Sexually Transmitted Diseases

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OPENING PLENARY

PROGRESS AND CHALLENGES IN THE EVOLUTION OF SEXUAL HEALTH AND STI PREVENTION

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PLENARY SESSION 1

PROGRAM SCIENCE

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The Program Science Framework in the United States: What, Why and How? (Bolan)
The goal of United States STD prevention and control efforts is to contribute to population health through carefully targeted and tailored efforts that maximize use of limited resources. This goal requires collaboration and coordination of prevention efforts: at the local, state and federal level, between public health and primary care entities, and, most importantly, through program and science. This session presents program science as an overarching framework for national-level STD prevention. The program science framework integrates the evidence base and the context in which that evidence is produced with continuous program definition, development, evaluation and management. With programs that are well-defined and have well-managed and measured processes and outcomes, program practice becomes the bridge that allows research and evaluation questions to be derived and tested in the context in which they are relevant for STD prevention. Results can be integrated efficiently and effectively into practice and refined through continuous quality improvement.
Program Science: Global Examples (Blanchard)

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PLENARY SESSION 2

SOCIAL AND BEHAVIORAL ISSUES IN GENERAL AND KEY POPULATIONS

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General Population (Anne M Johnson)
Endemic transmission of STIs and HIV persists despite increasing reliance on biomedical intervention for control including new screening programmes, improved treatment and the introduction of new vaccination programmes. Level of risk of acquisition and transmission remains extremely heterogeneous across and within different populations and remains driven by risk environments and the distribution of risk behaviours, as well as by the effectiveness of biomedical interventions. The combination of behavioural with biological data, and information on intervention uptake, can be powerful tools in understanding transmission dynamics in both general and focused populations. They can thus inform and evaluate the roll -out of interventions at scale. This session will consider recent advances in understanding the social and behavioural contribution to the transmission dynamics of STIs drawing on new insights from population behavioural and epidemiological data from Britain, the USA and elsewhere.
Key Populations (MSM) (Seth Stephens-Davidowitz)
How does intolerance affect gay Americans? This uses a variety of new sources to explore this question. These include Facebook data for both state of residence and state of birth; pornographic search data; dating sites; and Google searches from spouses suspecting their husband is gay. I show that there are substantially more openly gay men in areas with less tolerance towards gays. However, there are actually a relatively similar number of gay men in all states. Thus, many men in intolerant states are in the closet.

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PLENARY SESSION 3

CHANGES IN HEALTH SYSTEMS (GLOBAL AND UNITED STATES)

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How Do We Achieve Better Health for Under-Served Populations? Learning from Large Scale Health Systems Improvement Initiatives across the Globe (Barker)
Across the globe, health systems are trying to deliver better care at affordable cost to achieve better health for their populations. The best examples of how we might achieve these goals in a changing US health environment may come from surprising places. In this session Dr Barker talks about approaches we can apply to US safety-net and other under-served communities, based on experience of the Institute for Healthcare Improvement's programming in populations, communities and facilities across the world.
Changes in Global Health Systems (Bertozzi)

P4
PLENARY SESSION 4

GLOBAL BACTERIAL STI CHALLENGES FOR THE 21ST CENTURY

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Gonococcal Resistance in Asia-Pacific Region and the Japanese Response (Matsumoto)
Multi-resistant *Neisseria gonorrhoeae* have been increasing worldwide. In particular, fluoroquinolone-resistant strains are increasing in the Asia-Pacific region. Furthermore, antimicrobial activity of oral cephalosporins has recently been decreasing. Parenteral ceftriaxone is a standard therapeutic agent in such area. However, ceftriaxone-resistant gonococcal strain was detected in Japan 3 years ago. This news was a great threat to us, and made known an importance of surveillance of antimicrobial activities of therapeutic agents for *N. gonorrhoeae*. I will show surveillance data in Asia-Pacific region and discuss about proper treatment for gonococcal infection.
Elimination of Congenital Syphilis in Latin America: a Reality? (Garcia)

CLOSING PLENARY 1

MACRO-PICTURE

Charlotte Watts[1], Randolph Neese[2]
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Structural Interventions: Maximizing Impact and Efficiency (Watts)
With the substantial advances in HIV treatment and prevention technologies, there is increasing discussion of the potential to 'end AIDS'. Alongside this optimism, there is growing recognition of the substantial challenges to achieving this goal, with a range of social, economic and political, structural level factors, creating situations of high HIV vulnerability, and undermining the effectiveness of proven interventions. Drawing on evidence from both industrialised and developing countries, this presentation will give an overview of current thinking about structural interventions, including evidence of their importance, feasibility and affordability, and argue for the importance of structural level programming, as part of a combination HIV response.
What Evolutionary Medicine Offers to STD Prevention and Treatment (Neese)
Sexually transmitted pathogen and their hosts are products of natural selection, so an evolutionary approach is critical to understanding sex and STD's. An evolutionary approach addresses several core questions about sex: 1)why does sex exists at all, given that asexual reproduction doubles reproductive success and is vastly safer 2) why there are two sexes (instead of more) and why does one sex makes small gametes, the other larger ones, 3) why is direct contact between the sexes so common given its dangers. It also addresses several core questions about sexually transmitted diseases: 1) How does co-evolution of host and pathogen result in escalated conflicts with huge costs to both sides? 2) How do transmission patterns shape levels of virulence, and does virulence decrease with long exposure? 3) Where do antibiotic resistance mutations occur and what are the implications for public health policy? 4) Why is it so hard to change patterns of sexual behavior? Clinicians and public health experts can us answers to these questions to plan interventions that will reduce morbidity and mortality from STD's.

CLOSING PLENARY 2

WHERE WE ARE; WHERE WE ARE HEADED: A DIALOGUE

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MINI-PLENARY SESSIONS

MP1—MINI-PLENARY SESSION 1
THE BRAVE NEW WORLD OF BIG HEALTH DATA AND HOW STD CONTROL CAN BENEFIT FROM/LEVERAGE IT

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The capacity to amass 'big data' has been enhanced through many avenues including social media (Twitter, Face Book), Internet search engines (Google), and the overall conversion of paper-based data to electronically-stored data for management of just about every aspect of daily life from finances to health (electronic health records and health information exchanges). Data mining of any of these individual or potentially linkable data sources can yield novel profiles of the community and could be an opportunity for application to STD surveillance, risk behavior assessment, monitoring, and evaluation of the impact of control strategies.

What Can Internet Search Engines Reveal About Population STD Trends and Risk? (Mehta, Johnson)
Use of search engines to answer myriad questions has become an automatic tool for public and professionals. Access to and use of these tools can overcome even the potential stigma associated with sensitive behaviors and STD. To what extent can Google Analytics be used to describe and potentially predict STD trends and emerging risk behaviors?
Social Media Connectors for STD Risk or Prevention? The Case for Twitter and Face Book (Srivastava)
Can the real-time streams and data on Twitter and Face Book users be analyzed to identify persons at risk for STD?
Can EHRs and HIEs provide the 'big data' on sexual health measures? (Barton)
The conversion from paper records to Electronic Health Records has been heavily incentivized through the HITech Act with requirements to demonstrate meaningful use of these EHR data for improved quality of care, and population-level health outcomes. Yet, sexual health measures remain relatively under-recognized and limited to chlamydia screening. How can we better advocate for sexual health measures as a way to develop the evidence base for STD prevention services?

MP2—MINI-PLENARY SESSION 2
ROLLING OUT HPV VACCINATION: SUCCESSES, CHALLENGES AND LESSONS LEARNT

Luisa Villa[1], Christopher Fairley[2], Gina Ogilvie[3]
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This mini-plenary session will review the successes, challenges and lessons learnt from rolling out HPV vaccination in countries in three different continents.

Perspectives from the Latin America and the Caribbean region (Villa)
Latin America and the Caribbean have one of the highest incidence and mortality rates from cervical cancer in the world. Despite the efforts to reorganize screening programmes in the region, mortality rates continue to be high. New modalities for primary and secondary screening including HPV testing and vaccination are under evaluation. HPV prophylactic vaccines were approved in most Latin American countries but only few are considering its implementation in national immunization programs. Importantly, studies conducted in the region have indicated that HPV vaccination is a cost-effective strategy to reduce mortality by cervical cancer.
Perspectives from Australia (Fairley)
Australia introduced a free school based quadrivalent HPV (qHPV) vaccination program for girls at school age 12-13 years in April 2007 and a catch up program for girls/women (13-26 years of age) from 2007 to 2009. This has led to the almost complete disappearance of genital warts among Australian born women but also dramatic falls in heterosexual men. No changes have occurred in homosexual men. In 2013 Australia introduced free qHPV vaccine through schools for boys of 12-13 years of age and a catch up program to those 14-15 years of age. The successes, changes and lessons learnt from these endeavours will be discussed.
Two or three dose schedules? How to get the best cervical cancer protection for women with limited funds (Ogilvie)
Emerging evidence is strongly indicating that fewer than three doses of the HPV vaccine will provide adequate protection against HPV infection and cervical cancer. In this talk, Dr. Ogilvie will review the latest evidence and recommendations for reduced doses of both the bivalent and quadrivalent vaccine, use of alternate dosing strategies globally, and ongoing plans for evaluation of reduced and alternate dosing programs.

MP3—MINI-PLENARY SESSION 3
SCARY CASE OF GONORRHEA

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The main focus of this session is to focus on existing approaches and to explore alternate (broader) approaches and their potential role in delaying the emergence of multi-drug resistant gonorrhea.

Antimicrobial stewardship: Can the rational use of antibiotics delay the emergence of gonococcal drug resistance? (Rice)
The use of dual antibiotic therapy to prevent/delay the emergence of antibiotic resistance is controversial in many settings-but standard of care in others. What are the data that support the use of this approach when treating gonococcal infections? What are the data that antimicrobial stewardship can have an impact?
Is management of pharyngeal gonorrhea crucial to prevent the emergence and spread of antibiotic-resistant *Neisseria gonorrhoeae?* (Lewis)
This talk will address this intriguing question in both well-resourced and resource-poor settings and link the issue to the WHO action plan (+ other national/regional plans).
Targeting core GC groups: feasibility and impact (Alary)
Will screening certain core risk groups have an impact on the emergence and spread of drug resistant GC? If so, how do we implement the programs?

MP4—MINI-PLENARY SESSION 4
ADDRESSING DISPARITIES IN STD RISK: CAN RESIDENTIAL SEGREGATION AND OTHER POPULATION-LEVEL CONSTRUCTS [OR SOCIAL DETERMINANTS] MAKE REAL-WORLD CONTRIBUTIONS TO STD PREVENTION?

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The Problem: Racial, social, and economic disparities are persistent elements of STD epidemiology and of public health concern. In the US, our black and adolescent populations are especially affected. E.g. the 20-fold higher rates of gonorrhea among black teens compared to white teens. Sexual behaviors do not fully account for these enormous disparities, and research in the area of structural factors at the population level, such as residential/economic segregation, homophobia, and incarceration has received growing attention over the last twenty years through several paradigms, including structural interventions, program science, and others. Research regarding these ecological constructs is a complicated undertaking, especially considering that the factors impacting different populations vary by population, and may vary regionally, as well. However, some work to date has tied them to the disparities in US STD rates (as well as to disparities in overall mortality, chronic disease and other ID such as TB). Implementation of research findings has been even more challenging due to lack of resources, the structure of categorical funding streams and programs, and lack of data demonstrating effectiveness of structural approaches. Some structural interventions that are

developed with an appreciation of the social determinants impacting populations could be achieved by state or local health departments. Limited interventions could have a beneficial impact on the populations served.
Overview of social determinants/structural constructs (Biello)
Incorporating these constructs into STD prevention setting(s) (Cooper)
The current state of the field, implications for going 'beyond predictions and associations' to address STD infection disparities; future potentially productive directions/next steps (Wohlfeiler)

CLINICAL CASE SERIES 1

CC1A
SPECTRUM OF PROBABLE CONGENITAL SYPHILIS, MASSACHUSETTS 2013

Barbara Coughlin, RN[1], **Marla Early-Moss, BS[1]** and Katherine Hsu, MD, MPH[2]
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Introduction: In the past decade, ≤1 case of congenital syphilis has been reported in Massachusetts annually. We report 3 Massachusetts cases from 2013 that highlight a spectrum of clinical and public health management issues.
Case Description: Case 1 - Ex-36-week infant female born to a 27 year old HIV negative female with no prenatal care and latent syphilis of unknown duration (RPR 1:4, TPPA+ at delivery), treated with 1 dose benzathine penicillin G (BPG) 2.4 million units (MU) IM administered 13 days post-delivery, then lost to follow-up. Infant exam normal; RPR 1:2, TPPA+; CSF with normal cell count and protein, VDRL nonreactive; classified as *probable congenital syphilis*. Case 2 - Ex-38-week infant male born to a 20 year old HIV negative female with late prenatal care and early latent syphilis (maternal RPR 1:16, TPPA+ at 28 weeks of pregnancy), treated with multiple BPG doses. Infant exam normal; RPR 1:64, TPPA+; CSF VDRL reactive, WBC 34, RBC 15,000, protein 152; classified as *probable congenital neurosyphilis*. Case 3 - Ex-37-week infant male born to an 18 year old HIV negative female with good prenatal care, maternal RPR nonreactive at 8 weeks of pregnancy. Presented to pediatrician at 11 weeks of age with nasal congestion, rash on trunk and extremities, irritability, fever, splenomegaly, scalp lesions with surrounding alopecia, and palatal ulceration. RPR 1:512, TPPA+; CSF VDRL 1:4, WBC 11, RBC 0, protein 96; long bone radiographs suspicious for syphilitic involvement of tibias bilaterally. Infant classified as *probable congenital syphilis with neurologic involvement.*
Discussion: Cases epidemiologically classified as "probable congenital syphilis" encompass a wide spectrum of clinical presentations, with different prenatal exposure circumstances and levels of evidence for infection. Investigation and follow-up involved traditional case and contact investigation, as well as recommendations for occupational exposure in the case of the infant with snuffles and rash.
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CC1B
A MISSED OPPORTUNITY FOR EARLY MATERNAL SYPHILIS TREATMENT

Anne Lifflander, MD, MPH
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Introduction: Despite prenatal screening, serologic monitoring, and intervention by public health agencies, maternal syphilis treatment opportunities may be missed, resulting in congenital syphilis.
Case Description: This 32 year old woman came to STD clinic in 2009, three months after treatment with Bicillin (BIC) 7.4 million units (mu) for an RPR of 1:64. She had a titer of 1:32 at first STD clinic visit and was not re-treated. Eleven months later, her titer was 1:2. In 2011 she returned to STD clinic with a titer of 1:8 (drawn at another facility) and was treated with BIC 2.4 mu. She stated that her husband had been diagnosed with syphilis and treated with three injections. She had been sexually active with him before he completed treatment. By the beginning of 2012 titers dropped to 1:4 and remained the same six months later. She became pregnant in 2013. In the first trimester, titers ranged from 1:4 (Laboratory A/STD Clinic) to 1:16 on three subsequent samples at (Lab B/Ob-Clinic), dropping to 1:4 in the second trimester (Lab B/Ob-Clinic). Titers rose to 1:16 (Lab B/Ob-Clinic) and 1:32 (Lab B/Ob-Clinic) at 33 and 37 weeks gestation, respectively. In week 37 she was treated by her obstetrician with BIC 2.4 mu; she delivered one week later. The baby's titer at birth was 1:1, TP-PA positive. Cerebrospinal fluid (CSF) VDRL was negative; CSF protein normal. The baby was treated per CDC Guidelines.
Discussion: Despite multiple titers indicating a need for treatment during pregnancy, treatment delay occurred. Contributing factors included: 1)a triage system in STD clinic that does not assess for pregnancy, 2) an infectious disease consultant who advised there was no need to treat at titers <1:64, 3) laboratories reporting syphilis do not know patients' pregnancy status, 4) errors in data entry which can result in failure to prioritize follow-up.
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CLINICAL CASE SERIES 2

CC2A
SYPHILIS PRESENTING AS COLORECTAL CANCER

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Introduction: Syphilis has long been known as 'The Great Imitator' for its ability to mimic other diseases. Although there has been a resurgence of infectious syphilis in the UK since 2000, reports of syphilitic proctitis (SP) are rare. SP has no pathognomonic clinical characteristics and misdiagnosis can lead to costly interventions and delayed treatment. We present the cases of two men with syphilitic colo-rectal lesions which were initially thought to be cancer.
Case Description: ***Case 1*** A 40 year old HIV-positive man who has sex with men (MSM) man presented with diarrhoea, rectal discomfort and frank rectal bleeding. Colonoscopy revealed an ulcerating mass in the proximal sigmoid and three other rectal lesions. Biopsy demonstrated inflammatory tissue only with no evidence of malignancy. At an HIV clinic review treponemal serology indicated active syphilis.
Case 2 A 50 year old HIV-negative MSM presented with a short history of rectal bleeding, change in bowel habit and tenesmus. There was a family history of colorectal cancer. Colonoscopy revealed multiple polypoid lesions with central ulceration. Biopsy demonstrated severe inflammatory cell infiltrates with no evidence of malignancy. By chance, the patient presented himself for a sexual health which revealed positive treponemal serology. The chance identification of positive syphilis serology prompted repeat analysis of histological specimens which proved their treponemal origin. Syphilis treatment resulted in resolution of all bowel lesions in both patients at follow-up endoscopy.
Discussion: Syphilis should be considered inl patients, particularly MSM, who present with symptoms suggesting colorectal cancer. Clinicians must have a high index of suspicion with regard to diagnosing syphilis. Specific staining techniques or PCR are required to confirm the diagnosis; this may be missed if syphilis is not considered in the differential diagnosis. Sexual history, with rigorous attention to the time course of symptoms, should help to guide investigations and staging of syphilis.
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CC2B
SYPHILIS IN A PATIENT WITH POLIO – IS THE DIAGNOSIS IN DOUBT?

Chris Ward, MBchB, MRCP, MPH, DipGUM, DFSRH
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Introduction: Positive syphilis serology found in patients with ongoing neurological conditions can lead to diagnostic uncertainty about the cause of their symptoms. We present a clinical case report of a man with polio who later presented with positive syphilis serology and the uncertainty this caused in his original diagnosis.
Case Description: A 37 year old heterosexual paralympian from the Central African Republic (CAR) was referred by his GP with positive syphilis serology. He reported no history of ulcers, rashes or lymph nodes and had no known contact with syphilis. He had never been tested or treated for syphilis before. He was diagnosed in the CAR with Polio at the age of 10 and has been in a wheelchair since 15. He had fled the CAR in 2012 following a military coup and all his family and medical personnel were uncontactable. On examination he had flaccid weakness in both legs, worse on the left, upgoing plantar reflexes and a reduced vibration sense. His syphilis serology showed an RPR of 1:4. The clinical concern was whether his neurological symptoms were due to Polio or if they could possibly be due to neurosyphilis. He was discussed in our GUM multidisciplinary meeting and then seen in a joint GUM/neurology clinic. He had complained of increased weakness in his left arm and so an electromyogram was requested to rule out Polio progression. At this review it was felt his history and clinical examination were more consistent with Polio and thus he was treated as late latent syphilis with Benzathine Penicillin.
Discussion: Pre-existing neurological signs and symptoms can cause uncertainty in the diagnosis and classification of syphilis infection. Neurological opinion and investigation can help clarify the cause when the diagnosis is in doubt.
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CC2C
THE GREAT IMITATOR STRIKES AGAIN

Rose Weber, MS, ANP-BC, University of Wisconsin Hospital and Clinics, Madison and Andrew Urban, MD, University of Wisconsin Hospital and Clinics

Introduction: Periostitis is a well-described manifestation of acquired syphilis uncommonly seen in clinical practice. We review a case of syphilis in a man with a history of HIV and treated lymphoma who presented with severe tibial pain. The incidence of syphilis in MSM continues to increase and early recognition and management of unusual presentations has important individual and public health implications.
Case Description: A 44 year old male presented with the sole complaint of a four day history of progressive, severe unilateral shin pain. His medical history was significant for AIDS on antiretroviral therapy with a recent CD4 T-lymphocyte count of 125 cells/mm3, and diffuse large B cell lymphoma with successful treatment completion 1 year prior. Exam was remarkable for the absence of fever, rash, oral lesions or joint swelling and the presence of exquisite tenderness to palpation of the proximal right tibia. A tibia plain film showed an area of focal periosteal bone. MRI showed patchy bone marrow edema with adjacent periosteal and soft tissue edema, raising concern for an atypical infection or infiltrative process such as lymphoma. One week later he developed a rash consisting of multifocal erythematous, nontender macular lesions. Serology revealed a RPR titer >1:256 and CSF evaluation demonstrated a reactive VDRL at 1:1. Therapy for neurosyphilis was completed. His tibial pain and rash resolved with treatment and follow-up serology has shown an appropriate response.
Discussion: Syphilis has long been regarded as the great imitator and it is important for contemporary practitioners to be aware of unusual presenting scenarios for this important public health threat. Since MSM account for the majority of primary and secondary syphilis cases in the US, with high rates of HIV co-infection, early recognition of syphilis has the potential to reduce transmission of both conditions.
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CLINICAL CASE SERIES 3

CC3A
BUSCHKE-LOWENSTEIN TUMOR RESECTION AND TOPICAL CARE

Mariana Costa, Skin Group Consultant[1], Andreia Oliveira, Supervisor[2], Sayonara Scota, Supervisor[2], Poliana Brito, student[2], Renata Martins, student[2], Sara Moura, student[2] and Aline Gomes, student[2]
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Introduction: Buschke Lowenstein tumor (BLT) is a rare variant of anogenital condylomata acuminata, related to HPV[1,2]. Lesion is large, vegetating, warty, exophilic[2,3]. Best therapeutic strategy: not established[2]. Incidence: 0.1%1,2. Tumor rapid growth is associated with imunity deficiencies[1].
Case Description: NGS, black, 55 years old, single, Nurse. Patient diagnosis HIV and TBL, topical treatment failled. 1st PO tumor resection, Skin Group assessment and management. Extensive raw area, involving penis body, extending to sacral region with points of necrosis. Topical care plan: PHMB solution, EFA, hydrofiber with silver, transparent film. Exchange daily to prevent secondary infection. 3rd PO: foul smell, necrosis, slough across lesion. Secretion culture positive for *Morganella morganii*. Replaced secondary coverage by hydropolymer with ibuprofen foam in scrotum due to pain and hydropolymer with silver foam accross lesion for infection control. After 5 days observed important score reduction for pain, adopting hydropolymer with silver across the lesion. 41st PO: pain resolution, no odor, granulation in whole extent of injury, edges contraction, no secondary infection. Programmed skin graft. Respected bioethical principles postulated by Resolution 196/96, National Research Council (CC No. 96/2012).
Discussion: Despite the possible confusion bias, can be inferred that use of PHMB solution, EFA and coverage with hydropolymer in this case, controlled secondary infection, pain, removed unviable tissue, promoted the granulation tissue increase, contraction of edges and ideal conditions for wound bed to receive skin graft.
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CC3B
PATIENT WITH SYPHILIS, GONORRHEA, AND ASYMPTOMATIC ANORECTAL CHLAMYDIA

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Introduction: Diagnosing Lymphogranuloma Venereum (LGV) is a challenge in the absence of routinely available serovar-specific Chlamydia trachomatis (Ct) tests.
Case Description: A 23 year old presented to STD clinic with urethral discharge four days after his last episode of unprotected insertive and receptive anal sex. He was presumptively treated for gonorrhea (GC) and Ct with Ceftriaxone 250 mg and Azithromycin 1 gram. Specimens for anorectal and urethral GC/Ct testing were collected, as was blood for syphilis and acute HIV testing. Rapid HIV test was negative.
The RPR titer from the first visit was 1:128; the patient returned to clinic five days later for treatment with Bicillin 2.4 Million Units (BIC). The discharge was gone. Anorectal NAAT results were not yet available. Urethral Nucleic Acid Amplification Testing (NAAT) was positive for GC. He returned nine days later for a second BIC. The anorectal Ct/GC NAATs from his first visit were positive. He reported no new exposure and was not treated for Ct or GC. Three weeks later he was admitted to the hospital with severe lower abdominal pain. MRI and laparoscopy showed extensive abdominal adenopathy. No biopsy was performed. Fever developed on the second hospital day. The Infectious Disease (ID) consultant diagnosed acute HIV. HIV viral load was in the millions. The ID consultant called the Bureau of STD Control (BSTDC) for advice on syphilis treatment and was informed that the patient had been diagnosed with anorectal Ct infection, but had not been treated for LGV. The specimen from the first visit was sent to a reference laboratory for serovar testing and was positive for the L-2 serovar of Ct.
Discussion: This patient presented with GC urethritis, syphilis, asymptomatic anorectal LGV and gonorrhea. He developed acute HIV infection, and abdominal pain which may have been caused by untreated LGV.
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1A—MSM: IDENTIFICATION OF INTERVENTION TARGETS AND SCREENING INTERVENTIONS

1A1
FACTORS ASSOCIATED WITH CLUSTERS OF RISK BEHAVIORS AMONG MEN WHO HAVE SEX WITH MEN (MSM) AND MEN WHO HAVE SEX WITH MEN AND WOMEN (MSMW) WITH EARLY SYPHILIS (ES) IN LOS ANGELES COUNTY (LAC), 2010-2012

Ryan Murphy, MPH, PhD and Amy Wohl, MPH, PhD
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Background: Identifying geographic and demographic factors associated with clusters of risk behaviors among persons with early syphilis (ES) can guide the development and implementation of targeted interventions within large and diverse communities.
Methods: 4,178 ES cases were reported in Los Angeles County (LAC) in 2010-2012 among MSM/MSMW. Using latent class analysis (LCA), we identified subgroups within these cases based on responses to dichotomous measures of risk behavior during the past 12 months: anonymous sex, 4 or more sexual partners, substance use (SU), substance use during sex (SUDS) and trading sex for drugs/money. The probability of a respondent's membership within a certain risk behavior subgroup was predicted by age, race/ethnicity, MSMW vs. MSM, co-infection with HIV and service planning area (SPA).
Results: A five-subgroup model of risk behavior provided the best fit to the data. Subgroups included: 1) no identified risk, 2) sex with anonymous or many partners without SU, 3) SUDS + many partners + anonymous partners, 4) SUDS + anonymous partners and 5) sex trade. The prevalence of each subgroup among total ES cases was 33.0%, 48.2%, 10.6%, 6.7% and 1.5%, respectively. Relative to Whites, African Americans and Latinos were more likely to be classified into the "no identified risk" and "SUDS + anonymous partners" subgroups. MSMW with ES were more likely than MSM with ES to trade sex for drugs/money. MSM/MSMW living in South Los Angeles (SPA 6) were more likely than those living in the Metro area (SPA 4) to be in the "no identified risk" group, which consisted of sex with known and fewer partners and sex without substance use.
Conclusions: The data suggest that a large proportion of minority MSM/MSMW with ES, many of whom reside in SPA 6, acquired the infection through a pattern of behavior that is unlikely to be detected during a routine evaluation of sexual risk.
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1A2
DOES IT ALWAYS TAKE TWO TO TANGO? SEX PARTNER CHARACTERISTICS AMONG PERSONS WITH GONORRHEA IN THE STD SURVEILLANCE NETWORK (SSUN), 2010 – 2012

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Background: Little is known about the characteristics of sex partners among persons diagnosed with gonorrhea. Population-level characteristics of recent partnerships are useful for understanding transmission pattern differences for specific populations and for developing targeted gonorrhea control activities. Methods: A random sample of cases reported in 2010–2012 was identified and patients interviewed in 12 geographically diverse areas collaborating in SSuN. Data were weighted to provide overall estimates of partnership characteristics among persons reported with gonorrhea. The number and gender of sex partners reported in the previous three months and the age, race and Hispanic ethnicity of the most recent sex partner (MRSP) were ascertained. Differences by index patient characteristics were described.
Results: Of 218,189 reported cases, 15,014 (6.9%) were interviewed. Among all cases, the mean number of partners reported in the previous three months was 2.5 (95% CI 2.4–2.7), the proportion reporting that their MRSP was within five years of their own age was 68.4% (95% CI 66.6–70.2) and proportion reporting MRSP of the same race/ethnicity was 68.1% (95% CI 66.2–69.9). Significant differences were observed by gender of sex partner status and race/ethnicity. Men-who-have-sex-with-men (MSM) had more partners in the previous three months than heterosexuals (means= 4.4 vs. 1.9, p<0.0001), were more likely than heterosexuals to report MRSP of different race and/or ethnicity (36.7% vs. 20.1%, p<0.0001) and more likely than heterosexuals to report MRSP more than five years older/younger (37.8% vs. 19.1%, P<0.0001). Among heterosexuals, non-Hispanic blacks were less likely than others to report MRSP of different race (10.4% vs. 39.0% p<0.0001) and less likely than others to report MRSP more than five years older/younger (17.6% vs. 21.6%, P=0.03).
Conclusions: Number and characteristics of recent sex partners vary significantly by MSM status and by race/Hispanic ethnicity. These findings are consistent with, and may help to explain, observed incidence patterns.
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1A3
EVALUATION OF AN INDIVIDUAL-LEVEL INTERVENTION TO INCREASE KNOWLEDGE AND THE LIKELIHOOD OF USE FOR PREP: RESULTS FROM A PILOT STUDY

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Background: HIV remains a major health and social problem nationwide. Since the early days of the epidemic, behavioral change strategies have been the hallmark of prevention efforts. Significant advances in biomedical interventions, however, are transforming the HIV prevention paradigm. PrEPUp! is an individual-level intervention designed to raise awareness and knowledge of PrEP among at-risk Black MSM, transgender male-to-female individuals and heterosexual men and women.
Methods: The prospective, pre-post intervention pilot study was conducted between March and November 2013 in Dallas, Texas. The one-hour, facilitator-led, in-person education session, was delivered to Black MSM, transgender MTF and heterosexual men and women recruited through targeted community outreach by trained staff and peer referrals. Knowledge, attitudes, beliefs and likelihood of PrEP use based on subjective and normative beliefs were assessed using a 36-item questionnaire administered just prior to and immediately following the intervention. Dependent sample t-tests were used to compare pre- and post-test results.
Results: Seventy-four individuals completed the PrEPUP! intervention. Participants were largely women (63%) and Black (87%). Statistically significant changes in overall PrEP knowledge were observed (n=69, p=.000). There was a significant difference in the proportion of respondents who agreed they would use PrEP based on affordability at baseline (M=30%, SD=1.38) and post-intervention (M=41%, SD=1.42), (t=-2.076, p=.042). Reports of intent to share information about PrEP were also greater post-intervention (M=70%, SD=1.09) compared to baseline (M=40%, SD=12.4), (t=-2.305, p=.025). Changes in subjective norms based on the perceptions others may have towards the individual taking PrEP were greater post-intervention (M=59%, SD=1.01) compared to baseline (M=27%, SD=1.21), (t=-2.547, p=.013).
Conclusions: This pilot study provides support for the effectiveness of educational interventions to increase knowledge while addressing subjective norms and beliefs about PrEP. While limited by a small sample size and implementation in one state, the study offers insight into addressing community normative beliefs and health literacy towards PrEP.
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1A4
FREQUENCY OF EXTRA-GENITAL STD TESTING IN HIV+ MEN-WHO-HAVE-SEX-WITH-MEN (MSM) IN CARE AT A NYC FEDERALLY-QUALIFIED-HEALTH-CENTER, 2011

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Background: MSM are an at-risk group for chlamydia (CT) and gonorrhea (GC) infections, including extra-genital (EG) CT/GC. However, studies show that EG infections may be underdiagnosed due to lack of screening. We examined the prevalence of EG CT/GC screening at a Federally-Qualified-Health-Center (FQHC) that primarily serves lesbian, gay, bisexual, and transgender (LGBT) communities to identify opportunities for improvement.
Methods: We randomly sampled 10% of 3,000 HIV+ MSM with ≥1 clinic visit during 2011. Anatomic sites of CT/GC testing in the year prior to visit were abstracted from medical records, as were demographic factors: age, residential zip code, race/ethnicity, and insurance type.
Results: In our sample (n=300), the median age was 39 years, 47% (141/300) were Manhattan residents, 18% were Black and most had either government subsidized insurance (78%) or were privately insured (21%). The prevalence of urethral, rectal and pharyngeal CT/GC testing in the past year was 71% (213/300), 47% (140/300) and 40% (119/300), respectively. Overall, 9% (27/300) of patients tested positive for CT at any anatomic site; 9% (27/300) tested positive for GC at any anatomic site. Among those who had a rectal CT/GC test, 9% (12/140) were positive for GC and 14% (20/140) were positive for CT. Overall, 9% (27/300) of patients tested positive for CT at any anatomic site; 9% (27/300) tested positive for GC at any anatomic site.
Conclusions: Extra-genital CT/GC testing was markedly less common than urethral testing for HIV+ MSM attending this LGBT-focused FQHC, likely resulting in missed infections. Further evaluation is needed to characterize missed opportunities for EG CT/GC screening, in order to inform measures to increase screening rates in this at-risk population.
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1A5
BASELINE FINDINGS FROM THE ANAL CANCER EXAMINATION (ACE) STUDY - ACCEPTABILITY OF DIGITAL ANO-RECTAL EXAMINATION AS A MEANS OF SCREENING FOR ANAL CANCER IN HIV POSITIVE MEN WHO HAVE SEX WITH MEN

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Background: Anal cancer is the most common non-AIDS defining cancer in HIV-positive men who have sex with men (MSM). An anal cancer examination (ACE i.e. visual inspection perianally and digital ano-rectal examination) alone is a possible option for early detection but has never been systematically investigated.
Methods: The ACE study is a 2-year prospective study of HIV-positive MSM, aged 35 years or older in Victoria, Australia. Participants will undergo an annual ACE and complete questionnaires at recruitment and after each examination. Questions included relate to quality of life (SF12), and morbidity associated with ACE. A baseline questionnaire is completed by physicians assessing their experiences and confidence in performing an ACE.
Results: 341 participants have been recruited to date. At baseline, few participants found the examination painful (1%, 95% CI: 0.2-5) or reported bleeding (2%, 95% CI: 0.4-5). 66% (95% CI: 59-73) were concerned about their cleanliness, 39% (95% CI: 32-47) felt embarrassed, and 16% (95% CI: 10-21) worried about losing control of their bowels. Despite this, 99% (95% CI: 96-100) would undergo another ACE in a year's time. Quality of life measures before and after ACE were not statistically significant. Of 36 physicians, most (86%, 95% CI: 71-95) thought that anal cancer screening was important. 67% (95% CI: 49-81) felt confident in performing an ACE, but only 22% (95% CI: 10-39) were confident in recognizing early anal cancer using ACE. There was a 4% referral rate to specialists, with one anal cancer detected.
Conclusions: An ACE is acceptable to HIV positive MSM as a screening method for anal cancer. Strategies for preparing patients for ACE and further training for physicians, as well as evidence of efficacy are needed if ACE is to become routine practice.
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1B—COLLABORATIVE EFFORTS BETWEEN FAMILY PLANNING AND STD: PREVENTION SERVICES FOR WOMEN

1B1
PROVISION OF INTRAUTERINE DEVICES IN AN STD CLINIC SETTING

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Background: Most STD clinics focus solely on STD treatment and prevention. However, certain women presenting for care are also at high-risk for unintended pregnancy. Intrauterine devices (IUDs) are highly effective in preventing pregnancy. There is no information on adverse outcomes associated with IUD use in sexually transmitted disease (STD) clinics. This study describes the utilization of IUDs in an STD clinic and evaluates the risk of pelvic inflammatory disease (PID) and discontinuation after insertion.
Methods: Retrospective chart review of IUD provision at the Denver Metro Health (STD) clinic from January 2011-June 2013. STD screening (gonorrhea and chlamydia [CT] PCR testing) was performed within 45 days of insertion and positive tests were treated prior to insertion. PID incidence defined per the STD treatment guidelines and IUD discontinuation rate within 90 days of insertion were assessed.
Results: Among 7,427 female clients seen for family planning services (FPS), 404 women had an IUD (5.4%) inserted. Women obtaining IUDs were slightly older than the other FPS patients (mean 28.3 years versus 26.5 years, $p<0.001$); no other demographic characteristics differed between the two groups. Prior to insertion, 3.4% (14) women had a positive STD screening within 45 days of insertion and were treated. PID incidence rate was 0.74% (3) at 90 days post insertion and discontinuation rate was 2.5% (10).
Conclusions: Provision of IUDs in an STD clinic setting is feasible. Baseline STDs, risk of PID, and discontinuation after an IUD insertion were similar to other clinical settings (e.g., family planning clinics) and offers an opportunity to provide comprehensive reproductive healthcare in STD clinic settings. Based on these findings, same day IUD insertions likely have minimal risk in STD clinics and could be provided as in other clinical settings.
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1B2
CHLAMYDIA TRACHOMATIS (CT) IN OLDER FEMALE FAMILY PLANNING (FP) CLINIC CLIENTS: ASSESSING EFFECTIVENESS AND EFFICIENCY OF SCREENING ALGORITHMS BASED ON USPHS REGION X INFERTILITY PREVENTION PROJECT (IPP) RECORDS, 2009-2011

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Background: CDC recommends annual *Chlamydia trachomatis* (CT) screening in women age >25 years with risk factors. However, evaluation of specific screening criteria for this population has been limited. We investigated: 1) CT predictors in women aged 26-35 years screened at Region X IPP FP clinics; and, 2) potential screening algorithms.
Methods: We used 2009-11 Region X IPP and U.S. Census 2007-11 American Community Survey (ACS) records. IPP records operationalized client demographics, risk behaviors, clinical signs and CT test results. ACS records were used to generate area-based socioeconomic measures (ABSM), merged into IPP via client ZIP code. Only screened female FP clients aged 26-35 were included. We excluded females with diagnostic CT tests (records with signs, symptoms, CT exposure, symptomatic sex partner (SP), re-screening, pregnant, CT infection past year, or presumptive treatment). We calculated CT positivity (CT+) stratified by individual measures (demographics, risk behaviors) and ABSM (poverty, educational attainment, and Gini income inequality). Crude/adjusted odds ratios were generated by univariate and

multivariate logistic regressions. Significant predictors were used to develop 11 screening algorithms and were assessed for efficiency (%test volume required), effectiveness (%positives detected), and CT+.
Results: Of 17,877 CT screening records, 67% were women aged 26-30; 59% white race; 78% urban. 8% reported multiple SPs; 17% indicated new SP (past 60 days). 15% reported SP with concurrent SPs. CT+ was 2.7%. Significant predictors were: age 26-30 years (3.0% CT+); multiple SPs (5.9%); new SPs (5.0%). Screening algorithms were efficient (<30%), but not effective (<50%) (CT+ range: 3.3%-5.9%). Including age 26-30 years improved effectiveness (>74%), but reduced efficiency (>67%) and CT+ (3.0%).
Conclusions: Efficient and effective screening algorithms were not identified for older female FP clients. Selective screening works best in populations with higher CT+. More work is needed to determine other risk factors to optimize screening in this clinic population.
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1B3
INJECTABLE CONTRACEPTION AND ACQUISITION OF CHLAMYDIA AND GONORRHEA AMONG SOUTH AFRICAN WOMEN PARTICIPATING IN MTN-003 (VOICE)

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Background: The potential impact of injectable hormonal contraception (HC) on C. trachomatis (CT) and *N. gonorrhoeae* (NG) acquisition in women is unclear. This is the first direct comparison of two commonly used methods of injectable HC in South Africa (depot medroxyprogesterone acetate [DMPA] and norethisterone enanthate [NET-EN]) on acquisition of these infections.
Methods: MTN-003 was a randomized trial of HIV chemoprevention in Africa. Women using protocol-defined effective contraception were eligible for enrollment. Testing and treatment for CT and NG occurred at baseline, annual and exit visits, and when clinically indicated. Andersen-Gill proportional hazards models were used to assess the association between injectable contraceptive type and incident CT and NG among 4,077 South African MTN-003 participants.
Results: Among the 3,246 (79.6%) participants who used injectable HC during follow-up, DMPA users were more likely, compared to NET-EN users, to be >25 years (43.1% vs. 34.0%, p<0.001), but had similar baseline prevalence of CT (14.3% vs. 14.2%, p=0.95) and NG (3.2% vs. 3.7%, p=0.49). During 3,761 person-years of follow-up, 514 cases of CT (14.2/100 person-years) and 118 of NG (3.1/100 person-years) were observed. Incidence did not differ between current DMPA and NET-EN users for CT (14.1/100 person-years [p-y] vs. 14.5/100 p-y, hazard ratio [HR] 0.95, 95% CI 0.79-1.16) or NG, (3.3/100 p-y vs. 3.8/100 p-y, HR 0.80, 95% CI 0.58-1.09). Adjustment for age, marriage, number of partners and condom use did not modify these inferences (CT: adjusted hazard ratio [aHR] 1.09, 95% CI 0.92-1.29; NG: aHR 0.92, 95% CI 0.64-1.32).
Conclusions: The risk of incident CT or NG did not differ between DMPA and NET-EN users. Lack of a non-HC comparator prevented estimating risk associated with either injectable method compared to non-use. Women choosing injectable HC should be counseled that risk of these infections does not differ between DMPA and NET-EN use.
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1B4
PROGRAM COLLABORATION AND SERVICE INTEGRATION: STD CHOICES, AN INTERVENTION TO PREVENT ALCOHOL EXPOSED PREGNANCY IN HIGH-RISK WOMEN ATTENDING URBAN STD CLINICS, FINAL RESULTS

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Background: Alcohol consumption during pregnancy is the leading cause of preventable neurocognitive deficits in the USA. Women attending STD clinics constitute a population at high risk for an alcohol-exposed pregnancy (AEP). CDC sponsored a demonstration project to evaluate the feasibility of reducing AEP risk in women attending STD clinics, using the CHOICES short intervention.
Methods: During 31 months (9/2010 – 3/2013), two STD clinics (in Baltimore and Denver) screened visits for eligible women: heterosexually active, aged 18 - 44, not using effective contraception, and drinking alcohol at high-risk levels (>3 standard drinks on one occasion or >7 in one week), during the last three months. At-risk women were offered the CHOICES intervention, comprising two motivational interviewing-based sessions with a trained interventionist, to explore contraceptive and alcohol use. Free family planning visits were offered to participants. Women were re-interviewed about contraceptive and alcohol use for the preceding 90 days, at three and six months after the first session. Reduced risk for AEP was defined as drinking below high-risk levels, using effective contraception, or both.
Results: 17316 female visits were conducted during this time, with 12893 (74%) receiving screening. 1731 (10%) met all eligibility criteria. Of eligible women, 480 (28%) enrolled; 383 of those (80%) received at least one intervention session, and 235 (61%) attended a family planning visit. Of women reached for follow-up, rates of reduced AEP risk at 3 and 6 months were 65% (136/208) and 70% (138/197).
Conclusions: Women receiving the intervention had reduced risk for AEP. STD clinics can effectively screen for women at risk for AEP, which is common in this population. The CHOICES brief intervention can motivate behavior change that lowers the risk for AEP. Both clinics are sustaining CHOICES by training public health department personnel outside of the STD clinics to deliver the intervention.
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1B5
SEXUAL AND REPRODUCTIVE HEALTH IN THE SOUTH: UNDERSTANDING DIVERSE INVESTMENTS AND MOVING FORWARD UNDER HEALTH CARE REFORM

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Background: The ongoing health inequities in the South are the result of a multitude of factors. Limited access to sexual and reproductive health (SRH) services compounds these inequities, resulting in poor outcomes such as high rates of unintended pregnancy and STDs, including HIV. While myriad family planning, STDs, and HIV/AIDS organizations have invested resources to improve specific health outcomes, this work is often done in silos. Recognizing the need to better coordinate efforts, the National Coalition of STD Directors (NCSD), the National Family Planning & Reproductive Health Association (NFPRHA), and the New Morning Foundation hosted a meeting bringing together partners representing a broad spectrum of stakeholders focused on improving SRH outcomes in the South. The sponsors facilitated cross-sector conversations about coordination, integration, and resource-sharing. A successful pilot meeting occurred in September 2013 with representatives from Alabama, Georgia, Mississippi, North Carolina, and South Carolina. A second meeting was held in February 2014 with participants from Arkansas, Kentucky, Louisiana, Tennessee, Virginia, and West Virginia.
Methods: Using qualitative research methods including semi-structured interviews, the hosts facilitated discussions between stakeholders to identify resources and priorities, opportunities and challenges, critical needs, and next steps. These discussions were first segmented by state with representatives from STD, family planning, and HIV/AIDs programs. Discussions were recorded and coded to identify key themes.
Results: Participants identified community partners, shared information about financial resources and strategies for responding to service delivery challenges (e.g. lack of 340B funding), and learned from similar programs in other states. Participants also identified challenges for policy and grant makers to consider addressing (e.g. planning for workforce changes, decline of grant revenue as the health care marketplace evolves etc.).
Conclusions: SRH stakeholders benefitted from engaging with colleagues across programs in a structured setting. Participants identified opportunities to improve coordination and SRH outcomes in the South.
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1C—INTERVENTIONS FOCUSING ON ADOLESCENTS: FROM SEXUAL HEALTH TO HPV VACCINATION

1C1
JUST TALK ABOUT IT: CHANGING SEXUAL HEALTH CONVERSATIONS IN COLORADO THROUGH BEFOREPLAY.ORG

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Background: Beforeplay.org, a statewide public awareness campaign, aims to improve sexual health in Colorado by normalizing the conversation. Primarily focused on reducing unintended pregnancy, the campaign employs a comprehensive approach to sexual health, recognizing unintended pregnancy and STD prevention behavioral risk and protective factors are inextricably linked. The interactive, evocative campaign engages Coloradans ages 18-29 in positive sexual health conversations and actions; encouraging them to "Just Talk About It." Online, indoor, outdoor, TV and radio advertising; promotional materials; community outreach; news media; and social media start sexual health conversations and drive young people to the website with age-appropriate, reliable sexual health information.
Methods: Beforeplay.org's immediate impact is measured with web-based analytics. Until unintended pregnancy and STD prevalence rate data are available for the duration of the campaign, evaluation methods are limited to process measures related to campaign reach and engagement.
Results: Engagement with Beforeplay.org is growing statewide. The website receives approximately 50,000 unique monthly visitors and has had more than 2,000,000 page visits since it launched in early 2012. STD information is the most often and longest viewed content. STD search terms dominate organic search traffic. Organic searches accounts for more than 75 percent of web traffic, four times higher than in 2012. Weekly, over 15,000 Facebook fans receive posts and share sexual health content from Beforeplay.org. Over 15,000 people have interacted with Beforeplay.org through outreach events staffed by over 160 volunteers.
Conclusions: Increasing engagement with Beforeplay.org online and in person indicates positive response to a holistic approach to sexual health. Users accessing STD information online will navigate to other sexual health topics such as birth control, pregnancy planning and sexuality and vice versa; also supporting a comprehensive approach to promoting healthy sexual behaviors. With encouragement and a safe, open space, young people will engage in positive sexual health conversations.
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1C2
A PILOT STUDY OF A COMBINATION STD PREVENTION INTERVENTION FOR AFRICAN-AMERICAN MOTHERS AND THEIR ADOLESCENT DAUGHTERS

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Background: African-American women and adolescent girls are disproportionately burdened by STDs. To combat this health disparity, two CDC demonstrated effective behavioral STD/HIV prevention interventions have been developed for African-American women (SISTA) and adolescent African-American girls (HORIZONS), but these two separate interventions have never been implemented with African-American mother-adolescent daughter dyads. Given high rates of single mother-headed households in African-American communities, providing STD/HIV prevention programming to both single mothers and daughters could reduce sexual risk-taking, but may also promote a supportive partnership between mother and daughter to engage in and sustain health-protective behaviors.
Methods: Thirty-one single mother-adolescent daughter dyads completed baseline ACASI, were randomized to the dyadic intervention condition (mothers received SISTA, daughters received HORIZONS) or the daughter-only intervention condition (daughters received HORIZONS; mothers received no intervention); 84% completed a 3-month follow-up ACASI. ANOVAs assessed improvements in psychosocial mediators targeted in the intervention (e.g., partner communication, condom use self-efficacy) among mothers and daughters. ANCOVAs, adjusting for baseline values, assessed differential improvement in parent-adolescent sexual communication among dyads by condition.
Results: Among daughters, increases from baseline levels were found at follow-up for condom use self-efficacy skills ($p = .003$), STD/HIV risk appraisal ($p = .03$), and intentions to use condoms ($p = .005$). Among mothers, increases were found for condom use self-efficacy skills ($p = .023$), partner communication self-efficacy ($p = .03$) and STD/HIV risk appraisal ($p = .08$). Importantly, daughters in the dyadic intervention condition reported more frequent parent-adolescent communication about safe sex than those in the daughter-only condition ($p = .10$), and higher levels of comfort during these conversations compared to the daughter-only condition ($p = .009$).
Conclusions: Simultaneously intervening with single African-American women and their adolescent daughters offers the potential to sustain positive outcomes for both mothers and daughters by reinforcing and supporting each other's healthy behaviors.
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1C3
CALIFORNIA CONDOM ACCESS PROJECT (CAP): USING THE INTERNET TO IMPROVE ACCESS TO CONDOMS FOR YOUTH ACROSS CALIFORNIA

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Background: STD and unintended pregnancy rates are high among sexually active youth in many California counties. Both are preventable through correct and consistent condom use. A CDC meta-analysis shows increasing availability and accessibility of condoms for youth increases condom use, delays sexual initiation, and decreases unprotected sex. CAP is a new multi-jurisdictional, web-based condom distribution program for adolescents.
Methods: CAP is housed on the CFHC website www.teensource.org where a searchable, statewide map shows where free condoms are available at local teen-friendly sites on a walk-in basis. In six counties with high STD morbidity, teens can also use the online platform to request condoms sent to them via mail. Online marketing, public service announcements (PSAs), and press releases promoted the project. Google analytics monitored unique website visitors, and media placements were tracked by project staff.
Results: Since the launch in February 2012, CAP has recruited, mapped, and supplied monthly condom shipments to 70 new condom access sites (CAS) across 25 counties. Over 400 existing condom providers have additionally been identified and included on the CAP map. Over 850,000 condoms have been distributed to CAS since project onset, and over 5,000 individual mailers with condoms, lubricant, and education have been distributed to eligible youth who requested them. Since the project launch, 6 Facebook campaigns, 2 targeted PSAs, and 2 press releases promoted CAP. CAP was covered over 180 times by local, state, national, and global media. From March 2012 to September 2013, the new CAP webpage experienced over 152,000 unique visitors, and daily webpage traffic continues to increase significantly each month.
Conclusions: Web-based interventions are an effective way to reach youth in an era of increased use of online and mobile technology. This statewide and geo-targeted, web-based intervention is a feasible method for expanding access to condoms for sexually active youth.
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1C4
A HEALTH INFORMATION TECHNOLOGY INTERVENTION INCREASES HPV VACCINE SERIES INITIATION AMONG FLORIDA MEDICAID AND CHIP ADOLESCENTS

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Background: HPV vaccine series initiation rates have increased modestly compared to other adolescent vaccines and did not increase from 2011 to 2012.
Methods: We evaluated the feasibility and preliminary efficacy of a multicomponent intervention to increase HPV vaccine series initiation among adolescents enrolled in Florida Medicaid and Children's Health Insurance (CHIP) programs. We assigned 11-17 year old boys and girls without HPV vaccine claims, residing in Gainesville or surrounding primary care service areas

(PCSA), and having a preventive care visit in the past year to one of four study arms. We assigned all adolescents with records of visits at five participating Gainesville clinics to a health information technology (HIT) system (n=2071) designed to alert providers of interested unvaccinated adolescents during clinic visits. We mailed postcards to a random half (n=1031). For comparison, we selected a random sample of adolescents living in PCSAs surrounding Gainesville (n=4025) and randomly assigned half to receive postcards (n= 2018).
Results: Preliminary efficacy in the two months following the intervention start suggests that the HIT system improved vaccination rates by 1% [HIT arms: 5% vs. non-HIT arms: 4% – Risk Ratio (RR) = 1.3; 95% Confidence Interval (CI) = 1.0, 1.7]. An additional 1% increase may be achieved by supplementing the HIT system with postcards (HIT and postcard arm: 6% vs. standard of care arm: 4% – RR=1.5; 95% CI = 1.1, 2.0). Within HIT system arms, 71 youth who visited the study providers were invited to participate. Most parents consented (82%; n=58) and 63% of adolescents completed the survey. Of the 80% of youth (n=36) verifying they were unvaccinated, only half were interested in the vaccine (n=18).
Conclusions: The intervention was feasible within the Medicaid and CHIP populations. Preliminary evidence suggests increases in HPV vaccine series initiation with the HIT system arms potentially boosted with parent postcards.
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1C5
EVALUATING THE NATIONAL HPV VACCINATION PROGRAM IN AUSTRALIA THROUGH INPATIENT TREATMENT OF GENITAL WARTS

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Background: Australia introduced a national human papillomavirus (HPV) quadrivalent vaccine program for 12–13-year-old girls in mid-2007, with a catch-up program for 14–26-year-old women till 2009. Since, sentinel surveillance has shown a large decrease in proportion of vaccine-eligible women diagnosed with genital warts at outpatient sexual health services. This analysis assessed trends in inpatient treatments for genital warts.
Methods: Data on in-patient treatments of warts in men and women were extracted from Medicare (Australian universal health insurance scheme) website. We used $\chi 2$ statistics to determine trends in inpatient treatments before and after 2007, stratified by age groups and anatomical site.
Results: Between 2000 and 2011, 6014 15–44-year-old women underwent inpatient treatments for vulval/vaginal warts. In women aged 15-24 years (eligible for vaccination in 2007), there was no trend in number of treatments before 2007 (p=0.73); however, there was an 85% decline after 2007 (p<0.01). In women aged 25-34 years, there was 24.2% decline before 2007 (p<0.01) and 33.3% decline after 2007 (p<0.01); and in 35–44-year-old women there was no decline (p=0.07). In 2000-2011, a total of 936 15–44-year-old men underwent treatment for penile warts, and 3398 men for anal warts. There was a 200% increase in penile wart treatments in men aged 15-24 years before 2007 (p<0.01) and 70.6% decline after 2007 (p<0.01). In 25–34-year-old-men there was no decline before 2007 (p=0.27) and 59% decline after 2007 (p<0.01). There was no decline in men aged 35-44 years (p=0.11). There was no decline in anal warts treatments in men.
Conclusions: This is the first study to look at impact of vaccine program on treatment of severe cases of genital warts. The marked decrease in numbers of vulval/vaginal wart treatments in youngest women is attributable to the vaccine program; moderate decrease in in-patient treatments for penile warts in men probably reflects herd immunity.
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1D (SYMPOSIUM)
ADVANCES IN MOLECULAR DIAGNOSTICS AND GENOMICS OF AMR

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Molecular diagnosis, speciation and characterization of Treponema species (Chen)
Development of molecular point of care tests for STDs? (Gaydos)
Genomic epidemiology of *Neisseria gonorrhoeae* with reduced susceptibility to antimicrobials (Grad)
Antimicrobial resistance, a European perspective (Unemo)

The WHO estimated 106 million gonorrhea cases in 2008 globally. Antimicrobial resistance (AMR) in *Neisseria gonorrhoeae* is a major public health concern that compromises effective treatment and disease control efforts worldwide. *N. gonorrhoeae* has retained high-level resistance to antimicrobials previously recommended for first-line empiric treatment and, recent years, treatment failures using the last remaining option for first-line empiric monotherapy, i.e. the extended-spectrum cephalosporin (ESC) ceftriaxone, have been verified. Furthermore, some extensively drug-resistant (XDR) gonococcal strains with high-level resistance to ceftriaxone have been identified. In this talk, with particular emphasis on ESCs the emergence and spread of AMR internationally, genetic AMR determinants, and essential actions and research priorities to mitigate the emergence and spread of multidrug resistant and XDR gonococcal strains will be discussed.

1E (SYMPOSIUM)
MATHEMATICAL MODELING OF RISK BEHAVIORS, TRANSMISSION DYNAMICS AND INTERVENTION IMPACT AND COST

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Gini coefficients for STIs: Measuring the distribution of infections among individuals with different sexual activity (Althaus)
The Gini coefficient is a measure of inequality between values of a frequency distribution. We previously applied the concept of the Gini coefficient to describe the dispersion of Chlamydia trachomatis as a function of the recent sexual activity in a given population (Althaus et al, 2012). Gini coefficients are also useful measures for calibrating mathematical models of infectious diseases and allow certain epidemiological characteristics, such as the infectious duration and transmissibility, to be inferred. We use population-based data from the latest British National Survey of Sexual Attitudes and Lifestyles (Natsal-3, 2010-2012) to calculate Gini coefficients for C. trachomatis, high-risk human papillomavirus (HPV) types, HIV and *Mycoplasma genitalium*. In addition, we apply bootstrap methods to assess uncertainty and to compare Gini coefficients for different the sexually transmitted infections (STIs). We compare the Gini coefficients for different HPV types to explore potential differences in infectious duration and transmissibility of different strains. For C. trachomatis, We compare the Gini coefficient to values obtained from Natsal-2 (0.38 for 18-44 year old women and men in 1999-2000) and show whether the dispersion of the infection has changed over the last decade. In summary, Gini coefficients for the different STIs for the population overall and in groups stratified by age and sex will help us to better understand their distribution. This information can be used to help plan or modify STI prevention and treatment strategies.

Taking the next step in HIV/STI programming: Look, Listen, and Model? (Mishra)

Sleepless in Seattle: forms and distribution of non-monogamy (Spicknall)
Background: The interplay between empirical observation and theoretical explanation is at the heart of scientific advancement and exploration. Empirical data of demographics, non-monogamy, and partner-preferences are estimated from census data and the Seattle Sex Survey (n=1194). Risk factors for STD acquisition are examined. These data are used to parameterize an individual based model of sexual partnership dynamics and sexual infection transmission.
Methods: According to 2000 census data, the Seattle metropolitan area is largely racially homogeneous (~74% non-Hispanic white). Correspondingly, there is also racial homogeneity of participants from the Seattle Sex Survey (~80% non-Hispanic white); thus sexual partner preferences among non-white participants may not be reliable or valid since these preferences would be based on relatively few participants. Because of this, we collapsed across racial categories, and focused on age, education, and sex to categorize individuals and their preference for sexual partners.
Results: Regardless of education level, there was strong preference for partners of similar ages. Among the youngest, educational status was more

homogeneous, as people between 18 and 24 were more likely have lower education status. Among older age groups, the preference for sexual partners of similar educational status was stronger. Non-monogamy was reported in roughly 25% of partnerships. In 5% of partnerships, the participant reported no outside sex partners but believed their partner had outside sex partners. In 11% of partnerships, the participant reported some outside sex partners but did not believe their primary partner had any outside sex partners; . In 7% of partnerships, the participant reported dual non-monogamy by both themselves and their primary partner. Surprisingly, younger participants reported greater monogamy than older participants. Participants 30-34 years old were least likely to report being in monogamous sexual partnerships.
Discussion: Monogamy and non-monogamy have different implications for STD transmission within partnerships, along with the likelihood of infection among partners selected. The implications of these partnership preferences and monogamy practices on STD transmission are examined in a discrete individual based model.

2A—MSM: WHO, HOW, AND WHERE? IDENTIFYING RISK POPULATIONS & VENUES FOR STD/HIV PREVENTION ACTIVITIES

2A1
THE HETEROGENEITY OF INDIAN MEN WHOM HAVE SEX WITH MEN [MSM]: THE EPIDEMIOLOGICAL ASSOCIATION BETWEEN LOCAL SEXUAL IDENTITY AND HSV-2 PREVALENCE

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Background: The pervasive use of the term "MSM" in public health discourse provokes an illusion of homogeneity among men at high risk of sexually transmitted infections (STIs). Research suggests that several local sexual identities exist within MSM in India, including "*panthis*" (predominantly masculine, insertive anal sex), "*kothis*" (predominantly feminine, receptive anal sex), and "*double-deckers*" [DDs] (both receptive and insertive sex). Large-scale studies examining the association between these identities and sexually transmitted infections are lacking.
Methods: Respondent driven sampling was used to recruit MSM across 12 Indian cities between 09/2012-07/2013. Participants selected from a list of locally recognized identities, including *panthi*, *kothi*, *DD* and bisexual. HSV-2 infection was diagnosed using ELISA-based IgG assays. The association between sexual identity and HSV-2 infection was examined using random-effects logistic regression adjusting for potential confounders such as age, education, marital status, injection drug use, intercourse type, STI history, sex work, number of partners and circumcision.
Results: Among 12,022 men, median age was 26 years and 33.1% were married. Median age at first intercourse with a man was 18 years. *Panthis* represented the largest subgroup (32.7%), followed by *kothis* (23.5%), *DDs* (23.3%) and bisexuals (12.6%). The overall HSV-2 prevalence was 22.4% (range across sites: 10.8%-37%). Compared to *panthis*, the odds ratio [OR] for HSV-2 infection was 3.82 (95% confidence interval [CI]: 3.38-4.32) among *kothis*, 1.94 (95% CI: 1.70-2.21) for *DDs* and 1.51 (95% CI: 1.28-1.78) for bisexuals. In multivariate analysis, *kothis* remained more than twice as likely to demonstrate IgG to HSV-2 (OR: 2.11; 95% CI: 1.73–2.58) compared to *panthis*. All other subgroups showed no differences.
Conclusions: Indiscriminate labeling of Indian male sexual minorities as "MSM" overlooks the heterogeneity of locally recognized subgroups. *Kothis* and *DDs* appear to be at elevated risk for HSV-2 infection compared to *panthis*. The factors placing these identities at higher risk of STI require additional consideration.
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2A2
IS HIV PEP A CARROT FOR FINDING STDS?

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Background: San Francisco City Clinic (SFCC) has offered HIV non-occupational Post Exposure Prophylaxis (PEP) for over a decade. PEP services are the primary reason for visit of a small, high-risk subset of patients. To describe STD co-morbidity among patients utilizing PEP, we compared STD morbidity between patients seeking PEP services and those seeking general STD care.
Methods: We examined all visits among HIV-negative patients from January 1, 2010 to December 31, 2012 where the patient self-identified their reason for visit as either PEP only or a STD check-up only. MSM categorization was based on self-reported sexual orientation and reported gender of sex partners. STD morbidity included chlamydia, gonorrhea, and early syphilis.
Results: During the study interval, there were 14,188 visits to SFCC among HIV-negative patients for which either PEP (n=1061) or STD check-up (n=13,127) were selected as the only reason for visit. Higher morbidity was seen among both PEP only visits compared to STD check-up only visits (11.1% versus 7.9%, p=0.0003). A history of a STD diagnosis in the past 12 months was more also likely at PEP only visits compared to STD check-up only visits (17.3% versus 8.11%, p<0.0001). Of the PEP only visits, 88.3% were MSM compared to 42.2% of STD check-up only visits (p<0.0001). Additionally, patients with PEP only visits were more likely to be white and Hispanic and less likely to be Black compared to patients with STD check-up only visits (p<0.0001).
Conclusions: STD morbidity rates were high among both those seeking PEP and those seeking general STD care. Integrating a PEP program at an STD clinic is feasible and STD screening should be bundled with PEP provision; PEP services may be a useful tool to identify additional untreated STDs.
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2A3
WILL STD SCREENING RATES IN MEN WHO HAVE SEX WITH MEN LIVING WITH HIV IMPROVE WITH THE IMPLEMENTATION OF A STANDARDIZED RISK ASSESSMENT TOOL IN AN HMO SETTING?

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Background: Routine rectal and pharyngeal chlamydia and gonorrhea (CT/GC) screening is recommended for HIV-positive men who have sex with men (MSM) who report having receptive anal or oral sex. However, performance of sexual risk assessment (RA) to assess which STD tests are indicated creates a barrier to routine STD screening. Our objectives were 1) to facilitate routine and accurate RA, and 2) to increase STD screening rates in HIV-positive MSM men at Kaiser Permanente Northern California (KPNC), Oakland by the implementation of a paper-based RA tool.
Methods: From 5/25/13 to 9/25/13 a pilot quality improvement intervention was implemented at a single KPNC medical center, which included: 1) qualitative assessment of baseline RA practices among HIV providers; 2) calculation of baseline STD screening rates for HIV-positive MSM; 3) development of self-administered RA tool; and 4) training and implementation support for the RA tool. During analysis, patient responses to the RA were sorted into high-risk (screen today) and low-risk (screen annually) groups.
Results: Qualitative assessment demonstrated an absence of standardized RA practices. Among 606 HIV-positive MSM, 59.1% were screened for GC/CT in the 12 months before the intervention; 26% of this total were screened by urine only. One hundred-ninety patients completed the standardized RA. Responses indicated 39.5% needed pharyngeal screening, 28.4% needed rectal screening and 39.5% needed urethral screening on day of visit. Evaluation comparing pre-/post-intervention data to measure changes in the proportions of patients receiving STD screening will be completed by March 2014.
Conclusions: A self-administered RA tool could provide consistent sexual health information to guide provider's decision-making about STD testing. Implementation includes: 1) relationship-building and problem-solving with the partner agency to tailor the quality improvement intervention; 2) assessment of current RA and STD screening practices; and 3) evaluating use of the tool and reporting back to partner agency.
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2A4
THE FREQUENCY AND STABILITY OF SEX PARTNER MEETING PLACES REPORTED BY HIV-INFECTED MSM IN BALTIMORE CITY, 2009-2013

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Background: In the United States, the incidence of HIV and other STIs among men who have sex with men (MSM) continues to increase. Sex partner meeting places (SPMPs) are key to understanding the sexual transmission and resulting burden of HIV/STIs among MSM. Certain venues may present opportunities for targeted prevention and control activities (e.g., outreach testing). To inform prioritization of HIV/STI programs targeting MSM, the objective of this study was to identify stable and newly emerging SPMPs frequented by MSM in Baltimore, Maryland.
Methods: We used HIV surveillance data from newly diagnosed MSM interviewed by the Baltimore City Health Department during May 2009-April 2013 to explore annual distributions of SPMPs. Focusing on SPMP typologies most relevant to MSM, we reviewed reports of Internet-based sites (e.g., websites, phone apps) and local bars and clubs to capture high-frequency meeting places, defined by >3 nominations during the study period. Places with <10% change in the proportion of reports during the study period were considered stable; those nominated for the first time in the past year that met the high-frequency criteria were categorized as newly emerging.
Results: Among 434 newly diagnosed MSM, 234 (54%) provided information on at least one SPMP, accounting for 27 unique Internet-based sites and 33 distinct bars or clubs. Six (22%) of the 27 Internet-based sites and 7 (21%) of the 33 local bars and clubs were identified as high-frequency SPMPs. Among the six high-frequency Internet-based sites, three were stable over time and one emerged as a new site. Five of six high-frequency bars demonstrated stability over time.
Conclusions: We identified high-frequency, stable sex partner meeting places of HIV-infected MSM in Baltimore City. These places, including Internet-based sites and physical venues, may be important for targeted HIV control among a high incidence population.
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2A5
TAKING HIV TESTING TO THOSE AT THE HIGHEST RISK: TESTING IN NON-TRADITIONAL VENUES THROUGH OUTREACH IN BALTIMORE, MARYLAND

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Background: HIV/AIDS is an ongoing concern in Baltimore City; in 2011, the Centers for Disease Control and Prevention ranked the Baltimore Metropolitan Area sixth highest for new HIV diagnoses. The majority of new cases of HIV are occurring among African American gay, bisexual, and transgender (LGBT) youth. Baltimore City Health Department (BCHD) community outreach program has been hosting testing and care referral events for the LGBT population in a safe environment. The impact of testing at numerous non-traditional venues was evaluated by examining the yield of confirmed positives in 2011 and 2012 by venue type.
Methods: Client-specific data, including demographics, risk factors, venue information, and laboratory results are entered into electronic management information systems. Testing data from 2011 and 2012 were analyzed to establish the number of confirmed positives and their risk profiles. These venues were grouped into the following categories: LGBT-focused venues, BCHD-sponsored LGBT events, homeless services, substance abuse treatment centers, schools, festivals and health fairs, correctional facilities, and street-based venues.
Results: BCHD-sponsored LGBT events yielded the highest number of confirmed positives among all venues, with an HIV positivity rate of 11.16%. The second highest yield (2.78%) was from LGBT-focused venues. The least productive venues were homeless services, festivals and health fairs, colleges and youth centers with positivity rates of 1.66%, 1.23% and 0.26% respectively.
Conclusions: Outreach testing in venues that cater to LGBT individuals yielded the highest number of new confirmed HIV cases in Baltimore City. The BCHD-sponsored LGBT events also provided a safe and enjoyable atmosphere of comfort and trust. Other testing locations allowed BCHD to link and re-engage individuals to care. This analysis has helped the outreach program to minimize testing in non-productive venues, thus improving cost-effectiveness. Health Departments need to consider sponsoring targeted testing venues as a great way of reaching high risk populations.
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2B—SCREENING FOR CHLAMYDIA: TARGETING SUB-POPULATIONS AND PROMISING INTERVENTION STRATEGIES

2B1
PRENATAL SCREENING FOR CHLAMYDIA AND GONORRHEA AND THE ASSOCIATION WITH PAPANICOLAOU TESTING AMONG MEDICAID-INSURED WOMEN — UNITED STATES, 2009–2010

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Background: CDC recommends universal chlamydia (CT) screening of all pregnant women and gonorrhea (GC) screening of at-risk pregnant women. Prenatal CT/GC screening is often done concurrently with cervical cancer screening by Papanicolaou (Pap) testing. In 2012, the USPSTF issued revised cervical cancer screening guidelines and no longer recommends screening in women < 21 years and recommends an increased interval for testing in women ≥21 years. We estimated CT/GC screening rates among pregnant women and determined whether screening was more likely to occur during Pap testing.
Methods: Procedural and diagnostic codes from a large Medicaid claims database were used to identify chlamydia, gonorrhea, and Pap testing among pregnant women aged 15–24 during 2009–2010 who were enrolled in Medicaid ≥210 days prior to their date of delivery. Strengths of association between chlamydia and gonorrhea screening and Pap testing were measured using a Chi square test of independence.
Results: Among 63,332 pregnant women with a live birth, 79% (50,102) had a CT test, 72% (45,318) had a GC test, and 74% (46,966) had Pap testing. Of the 46,966 women who had Pap testing, 89% (41,695) had a CT test and 80% (37,423) had a GC test; among the 16,366 who did not have Pap testing, 51% (8,407) had a CT test and 48% (7,895) had a GC test. Women who had Pap testing were significantly more likely to have a CT or GC test (P < .001). Among all pregnant women, 13% (7,959) had neither Pap testing nor a CT or GC test.
Conclusions: Prenatal screening rates for CT/GC were suboptimal. Pregnant women who did not have Pap testing were much less likely to have CT/GC screening. These findings indicate that CT/GC screening rates could decline in the future if providers continue to tie CT/GC screening to Pap tests.
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2B2
EFFICIENCY AND EFFECTIVENESS OF SELECTIVELY SCREENING MEN WHO HAVE SEX WITH WOMEN (MSW) FOR *CHLAMYDIA TRACHOMATIS* (CT) IN FAMILY PLANNING/ REPRODUCTIVE HEALTH (FP/RH) SETTINGS

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Background: CDC recommends male CT screening only in high prevalence settings (e.g. STD, Corrections). Few studies have explored selectively screening men in other settings with moderate to high infection rates, e.g. FP/RH. Further, with the recent trend in stand-alone STD clinic closures and growing emphasis on medical home models, FP/RH client mix may shift. Washington (WA) State uniquely funds universal male screening, and documents risk factors and testing reason. We assessed CT positivity (%CT+) stratified by individual risk factors, sexual network and area-based socioeconomic measures (ABSM) among males screened in WA IPP FP/RH clinics; and compared efficiency and effectiveness of male CT screening algorithms.
Methods: %CT+ was calculated by demographics, risk behaviors, sex partner (SP) concurrency, and ABSM for 7,918 tests among men ages 15-44 screened in WA IPP FP/RH clinics from 2009-2011. We excluded men who have sex with men and diagnostic tests. We assessed efficiency (% of males that would be screened) and effectiveness (% of cases that would be detected) of 11 algorithms based on measures identified in univariate and multivariate analyses.

Results: 51% were aged 20-25; 60% non-Hispanic whites. %CT+ was 7.3%. Multivariate factors related to %CT+ ($p<0.05$): non-Hispanic black (10.7%CT+/AOR=2.31), Hispanic (9.1%CT+/AOR=1.28); other race/ethnicity (7.3% CT+/AOR=3.34); age 15-19 (7.4%CT+/AOR=5.33), age 20-25 (8.3%CT+/AOR=6.14); multiple SPs (9.5%CT+/AOR=1.60); no condom use (7.7%CT+/AOR=1.45); and living areas where >20% of adults lack a HS diploma (11.3%CT+/AOR=3.77). Algorithms ranged from 24-85% efficient and 21-91% effective. Screening based on multiple SPs, age 18-22, and low community education was the most efficient (58%) and effective (71%).
Conclusions: %CT+ among FP/RH screened males is high. Young and minority males have increased infection risk. Programs should document behavioral risk and reason for testing, and use local male and female %CT+ and resource levels to inform optimal test allocation. Future work should evaluate cost effectiveness of selective male screening.
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2B3
CHECK IT! A SEEK, TEST AND TREAT PILOT STUDY OF METHODS FOR COMMUNITY RECRUITMENT OF HARD-TO-REACH MEN FOR CHLAMYDIA AND GONORRHEA SCREENING AND EXPEDITED TREATMENT

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Background: Despite decades of *Chlamydia trachomatis* (Ct) screening sexually active women < 25 years, Ct rates have not decreased for African American (AA) women and remain 22 times higher than among White women. It is likely that untreated men are serving as a reservoir, thus innovative approaches to seek, test and treat men for STDs are needed. The purpose of this study was to compare respondent driven sampling (RDS) vs. venue-based sampling (VBS) for yield and Ct+ rate.
Methods: Sexually active men who have sex with women, aged 15-25, were recruited from high-poverty neighborhoods in New Orleans, LA using RDS or VBS (e.g. barbershops, basketball courts, etc.). Women were included in the RDS sampling in order to facilitate male recruitment. Participants were screened for both Ct and gonorrhea (GC) using NAAT urine tests and completed a brief ACASI survey. Individuals who tested positive were referred to either the STD clinic or a neighborhood pharmacy where treatment was provided free of charge by the study.
Results: Male participants (N=154) were recruited: RDS (n=57) and VBS (n=97). Nearly all (97%) were AA. Median number of female sex partners in the last 2 months was 2.0 (range 0-60) and 2 men (1.3%) had sex with men, 48% had never been tested for STDs and 57% reported that they no access to regular health care. Positivity rates for RDS compared to VBS were Ct (8.9% and 12.6%) and GC (1.8% vs. 2.1%). Of those who were positive for Ct 11/14 (79%) were treated. Of those positive for GC 100% (3/3) were treated.
Conclusions: RDS and VBS yielded high rates of infection among hard-to-reach men and community treatment facilities yielded high rates of treatment. Making testing available in the community has the possibility to effectively find hard-to-reach men in high-risk networks and treat their infections, subsequently breaking the chain of infection.
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2B4
ASSURANCE IN ACTION: TECHNICAL ASSISTANCE TO IMPROVE CT SCREENING RATES AMONG YOUNG FEMALES IN FEDERALLY QUALIFIED HEALTH CENTERS (FQHCS) IN NEW YORK CITY

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Background: As part of the Program Collaboration and Service Integration (PCSI) initiative at the New York City Department of Health and Mental Hygiene (DOHMH), the Bureau of STD Control (BSTDC) assessed primary care providers' chlamydia (Ct) screening practices and sought to improve documentation of sexual histories and appropriate testing and treatment of adolescent females. Three FQHCs (designated as Entity A, B and C) each with clinics in NYC neighborhoods with high rates of co-occurrence of Ct, HIV and Hepatitis C were recruited to participate.
Methods: FQHCs extracted baseline (January-June 2012) and follow-up (January-June 2013) data from their electronic health records (EHRs). Technical assistance offered in the interim included: aggregation and discussion of submitted data, targeted recommendations, materials on screening and treatment guidelines, provider training, and access to STD-related webinars.
Results: Compared to baseline, documentation of sexual activity (a reflection of appropriate sexual history taking) in its structured field increased at Entity A (49% to 58%, p<.0001) and Entity B (83% to 90%, p<.0001). Furthermore, Ct screening among women ≤25 years increased (p<.0001) from 36% (772/2131) to 47% (1760/3770) at Entity A and from 70% (1280/1825) to 77% (1437/1856) (p<.0001) at Entity B. While Ct screening among women >25 years increased slightly at Entity A and B, Entity C showed a significant (p<.0001) decrease in Ct screening among women >25 years from 50% (307/608) to 41% (157/385).
Conclusions: Structured fields for sexual activity are often under-utilized by providers and therefore do not accurately reflect the number of sexually active patients. Provision of provider training on the importance of taking and documenting sexual histories helped one FQHC improve its EHR documentation. Technical assistance to FQHCs appears to have a positive impact on facilities' screening rates among young women, but may be less effective in curbing over-screening of women >25 years.
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2B5
THE INTOUCH STUDY: SUCCESSFUL STRATEGIES FOR INCREASING PATIENT RETURN RATES FOR CHLAMYDIA (CT) AND GONORRHEA (GC) RETESTING

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Background: Chlamydia and gonorrhea reinfections are common and associated with serious reproductive health sequelae. Routine retesting a few months after treatment can detect reinfections early, reducing the risk of complications. Although national guidelines have recommended retesting for over a decade, retesting rates remain below 50%. A major contributing factor to low rates is patients not returning to clinic for retesting. Effective strategies for increasing patient retest return rates have been elusive.
Methods: From 2010-2011, female California Family Planning, Access, Care, and Treatment Program clients treated for CT and/or GC at six geographically diverse California Title X clinics were counseled about the dangers of reinfections and importance of retesting (education phase). During 2011-2012, treated CT/GC-positive clients were additionally enrolled in the InTOUCH Study and offered options for customizing their follow-up care, including receiving retest reminders via postcard, text, and/or email, and retesting using a mailed-in home-testing kit (education-plus-options phase). Clinic-level return rates during the 31-180 days post CT/GC treatment were calculated using laboratory and clinical encounter data. Fisher's exact test was used to compare differences in return rates from the two intervention phases versus the historical period just prior to study initiation.
Results: The number of eligible patients in the historical, education, and enrolled education-plus-options phases were 2696, 1454, and 575, respectively. Among enrolled patients, 90% opted to receive retest reminders while only 5% opted to use the home-test kit. The historical patient retest return rate was 54% (range 47-60%). This rate increased significantly during the education phase to 59% (range 52-66%, p=0.01), and during the education-plus-options phase to 62% (range 52-73%, p=0.001).
Conclusions: By providing CT/GC patients education about reinfections and retesting, and options for customizing their follow-up care, including receiving retest reminders, we were able to increase patient retest return rates by 15%. These low cost interventions can be broadly and feasibly implemented.
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2C—MEETING THE NEEDS OF HIGH-RISK POPULATIONS

2C1
RISK BEHAVIORS AMONG INCARCERATED FEMALE ADOLESCENTS WITH A DIAGNOSED STD: AN OPPORTUNITY FOR INTERVENTION

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Background: Universal gonorrhea and chlamydia (GC/CT) screening at intake to Los Angeles County (LAC) Juvenile Hall (JH) has proven fruitful in finding and treating high-risk youth, including commercially sexually exploited children (CSEC). Data are presented on risk factors among a subset of CSEC to inform prevention and treatment interventions.
Methods: Detailed risk assessments were conducted as part of a case manager-administered risk assessment for 159 young women ages 12-18 diagnosed with GC and/or CT at three LAC JH in 2012. Descriptive data are presented on demographics, arrest charge, sexual risk behaviors, physical/sexual abuse history, alcohol/drug use, family situation and gang affiliation.
Results: Among the 159 girls in JH case management in 2012, 24 (15%) reported ever having traded sex for money, shelter, or food (CSEC). Among the 24 CSEC, the average age was 14; 79% were African American and 45% were incarcerated for a prostitution-related charge. The average age at first sex was 12; 50% had 10 or more lifetime partners; 50% reported their first drink at age 13; and more than 90% reported marijuana and methamphetamine use in the previous year. Only 21% of the CSEC lived with or received money from a parent or relative; 40% reported gang affiliation; 46% reported forced sex as young children and 25% reported physical abuse by a parent or relative.
Conclusions: Among CSEC testing positive for GC and/or CT at JH, a large proportion reported early sexual debut, sexual abuse, alcohol and drug use and financial and social instability, underscoring the need for effective linkage to needed mental health, substance abuse and social services. In addition, since the average age of first sex was 12 and the average age of presentation at JH was 14, it is possible that interventions at an earlier age could interrupt the risk behaviors leading to CSEC.
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2C2
EVALUATION OF THE CHANGE IN SCREENING REGULATION OF SEX WORKERS FOR SEXUALLY TRANSMITTED INFECTIONS IN VICTORIA, AUSTRALIA

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Background: In Victoria, Australia, the legislation for sex workers to undergo mandatory testing for sexually transmitted infections (STIs) was changed from monthly to quarterly on October 7, 2012. The aim of this study was to determine the impact of this legislative change on STI diagnoses, clinical consultations and clients seen at the Melbourne Sexual Health Centre (MHSC).
Methods: Computerized medical records of all clients attending at MHSC from October 7, 2011 to October 7, 2013 were analyzed. Parameters in the year prior to the legislative change were compared to the year following the change.
Results: Comparing the post- to pre-legislation period, there was a small decrease in the total number of consultations at MSHC [4.1% (36260 to 34775)] but a minimal reduction in consultation hours [0.58% (from 10020 h to 9962 h)]. However, the number of consultations with FSW halved from 6146 to 3453 ($p<0.001$) and the consultation time spent on FSW reduced by 40.6% (1942 h to 1153 h). More heterosexual men ($p<0.001$), and women ($p<0.001$) were seen in the post-legislation period. Overall, 2158 (6.0 cases/100 consultations) and 2441 (7.0 cases/100 consultations) cases of chlamydia, gonorrhea, syphilis or HIV (STIs) were detected at MSHC in the pre- and post-legislation period [13.1% increase ($p<0.001$)]. STIs cases attributed to FSW decreased from 135 (2.2 cases/100 consultations) to 95 cases (2.8 cases/100 consultations) during the period but remained substantially below the rate in heterosexual women (5.0 to 5.5), men (5.9 to 6.0) and MSM (8.0 to 10.8).
Conclusions: The change in STI screening legislation for sex worker from monthly to quarterly resulted in more complex higher risk clients being seen and a 13% increase in STI diagnoses in the clinic although there was a small increase in STIs cases/100 FSW consultations. Overall, the change in legislation is likely to have had a beneficial effect on STI control in Victoria.
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2C3
THE IMPORTANCE OF FOCUSED HIV PREVENTION PROGRAMMING FOR FEMALE SEX WORKERS AND CLIENTS IN THE RESPONSE TO THE HIV EPIDEMIC IN AFRICAN COUNTRIES

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Background: HIV transmission in concentrated HIV epidemics has been reduced by focused HIV prevention programming for female sex workers (FSWs) and clients, particularly in countries in Asia. Yet only a few sub-Saharan Africa (SSA) countries are implementing HIV prevention programs for FSWs and clients to scale. In this paper, we explore the rationale for focused HIV prevention programming in African countries.
Methods: We globally reviewed available data and conducted mathematical modeling analysis to explore the rationale for focused HIV programming for FSWs and clients in SSA. We review existing data from 48 countries in SSA, and use examples from West Africa (Benin, Burkina Faso, Nigeria), East Africa (Kenya), and South Africa.
Results: Our findings suggest that formal commercial sex account for a larger burden of HIV acquisition and onward transmission than would be suggested by existing approaches of appraising HIV epidemics. For example, whereas data from the 2006 Benin demographic and health survey (DHS) reports that only 0.7% of men living in Cotonou paid for sex in the last year, polling booth surveys (PBS) carried out in 2008 showed that this proportion was 19.9%. The resulting classic population attributable fractions (PAF) for prevalent HIV among men due to contacts with FSWs were 1.4% using DHS data and 49.2% using PBS data. For women, corresponding reports of sex work were 1.3% and 13.2%, respectively, with classic PAF of only 10.9% based on DHS and of 54.9% based on PBS. Mathematical modeling shows a "transmission" PAF related to sex work for incident infections over 20 years, among men and women combined, of 58.3% in Cotonou, 61.2% in Kisumu, Kenya, and 88.9% in Bobo-Dioulasso, Burkina Faso.
Conclusions: HIV prevention programming among FSWs and clients remains critical to the HIV response in most African countries that have been labeled as experiencing "generalized" HIV epidemics.
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2C4
FINDING ACUTE HIV INFECTION AT NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE'S SEXUALLY TRANSMITTED DISEASE CLINICS, 2010-2012

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Background: Acute HIV infection (AHI) is characterized by peak infectiousness, undetectable HIV antibody, and detectable virus. Since 2010, New York State HIV law requires HIV testing be offered to all persons 13 to 64 years receiving hospital or primary care services. Opt-out HIV antibody testing was implemented at the New York City (NYC) Department of Health and Mental Hygiene's (DOHMH's) Sexually Transmitted Disease (STD) clinics in 2008. Targeted AHI testing of those at risk of recent HIV exposure began in 2010.
Methods: We measured annual contributions from NYC STD clinics to NYC HIV surveillance data, from calendar years (CY) 2010-2012, and described AHI cases diagnosed in NYC STD clinics, using medical record data. The Cochrane-Armitage test was used to evaluate trends.
Results: During CYs 2010, 2011 and 2012, NYC DOHMH STD clinics diagnosed 530, 479 and 438 HIV cases, representing 11.3%, 10.8%, and 10.9% of all HIV cases reported in NYC, respectively; and 35, 39, and 43 AHI cases, contributing 20.2%, 23.6%,and 19.8% of all AHI case reports. AHI cases represented an increasing proportion of STD clinic-based HIV diagnoses (6.6% (35/530), in 2010; 8.1% (39/479), in 2011; 10.9% (48/438), in 2012; $p=0.02$). Among the 122 AHI cases diagnosed from 2010-2012, all were male, but one. All male cases were AHI tested based on report of sex with other men over the prior two months. There were no significant changes in median age, race-ethnicity, or borough of residence of AHI cases from 2010-2012.
Conclusions: From 2010-2012, NYC DOHMH STD clinics consistently accounted for ~ 11% of NYC's reported HIV cases and ~20% of reported AHI cases. Among new HIV diagnoses made at the STD clinics, an increas-

ing proportion are AHI, affording the earliest possible linkage to care and viral load suppression.
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2C5
COMBINED HIV PREVENTION, THE NEW YORK CITY CONDOM DISTRIBUTION PROGRAM, AND THE EVOLUTION OF SAFER SEX BEHAVIOR AMONG PERSONS WHO INJECT DRUGS IN NEW YORK CITY

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Background: "Combined" prevention programming is now considered to be the standard of care for reducing injection risk behavior. We examined long term sexual risk behaviors among persons who inject drugs (PWID) in New York City following implementation of "combined" prevention programming, including a condom social marketing program established in 2007.
Methods: Quantitative interviews and HIV testing were conducted among PWID entering Beth Israel Medical Center drug treatment programs in New York City between 1990 and 2012. Data were analyzed by four time periods corresponding to the cumulative implementation of HIV prevention interventions including distribution of over 30 million NYC Condoms annually in New York City.
Results: A total of 7132 subjects were included; little change in sexual behavior occurred among HIV seronegative subjects, while HIV seropositive subjects reported significant decreases in being sexually active and increases in consistent condom use. HIV transmission risk declined from 14% in 1990-1995 to 2% in 2007-2012 for primary sexual partners and from 6% to 1% for casual partners. Results from the NYC Condom distribution program showed that 65% of drug users were aware of the NYC Condom, and among those who had heard of the NYC Condom, 48% had used it.
Conclusions: Cumulative implementation of combined prevention programming for PWID, including mass distribution of NYC Condoms, was associated with a substantial decline in the potential for sexual transmission of HIV from PWID between 1990 and 2012. The reduction in the potential sexual transmission of HIV from PWID occurred through the reduction in HIV seroprevalence among PWID and through reduced sexual risk behavior among the HIV seropositive PWID. These data suggest combined prevention may be considered as a standard of care for HIV positive PWID but also point to the need for interventions to reduce sexual risk among HIV negative PWID.
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2D (SYMPOSIUM)
METHODS OF POPULATION–BASED SURVEILLANCE OF STDs

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Estimating the population-level burden of sexually transmitting infections (STIs) can inform and evaluate prevention efforts. However, notifiable disease reports may be not capture all infections diagnosed and may have missing information on key variables, such as treatment information. This symposium will highlight three strategies for improving population-estimates of STIs by using 1) regional health information exchanges, 2) electronic case reporting, and 3) administrative data from the private sector.

Using a Regional Health Information Exchange to Facilitate Public Health STD Reporting and Partner Notification (Burstein)
Background: HEALTHeLINK, the Western New York Regional Health Information Organization, a multi-stakeholder organization created to facilitate health information exchange, can be used by public health for STD reporting and partner notification to more accurately and efficiently improve contact tracing and case reporting.
Methods: HEALTHeLINK maintains information on a secure data site shared with health care entities and public health departments. As of 2013, HEALTHeLINK has received data from 98% of hospitals and laboratories in the reporting area. HEALTHeLINK has been collecting or aggregating STD information as part of standard reporting. Laboratory, treatment, and demographic data on persons with reportable STDs in Erie County are available to Erie County Department of Health (ECDOH) staff.
Results: HEALTHeLINK collects 500-600 positive chlamydia and gonorrhea test results each month on Erie County residents. ECDOH Epidemiology staff and Disease Intervention Specialists (DIS) use HEALTHeLINK to determine treatment when not reported and demographic and contact information on cases and partners. By accessing HEALTHeLINK, the percent of reported chlamydia and gonorrhea cases with unknown treatment decreased from 46% (1934/4199) and 19% (344/1791), respectively, in 2006, to 8% (393/5088) and 4% (76/1781), respectively, in 2012. DIS started accessing HEALTHeLINK to perform patient and partner follow-ups in December, 2010. DIS with available performance data from both before (April 2009 – December 2010) and after HEALTHeLINK adoption (January 2011 – September 2013), increased percentage of cases interviewed from 72% (539/747) to 81% (750/923) and increased percentage of named partners examined from 68% (221/323) to 87% (418/481).
Conclusions: Clinical information exchange that includes public health statistics and information that HEALTHeLINK maintains can provide important information on STDs over a wide geographic area in near real time to public health practitioners. This exchange could translate into improvements in accurate and efficient STD identification, reduction of adverse outcomes, and enhancement of the impact of treatment.

Innovative Prevalence Monitoring through Private Sector Collaboration (Chow)
Background: Interpretation of case-based chlamydia and gonorrhea (CT/NG) STD surveillance data can be challenging without supplemental information about the at-risk population, including characteristics of who is seeking care, getting tested, and proportion testing positive. Sentinel clinic-based prevalence monitoring of chlamydia and gonorrhea is one model for collecting supplemental information, and has focused on high priority populations in public sector clinics, e.g. STD, family planning, and correctional settings. To construct a more representative profile of local STD burden among the vast majority of the population seeking care in the private sector, access to population-based program data sources in the private sector should be considered.
Objective: Identify private sector data sources with clinical and laboratory data that can be shared with local public health STD surveillance agencies for assessment of STD-related care, development of cost-efficient screening guidelines, and evaluation of preventable STD-related outcomes.
Methods: To assess age-specific CT/NG screening coverage at the program and provider level, we analyzed Family PACT program administrative client enrollment and provider claims data from 2003-2012. To assess CT/NG prevalence rates, we merged Quest Diagnostics data with the administrative data to determine relative case yields by age. We will also present examples of other CT/NG prevalence monitoring efforts based on Kaiser Permanente Northern California (KPNC) chlamydia and gonorrhea data, and national/state-level Lab Corp data. To estimate the burden of pelvic inflammatory disease, we used Family PACT claims-based ICD-9/NDC/CPT4 codes, as well as KPNC PID clinical encounter data, and present examples of other approaches with Group Health Cooperative and Market Scan data sources.
Results: CT/NG screening rates have increased across all data sources and all age groups. CT/NG prevalence monitoring trends across administrative data sources from multiple private sector data sources demonstrate similar and consistent age and race disparities to those seen in case-based surveillance data. Administrative data-based PID burden exceeds that seen in mandated case reports but for some sources showed declining trends coincident with increases in screening coverage.
Conclusions: Analysis of program-specific and population-based administrative data on STD-related clinical and laboratory data have been very useful for targeting programs and providers to improve cost-efficient screening of young women, reduce over-screening in low prevalence populations, and demonstrate impact of increased access to STD services on reduced reproductive sequelae.

Making electronic surveillance sensitive, specific, objective, and reproducible (Klompas)
Intro: Electronic health record (EHR) data are a promising source to enhance notifiable disease surveillance since they include timely, comprehensive data

including demographics, diagnoses, tests, and treatments. Raw EHR data, however, have important limitations. Diagnosis codes are often used inaccurately and laboratory tests cannot detect culture-negative disease or reliably distinguish between acute, chronic, and resolved infections. We have been collaborating with clinical practices and the Massachusetts Department of Public Health since 2007 to develop surveillance algorithms for sensitive and specific notifiable disease surveillance.
Methods: We hypothesize that integrating different kinds of EHR data (past and present diagnoses, laboratory tests, and prescriptions) can overcome the limited sensitivity and specificity isolated streams. We develop surveillance algorithms by systematically identifying all patients within a practice with a disease of interest by reviewing EHR data, infection control records, and health department archives of reported cases. We then propose candidate surveillance algorithms based on combinations of past and present laboratory tests, diagnosis codes, and prescriptions. We measure candidate algorithms' sensitivity and positive predictive value, and then use the results to refine the algorithms. We validate algorithms by applying them to a separate practice or separate period.
Results: Using these methods, we have developed surveillance algorithms for chlamydia, gonorrhea, pelvic inflammatory disease, acute hepatitis A, B, and C, syphilis, and others. Algorithm performance tends to be high: sensitivity and positive predictive values for chlamydia and gonorrhea are both 100%, sensitivity and positive predictive value for syphilis are 97% and 100%, sensitivity and positive predictive values for acute hepatitis B are 97% and 97%. These algorithms have now been implemented within live, automated EHR-based surveillance systems in Massachusetts and Ohio and have collectively reported over 20,000 cases to state health departments.
Discussion: Combination algorithms can enable sensitive and specific surveillance using EHR data.

2E (SYMPOSIUM)
PERFORMANCE MEASUREMENT & PROGRAM IMPROVEMENT: WHERE SHOULD STD PROGRAMS BE HEADING?

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Performance standards, measurement, and monitoring as well as calls for program improvement can evoke confusion and anxiety among program staff and leaders. This symposium will offer information and clarity on the latest thinking in these areas in public health and offer some best practices in performance measurement and program improvement from STD and other infectious disease programs in the US and abroad. Session speakers will reflect on accomplishments and barriers to: 1) using standards, benchmarks and measures, 2) creating an organizational culture that supports program improvement, and 3) institutionalizing program measurement and improvement cycles within a program. Audience members will leave the session with increased clarity regarding these terms and with concrete ideas on how STD programs can implement and maintain a culture of continuous program and quality improvement.

General trends in performance measurement/management in public health (Thomas)
TB program example of PM in action, on a realistic scale (Khan)
UK's STD program: example of PM in action, on a realistic scale (Dunbar)
California STD Program: example of PM in action, on a realistic scale (Frasure-Williams)

2F—CLINICAL SERVICES: HIV, PRENATAL SYPHILIS SCREENING, AND CHLAMYDIA SCREENING

2F1
HIV SERVICE DELIVERY TO POPULATIONS AT HIGH RISK ATTENDING STD CLINICS, 55 HEALTH DEPARTMENT JURISDICTIONS, 2011

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Background: Over 1.1 million people are living with HIV in the US. HIV testing and services along the continuum of care are necessary to curb the epidemic. STD clinics serve economically disadvantaged persons at high risk seeking confidential STD and HIV services.
Methods: In 2011, CDC funded HIV testing in 59 jurisdictions. Data submitted by grantees through April 5, 2013 were analyzed (SAS, V9.3), including population descriptives and bivariate analyses examining associations between demographic and HIV indicators from 55 jurisdictions.
Results: In 2011, 19% (462,671) of CDC-funded HIV tests in healthcare settings were conducted in STD clinics. STD clinics accounted for 25.8% of newly identified confirmed HIV positives; 41.7% of these new cases were linked to care; 58.3% were referred to partner services. People in the South (61%) and 20-29 year olds (49.9%) were more likely to be tested than other regions and age groups (p<.001). African Americans were more likely to be tested (50.9% vs. 29.2%) and identified as newly confirmed HIV positive (.82% vs. .41%) than whites but were less likely to be linked (33.3% vs. 50.5%), p<.001. Hispanics/Latinos were more likely to be identified as newly confirmed HIV-positive (.72% vs. .41%), p<.001 and linked (65.2% vs. 50.45%), p=.002 than whites. Finally, MSM (3.99%) were more likely to be identified as newly confirmed HIV-positive than heterosexual men (.31%) and women (.23%) at high risk, p<.001, but there were no differences in linkage (MSM: 47.42%; men at high risk: 45.78%; women at high risk: 48.49%), p>.05.
Conclusions: Although linkage and referral percentages need improvement, STD clinics appear successful at serving populations disproportionately affected by HIV/STDs and prioritized in the National HIV/AIDS Strategy (MSM, African Americans, Hispanics/Latinos). Since access to medical services may be limited, specifically for sexual health, STD clinics provide an avenue for service provision to populations at high risk.
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2F2
IMPROVING HIV CARE OUTCOMES AMONG PERSONS NEWLY DIAGNOSED WITH HIV IN THE NEW YORK CITY DEPARTMENT OF HEALTH & MENTAL HYGIENE SEXUALLY TRANSMITTED DISEASE CLINICS, 2010 & 2011

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Background: Viral suppression is an important goal of HIV care. Annually, New York City (NYC) Sexually Transmitted Disease (STD) Clinics identify ~10% of all newly diagnosed HIV cases citywide, and facilitate timely linkage to HIV primary care. We sought to quantify HIV care linkage and viral suppression (VS) outcomes using population-based HIV surveillance data for HIV cases diagnosed in NYC STD clinics.
Methods: Using the NYC HIV/AIDS Registry (HARS), which contains mandated reports of HIV diagnoses and related tests, we identified persons newly diagnosed with HIV at NYC STD clinics in 2010 and 2011. We compared care linkage (HIV-related laboratory test within 90 days of diagnosis) and VS (viral load<200 copies/ml) at 6 and 12 months after diagnosis among cohorts of persons with HIV newly diagnosed in NYC STD clinics in 2010 and 2011, and to all other newly diagnosed persons in NYC in 2011. Z tests were used to assess differences among cohorts.
Results: In 2010, among 406 HIV cases diagnosed in NYC STD clinics, 251/406 (62%) had timely care linkages; 88/406 (22%) and 159/406 (39%) achieved VS at 6 and 12 months, respectively. In 2011, among 376 HIV cases diagnosed in NYC STD clinics, 244/376 (65%) had timely care linkages; 106/376 (28%) and 191/376 (51%) achieved VS at 6 and 12 months. VS at 12 months was higher in 2011 (p=.002). In 2011, 3098 HIV cases were diagnosed in NYC settings other than NYC STD clinics; 2101 (68%) had timely care linkages; 1122 (36%) and 1680 (54%) achieved VS within 6 and 12 months, respectively.
Conclusions: HIV care outcomes for persons newly diagnosed with HIV in NYC STD clinics improved from 2010 to 2011, but remain suboptimal. Future analyses will examine factors associated with failure to engage in care and achieve VS to inform future interventions to improve the HIV care outcomes.
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2F3
TECHNICAL ASSISTANCE AND TRAINING INCREASES STD SCREENING IN HIV CARE SETTINGS

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Background: Though syphilis screening in HIV care has been readily taken up by providers, screening for gonorrhea and chlamydia has historically lagged in these settings, even in the higher-risk population of men who have sex with other men (MSM). In order to address this disparity, the Denver Prevention Training Center partnered with 4 urban HIV clinics disproportionately serving MSM to provide training and technical assistance related to STD screening in those MSM living with HIV.
Methods: Through professional contacts, the Denver PTC identified a clinician champion at each of 4 HIV clinics (2 in CO, 2 in TX). Each clinic was asked to undertake a structured review of STD screening data for syphilis, gonorrhea, and chlamydia performed in their clinic in the last 12 months. The Denver PTC then worked with the clinician champion to identify and address barriers to increased screening in those settings and offered a 1-hour training session to all clinicians and clinic support staff in the individual clinics. Six months after the training clinics were asked to review STD screening data again. Pre- and post-capacity building services data were compared.
Results: Across all four clinics the number of patients screened for gonorrhea and chlamydia increased 23.4%. The percentage increase in the number of persons screened at the clinic level ranged from 7.6% to 137%. Collectively, patients screened for syphilis increased 5.9%, with clinics ranging from 2.5% to 11.9%. Two of 3 clinics unable to perform NAAT testing at rectal or pharyngeal sites prior to the project adopted procedures that allowed for screening in these anatomic sites.
Conclusions: When coupled with provider training, clinic-level technical assistance including the identification of a local champion, structured review of local data, review and addressing of barriers, and ongoing communication, can positively impact STD screening rates in HIV clinical settings.
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2F4
PRENATAL SYPHILIS SCREENING WITH THE REVERSE SEQUENCE ALGORITHM: ANALYSIS OF MATERNAL AND NEONATAL OUTCOMES AMONG WOMEN WITH DISCORDANT SEROLOGY

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Background: The reverse sequence algorithm (RSA) is increasingly used for prenatal syphilis screening by high volume laboratories, beginning with a treponemal test such as the chemiluminescence immunoassay (CIA), followed by reflex testing of CIA-reactive specimens with the rapid plasma regain test (RPR). Implications of discordant serology (CIA-reactive and RPR-non-reactive) for pregnancy and neonatal outcomes are unknown.
Methods: Pregnant women at Kaiser Permanente Northern California with CIA-reactive, RPR-non-reactive serology underwent reflex testing with Treponema pallidum particle agglutination (TPPA) from August 2007-August 2010. Samples reactive with TPPA (CIA+, RPR-, TPPA+) were deemed "TPPA-confirmed"; those reactive only with CIA (CIA+, RPR-, TPPA-) were deemed "unconfirmed CIA-reactive". Past syphilis testing history, other medical history, maternal and neonatal outcomes and treatment were abstracted from the medical record.
Results: Of 194 pregnant women with discordant treponemal serology, 156 (80%) were unconfirmed CIA-reactive. Of 106 women who were retested, 43 (41%) became CIA-non-reactive; all were initially unconfirmed CIA-reactive. Women with TP-PA-confirmed serology were more likely to receive treatment for syphilis than those with unconfirmed CIA-reactive serology (31.5% vs 3.8% $p<0.01$). Of 3 women who seroconverted to CIA-reactive and RPR-reactive during pregnancy, 1 became persistently CIA-non-reactive later in pregnancy and may have had both a false positive RPR and CIA. A large majority of pregnancies (189, 97.5%) ended in a live birth; there were no stillbirths attributable to syphilis. No infants were born with clinical signs of congenital syphilis, and 2 infants received antibiotic therapy based on the mother's serology results.
Conclusions: Most pregnant women with discordant treponemal serology were unconfirmed CIA-reactive and a substantial percentage became CIA-non-reactive upon repeat testing. Isolated CIA-reactive serology in these populations is likely to be falsely positive. Repeated testing of unconfirmed CIA-reactive specimens and reflex testing of discordant specimens with a second treponemal test is crucial in this population.
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2F5
CHLAMYDIA POSITIVITY AND COST PER CASE DETECTED IN ASYMPTOMATIC WOMEN OVER 25 YEARS IN AN STD CLINIC

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Background: CDC currently recommends against routine chlamydia screening of asymptomatic women >25 years, but recommends screening high-risk older women. What constitutes high-risk remains undefined and the program costs associated with screening these women remains unknown. We sought to determine 1) chlamydia positivity among asymptomatic tested women >25; and 2) costs associated with detecting chlamydial cases in this population.
Methods: We retrospectively analyzed Public Health – Seattle & King County STD Clinic data from January 1, 2004 – October 25, 2013 to describe the population of asymptomatic women, excluding those with known contact to chlamydia or gonorrhea, tested for genital chlamydia infection. We sought to identify factors associated with test positivity and calculate the laboratory testing costs per case detected.
Results: During the study period, 8,261 asymptomatic women >25 attended the clinic for new problem visits; this group represented 31% of all female visits, and 55% of these women sought care for routine STD screening. 5,320 women underwent chlamydial testing, and 104 tested positive (1.95%). Test positivity was highest among Hispanics (4.4% of 181 tested), Asians (3.9% of 409 tested), Native American/Alaskan Natives (3.8% of 131 tested), and women aged 26-30 (3.24% of 2,100 tested). Test positivity did not vary significantly by number of sexual partners, drug use, or history of chlamydia or another bacterial STD in the last 12 months. The laboratory cost per case detected was $1,254.73, with an overall cost for chlamydia testing of $140,530 over 10 years.
Conclusions: Overall, chlamydia positivity among asymptomatic women >25 at our STD Clinic is low. At the same time, eliminating the laboratory cost of chlamydia testing in this group would save relatively little money. In an era of near-universal healthcare, shifting the care of this low-risk population to primary care clinics could save additional costs while focusing STD Clinic resources on higher-risk populations.
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3A—STD PREVENTION AND ADOLESCENTS: DOES CONTEXT MATTER?

3A1
DO THE FIRST FEW SAME-SEX SEXUAL EXPERIENCES (FSSSE) OF YOUNG BLACK MSM (YBMSM) IMPACT STD/HIV TESTING BEHAVIOR?

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Background: Research suggests a relationship between timing of FSSSE and initial STD/HIV testing experiences. There is limited knowledge about how YBMSM operationalize STD/HIV risk during FSSSE and how this promotes testing behaviors. The objective of this study is to examine how YBMSM describe STD/HIV testing behavior around time of FSSSE.

Methods: 45 YBMSM 15-19 y.o., living in Baltimore, MD were recruited from clinics, venue/community-based outreach, social media, and snowball sampling over 10 months to complete face-to-face interviews. Interviews were transcribed and independently coded. Data was analyzed using categorical and contextualizing analytic methods (NVIVO software).
Results: Mean age of sample was 17.5 y.o. Most were homosexual/gay (66%) or bisexual (30%). Participants reported an average of 3.6 (SD 5) partners (prior 6 months), history of STD (16% (N=7)) or HIV (9% (N=4)). Nearly half (45%, N=20) described being worried about acquiring HIV, but few described worrying about risk around FSSSE. Two typologies of YBMSM STD/HIV screening behaviors emerged: ***Engaged YBMSM*** (*proactively/reactively screening*): Described general concern about STD/HIV seroconversion and future implications; network-level factors (knowledge of family member with HIV/AIDS, exposure to people/programs encouraging condom use/testing); and proactive (before sex) or reactive (after sex) testing. ***Disengaged YBMSM*** (*neither proactive nor reactive screening*): Described strong trust with partner(s), limited transmission knowledge, and test distrust, and nervousness/fear about knowing status. Network-level included lack of communication about STD/HIV and lack of acceptance of "homosexual lifestyle." Intra-dyadic factors included condom-less sex norms, negative attitude about testing and trust in partner results. **Screening behavior** was inconsistently related to condom use.
Conclusions: Network, dyadic, and individual level factors influenced YBMSM's engagement or disengagement in STD/HIV testing around FSSSE and was often inconsistent with worry about acquisition. This work suggests potential areas that may improve engagement and promotion of proactive STD/HIV testing in disengaged YBMSM who are navigating their FSSSE.
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3A2
ATTITUDES TOWARDS RELATIONSHIP POWER AND CONCURRENT HETEROSEXUAL PARTNERSHIPS AMONG AFRICAN AMERICAN YOUTH IN BALTIMORE, MD

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Background: Sexual concurrency may contribute to increased risk for sexually transmitted diseases (STDs) among youth. Attitudes about gender roles, including power balance within sexual partnerships, may be a driver. We examined the association between attitudes towards relationship power and concurrency among African American youth.
Methods: Data were collected from February, 2011 to May, 2013 through a random household sample of low and middle socioeconomic status (SES) African Americans (N=164), aged 15-24, from Baltimore, MD. Youth reported on 292 heterosexual partnerships via audio-CASI. Weighted bivariate and multivariate logistic regression analyses stratified by sex were conducted to examine whether index partner concurrency in male-reported partnerships and sex partner concurrency in female-reported partnerships were associated with participants' attitudes towards relationship power within a sexual partnership and to assess whether observed relationships varied by SES and/or partnership type (main vs. casual).
Results: Participants were on average 21 years old, 54% male and 55% low SES. 28% of partnerships were with a main partner. Index partner concurrency was reported in 35% of male-reported partnerships and sex partner concurrency was found in 30% of female-reported partnerships. More equitable beliefs about relationship power were significantly associated with decreased index partner concurrency (age-adjusted OR=0.18; 95%CI=0.05-0.58; p<.01) among middle SES, African American male-reported partnerships and significantly associated with increased sex partner concurrency (age-adjusted OR=6.80; 95%CI=2.19-21.11; p<.01) among low SES, African American female-reported partnerships. Among males and females, observed associations were significant in main but not casual partnerships, after adjusting for age and SES.
Conclusions: Findings suggest attitudes towards relationship power are associated with concurrency among African American youth and that this relationship may manifest differently by SES and partnership type. Implementing targeted interventions that recognize the complex relationship between socioeconomic context, partner dynamics, gender, and sexual behavior is an important step towards reducing STD risk in this vulnerable population.
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3A3
LOW PROSPECTS AND HIGH RISK: STRUCTURAL DETERMINANTS OF SEXUAL HEALTH ASSOCIATED WITH SEXUAL RISK AMONG AN ECONOMICALLY DISADVANTAGED COHORT OF YOUNG AFRICAN AMERICAN WOMEN

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Background: The increased risk of HIV and other sexually transmitted infections (STIs) among some African American women may reflect their attempts to survive depressed economic conditions. Furthermore, these women may feel hopeless and engage in risk behaviors as a coping mechanism for their low future expectations given these adverse conditions. This study examines the association between high-risk sexual behavior and structural determinants of sexual health among a sample of young African American women.
Methods: 237 young African American women (16 to 19 years old) from economically disadvantaged neighborhoods in Raleigh and Durham, NC were enrolled into a randomized trial testing the efficacy of an adapted HIV/STI prevention intervention. Participants were assessed at baseline for several structural determinants of sexual health (e.g., lack of food at home, homelessness, and low perceived prospects for education and employment) and HIV/STI-related risk behaviors (e.g., unprotected sex, number of sex partners, exchange sex). Logistic regression analyses controlling for age predicted the likelihood that young women reporting lack of food at home, homelessness and low future prospects would also report sexual risk behaviors.
Results: Some young African American women reported a lack of food at home (22%), homelessness (27%), and low perceived education/employment prospects (19%). Young women reporting these structural risk factors were between 2.2 and 3.8 times as likely as those not reporting these risk factors to report multiple sex partners, risky sex partners including older men and partners involved in gangs, substance use prior to sex, and exchange sex.
Conclusions: In this sample of economically-disadvantaged young African American women in the southeast, self-reported structural determinants of sexual health were associated with myriad sexual risk behaviors. Diminished economic conditions among these young women may lead to sexual risk due to hopelessness, the need for survival or other factors.
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3A4
EXPLORING CHLAMYDIA POSITIVITY AMONG FEMALES ON COLLEGE CAMPUSES, 2008–2010

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Background: Comprehensive, national data are not available on STDs among the college population, and sentinel studies have predominately focused on white students attending 4-year institutions. However, racial and ethnic minorities are disproportionally impacted by STDs, and little is known about STDs among students attending minority serving institutes (MSIs). Likewise, STD research on the community college population is limited, despite the fact that these colleges serve almost half of all the undergraduate students in the US.
Methods: We reviewed chlamydia testing data from colleges participating in a national infertility prevention program. We determined chlamydia positivity (# of positive tests divided by the # tested) among females aged 18–24 years stratified by college type (4-year versus 2-year; MSI (yes/no)). MSIs include tribal universities, historically black colleges and universities, and Hispanic serving institutions.
Results: During 2008-2010, 143 colleges provided chlamydia testing data, 37 (26%) of which were MSIs and 21 (15%) were 2-year colleges. The colleges performed 118,946 chlamydia tests of which 7,733 (6.5%) were positive. Chlamydia positivity in females at 4-year institutions was 6.6% (6,625/94,395) compared to 5.3% (461/8,229) at 2-year institutions (p=0.0001). Among females at MSIs, chlamydia positivity was almost double of that at non-MSIs (10.0% (2,464/22,269) vs. 5.4% (4,873/85,189); p=0.0001). Similar to overall US patterns among women tested in family

planning clinics, chlamydia positivity was highest in the southeast (11.0%) and southwest (13.5%), where the majority of MSIs are located.
Conclusions: Chlamydia positivity is higher among females on college campuses than among general population prevalence estimates; however additional information on screening practices is needed to better estimate prevalence as high positivity may reflect symptomatic testing rather than routine screening. Still, increased positivity at MSIs suggests targeted prevention efforts are needed to work with high-risk college populations to provide better screening and prevention services.
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3A5
CHLAMYDIA AND GONORRHEA INFECTIONS AMONG YOUNG BLACK MEN WHO HAVE SEX WITH MEN IN JACKSON MISSISSIPPI

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Background: This study examined the prevalence rates of chlamydia (CT) and gonorrhea (GC) among young Black men who have sex with men (YBMSM) attending an urban STD clinic in Jackson, MS.
Methods: Data were collected in an STI clinic of Jackson Mississippi. The men (N=207) were 15-29 years of age, identified as Black and engaged in sexual intercourse with a man in the past three months. YBMSM were screened for chlamydia by rectal, pharyngeal and urethral sites. The men had the option to refuse screening by biological site. Bivariate associations between these outcomes and status of being HIV- (74%) or HIV+ (26%) were conducted.
Results: Mean age was 22.4 years (SD=2.96). Overall 41% had evidence of CT or GC infection. CT and GC were identified in 24% and 29% of men respectively. Regarding infection site, in the urethra, 8% had CT and 9% had GC; in the pharynx, 5% had CT and 14% GC; in the rectum, 16% had CT and 18% had GC. The prevalence of pharyngeal chlamydia was 3.34 (95% CI=1.07, 10.98) times higher among HIV+ men when compared to HIV- men. No significant differences were found for rectal and urethral chlamydia. The prevalence of urethral gonorrhea was 2.51 (95% CI= 1.02, 6.20) times higher among HIV+ men when compared to HIV- men. No significant differences were found for rectal and pharyngeal chlamydia.
Conclusions: These groups of YBMSM exhibit alarmingly high rates of CT/GC infection regardless of their HIV status. YBMSM need access to routine CT/GC screening programs that include all anatomical sites and risk reduction interventions that may address high prevalence infection rates in this population.
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3B—MEASUREMENT IN STI PREVENTION

3B1
RELIABILITY OF SELF-REPORTED AGGREGATE AND ENCOUNTER-SPECIFIC SEXUAL ACTIVITY IN HIV-POSITIVE MSM

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Background: The identification of promising interventions to reduce HIV transmission depends on the availability of reliable self-reports of sexual risk behaviors (SRB). Reliability of SRB data is influenced by characteristics of items (e.g. item type, response scale) and respondents (e.g. stigma, openness, outness, sexual communication). This study utilized data obtained from two different but equivalent item types (aggregate vs. encounter-specific) to evaluate SRB data reliability.
Methods: Data were obtained from 223 HIV+ MSM at the baseline observation of a behavioral intervention trial. An audio computer-assisted self-interviewing (ACASI) instrument was used to gather SRB in two ways. First, participants provided aggregate counts of specific behaviors for the prior 30 days. Second, participants provided information on 5 specific sexual encounters during the same period. Data from both item types was compared for the number of sexual encounters (NSEX), the number of sexual partners (NPART), and the number of encounters involving unprotected receptive/insertive anal intercourse (URAI, UIAI).
Results: The proportion of participants with consistent SRB (between aggregate and encounter-specific items) was highest for data on the number of sexual encounters (57%) and the number of sexual encounters (56%). Reporting consistency was lowest for UIAI (31%). Participants reported higher SRB frequencies on the encounter-specific items in all cases except NPART, where values were higher for the aggregate items. Higher HIV stigma scores and lower outness scores were related to inconsistencies in NSEX and NPART. Inconsistencies in reports of URAI/UIAI were not significantly related to any of the tested respondent characteristics.
Conclusions: Poor reliability in SRB data obtained from participants in trials of HIV prevention interventions could lead to poor decision-making regarding intervention effectiveness. Comparisons of data obtained from aggregate and encounter-specific items yielded potentially significant inconsistencies in self-reported SRB. More work is needed to understand how item and respondent characteristics influence SRB data reliability.
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3B2
WHAT DO RISING CHLAMYDIA DIAGNOSIS RATES MEAN IN THE ERA OF CHANGING TESTING TECHNOLOGIES?

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Background: The number of chlamydia diagnoses made in genitourinary medicine (GUM) clinics in England has increased over the last decade. It is often assumed that rising diagnoses are caused by increases in transmission. However factors other than transmission that affect diagnoses have also changed over the same period; more tests have been performed, and nucleic acid amplification tests (NAATs) gradually replaced less accurate enzyme immunoassay (EIA) tests in the mid-2000s. We investigated the potential effect of changes in testing rates and test technologies on chlamydia trends.
Methods: Numbers of chlamydia tests and diagnoses reported from GUM clinics in England from 2003 to 2012 were analyzed. The proportion of laboratories in England using NAATs and EIA tests each year between 2003 and 2012 was obtained from the National External Quality Assessment Service. Estimates of sensitivity and specificity of EIAs compared to NAATs were derived from literature. Trends in the number of diagnoses, crude positivity (diagnoses/tests) and positivity adjusted for test sensitivity/specificity were compared.
Results: Between 2003 and 2012, numbers of tests increased from 633,289 to 1,288,443 and diagnoses from 86,595 to 97,166. Crude positivity decreased from 13.7% to 8.1%. After adjusting for average sensitivity (80%) and specificity (95%) estimates for EIAs, positivity declined less steeply, from 11.7% to 8.1%. Sensitivity analyses using a range of plausible sensitivity and specificity estimates had a substantial impact on the range of positivity trends over the analysis period.
Conclusions: Although diagnoses increased between 2003 and 2012, trends in chlamydia diagnoses alone do not provide a full picture of the burden of infection. Diagnosis trends should be interpreted with caution in the absence of information on test volume. Changes in sensitivity and specificity of tests in use should be taken into account when interpreting trends in diagnoses or positivity.
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3B3
EXPEDITED PARTNER THERAPY FOR CHLAMYDIA INFECTION IS UNDERREPORTED AND UNDERUTILIZED, MASSACHUSETTS 2012

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Background: Massachusetts Department of Public Health (MDPH) promulgated regulations in August 2011 to permit Expedited Partner Therapy (EPT) for chlamydia infection. In January 2012, MDPH revised the chlamydia case report form to capture additional information regarding partner notification and treatment (PN).
Methods: Laboratory-confirmed chlamydia cases diagnosed in 2012 were analyzed in SAS 9.3 to describe provider usage of EPT through patient-delivered medication and/or prescription. Treatment setting, method of PN, patient sex and age were analyzed using chi-square.
Results: A total of 21,438 chlamydia cases were identified. 71% of the case report forms had incomplete EPT information. We analyzed cases where PN and EPT questions were answered by providers (n=6114, n=29%). 5410

(88%) reported any form of PN, mainly patient notification of partners (n=5324, 98%). 1092 (18%) reported offering EPT; of those, 558 (51%) reported using patient-delivered prescription(s) only; 468 (43%) reported using patient-delivered medication only; 66 (6%) reported using a combination of methods. Treatment setting was reported for 4648/6114 (76%) of cases. Community health centers (358/1275, 28%; p< 0.0001), hospital-based clinics (153/537, 28%; p=0.0149), and STD/family planning clinics (229/863, 27%, p=0.0005) reported using EPT in a larger proportion of cases, when each was compared to all others with known setting. EPT was offered more often to female cases (981/3519, 28%) than male cases (148/1388, 11%) (p< 0.0001). Differences between age groups were not statistically significant.
Conclusions: A minority of case report forms had complete information regarding PN. PN methods varied by patient sex and treatment setting, but overall, reported use of EPT by healthcare providers in Massachusetts is low. Newness of regulations along with varied interpretation of EPT questions on the new case report form, may have contributed to underutilization and underreporting. Further steps could be taken to promote EPT usage, to maximize impact of the policy on chlamydia control.
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3B4
A BETTER BANG FOR YOUR BUCK: TARGETED SYPHILIS INTERVIEWS IMPROVES PARTNER SERVICES OUTCOMES WHILE MAXIMIZING STAFF RESOURCES

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Background: In 2012, to streamline STD partner service activities in NYC and target limited resources, the New York City Department of Health and Mental Hygiene's (DOHMH) Bureau of STD Control (BSTDC) conducted an evaluation of syphilis interview outcomes. Syphilis case data were analyzed by disease stage, and select demographics of the index case-patient to examine variances in outcomes among specific populations. Subsequently, in July 2012, BSTDC changed syphilis interview criteria, restricting early syphilis interviews to those ≤ 45 years of age and ceasing interviews of both males and females with late latent or latent of unknown duration syphilis.
Methods: Using STD registry data, we compared early syphilis partner indices and time to interview data from 2011 to the year after the changes were implemented (7/23/12 – 7/22/13). Chi-square was used to compare these outcomes before and after the interview criteria change.
Results: The changes in interview criteria resulted in a decrease in overall syphilis interviews (2041 vs. 1866). The partner index (PI) remained unchanged for Primary and Secondary (P&S) syphilis (0.95 vs. 0.92), but increased slightly for Early Latent (EL) syphilis (0.71 vs. 0.76, NS). After the criteria change, P&S and EL syphilis cases were more likely to be interviewed within 14 days of specimen collection (48% vs. 61%, p=<0.001 and 42% vs. 56%, p=<0.001 respectively), and the disease intervention index for all syphilis cases increased (0.23 vs. 0.26, p=0.03).
Conclusions: Narrowing the interview criteria for syphilis cases did not yield additional partners per case, but the number of partners with favorable dispositions including those treated for syphilis exposure and/or infection increased and we improved timeliness to interview among priority cases. Optimization of partner services will continue to be necessary as demands on case investigation and partner services staff increase and resources diminish.
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3B5
MONITORING AND EVALUATION OF HIV PARTNER SERVICES PROGRAMS IN THE UNITED STATES: APPROACHES, STRUCTURES, AND LESSONS LEARNED

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Background: In support of the 2010 National HIV/AIDS Strategy, the Centers for Disease Control and Prevention (CDC) provides funding to Health Departments to implement high impact HIV prevention programs to reduce new infections, increase access to care and improve health outcomes for people living with HIV. This presentation will highlight lessons-learned from implementing the PS data requirements, conducting data quality assurance processes, and calculating program performance indicators at the national level.
Methods: Health departments began submitting client-level HIV PS data to CDC for the first time in March 2012 for their 2011 program activity. Standardized NHM&E variables for index patients and their named partners captured information on client demographics, behavioral risks, HIV testing history, referrals to HIV testing and linkage to HIV medical care. CDC received 2011 PS data from 47 of 59 health departments. This presentation focuses on data submitted by 36 whose data were in an analyzable format.
Results: After utilizing SAS and conducting the Data Management/Data Quality processes to increase data collection standardization and quality, a total of 21,913 index patients and 14,481 partners were identified in PS programs. Eighty-five percent of index patients accepted enrollment in PS and 77% of their partners were located. Among those partners identified not known to be HIV-positive, 83% received an HIV test and of those, 93% received their results. A review of PS programs across 59 health departments indicated that 56% of health departments used a combination of rapid and conventional test technologies for PS activities.
Conclusions: Program integration that involves both HIV and STD programs (currently 42 Health Departments) has the potential to be highly effective in notifying partners and referring them for HIV testing. Health Departments can also use national HIV PS indicators as benchmarks to improve their own service delivery.
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3C—THE CHANGING STI PREVENTION LANDSCAPE: ESTIMATING THE SIZE OF THE SAFETY NET POPULATION AND IMPLICATIONS FOR STD CLINICS-BILLING PLUS OPT-OUT TESTING FOR HIV

3C1
PREPARING FOR THE CHANGING LANDSCAPE OF STD CLINICS

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Background: The Denver Metro Health Clinic (DMHC) is the largest STD clinic in the Rocky Mountain region with over 20,000 visits yearly. In anticipation of decreased federal funding and the roll-out of the Affordable Care Act, we initiated several operational adjustments to prepare for the changing environment. These changes included the introduction of Medicaid and third-party billing, and the development of a sliding scale co-pay structure. To inform these changes, we surveyed patients utilizing our clinic.
Methods: Between October and November 2013, we assessed all clients presenting for a new visit to gauge client insurance status, reasons for not having insurance, reasons for choosing care at the STD clinic, and types of other healthcare services utilized.
Results: Of 560 respondents, 325 (58%) were male, 241 (43%) identified as white, non-Hispanic, 168 (30%) as Hispanic, and 112 (20%) as black, non-Hispanic. The mean age was 39.5 years. Reasons for choosing the DMHC for care included: confidential visits (42%), how quickly they can be seen (28%) and not knowing where else to go for care (28%). A total of 250 (46%) clients indicated they had been seen for STD care within the past 12 months with the most frequented venues being the DMHC (36%), Private Physicians (18%), and Planned Parenthood (15%). 365 (65%) of those completing the survey indicated they were not enrolled in health insurance, with 256 (70%) of the uninsured identifying cost as the main reason. Of the 183(33%) clients who had insurance coverage, 117 (64%) were enrolled in private insurance, 45 (25%) in Medicaid, and 10 (5%) in Medicare.
Conclusions: While we plan for expanded health insurance coverage, health insurance alone cannot address access barriers specific to seeking STD related care. Our findings underscore the importance of understanding what drives clients to seek care at STD clinics.
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3C2
ESTIMATING THE SIZE AND COST OF SERVICES OF THE SAFETY NET POPULATION FOR STD PREVENTION

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Background: Uninsured persons are a primary population using publicly-funded safety net sexually transmitted disease (STD) prevention services. The percentage uninsured of the US population is expected to decrease over the next 10 years, but will remain above 10%. Understanding the size of the uninsured risk population who are a priority for STD prevention, as well as the potential costs of meeting some of their needs, would help anticipate the demand for such services.
Methods: We defined the risk population who should be prioritized for STD services as sexually-active women aged 15–24 years, pregnant women, women 25–44 years or men 15–44 years with multiple sex partners (past year), and men who had ≥1 male sex partners (past year). We estimated the size of the risk population and insurance status using the National Survey of Family Growth. To estimate the proportion of the non-elderly population without insurance in each year 2013–2023, we used Congressional Budget Office estimates and Census data to account for population growth. We estimated a lower bound cost of providing potential services to this priority uninsured risk population by calculating the costs of chlamydia screening and treatment to the uninsured risk population based on cost estimates from the literature and chlamydia positivity data from the National Health and Nutrition Examination Survey (2012 US dollars).
Results: The uninsured risk population equaled 7.8 million persons in 2013, falling to 4.4 million by 2023. The annual cost of providing chlamydia services to this population would be $239.7 million in 2013, declining to $135.0 million in 2023.
Conclusions: Although decreases are expected, a substantial need will continue to exist for safety net STD prevention services over the next 10 years. The cost of chlamydia screening and treatment indicates the financial burden of providing services to the uninsured STD priority population is substantial.
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3C3
INTRODUCTION OF BILLING INTO A PUBLIC HEALTH STD/FAMILY PLANNING CLINIC

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Background: Denver Metro Health Clinic (DMHC) is a fully integrated STD and Family Planning Clinic located within Denver Public Health. DMHC has 20,000 visits and 15,000 unique patients annually with a current annual operating budget of $2.7 million. With the passage of the Affordable Care Act and anticipated reductions in funding, DMHC initiated efforts to collect revenue through billing for services provided.
Methods: In order to start billing in the DMHC, beginning in November 2012, we worked through eight domains: Assessing the cost of clinic activities, Determining levels of service, Estimating potential revenue, Establishing processes for enrolling patients in appropriate insurance program, Establishing processes for documentation of services, Assessing the need for alternations in clinic flow, Developing a communication plan with internal and external partners, Determining how to evaluate and promote quality improvement. Each of these domains required our attention and were regularly addressed through committee, staff and leadership meetings.
Results: Our current payer mix is: 78% uninsured, 15% Private and 7% Medicaid. For the most recent month of October 2013, DMHC billed for $377,000 in services provided. Though receipt of payment on these charges is only 0.84% due to our current payer mix, this value is expected to increase with the expansion of the Colorado Medicaid program to include all individuals under the 133% Federal Poverty Level and new options for coverage under the exchange. Denver Public Health is actively assisting patients to enroll in an insurance program and has successfully enrolled 104 patients who were previously uninsured (October 1-November 20, 2013).
Conclusions: The shift to billing in our STD and Family Planning clinic has been challenging. By the end of 2013, billing revenue will only cover <1% of our total clinic expenditures. Despite this, DMHC is dedicated to continue to increase revenue via billing through quality improvement efforts and increased enrollment of patients in payer plans.
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3C4
STD CLINIC BILLING: WHO'S DOING IT? PART 1

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Background: The ACA increases the number of Americans with health insurance coverage. Simultaneously, funding for safety net clinics is unsteady; federal and state agencies want to ensure safety net services are utilized as payer of last resort. Safety net programs are expected to diversify revenue by expanding third-party billing of both public and private payers. The STD-related Reproductive Health Training and Technical Assistance Centers (STD RH TTAC) are funded regionally to provide training and technical assistance to support the implementation of billing systems for clinics providing publicly-funded STD services. The STD RH TTACs conducted a national coordinated needs assessment to find out how many STD-certified 340B clinics bill Medicaid and other third party payers and understand the barriers to billing.
Methods: A web-based needs assessment was sent from ten regional TTACs to STD-certified 340B clinics and agencies. Data from each region was compiled into a national data set and analyzed in SAS 9.1. JSI tested differences between group medians using the Wilcoxon Rank Sum test. For categorical variables, JSI calculated proportions for the entire sample and for specific groups of interest (stratified analysis). JSI tested the association using a chi-square test. A p-value of less than 0.05 was considered indicative of a significant difference.
Results: Less than one half (45%) of clinics were billing both Medicaid and third-party payers; 30% were billing Medicaid only, and one quarter (25%) were not billing Medicaid or other third-party payers at all. The clinics that were not billing were smaller, more likely to provide STD services only, and more likely to be Health Department STD clinics compared to those that were billing.
Conclusions: There were over 1,000 clinics not billing private third-party payers. The barriers identified through the assessment include prohibitive policies, confidentiality concerns, lack of staffing resources, and lack of infrastructure.
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3C5
IMPACT OF A ROUTINE, OPT-OUT HIV TESTING PROGRAM AND RISK OF PROGRESSION TO AIDS AMONG NEW HIV DIAGNOSES IN NORTH CAROLINA SEXUALLY TRANSMITTED DISEASE CLINICS

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Background: Although routine HIV testing programs aim to identify persons earlier in the course of their HIV infection, the results of extant HIV testing programs are inconclusive. The objective of this study was to estimate the impact of a routine, opt-out HIV testing program in North Carolina sexually transmitted disease (STD) clinics on the risk of progression to AIDS after HIV diagnosis.
Methods: North Carolina residents aged 18-64 identified as new HIV-infected cases in North Carolina STD clinics from July 1, 2005 through June 30, 2011 were included. Exposure status was dichotomized on the date of intervention implementation on November 1, 2007. Risk of progression to AIDS within 12 months of initial HIV diagnosis was analyzed using county-specific random-intercept multilevel binomial regression models to calculate risk ratios (RRs) and 95% confidence intervals (95% CIs).
Results: Of the 1203 persons newly diagnosed with HIV infection, 12% and 13% were diagnosed with AIDS within 12 months of their initial HIV diagnosis in the pre- and post-intervention periods, respectively. Overall, we did not observe an association between the introduction of the expanded HIV testing program and the risk of progression to AIDS (RR=1.04, 95% CI: 0.77-1.43). The intervention was associated with an increased risk of progression to AIDS among women (RR=2.32, 95% CI: 1.06-4.83) and persons who had previously been tested for HIV (RR=1.42, 95% CI: 0.92-2.19).
Conclusions: Overall, the routine, opt-out HIV testing program was not associated with a decreased risk of progression to AIDS. Among some subpopulations, the increased risk of progression to AIDS post-intervention was likely due to identification of persons who had been infected for many years but were not previously targeted for risk-based testing. If undiagnosed HIV-infected persons do not seek interactions with the healthcare system, they cannot benefit from routine HIV testing programs in clinical settings.
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3D (SYMPOSIUM)
PUBLIC HEALTH AND PRIMARY CARE COLLABORATION: NATIONAL, STATE, AND LOCAL EXAMPLES TO ENHANCE STD PREVENTION AND CARE SERVICES

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Background: In 2013, the Division of STD Prevention and its funded national partners—ASTHO, NACCHO, NACHC, and NCSD—sought to better understand how public health and primary care integration is, and could be, operationalized, tested, and evaluated in real-world settings.
Methods: The partners worked with Northeastern University to select and conduct interviews with public health officials and primary care leaders in 7 states and 5 local areas, to learn about existing collaborations and what could help move these areas forward to test integration components (spring 2013). Sites were selected for diversity by region, size, STD rates, and Medicaid expansion plans. In August 2013, 10 of the selected sites participated in a meeting designed to help the national partners identify what tools may be of value to local efforts, and to be a springboard for collaboration within these areas. About 6 weeks following the meeting, questions were sent to the 43 meeting attendees to assess their progress, plans, and need for technical assistance.
Results: Models of collaboration and integration are diverse, but common issues were identified (i.e., funding/reimbursement, informatics, policy change). Initiating and sustaining collaborative efforts are most often hampered by a lack of time (62%), resources (39%), uncertainty about next steps (31%), and political will (27%). When asked what resources would be most helpful, 74% requested sessions on integration for STD prevention at or in conjunction with national meetings. Conclusions: State and local areas need examples and best practices to overcome barriers to integration. This session includes 4 presentations: 1) an overview from the national perspective gained through interviews, meeting, and surveys, 2) an example from a state health department illustrating how barriers to integration can be addressed , and 3) an example from a community health center focusing on organizational culture and redesign to guide integration strategies to address STD service needs; and 4) an example from a local health department describing partnerships and collaboration that facilitate access to comprehensive STD services.

Overview of Preliminary Findings and Structure of the National Partners Initiative on PC/PH Integration for STD Prevention (Auerbach)
Presentation of recent work done on the current status of integration of services provided for sexually transmitted diseases and how transitioning to a more integrated model can be successful. Through a literature review, interviews, and an in-person meeting, the effort set out to understand the real challenges and opportunities for better integration. The presentation will highlight the findings of this work and the next steps.

STD Integration in Mississippi: An Example from a Non-Medicaid Expansion State (Currier)
Presentation will focus on Mississippi's effort at integration of STD services. As a state that is not expanding Medicaid, has limited private clinic capacity, Dr. Currier will highlight the efforts that have undertaken and plan to take in the future to achieve a higher level of integration between the public and private sector in the provision of STD services.

Integration of Public and Primary Care to Improve Health Outcomes to Underserved Populations (Dahl)
This presentation will present the roadmap to public health and primary care integration with a focus on organizational culture and redesign, management and structure, QI infrastructure with data driven metrics to guide improvement, and active implementation and integration strategies.

The Future? Integration in Boston, MA in years following health reform (Barry)
During this session Dr. Barry will provide an overview of the current epidemiology of STDs in Boston and the public health and health care services available for STD prevention and treatment. She will discuss the structure of partnerships that allow for comprehensive STD services in Boston and the factors that influence the development and maintenance of these collaborations. Dr. Barry will also present on the unique state and local conditions that resulted from early implementation of health reform and the impact of these policies on the availability of STD services in Boston and the state of Massachusetts.

3E (SYMPOSIUM)
PELVIC INFLAMMATORY DISEASE: CLINICAL TRENDS AND IMPROVING IMPRECISION

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PID: Understanding the Biological Milieu (Haggerty)
Although PID is a recognized complication of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* infections, the etiology of up to 70% of cases is unknown. Emerging cross-sectional evidence implicates *Mycoplasma genitalium* as a significant etiologic agent of PID, although prospective are limited. Less is known about the role of other mycoplasmal bacteria, including the recently differentiated ureaplasmas, as well as bacterial vaginosis and newly recognized bacterial vaginosis-associated bacteria in PID and its sequelae. Dr. Haggerty will discuss the role of mycoplasma and bacterial vaginosis in the biology of PID and potential considerations and implications for treatment.

Subclinical PID (Wiesenfeld)
Fallopian tube damage continues to represent a common cause of infertility in women. Prior infections with chlamydia and gonorrhea are more common among women with tubal factor infertility than women without infertility or women with other causes of infertility. Subclinical PID is found in as many as 1 in 4 women with gonococcal or chlamydial cervicitis, and is associated with subsequent infertility. This talk will outline the impact of subclinical PID on the reproductive health of women.

Developing Novel PID Intervention Strategies for a Vulnerable Population (Trent)
Despite declines in the overall rates of PID, it remains a common reproductive health disorder that affects young women of reproductive age globally. Available data suggests that adolescence is a unique developmental period for acquisition and management of PID, that adverse outcomes are more common for adolescents with recurrent disease, and that optimal management likely requires additional clinical support. This talk will specifically address adolescent risk and management in an increasingly cost-conscious health care environment.

Using Immunology & Genomics to Improve Diagnostic and Risk Management Precision (Darville)
Women with PID are plagued by inadequate treatment in the United States in part because of the imprecision involved in the diagnosis of PID. Dr. Darville will discuss immunological translational research that has the potential to improve the precision associated with PID diagnosis and risk management in clinical settings.

3F—INTERNATIONAL FOCUS: TESTING, SURVEYING, AND IMPROVING TESTING PROFICIENCY

3F1
CROSS SECTIONAL STUDY OF THE PREDICTORS OF THE NUMBER OF ATTENDEES AT A SEXUAL HEALTH SERVICE 2002 – 2012

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Background: Open access to sexual health services may be inefficient if there are substantial unpredictable fluctuations in presentations. Our aim was to determine if the number of presentations over the last 11 years could be predicted.
Methods: This cross sectional study involved all individuals presenting to Melbourne Sexual Health Centre (MSHC) from 2002 to 2012. The outcome measure was the number of presentations during a clinical session (half day).
Results: There were 270,070 presentations to the clinic among 86,717 individuals. The factors associated with the largest difference in mean presenta-

tions per session were morning or afternoon (60 vs. 51 per session), days of the week (57-67 per session), months of the year (93-112 per day), year (77-131 per day), maximum temperatures of <15C vs. ≥ 30C (56-62 per morning session), and 5 working days after holiday periods (61 vs. 54). A multiple linear regression model using these factors explained 64% of the variation in attendances per session. Peak attendance rates (>90th percentile) were also strongly correlated with these same variables. Higher risk heterosexuals (≤ 25 years of age) attended more commonly in the afternoons (37% of heterosexuals) than mornings (30%). No factor other than year of attendance substantially influenced the proportion of higher risk men who have sex with men (MSM) (≥ 10 partners per year) who attended.
Conclusions: A considerable proportion of the variability in presentations was explained by known factors that could predict client presentations to sexual health services and therefore allow optimal allocation of resources to match demand.
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3F2
CHLAMYDIA TRACHOMATIS AND *NEISSERIA GONORRHOEAE* POINT-OF-CARE TESTING IN THE UK: IS THIS A NECESSARY VENTURE OR AN IMPRACTICAL FOLLY?

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Background: UK STI clinics routinely use *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) nucleic acid amplification tests (NAAT), with results available within two to seven days suggesting there may be potential for CT and GC point of care tests (POCT). Studies have shown the sensitivity and specificity of the CT POCT to be above 90% and a result can be produced in 30 minutes. The study assessed the time service-users were prepared to wait in clinic for a CT/GC POCT result and analyzed the impact a POCT would have on preventing loss to follow-up and subsequent re-presentations.
Methods: 1400 patients attending a level 3 sexual health clinic in the UK were recruited and surveyed on the maximum time they were prepared to wait for a result if a CT/GC POCT were available. Subsequent infection rates diagnosed on NAAT and follow-up episodes were reviewed. Chi-squared analysis was used to compare the infection rates among time category groups.
Results: Preliminary results suggest that most patients were not willing to wait for a POCT result in clinic longer than 30 minutes. The majority of individuals with infections were treated and followed up appropriately. All individuals with CT/GC were informed and no individuals were left untreated. Full results will be available at conference.
Conclusions: CT and GC POCT would be of limited benefit if introduced in the UK. The current system in the UK using NAAT and recalling patients with positive results to clinics has a minimal default rate and is well developed. There may be a place for such POCT in outreach settings or healthcare systems where access to STI clinics is limited or final treatment and cure rates are poor with central laboratory testing.
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3F3
FACTORS ASSOCIATED WITH STD TESTING AMONG SELF-IDENTIFIED LESBIAN AND BISEXUAL WOMEN IN THE US AND UK

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Background: Limited research has explored STD testing among sexual minority (non-heterosexual) women despite documented STD transmission between women. The purpose of this study was to determine individual and behavioral factors associated with an STD test (past year) among a sample of self-identified lesbian and bisexual women living in the US and UK.
Methods: More than 4,500 English-speaking women from 67 countries completed an internet-based survey. The sample was restricted to females who identified as gay/lesbian or bisexual, were aged 18 years or older, resided in the US or UK, and responded to all items of relevance (n=2,713). Individual factors included age, race/ethnicity, education, relationship status, country of residence, sexual identity, and self-described femininity/masculinity. Sexual behaviors included age of first sex with a woman, past year history of performing oral sex on a woman or man, and lifetime history of vaginal or anal intercourse with a man. Multivariate logistic regression analyses were conducted to identify factors associated with recent STD testing.
Results: Most respondents were White (89.1%), self-identified as gay/lesbian (79.1%), and feminine/femme (70.6%). Participants ranged in age from 18-69 years (M=29.62, SD=9.26). Nearly one-third (31.3%) of respondents (n=848) said they had received a STD test in the past year. In unadjusted models, women who identified as bisexual were nearly twice as likely as gay/lesbian identified women to have had an STD test in the past year; while masculine/butch identified women were 30% less likely to have had an STD test than feminine/femme identified women. This relationship remained significant after adjusting for other individual factors. However, after adjusting for sexual behaviors, associations between sexual identity, femininity/masculinity and STD testing became non-significant, suggesting that sexual behaviors may mediate this relationship.
Conclusions: Results can be used to inform STD testing and prevention efforts targeting sexual minority women in the US and UK.
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3F4
ASKING ABOUT SEX IN GENERAL HEALTH SURVEYS: COMPARING DATA COLLECTED BY THE 2010 HEALTH SURVEY FOR ENGLAND WITH THE THIRD NATSAL SURVEY OF SEXUAL ATTITUDES AND LIFESTYLES

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Background: The HSE is administered annually to a probability sample of people in England. In 2010, the HSE included, for the first time, questions about sexual health, which previously were considered too sensitive for a general health survey. This paper compares the reporting of sexual behaviours by people aged 16-69 in HSE2010 with Natsal-3, Britain's national probability survey of sexual behaviour.
Methods: HSE2010 interviewed 6,966 people aged 16-69. Natsal-3 interviewed 12,524 people aged 16-69 in 2010-12. HSE2010 used pen-and-paper self-completion questionnaires for the sexual health questions, while Natsal-3 used computer-assisted self-interviews for the more sensitive questions.
Results: Collecting sexual behaviour data was acceptable to HSE2010 participants with low item non-response (5-10%), albeit slightly higher than in Natsal-3 (<5%). Reported age at 1st intercourse was comparable in the two surveys: medians of 17 (men) and 16 (women) aged 16-24. However, for some very sensitive questions there were lower levels of reporting in HSE2010 than in Natsal-3: while the proportion reporting same-sex in the last 5 years was similar (2-3%), reporting of ever having same-sex was lower in HSE2010 for men (2% vs 5% in Natsal-3). Similarly, the mean number of opposite-sex partners reported in HSE2010 was a little lower than in Natsal-3, particularly for men: 9.5 vs 12.7, respectively; (5.4 vs 6.5 for women, respectively). Men were also slightly less likely to report STI diagnoses in HSE2010 vs Natsal-3: 8.0% vs 13.2%, respectively.
Conclusions: Sexual behaviour data can be successfully collected by the HSE, albeit in less detail than in Natsal. HSE2010 has demonstrated the feasibility and utility of including such questions in general health surveys, providing a useful vehicle for monitoring sexual risk behaviour more frequently than is possible with decennial Natsal surveys.
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3F5
WHO/PAHO COLLABORATING CENTRE FOR SYPHILIS SEROLOGY PROFICIENCY TESTING PROGRAM AT THE CDC

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Background: Proficiency in serological testing is essential to accurately diagnose syphilis. CDC administers a syphilis serology proficiency testing (PT) program worldwide in its role as a WHO/PAHO Collaborating Centre for STD Diagnostics and Surveillance.
Methods: CDC sends a serum panel of known results to 78 laboratories worldwide. Participating laboratories perform treponemal (TPPA, MHA-TP, TPHA, FTA-ABS, EIA) and non-treponemal (VDRL, USR, RPR) qualitative and quantitative tests, reporting results to CDC for analysis and feedback.
Results: In 2012, 51 (65.4%) of the 78 laboratories reported PT results on at least one serologic test (third panel). Qualitative VDRL and RPR non-trepo-

nemal test results from responding laboratories were comparable to those of 3 CDC reference laboratories (Georgia PHL; the Texas Department of State Health Services; and the Syphilis Serology Laboratory, CDC) for most VDRL and RPR samples. For the qualitative VDRL, scores averaged 98.7 %, with 1 of 31 (3.2%) reporting laboratories failing. Scores for the qualitative RPR averaged 99.4%, with 1 of 36 (2.7%) laboratories failing. For the quantitative VDRL and RPR, low scores were due to reported titers being too high or too low. Scores for the quantitative VDRL averaged 94.1%, with 3 of 29 (10.3%) laboratories failing. Scores for the quantitative RPR averaged 94%, with 6 of 32 (18.8 %) laboratories failing. For treponemal tests, the 42 laboratories performing the MHA-TP, TPHA, or TPPA averaged 98.6%; 3 (7.2%) laboratories failed. For FTA-ABS, 22 laboratories averaged 100%. For the EIA-IgG test, 18 laboratories averaged 98.9% with 1 (5.6%) not achieving an acceptable result.
Conclusions: Laboratories participating in the syphilis PT program do well in treponemal and qualitative non-treponemal testing. However, several had problems in quantitative non-treponemal tests suggesting training or other capacity building options may be beneficial. Criteria for PT program inclusion should be revisited due to lack of reporting from a number of laboratories.
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4A—CONDOM MICROCLIMATES AND CYBER SEXUALLY TRANSMITTED DISEASE PREVENTION: USING THE INTERNET AND TEXTING FOR SCREENING AND TEST RESULTS

4A1
IMPLEMENTATION AND CONTINUING EVALUATION OF A NEW I WANT THE KIT (IWTK) INTERNET OUTREACH SCREENING PROGRAM FOR STIS

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Background: IWTK (www.iwantthekit.org) has been in operation in Maryland and DC for recruiting participants to self-collect urogenital samples at home and mail them to a testing laboratory since 2004. Other states have participated periodically. Testing has been performed for chlamydia, gonorrhea, and trichomonas for >5,000 women and >2500 men. IWTK also has an STI educational component and a quiz for self-risk assessment of having an STI. A new website was implemented August 21, 2013, which allows users to obtain their own results using a secure username and password.
Methods: New components of the HIPPA compliant, privacy- protected website allow participants to create a secure account to request kits. Vaginal, penile, and/or rectal kits can be requested. Participants select a potential treatment clinic before requesting kits. The site allows participant-monitoring, when kits are sent and kits are received. When results are ready, users are notified by text or email automatically by the website. If infected with any STI at any site, participants are requested ("next steps") to attend their chosen clinic for treatment. Monitoring for treatment is performed to assess patient acceptability to seek their own treatment.
Results: Very early 3-month, preliminary results indicated 376 females and 245 males have requested urogenital kits; 178 requested rectal kits (female, 104; male, 74). 188 vaginal, 137 penile and 82 rectal kits (44 females, 38 males- 3 returned rectal-only) have been returned from MD and DC. Of 24 infected females, positives included: 9 (4.8%) chlamydia, 2 (1.1%) gonorrhea, 14 (7.4%) trichomonas (1-coinfected). Of 14 infected males, positives included: 11 (7.8%) chlamydia, 1 gonorrhea (rectal), (0.71%), 3 trichomonas (2.1%), (1-coinfected). Of notified infected patients 31/32 (96.8%) were treated, thus far. Statistics demonstrated >4,000 website-visits/month; average 134-137/day.
Conclusions: Early evaluation indicates the new IWTK website is functioning well and newly automated components are performing as expected.
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4A2
IF YOU BUILD IT WILL THEY LOG IN? A PRELUDE TO PATIENT PORTALS: AUTOMATING A TEST RESULTS SYSTEM FOR STD PATIENTS IN NEW YORK CITY

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Background: In October 2009, the New York City Department of Health and Mental Hygiene's (NYC DOHMH) Bureau of STD Control (BSTDC) implemented an automated test results retrieval system (ATRRS); before that date, patients returned to a clinic or called the NYC DOHMH Call Center for test results (clinic staff call patients requiring follow-up). The ATRRS is linked to the clinic electronic medical record (EMR), and a daily automated algorithm assesses gonorrhea, chlamydia, HIV, syphilis & Pap smear test results, and gonorrhea and chlamydia treatment. A summary message is assigned/updated per visit: (1) pending; (2) normal/negative; (3) need to call the NYC DOHMH Call Center; or (4) return to our clinic. Patients access their password-protected account via website or interactive voice response (IVR) system, available 24/7.
Methods: We analyzed DOHMH Call Center data for calls received from BSTDC patients requesting test results, for the time period before, and after implementing the ATRRS. We reviewed EMR data for each patient's results retrieval status and method (website versus IVR).
Results: The proportion of patients who retrieved their results was 48% (47,566/99,429) in the year before, and 54% (58,339/107,284) in the year after implementation. Since implementation, the proportion of patients retrieving their messages via website increased from 55% (29,911/54,040) in 2010 to 59% (19,990/33,970) in 2012, $p<0.0001$. The monthly average number of calls to the call center decreased from 7,231 before, to 780 after implementation. Incoming calls on average last 3.4 minutes.
Conclusions: Implementation of an automated results retrieval system vastly reduced the number of calls to our Call Center while maintaining the proportion of patients who received their test results; resulting in a potential savings of 366 employee hours per month that were previously spent receiving calls. The proportion of patients using the website to retrieve their test result messages has significantly increased.
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4A3
EVALUATION OF THE FLORIDA STD TEXTING PROJECT FOR CLIENT NOTIFICATION OF TEST RESULTS

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Background: Escalating morbidity, changing resources, and inefficiencies in test result notification procedures led the Florida STD Program to initiate a process to notify clients of their test results via text. An evaluation of the first year of the texting project in three Florida counties aimed to assess the feasibility of texting for client notification and its impact on treatment timeframes.
Methods: The STD Program modified its existing electronic STD database in order to send test results by text and to record call backs received by clients for treatment follow-up. Data on demographics, opt in, call back rates, delivery success, and time to treatment were used to evaluation the texting project. All clients who were tested for gonorrhea and chlamydia in three clinics were offered text notification and included in the evaluation. Texts were coded for client privacy and positive clients were given a number to call for treatment referral.
Results: 10,272 clients were tested for chlamydia and gonorrhea and offered text notification from February 2012 – January 2013, with 5,353 (52%) opting in. Opt in was highest among positive clients and females (58% each) and lowest among males (45%). Among positive clients who opted in, 198 (57%) called the health department for treatment referral, calling within an average of one day. Only 4% of clients' texts were returned as undeliverable. Clients who opted into texting received treatment an average of 1.6 days sooner than clients who did not opt in ($p=.036$).
Conclusions: The high opt in and call back rate within three very different clinic populations suggests that text notification of STD results is feasible within STD clinics. Overall, texting reduced treatment delays. The Florida STD database is in use in seven other states, and therefore the texting project could be utilized by a much larger population than Florida STD clients.
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4A4
TO TEXT OR NOT TO TEXT: RESULTS FROM A SURVEY OF STD CLINIC PATIENTS IN NEW YORK CITY, 2012

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Background: The New York City Department of Health and Mental Hygiene's (DOHMH) Bureau of STD Control (BSTDC) operates STD clinics throughout NYC. To understand STD clinic patients' access to and use of the internet and text messaging, and to measure the acceptability of receiving notifications via text message, BSTDC conducted a survey in the STD clinics in 2012.
Methods: A paper-based survey was given to all patients accessing clinic services from March-April 2012 at the 9 STD clinics. The 19 question survey was anonymous, available in English and Spanish, and completion was voluntary.
Results: Of the 3374 survey respondents, over half were male (59%) and aged 20-29 years (55%); proportions similar to the overall patient population. Eighty-nine percent of respondents had a computer and/or cellphone with internet access, and 86% had unlimited text messaging plans. Over half (51%) of respondents reported interruptions in their cell phone service in the last six months. The majority (68%) of respondents preferred to be contacted by cellphone if their test results were positive as compared to only 28% and 25% who preferred email and text messaging respectively. A majority (70%) of those surveyed would sign up for text messages when their STD test results were ready if available; while only 46% indicated an interest in receiving health education text messages from the clinic.
Conclusions: Access to mobile technology, particularly cell phones with texting capability is widespread among NYC STD clinic patients. Patients are interested in generic text alerts when their test results are ready, but more reticent to be contacted by text or email for follow-up concerns. Opportunities for disseminating health education and prevention messages to STD clinic patients via text exist. Instability in cell phone accounts and use of disposable phones will pose issues for any clinic-patient communication system that relies on phone numbers.
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4A5
CONDOM DESERTS VS. CONDOM SWAMPS: AVAILABILITY AND ACCESSIBILITY OF CONDOMS AND THEIR RELATIONSHIP TO SEXUALLY TRANSMITTED INFECTIONS

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Background: Eliminating health disparities is one of the National HIV/AIDS Strategy goals, and thus identifying factors that contribute to geographic disparities in sexually transmitted infections (STIs) is pertinent to their elimination. This study was conducted to assess the relationship between condom availability and accessibility and the locations of STIs in order to better understand these geographic disparities.
Methods: We conducted a condom availability and accessibility audit where local businesses (beauty salons, barber shops, liquor stores, bars, pharmacies, convenience stores, and gas stations) were contacted as identified using Google Earth. Additionally, we collected the census tracts of individuals who tested positive for gonorrhea, chlamydia and syphilis in 2011; as well as HIV infections from 2006-2011. We conducted geospatial clustering analyses to identify areas were more infections occurred and assessed the ratio condom availability and accessibility within those high and low risk areas.
Results: A total of 850 potential condom-selling establishments participated in the condom availability and accessibility audit in St. Louis City; 260 of those stores sold condoms. These analyses identified geographic clusters of gonorrhea/chlamydia that housed the highest and lowest cases. We identified that stores within the high incidence clusters housed 82 stores that sold condoms behind the counter, while 9 stores sold them out in the open. In the low incidence cluster, only 13 stores sold condoms behind the counter, while 26 sold them out in the open. We were able to repeat these analyses for HIV and syphilis and identified similar patterns, yet in different locations.
Conclusions: This study was conducted to provide evidence that condom availability and accessibility differ by geographic region, and likely are an integral component to influencing subjective norms and condom use. These findings have identified that future research needs to consider other neighborhood level factors that may further contribute to geographic disparities.
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4B—STI TESTING: INNOVATIVE INTERVENTIONS TO INCREASE SCREENING AND MEASUREMENT OF COVERAGE

4B1
WHAT IS THE COVERAGE OF CHLAMYDIA TESTING IN 15-25 YEAR OLD WOMEN IN THE USA? A MULTI-PARAMETER EVIDENCE SYNTHESIS

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Background: The uptake of chlamydia screening recommendations for sexually active young women in the USA is debated. The coverage estimates derived from direct (e.g. testing activity) and indirect sources (e.g. surveillance reports) are conflicting, ranging from 14 to 60%.
Methods: We collated US data about chlamydia prevalence (NHANES), surveillance case reports (CDC), chlamydia testing (MarketScan, HEDIS), test positivity and performance (Baltimore City Health Department) and sexual activity (NSFG, NHANES, HEDIS) for 15-25 year old women in 2008. We described the relationships between data sources in a common underlying Bayesian model fitted jointly to the data. This approach simultaneously integrates all the evidence available into parameter estimation. We obtained posterior means (with 95% credible intervals, CrI) for chlamydia testing coverage in sexually active women and all other model parameters.
Results: The model estimates were highly consistent with observed data from surveillance case reports, chlamydia testing, positivity and prevalence, increasing confidence for other parameter estimates. The estimates of chlamydia test coverage were 17.6% (95% credible interval, CrI: 17.1, 18.2%) in sexually active 15-19 year old women and 21.2% (95% CrI: 20.6, 21.9%) in 20-25 year olds. Among women who met HEDIS administrative criteria for sexual activity (53% (95% CrI: 51.4%, 54.7%) of all sexually active women), coverage estimates were 38.3% (95% CrI: 38.1, 38.5%) for 15-19 year olds and 46.2% (95% CrI: 46.1, 46.3%) for 20-25 year olds. Women with chlamydia were considerably more likely to be tested for chlamydia infection than uninfected women (mean 6.0, 95% CrI: 3.1, 9.4).
Conclusions: This model reconciled apparent inconsistencies between data on population chlamydia prevalence and surveillance of diagnosed chlamydia. Overall chlamydia test coverage was lower than expected from some routine data sources. These findings suggest that chlamydia tests are appropriately targeted to women at high risk of chlamydia infection.
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4B2
EFFECTIVENESS AND PATIENT ACCEPTABILITY OF A SELF-TESTING INTERVENTION FOR STI IN AN HIV PRIMARY CARE SETTING

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Background: STI screening in HIV care settings is suboptimal. In 2013, we implemented a self-testing intervention for men who have sex with men (MSM) at a large HIV clinic and assessed yield and acceptability. The intervention consisted of establishing a dedicated room for self-testing with instructional posters, a new protocol, and provider education.
Methods: From January - March 2013, we educated clinicians and facilitated project implementation. We then compared screening coverage and infection rates among MSM attending ≥1 primary care visit between two six-month periods: pre-intervention (July-December 2012) and intervention (April–September 2013). Data were extracted from electronic medical records. Patient acceptability was determined through survey offered after self-testing.

Results: Pre-intervention, providers screened 30% of 1138 MSM for gonorrhea or chlamydia at any anatomic site at least once (19.9% pharynx, 17.3% rectum, 20.7% urethra; 9.9% all sites). In the intervention period, 230 MSM completed self-testing, including 51(22%) who self-referred. Screening coverage following the intervention among 1067 MSM attending at least one primary care visit increased 20.6% overall, with 29.1% increase at pharynx, 30.0% at rectum and 48.3% at urethra. There was no change in syphilis screening rates, or in test positivity between the two time periods: 7.3% and 11.4% of men tested positive for gonorrhea and chlamydia respectively pre-intervention, and 6.7% and 13.2% post-intervention. Urethral chlamydia positivity increased 153% post-intervention from 1.7% of 235 tested MSM, to 4.3% of 328 tested men (p=0.08). Of the 77 (33.5%) men completing feedback surveys, 92% rated their overall experience with self-testing as "good" or "very good" and 83% reported the instructional posters to be "extremely helpful."
Conclusions: Offering self-testing in HIV primary care settings increases screening coverage and the likelihood of detecting STI among MSM. The acceptability of this screening approach in HIV primary care settings was very high.
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4B3
HOME-BASED SELF-COLLECTION FOR THE DETECTION OF SEXUALLY TRANSMITTED INFECTIONS IN HIGH-RISK WOMEN IN NORTH CAROLINA

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Background: Use of mailed, home-based self-collection kits to test for sexually transmitted infections (STIs) is a promising strategy to increase screening in medically underserved women. Recent advances in methods for collection, preservation, and processing of samples, including mailing for self-collection, allow for greater flexibility in STI testing.
Methods: Study participants were low-income women in North Carolina with histories of infrequent cervical cancer screening. Participants were asked to self-collect a cervical/vaginal sample at home and return the sample by mail, then referred to a local clinic to complete a second self-collected sample and a clinician-collected endocervical sample. Samples were tested for *Chlamydia* trachomatis, gonorrhea, *Trichomonas vaginalis*, *Mycoplasma genitalium*, and oncogenic HPV infection using Aptima assays (Hologic Gen-Probe). Analysis used Kappa statistics to compare detected prevalence between the home self-collected, clinic self-collected, and clinician-collected samples.
Results: A total of 181 women received self-collection kits and 150 successfully returned samples for subsequent testing. In 137 women who completed all 3 samples to date, the most common STIs detected were HPV (13% in self-home, 16% in self-clinic, 12% in clinician), followed by trichomonas (10%, 12%, and 12%) and *M. genitalium* (3%, 4%, and 3%). High Kappa values were found between home self-collection and clinician collection results for trichomonas (Kappa=0.89), HPV (0.76), and *M. genitalium* (0.65). Similar Kappa values were observed between home self-collection and clinic self-collection for these STIs. Kappa values are not presented for chlamydia and gonorrhea, as these infections were relatively rare (<1%).
Conclusions: Mailed self-collection kits were used with a high rate of successful completion in this population of medically underserved women. Results for trichomonas, HPV, and *M. genitalium* from home self-collected samples were highly concordant with both clinic self-collection and clinician-collected samples. Self-collection may ultimately be a valid method of increasing STI screening coverage among women who do not regularly access medical care.
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4B4
SELF-COLLECTED PENILE SWABS IN A CLINIC: HOW DO THEY COMPARE TO URETHRAL SWABS FOR ACCURACY FOR DETECTION OF *NEISSERIA GONORRHOEAE* AND *CHLAMYDIA TRACHOMATIS*?

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Background: Urethral swabs are preferred for the culture of gonorrhea in males and are also used for the diagnosis of chlamydia. Self-collected penile swabs can be used for nucleic acid amplification tests (NAATs) in males, but have not been compared to clinician-collected urethral swabs.
Methods: Men who were being cultured for the diagnosis of gonorrhea in the STD clinic were asked to volunteer to also collect a penile swab for a NAAT for gonorrhea (GC) and chlamydia (CT). Clinician-collected urethral swabs for GC culture/Gram stain were placed into transport media for a NAAT. Volunteers for the study were then asked to collect penile swabs for transport media for the same NAAT assay. GC culture results for gonorrhea were also determined.
Results: In an ongoing study, of 92 men approached in the clinic, 83 (90.0%) of men agreed to collect a penile swab. From paired specimens, test results indicated 10 (12%) were positive for GC and 14 (16.8%) for CT from penile swabs; 9 (10.8%) were positive for GC and 12 (14.4%) for CT from clinician-collected urethral swabs. Results from penile swabs and urethral swabs agreed except 1 sample was penile+/urethral- for GC and 2 samples were penile+/urethral- for CT. There was no significant difference between self-collected penile swab and clinician-collected urethral swab for NAATs (p=0.500 for GC; p=0.250 for CT). Two of the three discordant samples positive by the penile swabs only were confirmed to be true positives by another NAAT assay (1 GC and 1/2 CT). Of the 10 positive GC NAAT results, all 10 were positive for GC by Gram stain and culture.
Conclusions: Self-collected penile swabs appeared to be as accurate as clinician-collected swabs for the detection of GC and CT for NAAT assays and could expedite express visits in a busy STD clinic.
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4B5
BENEFITS AND BARRIERS TO INTEGRATION OF CHLAMYDIA AND GONORRHEA POINT-OF-CARE TESTING INTO REMOTE COMMUNITIES

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Background: The GeneXpert- is a new molecular point-of-care (POC) test device for diagnosing *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG). It recently received regulatory approval in the US, Europe and Australia, and is being used routinely in remote Aboriginal health services in Australia as part of the TTANGO (Test, Treat, ANd GO) Trial. Previously, most CT/NG POC tests have suffered from being inaccurate and complex.
Methods: We conducted in-depth interviews with 18 purposively selected Australia experts in sexual health, primary health care, microbiology and policy, to explore benefits and challenges of integrating CT/NG POC tests (not exclusively molecular tests) into remote health services.
Results: Interview participants thought CT/NG POC testing would have greatest utility in areas of high CT/NG prevalence, remote locations and in settings where treatment is frequently delayed or patients are lost-to-treatment. Stakeholders identified more targeted and immediate treatment as a key benefit (with flow on benefits of reducing sequelae, infectious period, and prevalence). Other benefits included increased health service efficiencies by reducing the number of treatment recalls, greater acceptability and satisfaction, and reduced stigma. Key challenges identified included ensuring the test was accurate, robust and user friendly. Other challenges included conforming to the regulatory/accreditation framework when/where such a framework exists, financing, adapting clinical practice and policy, training in areas with high staff turn-over, staff attitudes, quality management, and the potential to reduce surveillance data (for case reporting and NG resistance). The immediacy of the result was reported as both a benefit and challenge. Participants noted that identified benefits and challenges would be contingent on the POC test device.
Conclusions: Stakeholders saw CT/NG POC tests as a useful clinical and public health strategy for remote primary care facilities in settings of high STI prevalence, but identified significant challenges which will inform integration into clinical practice in such settings.
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4C—NEW DEVELOPMENTS IN PATIENT FOLLOW-UP AND PROGRAM EFFECTIVENESS

4C1
THE CONDOM FAIRY PROGRAM: SHE DELIVERS SO YOU CAN, TOO! A NOVEL MAIL-ORDER SERVICE FOR SEXUAL HEALTH SUPPLIES AT BOSTON UNIVERSITY

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Background: Less than a third of sexually active college students report "always" using a condom during intercourse. Students identify several barriers to consistent condom use including embarrassment, awkwardness, stigma, cost, and privacy concerns. In January of 2013, Boston University Wellness & Prevention Services launched a novel condom distribution program called 'The Condom Fairy Program' to address these barriers, raise awareness about STI testing, and encourage enthusiastic consent. Our program design aligns with CDC recommendations for effective structural-level condom distribution programs and is the first of its kind on college campuses.
Methods: Students complete an online request form for free male or female condoms, oral dams, and personal lubricant at their convenience. Orders filled by trained interns and peer educators are delivered to students' on-campus mailboxes in discrete packaging via the University's mail services. Tailored information about STI-risk, testing resources, and consensual sex are also included in the package. At the end of each semester, participating students are asked to complete a web-based evaluation.
Results: Over 2,200 packages were delivered from January-November of 2013. Evaluation results showed that 70% of students who requested condoms had used them, 75% were more comfortable getting supplies from the Condom Fairy than through traditional outlets, and 70% felt more likely to practice safer sex because of the program. The program also provides critical access to female condoms and oral dams, which over 60% of students would not have acquired without the Condom Fairy. Educational materials included in the packages also led to STI testing and dialogue about consent among students.
Conclusions: The Condom Fairy program effectively addresses several barriers to condom use among college students and provides a unique opportunity to communicate important health promotion messages. Its structural-level design and popularity also encourage the institutionalization of a social norm that promotes sexually responsible decisions.
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4C2
SEXUAL ABSTINENCE BY SEXUALLY TRANSMITTED CLINIC PATIENTS IMMEDIATELY FOLLOWING A NEW STI DIAGNOSIS: SAFE IN THE CITY TRIAL

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Background: Few studies assess sexual behaviors of patients during the period immediately following new diagnosis of curable STI.
Methods: We studied 450 patients who reported receiving a new STI diagnosis or treatment three months earlier. Participants were part of a behavioral study within a trial of video-based STI/HIV intervention conducted in 3 STD clinics. Using multivariable logistic regression, we identified correlates of sexual abstinence until participants were treated adequately and abstinence until their partner received STI testing.
Results: Most participants reported successfully abstaining from sex until they were adequately treated (90%) and from sex with potentially-exposed partners until their partners received STI treatment (84%). Black, non-Hispanic participants were more likely than Hispanic participants to report abstinence until receipt of adequate treatment (adjusted odds ratio [aOR], 5.0; 95% confidence interval [CI], 1.8-13.7). Also, participants attending the initial visit because of new symptoms were more likely to report abstinence until treatment (aOR, 3.1; 95% CI, 1.3-7.6) compared to those attending because of STI contact. Finally, abstinence until treatment was more common among those who discussed risks with a potentially-exposed partner (aOR, 5.4; 95% CI, 2.3-12.7) and those who abstained from sex when drinking or using drugs (aOR, 2.7; 95% CI, 1.3-5.7) compared to those without these behaviors. Males were more likely than females to report successfully abstaining from sex with potentially-exposed partners until their partners received STI treatment (aOR, 2.2; 95% CI, 1.2-4.1). Reporting this abstinence also differed by race/ethnicity and site. Reporting abstinence until their partner was tested was more common among those reporting having discussed the risks with a potentially-exposed partner (aOR, 3.8; 95% CI, 1.6-9.0) or telling a potentially-exposed partner to seek an STI examination (aOR, 2.8; 95% CI, 1.2-6.6).
Conclusions: Many patients successfully adopt protective behaviors after receiving a new STI diagnosis. Interventions to further strengthen behaviors for avoiding transmission of infection or reinfection among these patients are needed.
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4C3
ANTIBODY TITERS FOLLOWING THE HPV4 SERIES ADMINISTERED AT DELAYED DOSING INTERVALS

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Background: Although HPV4 vaccine is recommended as a 3-dose series administered at 0, 1-2, and 6 months, many do not adhere to this schedule. Our objective was to assess antibody titers to HPV when 2nd and/or 3rd doses of HPV4 are administered either according to recommendations or late.
Methods: Healthy females aged 9-18 years were enrolled at the time of receipt of their 2nd or 3rd HPV4. Participants were assigned to one of four groups depending upon the timing of prior receipt of HPV4: Group 1 – doses 2, 3 on time; Group 2 – only dose 2 late (> 90 days); Group 3 – only dose 3 late (>180 days); and, Group 4 – doses 2, 3 late. A blood sample was obtained 1 month after the 3rd HPV4. HPV antibody (types 6, 11, 16, and 18) was measured using the VLP-IgG ELISA with parallel-line method to determine titers and is expressed as a geometric mean titer (GMT).
Results: Of 331 eligible participants, 286 received a 3rd HPV4 and had a blood sample. The median age for Group 3 (14 years) or 4 participants (15 years) was older than that of Group 1 participants (13 years) ($p=0.04$ and $p<0.001$, respectively). GMTs were not significantly lower for any of groups who received HPV4 late when compared to the group who received HPV4 as recommended. GMTs to HPV types 6 and 11 were significantly higher in group 3 versus group 1 ($p<0.05$ and $p=0.02$, respectively).
Conclusions: When compared to girls receiving HPV4 according to the recommended schedule, girls receiving either their 2nd or 3rd dose, or both doses, late did not have significantly lower antibody concentrations to any HPV type. These results support current recommendations to not administer additional doses of HPV vaccine for girls who receive the 2nd or 3rd HPV4 doses late.
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4C4
CHLAMYDIA TRACHOMATIS (CT) TREATMENT FAILURE AFTER 1 GRAM AZITHROMYCIN AMONG MEN- A MULTI-CENTERED STUDY

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Background: Treatment failure rates after the recommended 1 g azithromycin among *Chlamydia trachomatis* (Ct)-infected men have ranged from (5%-23%) in 3 recent studies. Reasons for the disparate results are unclear. Methodological issues or geographic differences may account for this inconsistency. The purpose of this study was to conduct a secondary analysis of combined data from three studies, removing the confounding effects of premature test-of-cure (TOC) and sexual re-exposure comparing the rates by geographic location.

Methods: Data from cohorts of men in 4 U.S. cities who received 1 g azithromycin under directly observed therapy (DOT) for the treatment of uncomplicated Ct infections were pooled. Baseline/TOC was performed using Gen-Probe APTIMA Combo 2 (GPAC-2) NAAT urine test. Sexual re-exposure was elicited via ACASI survey for all but Birmingham which was provider-elicited. Men who were GPAC-2+ prior to 3 weeks were excluded from analysis. Rates of re-test positive were compared for men who denied sex or used a condom for all sex acts to those who reported sexual re-exposure/new exposure.
Results: Among 323 included, pooled crude and weighted Ct re-test positive rates were 9.0% and 14.9%. Rates varied by city: New Orleans 13/225 (5.8%), Jackson 2/33 (6.1%), Seattle 8/45 (17.8%), and Birmingham 6/27 (22.2%). Rates of sexual re-exposure were: New Orleans (51.1%), Jackson (45.5%), Seattle (33.3%) and Birmingham (8.3%). In pooled analyses, re-test positive rates among those who reported no sexual exposure were 8.5% (95% C.I. 5.4%-12.8%) and among those who reported sexual exposure 9.5% (95% C.I. 5.5%-12.7%).
Conclusions: Overall treatment failure was 9.0% and varied by geographic location (range 5.8%-22.2%) and re-infection did not appear to account for this. Given that test-of-cure is not recommended for Ct infections, this rate is of concern. Susceptibility testing should be performed to determine if sensitivity to azithromycin has declined and/or varies by region.
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4C5
ENHANCED LABORATORY TESTING REDUCES CHLAMYDIA TRACHOMATIS INFECTIONS IN YAP, FEDERATED STATES OF MICRONESIA

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Background: *Chlamydia trachomatis* and *Neisseria gonorrohoeae* are among the most commonly identified sexually transmitted infections worldwide yet little are known regarding the burden of these infections in the Pacific Islands. The lack of quality laboratory tests in the region limits the ability for comprehensive assessments of the epidemiology of these infections. In 2008, the Yap State Department of Health Services initiated a program with the assistance of the Centers for Disease Control and Prevention (CDC) to better understand the rates of *C. trachomatis* and *N. gonorrhoeae* infections.
Methods: Universal screening of sexually active men and women residing in Yap State ≥14 years of age for *C. trachomatis* and *N. gonorrhoeae* commenced September 2008 and analysis was limited to complete calendar year data sets. A total of 6468 vaginal or urine specimens were collected from women and men between 2009 and 2012 and shipped to CDC for testing using the Aptima Combo 2 assay (Gen-Probe). Patients that tested positive for either *C. trachomatis* and/or *N. gonorrhoeae* were treated as recommended by CDC. Sex partners were also offered treatment if identified.
Results: Overall, the prevalence of *C. trachomatis* infections decreased from 17.3% (328/1896) in 2009 to 11.42% (174/1521) in 2012. The decrease was most noted in 10-29 year olds from which the number of *C. trachomatis* infections fell to 14.9% (102/690) in 2012 from 26.1% (241/922) in 2009. *N. gonorrhoeae* prevalence remained low throughout the study period and ranged from 0.7% to 1.4%.
Conclusions: We report that *C. trachomatis* is endemic in Yap and high prevalence's were discovered in young women who may be at risk of infertility if these infections are left untreated. There was a marked decrease in *C. trachomatis* prevalence as screening continued which highlights the importance of consistent laboratory testing.
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4D (SYMPOSIUM)
CONTROLLING THE SPREAD OF ANTIMICROBIAL RESISTANCE IN *NEISSERIA GONORRHOEAE* IN LATIN AMERICA AND THE CARIBBEAN—THE GONOCOCCAL ANTIMICROBIAL SUSCEPTIBILITY PROGRAM (GASP)

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Challenges and Opportunities for the Gonococcal Antimicrobial Susceptibility Program (GASP) in Latin America and the Caribbean in Controlling the Spread of Antibiotic Resistant *Neisseria gonorrhoeae* (Dillon)

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Background: Antibiotic treatment remains the only effective strategy to cure infections caused by *Neisseria gonorrhoeae*. Because resistance to all classes of antibiotic is now prevalent in gonococcal isolates from most parts of the world, a global strategy to control the spread and impact of antibiotic resistance in the gonococcus is a public health priority. The Gonococcal Antimicrobial Susceptibility Program (GASP) has been operative in Latin America and the Caribbean since the early 1990s. The program has been revitalized recently in view of this urgent public health problem.
Methods: Representative public health laboratories from each country in Latin America and the Caribbean were invited to join the GASP. An initial evaluation was made of their capacity to undertake the identification and antimicrobial susceptibility testing of *N. gonorrhoeae* isolates. Standardized methods were adopted and MIC testing criteria were based on guidelines established by the Clinical Laboratory Standards Institute. International quality assurance programs have been implemented during various periods of the program.
Results: Individual countries able to participate in the GASP-LAC have changed over time; overall the number of countries reporting is declining. Countries vary in the representativeness of their internal GASP networks and the number of isolates tested annually. Trends in antimicrobial susceptibility vary between countries but most report resistance to ciprofloxacin, penicillin and tetracycline. Limited reports on decreased susceptibility to third generation cephalosporins have emerged and some countries have high levels of azithromycin resistance.
Conclusions: New efforts have been made to revitalize the GASP-LAC network through rebuilding international capacity in relevant clinical and laboratory practices. The provision of annual information on antimicrobial susceptibility to national public health authorities may assist in effecting appropriate drug regulations and the establishment of more effective preventive strategies.

Strengthening the Gonococcal Antimicrobial Susceptibility Surveillance Program (GASP) network in Peru: identifying and addressing operational challenges (Chiappe)

Background: Gonorrhea is a common sexually transmitted infection (STI) and a challenge due to emergence of resistant strains. In the 1990s the Gonococcal (GC) Antimicrobial Surveillance Program (GASP) was created with support of WHO. Peru was a founding member of the GASP in Latin America and the Caribbean, but data collection has been limited due to multiple factors. Recent Peruvian data has shown strains of *Neisseria gonorrhoeae* with very high levels of resistance to ciprofloxacin which is currently recommended for the treatment of gonococcal infections. The Universidad Peruana Cayetano Heredia (UPCH) in cooperation with the National STI/ HIV Program, and regional governments in Peru, work is ongoing to strengthen a regionally representative GASP network in Peru.
Methods/Results: Discussions were started with the Ministry of Health about the need of sharing information on GC antimicrobial resistance (AMR). Six Peruvian regions were chosen to start a GASP program based on their willingness to participate and their high prevalence of STIs. The main operational challenges identified are: (1) the need to train trainers and subsequent laboratory and clinical personnel; (2) poor knowledge at all levels (authorities, providers, laboratory personnel, and general population) about GC AMR; (3) laboratories with limited resources and no technical support; (4) poor techniques to collect samples; (5) poor quality of media preparation (6) lack of regional standardized procedures; (7) no incentives or requirements for improved reporting and feedback; (8) no national budget for GC surveillance; (9) the need to implement a quality assurance program in Peru ;(10) and, no national guidelines for GC surveillance.
Conclusions: To Invigorate the GASP-LAC network in Peru, we are creating awareness and providing training, identifying champions, standardizing procedures, creating a website to promote communication, giving feedback and technical support and working on the basis of a quality control system. One difficult issue is funding which will be needed to provide supplies and monitoring.

Building a Quality Assurance Program for the GASP Network – an International Collaboration (Martin)
Background: The National Gonococcal Antimicrobial Susceptibility Comparison Program is a Canadian program to standardize the *Neisseria gonorrhoeae* susceptibility testing data and maintain the comparability of data generated from the participating laboratories. It is administered by the National Microbiology Laboratory (NML), Public Health Agency of Canada and has been in practice for 30 years. A similar program has been recently re-initiated for Latin American and Caribbean countries participating in GASP by the NML in collaboration with the GASP Coordinating Centre for Latin America and the Caribbean.
Method: Interest and plausibility in re-initiating an international proficiency testing program for *N. gonorrhoeae* susceptibility testing in Latin American and Caribbean countries were determined. As in the 1990s, the National Gonococcal Antimicrobial Susceptibility Comparison Program was used as a model to create a program for the GASP laboratories.
Results: Seven Latin American laboratories participated in the initial proficiency panel distributed in September, 2013 consisting of WHO international reference control strains: WHO F, WHO G, WHO K, WHO L, WHO M, WHO N, WHO O, WHO P, ATCC 49226. Minimum inhibitory concentrations were determined by: Etest® (n= 5 laboratories); agar dilution (n=1 laboratory); Kirby Bauer disc diffusion (n=1 laboratory). Their results were compared to the modal MICs calculated for each strain and antibiotic combination and a report summarizing the data was sent to each participant. Comparative results from the Canadian program and the GASP-LAC program in the 1990s will be discussed.
Conclusions: t is imperative that laboratories monitoring *N. gonorrhoeae* antimicrobial susceptibility participate in quality assurance programs to maintain comparability of data and improve the quality of results.

Challenges of Treatment of Gonococcal Infections in Latin America and the Caribbean (Tinajeros)
Background: Gonorrhea remains a significant disease globally. While gonorrhea is more frequent in poorer countries, disease rates remain unacceptably high in developed countries and may be increasing in population subgroups such as female sex workers and men who have sex with men. Consequences of high disease rates include a high incidence of complications and long term morbidity, as well as increased HIV transmission. Antibiotic resistance increasingly compromises the effective treatment of gonorrhea. Inexpensive treatment regimens have been rendered ineffective due to antimicrobial resistance while efficacious ones are often unaffordable or unavailable in resource poor countries. Gonococcal isolates resistant to third generation cephalosporins, the last class of antibiotic used as monotherapy, have been reported from several countries worldwide. Coupled with syndromic management of gonococcal infections, effective treatment is a cornerstone of Latin-American gonorrhea control efforts. Treatment of gonorrhea has been complicated by the ability of *N. gonorrhoeae* to develop antimicrobial resistance coupled with the lack of on-going surveillance for resistance in many regions.
Methods: During the last months of 2013, a search of the Standard Operating Procedures for the identification and treatment of *Neisseria gonorrhoeae* in Latin American and Caribbean countries was undertaken. Primary treatment recommendations were reviewed in the national treatment guidelines of 14 countries including Bolivia, Perú, Argentina, Colombia, Chile, Paraguay, Brazil, Uruguay, Panama, Costa Rica, Guatemala, El Salvador, Nicaragua and Honduras.
Results: Of the 14 countries in which primary treatments were specified, 7 countries (50%) recommended ciprofloxacin 500 mg single dose as first-choice, 4 countries (28%) recommended ceftriaxone (250 mg IM single dose) and three countries (21%) recommended cefixime (400 mg orally in a single dose) . No Latin American country uses the latest CDC recommendation (ceftriaxone 250 mg and 1 g of azithromycin).
Conclusions: Few countries in Latin America have changed their primary treatment of infections caused by *N. gonorrhoeae* in response to evidence-based antimicrobial surveillance. Most countries continue to use ciprofloxacin despite high levels of resistance to this agent. The temptation to use ineffective but cheaper remedies must be resisted. Continuing, high quality antimicrobial susceptibility surveillance in all regions of Latin America and the Caribbean is of the utmost importance to ensure that effective treatments are in place for gonorrhea infections. Treatment options for the future will be discussed.

4E (SYMPOSIUM)
GLOBAL CHALLENGES/ADVANCES IN STD PREVENTION

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How do we reach the most vulnerable populations for STI testing in North America? (Gaydos)
Most STIs occur in those under the age of 25 years of age in North America and this population presents special challenges for public health officials to access. Special types of outreach methods are required to educate adolescents and young adults about the importance of screening for STIs. Some of these new paradigms include the internet, social media, school based clinics, and other alternative venue-based sites, including the home. Many different tools will be required in order to teach prevention, get individuals tested and treated, and to also get partners treated in order to prevent re-infection.

Challenging for STI control in Latin America (Espinosa–Miranda)
STI control remains challenging in the Latin American, besides a range of effective diagnostic tests, treatments, and vaccines. It happens because these options are unavailable or inaccessible in many areas of all countries, where syndromic management remains the core intervention for individual case management. Partner notification and treatment, antenatal syphilis screening and interventions delivered to groups in whom the risks of infection and transmission are higher need to be improved. Effective action requires a multifaceted approach including better epidemiological and surveillance data and methods to get effective interventions onto the infrastructure of health clinics and the policy agenda.

The challenges of controlling STIs across a diverse continent (Poder)
Differences between the 53 countries of Europe are far greater than is generally recognized. Health care systems, and, accordingly, treatment standards, in different European countries vary to a considerable extent. Also, there is large variation in economic conditions. The economic crisis has led to a scaling back of expenditure on free, open access STI clinics in all countries yet those economically less developed have suffered most. The vulnerable groups (e.g., young people, immigrants) have been especially affected by the crisis-induced changes. Specifically, these people cannot afford to be tested, particularly in asymptomatic cases. Paradoxically, the situation seemingly reduces the statistics of STI-related problems since data from clinics are becoming less reliable and problems appear to "go away". STI clinics have never been a priority anyway due to the stigma attached to the STIs that makes the patients less vocal about the services received. The problem is compounded by a fragmentation of services between dermatologists, gynaecologists and family practitioners, for all of whom STIs are a minority interest, not a priority. In addition, dermatologists are increasingly more interested in lucrative private practices (often focusing on cosmetology) than in treating STIs. All of the above makes dealing with such persistent problems as the HIV epidemic in former Soviet countries, the high level of antibiotic resistance in all parts of Europe, etc., more challenging.

Asia Pacific: Emerging drug resistance is a new challenge in syndromic management of STIs (Gupta)
Development of antimicrobial resistance of *Neisseria gonorrhoeae* to commonly available drugs is a growing challenge in Asia-Pacific region. In overwhelming majority of laboratories in the region, gonococcal resistance testing facility is not available and most of the patients still receive syndromic treatment. Some specialist clinics use on-site microscopy. Current guidelines recommend use of ceftriaxone or cefixime and azithromycin for purulent urethral discharge and azithromycin for non-purulent, mucoid urethral discharge in men and in symptomatic women at high risk of chlamydia. In some countries in the Pacific region (e.g. New Zealand) there has been gradual roll out of NAAT testing for gonorrhoea although NAAT testing for chlamydia has been available universally for a number of years. In view of changing antimicrobial resistance scenario, syndromic management guidelines need to be supported by extensive antimicrobial resistance surveillance.

STI Control in Africa – Where are we now? (Adu-Sarkodie)
Africa is the content hardest hit with STI and over the past many years there have been efforts by countries and supporting partners to put in interventions

for this. Tagging on the back of the HIV epidemic, a lot was done. With dwindling resources for developing country support for HIV interventions, what is the state of STI control on the continent?

5A—STI PREVENTION ISSUES IN SPECIAL POPULATIONS IN LATIN AMERICA

5A1
PROFILE OF ANONYMOUS PARTNERSHIPS AMONG MEN WHO HAVE SEX WITH MEN (MSM) AND TRANSGENDER WOMEN (TW) RECENTLY DIAGNOSED WITH HIV AND/OR OTHER STIS IN LIMA, PERU

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Background: Partner notification (PN) among MSM/TW diagnosed with HIV/STI is a key strategy for controlling HIV/STI transmission. Anonymous partnerships are an important barrier to PN and associated with sexual risk behavior. Limited research has examined the profile of MSM/TW who engage in anonymous sex.
Methods: HIV/STI-infected MSM/TW, diagnosed within the past month, participated in a cross-sectional survey assessing anticipated PN. Participants reported recent sexual partner types and characteristics of up to 3 recent partners. A multivariable generalized estimating equation (GEE) model was used to assess participant- and partnership-level characteristics associated with anonymous partnerships as compared to MSM/TW not reporting anonymous partners.
Results: Among 395 participants, 36.0% (n=142) reported sex with an anonymous partner in the last three months. These participants reported a mean of 8.6 anonymous partners (SD 17.0). 21% of individuals reported an anonymous partner as one of their last three partnerships, of whom 10% of participants were TW and 90% MSM. MSM/TW reporting anonymous partners had a mean age of 31.8 (SD=8.1) and 55.6% had a high school degree. The majority of participants reported sexual role versatility; 66.3% versatile 'moderno', 21.7% bottom 'pasivo' and 12.1% top 'activo'. Distribution of HIV/STI diagnoses was: 58.8% STI only, 15.0% HIV only and 26.3% HIV/STI co-infection. In a multivariable model, significant factors associated with an anonymous partner included: participant age (AOR: 1.05, CI:1.05-10.09), education (AOR:1.20, CI: 1.15-4.21), gay identity (AOR:0.16, CI: 0.03-0.88), or "moderno' role (AOR:11.98, CI:3.07-46.63); and partner gender: female (AOR: 3.54, CI:1.34-9.36) or TW (AOR: 4.78, CI:1.06-21.50). Participants were less likely to indicate that they planned to disclose their HIV/STI to anonymous partners than non-anonymous partners (AOR 0.41, CI:0.22-0.76).
Conclusions: Newly HIV/STI-infected MSM/TW with anonymous sex partners present an important challenge for partner notification. Partner notification interventions need to develop targeted strategies for Latin American MSM/TW who engage in anonymous partnerships.
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5A2
LACK OF HIV SEROSTATUS AWARENESS AMONG HIGH-RISK MSM IN LIMA, PERU. 2013

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Background: Men who have sex with men (MSM) and male-to-female transgender women (TW) are at increased risk of HIV infection. Although prevention strategies exist in Peru, they have not been adequately tailored to MSM/TW. As a result, high-risk MSM/TW often do not get tested for HIV with sufficient frequency, resulting in low awareness of their current HIV status, delayed diagnosis, and delayed linkage to care.
Methods: A cross-sectional, clinic-based study was conducted among MSM and TW at high-risk for HIV infection in Lima, Peru. The study included HIV testing with a 3rd generation rapid point-of-care test, a 4th generation Ag/Ab HIV EIA test and confirmation with Western blot (WB). Pre- and post-test counseling and linkage to care were provided. An interviewer-administered behavioral survey was also conducted. Statistical analysis included descriptive statistics and chi-square comparisons with Fisher's exact as needed.
Results: Participants included 133 MSM and 38 TW, median age was 29.5 years. Most, 159 (93.0%), reported at least one previous HIV test and 26/171 (15.2%) self-reported being HIV positive. After testing, 47/171 (27.5%) were HIV-antibody positive and 41/171 (24.0%) had WB confirmed infection. Among those with confirmed HIV infection, 15/41 (34.1%) were previously unaware of their infection. Among those who reported being HIV negative but tested HIV positive, 2/15 (13.3%) reported being at high risk of contracting HIV versus 31/124 (25.0%) who perceived high risk but were truly HIV negative (p-value 0.52).
Conclusions: Among MSM and TW in this high-risk sample, almost a third of HIV-infected participants were unaware of their infection. Moreover, almost all the MSM/TW with newly diagnosed HIV did not consider themselves to be at high risk for contracting HIV. Unawareness of HIV status and low perceived risk for HIV-infection are highly problematic and should be addressed in HIV prevention programs focused on MSM/TW.
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5A3
MAPPING AND ENUMERATION OF VENUE-BASED MALE AND TRANSWOMEN SEX WORKERS IN PERU USING PLACE AND CAPTURE-RECAPTURE

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Background: Ethnographic mapping and enumeration systematically describe hidden populations. Our objective was to identify and describe male and transwomen sex work venues and venue-based sex workers in Lima, Peru.
Methods: PLACE, Priorities for Local AIDS Control Efforts, includes brief community informant interviews to brainstorm possible venues, visits to possible venues to verify, map and describe the venue and estimate the number of people present at peak times using venue informant interviews, and surveys with venue attendees. We describe the PLACE data. We returned to verified venues for capture-recapture enumeration. We visited all venues on peak times at two points two weeks apart. At point 1, we offered a pocket calendar "tag" to MTSWs present and recorded the number accepting and rejecting the tag. At point 2, we recorded the number previously "tagged" and new MTSWs. We applied a population point estimate formula to the capture-recapture data and compared that with the PLACE estimates.
Results: We brainstormed MTSW sex work venues with 755 community informants, including taxi drivers, "sex hotel," community business, socialization venue and health personnel, police and MTSWs. Informants named 1,754 venues, which were consolidated into 447 venues: 91 did not exist; 259 existed but are not MTSW venues; and 81 are MTSW venues. Of confirmed venues, 51% are street-based, 28 have only MSWs, 49 have only TSWs and 4 have MTSWs. We surveyed 259 TSWs, 129 MSWs and 102 clients. Venue personnel estimated 357 MSWs and 443 TSWs. Capture-recapture estimated 542 MSWs (95% CI: 475, 609) and 677 TSWs (95% CI: 635, 699).
Conclusions: PLACE is a highly systematic method for identifying and describing sex work venues and attendees and implementing the ethnographic mapping that precedes capture-recapture. Capture-recapture is more systematic – but more costly and time intensive – than PLACE for estimating the size of hidden populations.
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5A4
PREVALENCE OF CHLAMYDIA AND GONORRHEA IN HIV-INFECTED PREGNANT WOMEN IN THE AMERICAS

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Background: Untreated sexually transmitted infections (STIs) in pregnancy such as *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) can have adverse effects on maternal and infant health. Recent availability of highly sensitive nucleic acid amplification tests (NAAT) allow for more accurate prevalence assessments. As part of NICHD HPTN 040, a multi-center clinical trial evaluating new infant treatment regimens for the prevention of intrapartum HIV mother-to-child transmission (MTCT), we evaluated the prevalence of these STIs and their association with HIV MTCT for the Americas cohort, which included Brazil, Argentina, and the U.S.
Methods: Urine samples from 799 HIV-positive pregnant women collected at the time of labor/delivery underwent CT and NG NAAT using GeneXpert® (Cepheid Inc., Sunnyvale, CA). Infant HIV infection was determined by HIV DNA PCR. Infants were not breastfed. Descriptive statistics were used to summarize results, and Fisher's exact test was used to compare HIV MTCT between groups.
Results: Of the 799 HIV-positive pregnant women, 146 (18.3%) had infections with either CT, NG, or both CT/NG. 134 women (16.8%) had CT alone or in combination, 24 (3.0%) had NG either alone or in combination, and 12 women (1.5%) had dual CT/NG infection. 67 women (8.4%) transmitted HIV to their infants. HIV MTCT in the CT-only group was 12.3% (15/122), 0% in the NG-only group (0/12), 25% (3/12) in the dual CT/NG group, and 7.5% (49/653) in the uninfected group (p <.001). Women co-infected with CT/NG were 3.1 times as likely to transmit HIV to their infants (RR: 3.1; 95% CI: 1.1, 8.4) than those without these infections.
Conclusions: HIV-positive pregnant women are at high risk for infection with CT and/or NG, which may impact HIV MTCT. NAATs may facilitate effective CT and NG diagnosis and should be routinely implemented for active screening and treatment.
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5A5
IMPLEMENTATION OF SYPHILIS RAPID TESTS IN THE HEALTH PRIMARY CARE SYSTEM IN BRAZIL

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Background: In 2011, the Brazilian Ministry of Health launched the "*Rede Cegonha*" (Stork Network) Program in order to improve the quality of antenatal, childbirth and postpartum health care for children up to 2 years of age. The national STD, AIDS and Viral Hepatitis Department is responsible for expanding access to rapid tests for syphilis screening to support the elimination of congenital syphilis by 2015.
Methods: We report program data on the distribution of rapid tests and training of health professionals, syphilis detection rate and incidence of congenital syphilis from surveillance data, one year after the launch of the "*Rede Cegonha*" Program.
Results: Between 2012 and 2013, the Ministry of Health distributed 1,311,766 rapid tests for syphilis to 5488 municipalities (98.5 %) that joined the prenatal component of the "*Rede Cegonha*" Program and trained 1123 health professionals responsible for the multiplication of testing in primary health care facilities. According to the National System of Disease Notification (SINAN) 16,930 cases of syphilis in pregnancy were reported in 2012 (63% increase compared with 2010, 10,338 cases). In the same year 11,316 cases of congenital syphilis were reported in children under 1 year with incidence rate of approximately 3.9 % (62.5% increase in incidence rate compared with 2010, 6916 cases and incidence rate of 2.4).
Conclusions: Epidemiological data suggests that incorporating rapid tests for syphilis into the "*Rede Cegonha*" Program may offer an opportunity to expand the coverage of detection of syphilis during pregnancy. The Ministry of Health will strengthen and expand the implementation of this program to achieve the target of eliminating congenital syphilis by 2015.
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5B—NEW DIAGNOSTICS FOR STIS AND ANTIMICROBIAL RESISTANT GONORRHEA

5B1
PERFORMANCE OF NEW POINT-OF-CARE SYPHILIS TESTS

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Background: New rapid point-of-care (POC) tests are being developed that would offer the opportunity to increase screening and treatment of several infections, including syphilis. This study, which was in response to a CDC opportunity in the Federal Register, evaluated three of these new rapid POC tests at a site in Southern California.
Methods: Participants were recruited from a testing center in Long Beach, California. A whole blood specimen was used to evaluate the performance of the Dual Path Platform (DPP) Syphilis Screen & Confirm, DPP HIV-Syphilis, and DPP HIV-HCV-Syphilis rapid tests. The gold-standard comparisons were Treponema pallidum passive particle agglutination (TPPA), rapid plasma reagin (RPR), HCV enzyme immunoassay (EIA), and HIV-1/2 EIA.
Results: A total of 870 whole blood specimens were analyzed in this study. The sensitivity of the HIV tests ranged from 95.0-100% and the specificity was 99.6-100%. The sensitivity and specificity of the HCV test were 91.3% and 99.4%, respectively. The treponemal-test sensitivity when compared to TPPA ranged from 44.0-51.2% and specificity was 99.2-99.6%. The nontreponemal test sensitivity and specificity when compared to RPR was 42.9% and 98.8%, respectively. The sensitivity of the Screen & Confirm test improved to 87.5% when cases who were both treponemal and nontreponemal positive on the POC test were compared to TPPA+/RPR >1:8 on the gold-standard.
Conclusions: The HIV and HCV on the multi-infection tests showed good performance, but the treponemal and nontreponemal tests had low sensitivity. These results could be due to a low prevalence of active syphilis in the sample population. The syphilis POC test did perform better when compared to detection of cases more likely to be active. Further evaluation of the new POC tests is required before implementation into testing programs.
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5B2
EVALUATING 4TH GENERATION TESTING FOR HIV-1 WITHIN A NON-PROFIT SETTING

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Background: Detection of acute HIV infection should be a central concern for HIV prevention. HIV 4th generation P24 Ag/HIV Ab testing allows for timely diagnosis of acute infection. AIDS Healthcare Foundation (AHF), the nation's largest provider of HIV care, evaluated 4th generation testing versus standard rapid antibody testing with pooled RNA testing for the detection of HIV infection and linkage-to-care.
Methods: Beginning May 30, 2013, all male clients who reported having sex with male partners presenting for HIV/STD testing at 4 AHF Los Angeles health clinics were offered routine rapid HIV antibody testing (Insti, bioLytical Laboratories, Richmond, Canada). Clients with a negative rapid HIV test received pooled HIV RNA testing (PCR Roche, Branchburg, NJ) and 4th generation HIV P24 antigen/antibody testing (Abbott Architect i1000, Abbott Park, IL).
Results: As of October 4, 2013, 13 (1.4%) of 917 clients tested positive by the rapid HIV test (8), 4th generation P24 Ag/HIV Ab test (5) or pooled HIV RNA testing (4). Four of the 13 were confirmed as acutely infected increasing HIV case detection by 50%. The 4th generation test missed no acute cases but had one false positive result. Of the 12 HIV-infected, 9 were linked to care, 2 have not been linked, and 1 was previously diagnosed. Of the 4 with acute infection, all are on treatment with reductions in HIV viral load. The average time from specimen collection to result availability among those with acute infection was 2.4 days for 4th Generation testing and 12.5 days for NAAT (p < 0.01).
Conclusions: The use of 4th generation HIV testing substantially increased HIV case detection and identified cases of acute infection faster than pooled HIV RNA testing. HIV testing organizations should consider the use of testing methods that provide enhanced and timely case-identification in order to increase community-level serostatus awareness and accelerate linkage-to-care.
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5B3
IN VITRO SYNERGY TESTING OF TWO NEW ANTIMICROBIAL COMBINATION THERAPIES FOR GONORRHEA

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Background: A recent clinical trial found that azithromycin plus either gemifloxacin or gentamicin is effective in the treatment of uncomplicated gonorrhea. These regimens could be useful in a future era of more widespread gonococcal resistance. However, the efficacy of these treatments against gonococci with resistance to azithromycin and/or gemifloxacin is unknown. We evaluated *in vitro* activities of these new antimicrobial combinations, including among isolates with resistance or elevated minimum inhibitory concentrations (MICs) to azithromycin, gemifloxacin, and gentamicin.
Methods: We selected a panel of 78 *N. gonorrhoeae* strains with varying susceptibility profiles including 15 reference strains and 63 clinical isolates collected from patients in Seattle, Washington, 2007 - 2013. We determined MICs for azithromycin, gentamicin and gemifloxacin individually and in combination by Etest, and calculated the fractional inhibitory concentration index (FICI) to assess synergy and antagonism.
Results: Azithromycin MICs ranged from 0.032 - 16 μg/mL; gemifloxacin, ≤0.002 to 12 μg/mL, and gentamicin, 2 -16 μg/mL. The overall mean FICI observed with the combination of azithromycin and gentamicin was 1.12, SD 0.21, with 13 (16.7%) of the isolates exhibiting partial synergy (FICI 0.63 – 0.99). The mean FICI for the combination of azithromycin and gemifloxacin was 1.20, SD 0.20, with only 2 (2.6%) of the isolates indicating partial synergy. No antagonism was observed for either combination. Among 20 isolates with intermediate susceptibility to gentamicin (MIC 8–16 μg/mL), all appeared to be susceptible to combination of azithromycin and gentamicin. In contrast, among 49 gemifloxacin-resistant isolates (MIC ≥1 μg/mL), only 33% showed laboratory evidence of susceptibility to a combination of azithromycin and gemifloxacin.
Conclusions: The combinations of azithromycin and either gemifloxacin or gentamicin showed partial synergy or indifference. Compared to gemifloxacin and azithromycin, the combination of azithromycin plus gentamicin had superior *in vitro* activity against relatively resistant gonococci; the clinical significance of this observation is uncertain.
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5B4
INTRA-LABORATORY VARIABILITY IN THE ETEST® METHOD FOR DETERMINING ANTIBIOTIC SUSCEPTIBILITY OF *NEISSERIA GONORRHOEAE* TO CEFIXIME, CEFTRIAXONE AND AZITHROMYCIN

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Background: *Neisseria gonorrhoeae* is a sexually transmitted bacterial pathogen that continues to evolve to become resistant to known antibiotics. Current treatment recommendations by the Centers for Disease Control and Prevention (CDC) are limited to either ceftriaxone or cefixime in combination with azithromycin. In preparing for potential emergence or importation of such resistant isolates in the US, the CDC recommends that clinical laboratories maintain or develop protocols to assess antibiotic susceptibly for *N. gonorrhoeae*. Methods that determine minimum inhibitory concentrations (MICs) would be best since interpretative breakpoints have yet to be established when testing *N. gonorrhoeae* against these antibiotics. This study examines the intra- laboratory variability of using the Etest method to provide consistent MIC values for gonorrhea.
Methods: A total of 200 clinical *N. gonorrhoeae* isolates, 100 paired duplicates, were tested by 8 public health laboratories for antibiotic susceptibility to ceftriaxone, cefixime and azithromycin using Etest strips. The laboratories were not aware that the isolates were paired duplicates. The MIC values were transformed to a logarithmic scale to assess correlation between the paired isolates. A correlation coefficient was calculated to assess intra-laboratory reproducibility.
Results: Laboratories inoculated GC agar base medium with approximately 108 CFU/mL and placed Etest strips onto the medium. The correlation coefficient for intra-laboratory reproducibility ranged from 0.39 to 0.93 for ceftriaxone, from 0.08 to 0.82 for cefixime, and from 0.40 to 0.91 for azithromycin.
Conclusions: There was considerable variation in laboratory reproducibility of Etest MIC results for antibiotics relevant for the treatment of *N. gonorrhoeae*. The development of standard laboratory protocols and training may help to improve the intra-laboratory performance of the Etest for *N. gonorrhoeae* antibiotic susceptibility testing. To improve standardization in testing, the CDC is working with the Association of Public Health Laboratories to develop an Etest training module for *N. gonorrhoeae.*
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5B5
IDENTIFICATION OF SINGLE NUCLEOTIDE POLYMORPHISMS IN *NEISSERIA GONORRHOEAE* ISOLATES WITH ELEVATED CEPHALOSPORIN MICS USING NEXT GENERATION WHOLE GENOME SEQUENCING

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Background: *Neisseria gonorrhoeae* (NG) remains the second most common bacterial sexually transmitted disease in Canada and the USA. If untreated, infections can result in serious injury and in some cases infertility. Diagnosis of NG infection is frequently performed by nucleic acid amplification tests which provide no information about antibiotic resistance. Emergence of NG strains with higher minimum inhibitory concentrations (MICs) to third generation cephalosporins, (cefixime, ceftriaxone) and azithromycin is threatening last available treatment options.
Methods: MiSeq whole genome sequencing and bioinformatics were used to detect single nucleotide polymorphisms (SNPs) present in 200 NG samples. Isolates with low (<0.032 μg/ml) and high (≥0.125 μg/ml) MICs to cefixime, and low (<0.016 μg/ml) and high (≥0.125 μg/ml) MICs to ceftriaxone were grouped for further analysis. In-silico assay validation using *two tailed student t-testing*, and *the power of the test* showed low and high MIC groups could be distinguished. The genes where SNPs were located were blinded until assays were optimized.
Results: Sequencing data was evaluated for both cefixime and ceftriaxone isolates and 12 SNPs with the greatest difference between low and high MIC groups were determined. Predicted sensitivities of 12 SNP cefixime and ceftriaxone assays were calculated to be 97% (58/60), and 94% (49/52). The specificities of cefixime and ceftriaxone assays were 83% (68/82) and 89% (51/57). Some informative nonsynonymous SNPs were located in genes including efflux pumps, proteins involved in ribosomal function and genes known to confer antibiotic resistance.
Conclusions: Novel SNPs can be used to distinguish NG strains with high cephalosporin MICs from low MICs and are being used for the development of diagnostic tests to identify antimicrobial resistance in *N. gonorrhoeae*. New rapid genotypic resistance assays could inform appropriate use of antibiotic treatment for gonorrhea infections, lowering the risk of treatment failure, and reducing the spread of multidrug resistant gonorrhea.
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5C—IMPROVING PARTNER SERVICES

5C1
CAN ACCELERATED PARTNER THERAPY (APT) IMPROVE OUTCOMES OF PARTNER NOTIFICATION FOR WOMEN DIAGNOSED WITH GENITAL CHLAMYDIA IN PRIMARY CARE SETTINGS: A PILOT RANDOMIZED CONTROLLED TRIAL IN GENERAL PRACTICE AND COMMUNITY SEXUAL HEALTH SERVICES

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Background: APT is a promising partner notification (PN) intervention in specialist sexual health clinic attenders. To address its applicability in primary care, we undertook a pilot randomised controlled trial (RCT) of two APT models in community settings.
Methods: 3-arm pilot individual RCT of 2 APT interventions: APTHotline (telephone assessment of partner(s)) and APTPharmacy (community pharmacist assessment of partner), vs routine care (patient referral). Participants were women diagnosed with genital Chlamydia trachomatis infection (indexes) in 10 general practices and 2 community contraception and sexual health services in London and the south coast of England, 1 Sept 2011-31 July 2013. The primary outcome was the proportion of contactable partners considered treated ≤6 weeks of index diagnosis.
Results: 199 women described 339 male partners, of whom 313 were described by the index as contactable. Index follow-up rates varied significantly by intervention arm: APTHotline: 50/68 (74%); APTPharmacy 42/65 (65%); Standard 54/66 (82%). Proportion of contactable partners considered treated ≤6 weeks of index diagnosis by arm were: APTHotline 41/111 (37%); APTPharmacy 38/110 (35%) and Standard patient referral 46/102 (45%). Excluding from the denominators partners who could not be followed-up, these proportions were: 49%; 60%, and 58%, respectively.
Conclusions: The proportion of partners treated was lower than that achieved by APT in specialist services and uptake of interventions was low. Poorer outcomes in these community settings may reflect index randomisation, removing the opportunity for the women to choose a PN approach, which has been shown to contribute to successful PN. Also the ability to follow-up indexes to ascertain PN outcomes varied by arm, and thus the extent of difference between arms depends on the denominator used. Nonetheless, overall outcomes were superior to previously-reported PN measures in similar settings and so further work is required to optimise uptake of APT outside specialist services.
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5C2
UTILIZING COMMUNITY-EMBEDDED DISEASE INTERVENTION SPECIALISTS TO MOBILIZE STD PREVENTION AND CONTROL IN SOUTH LOS ANGELES

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Background: Gonorrhea (GC) rates in South Los Angeles account for 40% of all cases in Los Angeles. Timely partner notification and treatment is essential to reducing further STD transmission, however the practice of partner management varies among clinical sites. Innovative, effective approaches are needed to address timely partner management for this population.
Methods: The Los Angeles County Division of HIV and STD Programs (DHSP) worked in collaboration with a community clinic to hire a Community-Embedded Disease Intervention Specialist (CEDIS), aimed at notification and treatment of partners. The CEDIS played a central role in STD prevention at the clinic. Building upon this successful model, California Family Health Council (CFHC) collaborated with Planned Parenthood Los Angeles (PPLA) and DHSP to pilot a similar project in South Los Angeles.
Results: In September 2012, CFHC hired two CEDIS to work with multiple clinics and community-based organizations located in South Los Angeles. Their role was to follow up with all GC- positive patients to ensure proper treatment, and identify their sexual partner(s) and networks. Since that time, the CEDIS have interviewed 260 positive GC cases, and initiated follow-up interviews with 159 of their sex partners or members of their social network. In addition, the CEDIS have worked with community partners to leverage existing efforts and to link non-traditional partners from various sectors with the Los Angeles STD control plan.
Conclusions: This project required institutional changes in clinic policy and practice specifically designed to reach partners of diagnosed STD patients, such as fast tracking appointments and improved quality of patient interviews, which were crucial to the effective integration of the CEDIS at clinic sites. In addition, creating and maintaining relationships with community based health centers was vital to the CEDIS' work. Combining practices from these effective community-based models has improved STD Prevention and Control efforts in South LA.
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5C3
UPTAKE OF AND EXPERIENCES WITH EXPEDITED PARTNER THERAPY AMONG AFRICAN AMERICAN GIRLS RECRUITED FROM SHORT-TERM JUVENILE DETENTION CENTERS

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Background: This study describes uptake, correlates of acceptance and experiences using expedited partner therapy (EPT) among African American girls recruited from short-term juvenile detention centers.
Methods: Ninety-five detained African American girls (13-17 years) participated in a HIV/sexually transmitted infection (STI) prevention program. At baseline, 3- and 6-month assessments participants completed audio computer-assisted self-interviews (ACASI) and self-collected vaginal swab specimens assayed for Chlamydia and gonorrhea. After each assessment, the study nurse offered EPT over the phone to STI-positive participants (n=51) and conducted follow-up phone interviews seven days after providing partner medication to participants (n=37) to assess medication delivery to partners. Summary statistics described EPT uptake. Generalized estimating equations assessed correlates of acceptance. Nine semi-structured interviews elicited participants' EPT experiences.
Results: EPT was offered 69 times, accepted over the phone 48 times (70%) and provided 47 times (68%) to 36 girls. Phone interview data indicated the most common refusal reason was discontinued partner relationship. ACASI data showed acceptance was significantly associated with an increased likelihood of self-reported STI history (OR=5.3, 95% CI: 1.7, 17.0, p=0.005), ≥4 lifetime sex partners (OR=3.3, 95% CI: 1.0,11.0, p=0.048), infrequently discussing STI prevention with partners (OR=3.2, 95% CI: 1.0, 10.1, p=0.048), and marginally associated with a decreased likelihood of condom use at last sex (OR=0.04, 95% CI: 0.1-1.1, p=0.084). In 33 (89%) phone interviews, girls reported delivering medication to ≥1 partner. ACASI data also indicated most girls felt "very comfortable" delivering partner medication, although emergent themes in five elicitation interviews included discomfort and missed opportunities for partner education during partner notification. Sense of responsibility for care of partners was a theme in three interviews.
Conclusions: EPT uptake was high; acceptance was associated with riskier sexual behavior. However, partner notification training may have been insufficient. Future research is needed to determine the efficacy of EPT among this population.
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5C4
COMPARISON OF THE CASE-FINDING EFFECTIVENESS OF PARTNER NOTIFICATION SERVICES FOR PRIMARY AND SECONDARY VERSUS EARLY LATENT SYPHILIS CASES IN NORTH CAROLINA

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Background: Partner notification (PN) services for early syphilis cases- primary, secondary (P&S) and early latent (EL)-are the cornerstone of public health control efforts. Due to decreasing funding, the CDC has encouraged states to limit PN services to P&S index cases only. We compared the yield of newly detected syphilis among contacts of EL and P&S syphilis index cases.
Methods: Recent sexual contacts (as defined by CDC) identified through PN services performed by Disease Intervention Specialists (DIS) for P&S and EL index cases were assessed from 2010- 2012. Using the STD-MIS database, we compared the number of new early syphilis infections among sexual contacts of P&S and EL cases and calculated the "contact brought-to-treatment" index (#contacts newly diagnosed with early syphilis per #index cases interviewed).
Results: DIS performed PN services for 98.0% of assigned index cases, 1083 P&S and 961 EL. EL interviews elicited 2500 sexual contacts; 1917 were contactable and 673 (35.1%) were infected. Of infected EL contacts, primary, secondary and EL infections were diagnosed in 57 (8.5%), 206 (30.6%) and 369 (54.8%) individuals, respectively. P&S interviews elicited 2516 sexual contacts; 1871 were contactable and 557 (29.8%) were infected. Of infected P&S contacts, primary, secondary and EL infections were diagnosed in 66 (11.8%), 193 (34.6%) and 265 (47.6%) individuals, respectively. The "contact brought-to-treatment" index was 0.66 (632 contacts with early

syphilis per 961 index cases) for EL and 0.48 (524 contacts with early syphilis per 1083 index cases) for P&S cases.
Conclusions: In North Carolina, PN services for EL and P&S cases identified similar numbers of early syphilis contacts. Without routine PN services for EL index cases, half of P&S syphilis cases among contacts may have remained undetected. Our findings suggest that effective syphilis prevention and control efforts in North Carolina require the continuation of PN services for EL cases.
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5C5
HIGH YIELD OF NEW HIV DIAGNOSES AND PATIENTS WITH HIGH VIRAL LOADS FROM HIV PARTNER SERVICES, PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH STD CONTROL PROGRAM (STDCP) AND AIDS ACTIVITIES COORDINATING OFFICE (AACO), 2012

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Background: Traditionally, partner services (PS) is evaluated by the number of new infections found; however, for HIV, risk of transmission is highest when viral load (VL) is high, and impact depends upon successfully linking persons to care. Successful HIV PS may be better defined as finding and linking to care persons with high VL; however, this can be difficult if VL values are not available to PS. Currently, AACO and STDCP maintain separate databases and HIV surveillance data is not used to initiate PS.
Methods: PS interviews and records from Jan. 1-Dec. 31, 2012 in the STDCP database were reviewed; cases and contacts were matched with eHARS to confirm HIV status and VL.
Results: In 2012, 750 persons were entered into eHARS as newly-diagnosed HIV. PS was initiated for 509 HIV-infected persons (30.7% of whom were diagnosed in 2012): 447 (87.8%) were interviewed; 226 (50.6%) named 529 partners. 109 (20.6%) partners refused PS or were not locatable. Of 420 (79.4%) partners interviewed, 116 (36.3%) reported never being HIV tested and 236 (44.6%) were previously HIV+. Of 178 partners testing after provision of PS, STDCP records categorized 23 (12.9%) as newly HIV+; however, matching with eHARS showed 3 were previously diagnosed, and 1 was false positive. VL was available for 16/19 new positives: 11 had VL ≥10,000 and 7 had VL ≥100,000 at diagnosis. 10/16 were linked to care within 1 month, 2 within 8 months and 4 have not linked to care to date.
Conclusions: A substantial number of persons found during HIV PS had high VL and were highly infectious. However, many persons with newly diagnosed HIV were not offered PS due to parallel data systems. Consideration should be given to using local HIV surveillance data to initiate PS and using DIS to assure HIV+ persons are in care.
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5D (SYMPOSIUM)
IMPROVING STI PREVENTION – LEARNING FROM GLOBAL EXPERIENCE

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Prevention of sexually transmitted infections remains a cornerstone of STI control but effective delivery is elusive in many countries. This session will review three aspects of STI prevention to assess the available evidence and highlight good practice. Firstly, the global experience of screening for infections to prevent STI transmission will be presented identifying what lessons have been learned and how delivery can be improved. Secondly, there will be a focus specifically on what works best when screening men who have sex with men for STIs. Finally, the role of laboratory testing as an adjunct to STI syndromic management will be discussed.

The role of screening in STI prevention (Hughes)
Screening MSM for STIs – what works best (de Vries)
When should laboratory testing be employed as an adjunct to STI s yndromic management? (Ndowa)

5E (SYMPOSIUM)
MEASURING PROGRAM EFFECTIVENESS: SCREENING COVERAGE, TREATMENT, AND PARTNER SERVICES

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Chlamydia (CT) Screening Coverage in Female Adolescent and Young Adult Family Planning (FP) Clients: Region X Title X FP Clinics, 2009-2011 (Fine)
Background: CDC recommends annual CT screening of all sexually active adolescent and young adult women, but FP clinic CT screening coverage (CCSC) in this population averages about 50%. However, little is known about CCSC. We assessed levels of and factors associated with CCSC in Region X FP clinics.
Methods: CY2009-2011 FP client clinic visit records (CVRs) (n=635,333) for female clients aged 15-24 years were aggregated to patient (n=291,096) and clinic levels (n=236). CVRs document client demographics and clinical services, including whether a CT test was done. We selected 125 clinics with >100 patients/year (range=102--4,137). We generated annual clinic-level measures, including patient volume and the number/percentage of clients: aged 15-19; non-white race; with comprehensive examinations; uninsured visits; and tested for CT (i.e., CCSC). We computed differences in CCSC between 2011 and prior years. Descriptive statistics and correlations were calculated.
Results: Annual CCSC averaged 50.6% (2009), 49.1% (2010) and 44.9% (2011). Individual CCSCs ranged from 10%-90%. Annual CCSC absolute differences averaged 11.5% (2011-2009) and 7.7% (2011-2010). Within-clinic annual 2009, 2010 and 2011 CCSC differences ranged from <1% to 66%. 52% of clinics had <10% variation between 2011 and their 2009/2010 CCSCs; 32% varied 10%-19%; 18% varied >20%. 2011 CCSC was correlated with 2009/2010 CCSCs (r=0.58/0.75; p<0.05). 2011 CCSC was not associated with 2011 clinic patient volume or percent non-white race, age 15-19, and comprehensive exam. For FP clinics in the Infertility Prevention Project (IPP) (n=85), 2011 CCSC was correlated with clinic %uninsured visits (r=0.47; p<0.05); for non-IPP FP sites (n=45) %uninsured was not associated with CCSC (r=0.30, p=NS).
Conclusions: CCSC varied significantly between clinics and within clinics over time. IPP supported a safety net service strategy for uninsured FP clients' CT testing. Other clinic client and service characteristics were unrelated to CCSC. Work is needed to identify client, provider, program, fiscal, and policy factors affecting CT testing decisions in this population.

Chlamydia Screening Coverage and CT Positivity (%CT+) in Family Planning/Reproductive Health (FP/RH) Clinics: Does It Matter Which Female Patients We Screen? (Salomon)
Background: The Region X Infertility Prevention Project (IPP) monitored %CT+ and risk factors for infection among adolescent and young adult women tested in FP/RH clinics. Broader agency information systems found FP/RH Clinic CT Screening Coverage (CCSC) averages ~50% but varies significantly. We asked if variation in CCSC reflects variation in criteria used to make screening decisions, and how that might affect clinic CT+? We assessed aggregate clinic-level variation and associations among patient demographics, CT risk factors, service characteristics, CCSC and %CT+.
Methods: We aggregated 2011 IPP FP/RH CT tests (n=47,896) for women aged 15-24 to the clinic level (n=186). We generated clinic characteristics: %age 15-19; %non-Hispanic white; %diagnostically tested (STD exposure, clinical signs, or re-screening), %reporting 1+ behavioral risks (multiple or new sex partner (SP); SP with concurrent SPs; no condom use), %routine visit, %self-collected specimen, and %CT+. CCSC, created from FP/RH Title X clinic visit records (n=197,660) aggregated to patient and clinic, was merged into IPP records via clinic ID#. We selected the 58 FP/RH IPP clinics with >100 female clients aged 15-24 and >50 IPP CT tests. We computed the median (M) and interquartile range (IQR) for each clinic characteristic, and explored associations among characteristics, CCSC, and %CT+ via correlations and scatterplots.
Results: Median (IQR): screening coverage=55% (IQR=23%) (range=32%-91%), %CT+= 6.5%(4%), %diagnostic testing=14%(12%), %behavioral risks=61%(31%), %no exam=54%(46%), %routine visit=83%(22%), %white=95%(8%), %self-collected specimen=57%(51%), %age15-19=44%(11%). CCSC was not associated with

other aggregate measures or clinic %CT+. Clinic %CT+ was significantly ($p<0.05$) correlated with %reporting behavioral risks ($r=0.274$), %non-routine exam ($r=-0.274$), and %re-testing ($r=0.288$).
Conclusions: FP/RH CCSC varied significantly, but was unrelated to %CT+. Demographic, behavioral, and service characteristics did not explain variation in CCSC. Clinic %CT+ was related to the mix of clients tested. Further research should explore system, fiscal, clinic, and provider factors affecting decisions to screen young female FP/RH clients for CT.

Verifying Treatment for Reported Cases of Gonorrhea: One Aim, More Than One Approach (Bowen)
Background: Verifying that gonorrhea cases receive appropriate treatment may reduce morbidity and decrease the development of antibiotic resistance. Little is known about the approaches that sexually transmitted disease (STD) programs are using—if any—to verify gonorrhea treatment.
Methods: We reviewed all applications for 2014 STD Program funding from the Centers for Disease Control and Prevention and noted each program's current activities and future plans for gonorrhea treatment verification. Programs using distinct approaches were studied in greater detail via interviews of program staff.
Results: Current and proposed treatment verification approaches vary widely. At present, most programs do not monitor gonorrhea treatment. While many programs collect treatment details from physician case reports, information is complete for only 30%–60% of all cases. Some jurisdictions verify treatment for a sample of cases using sentinel surveillance data. Many low-morbidity states and a few high-morbidity cities fax or call providers for all gonorrhea cases with undocumented or inappropriate treatment. These jurisdictions are able to verify appropriate treatment for 70%–92% of all cases within 30 days of diagnosis. Many programs are developing gonorrhea treatment verification plans to meet new funding requirements. Most programs passively collect provider-reported treatment information and they intend to review this in the future. A few programs have identified specific interventions to increase this reporting, including training providers about reporting requirements. Others plan to monitor treatment appropriateness using non-representative data sources like infertility prevention activity data and STD clinic data. Very few programs intend to implement comprehensive treatment verification.
Conclusions: Most programs are only beginning to develop plans to verify treatment appropriateness. Approaches to treatment verification vary widely. More information is needed to determine the cost-effectiveness of different verification strategies for identifying and treating persons who were untreated or inappropriately treated.

Unpacking chlamydia screening coverage in England, including estimates of partner notification and repeat testing outcomes
(Hughes)
Introduction: The number of chlamydia tests performed amongst the target age-group (<25 years) for screening in England has increased markedly over the last decade. Evaluation of this national screening programme is enhanced by understanding the relationship between testing coverage and rates of diagnosis, repeat testing, partner notification (PN) and positivity. Our data sources allow some examination of these relationships.
Methods: To the end of 2013, chlamydia tests and diagnoses in England were captured in two national surveillance systems, with tests reported by testing venues (STD clinics) and laboratories (other settings). Records were matched to remove duplicate testing episodes within 6 weeks and to estimate frequency of repeat testing. New surveillance codes were introduced to allow further de-duplication between surveillance systems and to monitor testing of partners.
Results: Approximately 13% of diagnoses were excluded from total chlamydia diagnosis counts as probable duplicates. Estimated coverage (tests/population) amongst 15-24 year-old women was 35% of the total population (44% among sexually-active women) nationally. Positivity varied by setting and coverage. 47% of diagnoses were made in STD clinics. 13% of young women tested in STD clinics and 10% tested in other settings had >1 test within 1 year; re-testing rates were higher following a positive rather than a negative test. In STD clinics, 0.6 heterosexual male partners were seen per woman diagnosed with chlamydia; positivity amongst male partners was 37%.
Conclusion: Detailed monitoring of chlamydia screening activity is available in England, although there are limitations. Our data suggest re-testing of positives and PN make important contributions to coverage and diagnoses. Further developments to improve accuracy of testing information and PN effectiveness are underway. While we continue to monitor coverage, England now focuses on the diagnostic rate per 100,000 as the outcome measure of screening activity, as coverage alone does not capture chlamydia control activity.

6A—DEVELOPMENTS IN ANTIMICROBIAL RESISTANT GONORRHEA: SURVEILLANCE AND TREATMENT ISSUES

6A1
PREDICTING ACQUISITION OF ASYMPTOMATIC BACTERIAL SEXUALLY TRANSMITTED INFECTIONS AMONG HIV-INFECTED MEN WHO HAVE SEX WITH MEN

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Background: Many HIV-infected men who have sex with men (MSM) remain at high risk of acquiring other sexually transmitted infections (STIs). Identifying those at greatest risk of acquiring STIs can guide screening recommendations.
Methods: We developed and validated a risk score to predict asymptomatic STI incidence (early latent syphilis, rectal and pharyngeal gonorrhea, and rectal and pharyngeal chlamydial infection) among HIV-infected MSM using medical record data from a public STD clinic. We randomly divided the data in half and used one dataset for risk score development and the other for internal validation. A stepwise selection procedure using the Akaike Information Criterion was used to identify the most parsimonious Cox proportional hazards model with time-varying covariates and recurrent failures. Censoring occurred at the individual's last visit.
Results: From 2006-2012, a total of 1664 HIV-infected MSM received care in the clinic, of whom 780 (46%) tested for STIs >1 time before 11/20/2013. These men acquired 524 asymptomatic STIs over 2129 years of follow-up (incidence = 25 per 100 person-years). The prediction model included the following risk factors, each of which pertained to the year prior to clinical evaluation: diagnosis of ≥1 STI (contribution to score: +5), unprotected anal sex with an HIV-infected man (+3), methamphetamine use (+3), and ≥10 male sex partners (+2). Risk scores ranged from 0-13. In the validation dataset, a one-point increase in score resulted in an average 1.10-fold increase in the rate of asymptomatic STIs. Men with a risk score ≥7 had a 2.0-fold increase in risk (95% CI: 1.6-2.6) compared with those with scores ≤6 (33 vs. 16 per 100 person-years, $p<0.001$). These higher risk men represented 48% of visits.
Conclusions: We developed a risk score predictive of asymptomatic STI acquisition among HIV-infected MSM that may assist providers in targeting frequent screening to the highest risk men.
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6A2
CEPHALOSPORIN ANTIMICROBIAL SUSCEPTIBILITY OF *NEISSERIA GONORRHOEAE* IN THE UNITED STATES, 2009–2013

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Background: Emerging gonococcal cephalosporin resistance is an urgent public health threat. Gonococcal cefixime minimum inhibitory concentrations (MICs) increased in the US during 2006-2010; the largest increases were observed in the West and among men who have sex with men (MSM). In response, CDC updated its treatment recommendations in 2012 and now recommends ceftriaxone-based dual therapy as the only first-line option. We describe the most recent US gonococcal cephalosporin susceptibility trends.
Methods: The Gonococcal Isolate Surveillance Project (GISP) conducts surveillance of antimicrobial susceptibility in urethral isolates from men. MICs are determined by agar dilution and clinical information is abstracted from medical records. We defined elevated cefixime MICs as ≥0.25 μg/ml and elevated ceftriaxone MICs as ≥0.125 μg/ml.
Results: 25,308 isolates were collected during 2009–June 2013. The percentage of isolates with elevated cefixime MICs increased from 0.8% (2009) to 1.4% (2010 and 2011), then decreased to 1.0% (2012) and 0.4% (2013). The percentage of isolates with elevated cefixime MICs: peaked among iso-

lates from MSM at 4.0% (2010) and decreased to 0.8% (2013); peaked among isolates from men who have sex with women (MSW) at 0.5% (2011) and decreased to 0.2% (2013); and peaked in the West in 2010 (3.3%) and then decreased (1.0% in 2013). Similar patterns were observed in other regions, but with smaller initial increases and later peaks. The percentage of isolates with elevated ceftriaxone MICs increased slightly from 0.3% (2009) to 0.4% (2011) and decreased to 0.1% (2013). Recent declines were observed in the West and Midwest and in isolates from MSM.
Conclusions: Following increases in 2009-2010, the percentage of isolates with elevated cefixime MICs decreased in 2012–2013; slight declines were also observed for ceftriaxone. Although the trends are encouraging, continued surveillance, appropriate treatment of patients with gonorrhea, and the search for new drugs remain critical.
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6A3
TREATMENT COMPLIANCE AMONG CHICAGO HEALTH CARE PROVIDERS IN RESPONSE TO NEW GONOCOCCAL TREATMENT GUIDELINES, 2011-2012

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Background: In light of recent gonorrhea (GC) drug-resistance, CDC Sexually Transmitted Diseases (STD) treatment guidelines changed in fall of 2011. We examined the compliance to GC treatment practices among Chicago providers.
Methods: Surveillance data for GC cases reported to the Chicago Department of Public Health (CDPH) between 2011-2012 were analyzed. Data were obtained from the Illinois National Electronic Disease Surveillance System and electronic medical records. Analysis was limited to laboratory confirmed GC cases with treatment information, and stratified by provider type (CDPH STI Clinic and non-CDPH providers). Per CDC guidelines, recommended treatments are: a single injection of ceftriaxone alone or in combination with azithromycin or doxycycline. We assessed the proportion of GC cases compliant with recommended treatments before and following CDC updated guidelines, and identified associated factors using multivariable logistic regression
Results: From April 2011 – June 2012, a total of 11,246 laboratory confirmed cases were identified of which 6,263 (55.7%) had treatment information. Prior to the new treatment guidelines (April 2011-July 2011) 39.6% (n=124) CDPH STD clients and 69.7% (n=628) of non-CDPH clients were prescribed compliant therapy. During the year following the updated guidelines (July 2011 – July 2012), CDPH STD providers demonstrated >90% compliance within 4 months of the new treatment recommendations, though compliance remained relatively the same for 69.0% of clients seen by non-CDPH providers. Among CDPH clients, treatment compliance was less likely for females, with no differences by age, race, or clinic location. Among non-CDPH clients, compliance did not differ by age, race, or gender. Compared to hospital providers, compliance was less likely among private providers, community health centers, family planning centers, and emergency departments.
Conclusions: With the emergence of changing *N. gonorrhoeae* antibiotic susceptibility patterns there is a need for continued surveillance of GC treatment practices among Chicago providers to identify the targeted educational needs among select providers.
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6A4
DEVELOPMENT AND EVALUATION OF AN STD TREATMENT MOBILE APPLICATION FOR HEALTH CARE PROVIDERS

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Background: Use of mobile technology in clinical practice is increasingly prevalent among health care providers. Eighty-six percent of health care providers routinely use smartphones in clinical practice and 53% use tablets. To address this growing trend and to increase clinicians' access to CDC's *STD Treatment Guidelines*, CDC's Division of STD Prevention developed a practical, user-friendly application available for mobile phones and tablets.
Methods: The STD Treatment Guidelines app (*STD Tx Guide*) was evaluated to assess user uptake, usage, and feedback. Data from app stores and analytics from code embedded in the app were used to measure the usability and quality of the app. An evaluation of promotion metrics was conducted to assess reach and engagement. Metrics from social media messaging (Facebook, Twitter), email campaigns, and web based promotions (banners, buttons, QR codes) were analyzed to identify which channels and messages were most successful at influencing user uptake.
Results: Within two months of the of *STD Tx Guide* release, the app had been downloaded over 12,500 times worldwide, making it the third most downloaded CDC mobile app. Qualitative and quantitative user feedback has been overwhelmingly positive, with an average user rating of 4.7/5.0. Email and social media have proved to be the most effective communication strategies for disseminating promotional messages about the app. These findings will inform future app updates.
Conclusions: Evaluation of mobile apps is still an emerging science and best practices have not yet been established for public health. This presentation will offer one approach to developing and implementing an informative and relevant evaluation of a mobile application. Lessons learned will help inform the development, promotion, and evaluation of future public health mobile applications.
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6B—POPULATION-SPECIFIC RESEARCH TOPICS

6B1
THE INFLUENCE OF YOUNG MEN'S SEXUAL HEALTH ON RELATIONSHIP-BASED STI RISK BEHAVIORS

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Background: Although sexual health is a guiding public health paradigm in adolescent adverse sexual outcome prevention, little empirical evidence links adolescent men's sexual health to relationship-based STI risk behaviors, including intimate partner violence (IPV), sexual coercion, partner concurrency and condom use.
Methods: Data were partner-specific quarterly interviews from a cohort of young men (N=75, 14-17 yrs.) residing in areas of high unintended pregnancy and STI in Indianapolis. Sexual health (WHO, 2002) was an additive, standardized scale (α=0.82) using 12-separate sexual well-being dimensions (relationship quality, partner meets needs, emotional intimacy, sexual autonomy, sexual satisfaction, pregnancy-prevention attitudes, condom-use efficacy, partner sexual-communication, partner-family closeness, shared sexual- and social-decision making; all α≥0.80). Outcomes: *IPV* (received and/or perpetrated; all 4-pt; never-often: threw something; hit/kicked/punched; pushed/shoved/shook; slapped/pulled hair); *sexual coercion* (received money for sex/made me have sex [both no/yes], partner gets mad at me/would break up with me if I didn't want to have sex [4-pt]), *sexual partner concurrency* (1/2+ partners), *condom use during vaginal sex*. Analyses were GEE logistic/linear regression (SPSS, 21.0; all p<.05), controlling for age and race/ethnicity. Condom use models were stratified by partner concurrency.
Results: Higher sexual health reduced the odds of young men's *receiving* IPV (partner's throwing something at him, hitting/kicking or pushing/shoving him: OR=0.18- 0.26), or *perpetrating* IPV (hitting/kicking or pushing/shoving his partner: OR=0.56-0.71). Sexual health also reduced young men's *receipt* of sexual coercion (partner mad: OR=0.37), but was not significantly associated with current partner concurrency (p=.654). Higher sexual health predicted more frequent condom use during vaginal sex in both single (b=36.7, p<.001) and multiple-partner (b=4.41, p=.002) relationships.
Conclusions: Young men's sexual health has direct links to STI-associated public health indicators. These data empirically support a public health approach to sexual health which both endorses healthy romantic/sexual relationships and maintains attention on preventing sexual risk behaviors occurring in those relationships.
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6B2
HIGH RATES OF ASYMPTOMATIC GONORRHEA (GC) AND CHLAMYDIA (CT) INFECTIONS IN MEN WHO HAVE SEX WITH MEN (MSM) UNDERGOING ANAL DYSPLASIA SCREENING

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Background: MSM referred by primary care clinicians for anal dysplasia screening are also tested for GC and CT at the oropharynx, anus and urethra. In December 2011 we switched to nucleic acid amplification testing (NAATs) from culture. Urine testing was always DNA based. We compared STI results obtained by culture vs. NAATs.
Methods: A retrospective analysis of MSM tested for GC and CT at ≥1 site from July-November 2011 (culture) and December 2011 – April 2012 (NAATs).
Results: Of 799 MSM (median age 42; range 17-81 years) tested by culture or NAATs at ≥1 site, 57.7% were HIV+, 23.4% were monogamous, 71.1% had receptive anal sex, 66% had insertive anal sex, 68% had oral sex with >1 partner, 70.7% had history of a prior STI and 12.1% had possible STI-related symptoms. Characteristics were not significantly different between the 384 MSM tested by culture and 415 tested by NAATs. Overall 3.4% and 15.1% of MSM tested positive for GC and/or CT by culture and NAATS, respectively (p<0.001). GC was identified by culture vs NAATS in the oropharynx 0 vs. 3.9%, urethra 0.3% vs 0%, anus 0.5% vs 2.7%, respectively (oropharynx p<0.001, anal p=0.02). CT was identified by culture vs NAATS in the oropharynx 0 vs 3.4%, urethra 2.3% vs 1.4% and anus 0.5% vs 8.0%, respectively (p<0.001 for oropharynx and anus). With NAATs 81.5% of GC and 74% of CT infections identified were asymptomatic. In multivariable analysis, testing positive for GC and/or CT by NAATS was significantly associated with HIV+; adjusted odds ratio (AOR) 3.5 (95%CI 1. 8-7.0), younger age; AOR 0.95(95%CI 0.92-0.98) and being symptomatic; AOR 8.2 (95%CI 4.0-17.2).
Conclusions: MSM referred for anal dysplasia screening have high rates of STIs unidentified by primary care clinicians. Most are asymptomatic. NAATs is superior to culture and MSM should undergo 3 orifice testing.
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6B3
THE IMPACT OF MOVING (PERMANENT CHANGE OF STATION) ON SYPHILIS INCIDENCE AMONG HIV+ ACTIVE DUTY MEMBERS AND BENEFICIARIES

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Background: Sexually-transmitted infection (STI) acquisition continues among HIV-infected individuals. HIV-syphilis co-infection has been shown to increase HIV transmissibility to sexual partners. The requirement of military members to move between duty stations may create instability and put them at risk for acquiring STIs. We evaluated the association between moves and incident syphilis in the DoD HIV Natural History Study (NHS).
Methods: The NHS is a cohort of HIV+ DoD beneficiaries seen bi-annually since 1986. Analyses were limited to those enrolled until 2011, with at least one syphilis screening and confirmatory test. Incident syphilis was defined as a negative non-treponemal test and a subsequent positive non-treponemal test. A move was defined as a change in the first 3 zip code digits at their visit. Weibull analyses were used for association.
Results: Among 4471 (30,378 years of follow-up; mean 6.8 yrs/per person), 407 (9.1%) acquired syphilis. At baseline, our sample was primarily male (92%), Caucasian (44%) or African American (43%) and single (60%). In an adjusted model, compared to those that never moved, hazard ratios (HR) for syphilis incidence among those that moved 1-2 times per 10 years of follow-up was 0.57 (CI: 0.4-0.8), 1.71 for those that moved 2-4 times (CI: 1.2-2.4) and 3.83for those with >4 moves (CI: 3.0-4.9), adjusting for race, military rank, and marital status at enrollment. Being African American (HR 2.9; 2.3-3.7), Hispanic/Other (HR 2.0; 1.4-2.8) or single (HR1.4; 1.1-1.7) was also associated with syphilis incidence.
Conclusions: Low rates of geographic location changes may be protective for acquiring syphilis due to the military expectation of moving but higher rates of movement do increase syphilis incidence. Racial and marital status associations with higher risk of syphilis incidence may guide education and prevention efforts. Additional research is warranted to identify behavioral aspects related to STI acquisition amongst military HIV-infected members.
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6B4
ADDING EXTRANEOUS LUBRICANT TO CONDOM IS ASSOCIATED WITH LOWER PREVALENCE OF GONOCOCCAL AND CHLAMYDIAL INFECTIONS AMONG FEMALE SEX WORKERS IN BENIN

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Background: Data on the protective effect of additional lubrication of condom among female sex workers (FSW) are controversial. We examined the association between additional lubrication of condom and prevalence of curable STI among FSW, and assessed whether condom consistent use (CCU) modifies this association.
Methods: During an integrated behavioural and biological survey conducted in Benin in March 2012, we collected data on participants' sociodemographic characteristics and sexual risk behaviours. Genital samples were collected and tested for bacterial STI [*Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT)] respectively]. Log-binomial regression was used to model prevalence of NG and/or CT infections in relation to condom lubrication. In addition, the product term between condom lubrication and CCU over the previous 30 days was included in the model to test for effect-measure modification.
Results: Among the 915 FSW included in the analysis, 475 (51.9%) reported additional condom lubrication and 106 (11.7%) had gonococcal and/or chlamydial infections. In multivariate analysis, controlling for age and sex work typology, condom lubrication was significantly associated with lower NG and/or CT prevalence with the adjusted prevalence ratio (APR) = 0.53, 95%CI=0.35 - 0.81 (p= 0.0038). In addition, CCU modified the APR measuring the association between condom lubrication and bacterial STI (p for interaction=0.05): in women with CCU, condom lubrication was significantly associated with lower NG and/or CT prevalence with APR= 0.45, 95% CI=0.26 - 0.76, (p=0.0027), while in those without CCU, it was not (APR= 0.87; 95% CI=0.42 - 1.82, (p=0.7185)).
Conclusions: Our findings suggest that adding extraneous lubricant to condom before use constitutes an added-value to the benefit of condom use in the prevention of STI among FSW. They also suggest that this protective effect would not be achieved unless condom is used consistently. STI prevention interventions should promote both lubrication and consistent use of condom to optimize results.
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6C—USING EMRS AND EHRS TO IMPROVE PROGRAM, PLUS THE STD IMPLICATIONS OF A MALE REPRODUCTIVE HEALTH PROJECT

6C1
ARE PATIENTS FILLING CHLAMYDIA (CT) TREATMENT PRESCRIPTIONS? USING ADMINISTRATIVE DATA TO VALIDATE TREATMENT IN CALIFORNIA TITLE X CLINICS

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Background: Standard estimation of CT treatment compliance is based on chart review documentation of treatment, whether onsite or via prescription. Yet, it is unknown what percent of CT cases fill their prescriptions.
Methods: Treatment information was collected during routine Title X site audits for a convenience sample of Family Planning, Access, Care and Treat-

ment Program clients with a CT-positive test from January 2008 through March 2013. Two treatment rates were calculated. The documented treatment rate (DTR) defined treated cases as all patients with treatment charted, whether onsite or via prescription. Prescriptions were then matched to billing claims within 90 days of test date to verify whether the prescription was filled. The verified treatment rate (VTR) defined treated cases as patients treated onsite or via a prescription validated with a matched billing claim. Rates were stratified by clinic type, age, and gender.
Results: Treatment information was analyzed for 795 cases across 85 Title X clinics. The DTR was 98%, with 514 (65%) patients treated onsite and 264 (33%) via prescription; 17 (2%) were untreated. Only 67% of prescriptions had matching billing claims, resulting in an 87% VTR. Among all treatment prescriptions, 97% occurred within community health centers (CHCs), which treated 49% of CT cases via prescription. The CHC-specific VTR was 82%, with a 63% prescription fill rate at federally-qualified health centers (FQHC), 58% at FQHC look-alikes, and 88% at other CHCs. Patients age <18 were significantly less likely to fill a prescription than patients >18 (47% versus 69%; p<0.01); there were no significant differences by gender.
Conclusions: Based on billing claims data, one-third of CT-positive patients treated via prescription in Title X settings did not fill their prescription, leading to an overestimation of chart-documented treatment rates. Offering medications onsite can improve CT treatment compliance, especially among younger patients.
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6C2
DEVELOPMENT OF AN ELECTRONIC PRESCRIBING SYSTEM, LINKING SPECIALIST SEXUAL HEALTH SERVICES AND COMMUNITY PHARMACIES TO SUPPORT AN ONLINE CLINICAL CONSULTATION FOR REMOTE MANAGEMENT OF PEOPLE WITH GENITAL *CHLAMYDIA TRACHOMATIS* WITHIN THE ESTI2 CONSORTIUM

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Background: As part of the eSTI[2] Consortium, an online clinical consultation has been developed enabling people undertaking a chlamydia test to access their results online, undergo an automated medical consultation and collect treatment at a community pharmacy without contact with a healthcare professional. However, mechanisms for electronic prescribing across the specialist-primary care interface do not currently exist in the UK. The development of a novel method of electronically prescribing oral azithromycin is described, which bridges this interface and complies with current UK legislation and regulations.
Methods: A wide-ranging literature search was conducted, with diverse outputs classified and synthesized to derive a list of possible prescribing mechanisms. Each mechanism was assessed according to: compliance with existing legislation; regulations; organizational and feasibility constraints.
Results: Eight possible mechanisms of conveying the information required in a prescription from the online clinical consultation to a community pharmacy were identified. Seven were found to be unfeasible because of: existing legislation; requirements for identifiable patient data to be transferred to a central server; regulations surrounding the use of private prescriptions within state provided health care; requirement for faxing a prescription. A compromise was reached with the sending of an automated email authorizing a pre-selected community pharmacy to provide patients with pre-packed azithromycin.
Conclusions: The marked differences in regulations, content guidance, implementation and uptake of electronic prescribing systems in specialist and primary care within the UK have created two mutually exclusive systems. This is hindering development of patient-centered prescribing within eHealth. Although a workable solution has been found, more flexible solutions are required to enable eSexual health to realize its full potential.
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6C3
MALE REPRODUCTIVE HEALTH PROJECT 2009-2013: PROGRAM IMPLEMENTATION, RESEARCH RESULTS AND IMPLICATIONS FOR STD SERVICE DELIVERY

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Background: While >90% of U.S. family planning (FP) clinic clients are women, men also benefit from reproductive health (RH) services, e.g. chlamydia/gonorrhea (CT/GC) testing. The *Male Reproductive Health Research Project* (2009-13) implemented interventions to increase male clients and services at FP clinics. We assessed impacts of clinic, staff, and community interventions on male RH client volume and CT/GC-related services.
Methods: Beginning 2009, three FP agencies implemented interventions at six experimental (E) clinics, including: restructuring clinic environments; male client recruitment through outreach and clinic in-reach; and training on male clinical services. Agencies identified 9 comparison (C) clinics not implementing innovations. We accessed clinic client information systems (IS) documenting male FP visits. Records included demographics, program characteristics, and STI services and test results. In univariate and multivariate analyses, we evaluated client volume and services by demographic, program, timeframe (pre=2007-09/post=2010-12), and condition variables.
Results: Relative to the 3 C agencies (n=3,683/1,584/8,322), the 3 E agencies (n=3,503/5,054/12,389) showed significant increases in male FP visits following interventions, 2010-12 (agency pre-post volume changes: C=17%/18%/26%; E=35%/99%/109%, respectively; all p-values<0.05). E site CT testing increased significantly during intervention (e.g. CT testing, E agency: pre/post-intervention=35%/42%; C agency: pre/post=37%/33%; p<0.05). E and C annual %CT+ in males aged <30 years ranged from 6.9%-16.6%. %GC+ was modest (<1.5%). E and C sites had comparable female patient volume and STI service trends 2009-2012.
Conclusions: Interventions were practical; E sites successfully implemented innovations. E sites significantly increased male FP patients and STI services. Young adult male FP clients represent a high risk group for CT. Increasing male access did not reduce female FP patients or services. Administrative IS can be used to monitor program innovations, but expanding IS measures is challenging, e.g. documenting sexual risk behaviors. Future work is needed on system models for scaling-up innovations, impact evaluations, and monitoring program management effectiveness.
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6C4
QUALITY ASSURANCE (QA) FOR PROTOCOLS IN AN URBAN STD CLINIC UTILIZING AN ELECTRONIC MEDICAL RECORD (EMR)

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Background: The Denver Metro Health Clinic is an urban STD Clinic. The clinicians are RNs working under protocols, using an EMR, with physician consultation available. QA was done with spot reviews of charts to identify departures from protocols. We developed initial EMR-based QA measures for two protocols, to allow review of all charts.
Methods: We identified all visits with trichomonads on wet prep (trich) and >= 3 WBC/HPF without gonorrhea on Gram stain (NGU), and identified the diagnosis and treatment given. We also identified all visits with a diagnosis of trich or NGU and the lab results and treatment given. To follow protocol, the lab results, diagnosis and treatment all needed to be consistent. If a chart did not follow protocol, we hand reviewed to determine whether the note indicated a physician consult directing off-protocol diagnosis and treatment.
Results: From 4/1/2012 – 3/31/2013, 2030 men had >= 3 WBC/HPF on Gram stain; 1960 had NGU correctly diagnosed and treated (97%, range by individual provider: 95–100%). Chart review revealed that several reasons accounted for the other 3%, including failure to address the lab results, lack of a recurrent NGU diagnosis in the EMR, leading to use of "other" for the diagnosis, and decisions to treat only 2 WBC/HPF as NGU without documentation of an MD consult. During that time, 2504 women had trichomonads on wet prep; 2486 had trich correctly diagnosed and treated (99%, range: 98–100%). Rarely the lab result was not addressed, but we found that ambiguity in the EMR about how to chart the treatment explained most of the remaining 1%.
Conclusions: EMR-based review allows more complete review of RN adherence to protocols, as well as individual feedback to RNs about performance. We were able to identify deficiencies in the EMR itself as a cause of some errors.
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6D (SYMPOSIUM)
POINT OF CARE TESTS

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Point of Care Tests for HIV (Branson)
Point-of-care tests for HIV play a substantial role in identifying new HIV infections and facilitating linkage to care. However, with increasing recognition of the importance of acute HIV infection in the onward transmission of HIV, the need for accurate diagnosis during early infection might offset some of the benefits associated with point-of-care testing, such as improved access for hard to reach populations and reduced turnaround time for test results. CDC has proposed a new diagnostic HIV testing algorithm designed to improve detection of acute HIV infection, reduce indeterminate test results, and facilitate the correct classification of HIV-2 infections. However, this new diagnostic algorithm currently depends on conventional laboratory assays. This presentation will describe existing and emerging technologies for HIV tests and review the available evidence for differences in the sensitivity of FDA-approved point of care and laboratory assays during early infection, and also with different specimen types. The presentation will also assess recent data on the performance of algorithms based on combinations of point-of-care tests in international settings, and the implications for interpretation of test results and quality assurance. The presentation will end with a description of HIV diagnostic technologies on the horizon, including tests designed for confirmation at the point-of-care and rapid, near-patient HIV nucleic acid tests.

POC tests for non HIV STI and dual/multiple test kits (Peeling)
Chlamydia; gonorrhea including POC tests to identify markers of antimicrobial resistance; syphilis including dual syphilis (treponemal and non treponemal); hepatitis B; test kits containing 2 or more tests, potential for POC treatment and potential impact on transmission (to sexual partners and mother to child)

Self-Implemented HIV Testing: Perspectives on implementation by African American Youth and Service Providers (Catania)
HIV/STI testing is a key element in the CDC's effort to identify and treat infected persons. African American youth (16-24 yrs.) are at risk for HIV and other STIs, and confront numerous barriers to clinic-based HIV testing (e.g., stigmatization, confidentiality concerns). These barriers can be addressed by HIV self-implemented testing (SIT). We conducted formative interview (N = 49, age 15-17) and focus group (N = 5 groups) studies with low SES at-risk African American youth in San Francisco and Chicago, and providers of health and social services to youth in those cities (N = 4 groups; N = 5 interviews). Study questions yielded information on potential SIT consumers' and disseminators' perceptions of the concept and value of SITs vs. venue/clinic testing. In addition, test specific information was gathered on perceptions of the OraQuick SIT's procedures and training materials, test result validity, retail costs, linkage-to-care and emotional consequences of SITs, and the value of SITs for repeat and partner testing. Both youth and providers perceive advantages to SIT use vs. clinic testing in terms of reducing social stigma and privacy concerns, and increasing convenience that, in turn, are expected to increase initial, repeat, and partner testing. Nevertheless, participants raised a number of caveats. A major concern was that those testing positive would not follow through for confirmatory testing or treatment and/or may experience adverse psychological outcomes without an "onsite" support person. In some instances, there were misperceptions that lead to negative attributions. For instance, some participants saw SITs as a confirmatory test rather than as a screening test that requires confirmatory testing to verify positive results. With regard to OraQuick, a number of specific barriers were identified including the high retail cost (> $40/unit in pharmacies), packaging concerns (e.g., seals that when removed destroy box instructions), as well as instructional and procedural challenges that reflect poor program fit with some young low SES African American consumers in terms of cognitive abilities (e.g., comprehension of technical language and complex instructions), socio-cultural factors (e.g., instructional video that appears to be a poor fit in terms of socio-economic status), and emotional expectations of consumers (e.g., video actor appears too calm). Overall, SITs, OraQuick in particular, have many desirable features, additional translation research may be justified to examine the concerns raised by these participants.

6E (SYMPOSIUM)
INFORMATICS IN STD PREVENTION

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The use of information systems in clinical settings (hospitals and clinics) as well as in the state and local health departments necessitates a change in approach for collection, analysis and dissemination of public health data. Increasing complexity and availability of health and public health information systems combined with increased incentives and motivation to integrate some aspects of primary care with public health necessitate the need for an integrated approach and require interoperability of public health and healthcare systems.

Increasingly, organizations are finding that data are an expensive and valuable resource that needs to be managed carefully. Data also needs to be fluid so it could move from a health information system to a public health system with proper privacy safeguards in place. For a variety of understandable reasons, healthcare delivery organizations have tended to put more emphasis on disease management than on preventive functions. However, current trends in health services delivery model and increasing cost of care, are refocusing medical services towards prevention. Proposed informatics symposium is an effort to bring together leading voices in informatics, surveillance and prevention to craft a way forward.

Data Sources, Standards, and Information Systems for Public Health— Cost Effective Integrated Architecture for Surveillance, Research and Evaluation (Ross)
Health Information Systems in Public Health— Prevention at the Point-of-Care (POC), Clinical Decision Support (CDS), and Integration of Primary Care with Public Health (Rachman)
Electronic Ph Reporting— Electronic Lab Reporting (ELR), Electronic Case Reporting (ECR) (Klompas)
Leveraging Clinical Decision Support Tools to Improve Screening of Adolescent Sexually Transmitted Diseases in a Pediatric Emergency Department (Yu)

TP 1

HIV STATUS AND VIRAL LOADS AMONG MEN TESTING POSITIVE FOR RECTAL GONORRHEA AND CHLAMYDIA, MARICOPA COUNTY, ARIZONA, 2011-2013

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Background: Men diagnosed with rectal gonorrhea and chlamydia are at risk for HIV acquisition and transmission.
Methods: Rectal gonorrhea (GC) and chlamydia (CT) testing data from males attending the STD Clinic during October 1, 2011-September 30, 2013 were cross-matched with HIV surveillance data to identify men with HIV co-infection. We examined HIV status, HIV diagnosis date, and the values of VL collected within one year of the rectal infection.
Results: During the two year time period, there were a total of 1,591 men that were tested for rectal GC and CT. Of men tested, 506 (31.8%) were positive for GC (13.2%), CT (12.2%) or both (6.4%). The median age of men with rectal infection (N = 506) was 25 (range 16-62); 214 (42.3%) were White, 62 (12.3%) were Black, and 80 (15.8%) were Hispanic. Of men with rectal infection, 380 (75.1%) had no reported history of HIV infection, 90 (17.8%) were diagnosed with HIV prior to rectal infection, 29 (5.7%) were diagnosed with HIV at the time of rectal diagnosis and 7 (1.4%) were diagnosed with HIV after rectal diagnosis. Of the 119 men with HIV at the time of rectal diagnosis (23.5%): 28 (23.5%) had no reported VL; 34 (28.6%) had an undetectable viral load (<200 c/ml) and 57 (47.9%) had a detectable VL collected within one year of rectal diagnosis (median 33,769 c/ml, range 239-10,000,000 c/ml), (median days from rectal diagnosis to VL collection 18, range -363-336 days).
Conclusions: Approximately one-quarter of men with rectal GC and CT also had HIV. Only 28.6% of HIV-infected men with rectal GC or CT had an undetectable viral load collected near the time of rectal diagnosis, suggesting most were at high risk for transmitting HIV.
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TP 2

A TALE OF SIX CITIES: PARTNER SERVICES THROUGH THE EYES OF GAY MEN AND OTHER MEN WHO HAVE SEX WITH MEN

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Background: A 2007 training assessment conducted for the Mid-America Prevention Training Center (MAPTC) found that Disease Intervention Specialists (DIS) face a number of barriers when trying to engage gay and other men who have sex with men (GMSM) in partner services (PS), a key public health Intervention to help ensure that sexual and needle-sharing partners of persons diagnosed with HIV learn of their exposure and seek appropriate follow-up. In 2013, the MAPTC conducted a formative evaluation to identify strategies for increasing acceptance of PS among GMSM.
Methods: 101 GMSM in six larger metropolitan areas within the MAPTC catchment area were recruited to participate in facilitated focus group discussions that explored the nature of the gay community in each area, community norms related to HIV risk and status disclosure, impressions and experiences with PS, information needed to improve communication between gay men and PS providers, how PS should be structured to be perceived as beneficial, and additional services that should be available to GMSM at risk for or living with HIV. Focus group sessions were transcribed and analyzed for significant themes and patterns.
Results: Most participants agreed that notifying partners was a desirable practice but expressed concerns about the manner that this is done by PS providers. Participants related positive PS experiences but these were much fewer in number compared to reported negative experiences. Participants stressed that the service needs of persons living with HIV be addressed before focusing on identifying partners in need of notification. Participants offered many recommendations to improve PS delivery including recommending that GMSM actively participate in designing and implementing PS activities.
Conclusions: The focus group discussions supported DIS perceptions that barriers exist to effectively engaging GMSM in PS. The formative evaluation identified changes to PS that if implemented could improve PS delivered to GMSM.
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TP 3

PREDICTIVE NATURE OF CONDOM USE IN FIRST RELATIONSHIP WITH USAGE IN SECOND RELATIONSHIP: ANALYSIS OF THE FECOND STUDY

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Background: While STD messages have resulted in increased condom utilization at sexual debut, contraceptive usage shifts towards pills once young people transition into longer relationships. Little is known, however, about how predictive stopping of condoms during first partnership is of subsequent use with next partner.
Methods: This study uses a French national survey conducted in 2010 comprising a random sample of 2,611 young people ages 15 to 29. This analysis uses the 1,834 heterosexual participants who reported more than one intercourse and their condom usage with their first two partners. Outcome measures are condom use and discontinuation in first relationship as well as condom use at first sex with second partner. Socio-demographic and family variables were used as controls in multiple logistic regressions.
Results: A total of 92% of respondents reported condom use at first intercourse, while 81% used condoms at first sex with second partner ($p<0.001$). The odds of condom use with second partner were 4.7 (CI: 2.9-7.9) times greater if condoms were used at very first sex. Nearly 30% of respondents stopped condom usage before the end of their first partnership, with gender and relationship length being the most significant predictors ($p<.05$). The odds of condom use with second partner were reduced by 20% when condoms were discontinued during first partnerships (OR=0.8, CI: 0.7-1.0). Educational level, gender, and immigration status were also significant correlates in all models suggesting important social inequities in condom use.
Conclusions: Important in the STD context, we found significant declines in condom use during early sexual life, with non-use at first sex and discontinuation within first partnership both strong predictor of non-usage with second partner. Results also suggest persistent social inequalities in use of condoms over time as women, those with lower education, and immigrants were all less likely to use condoms at any point.
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TP 4

THE RELATIONSHIP OF ETHNICITY, CLASS, AND GENDER ROLE BELIEFS WITH STI RISK BEHAVIORS AMONG ADOLESCENTS IN BALTIMORE, MARYLAND

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Background: Gender role beliefs are culturally-bound perceptions about how women and men should behave. Their influence on STI risk behaviors (i.e., concurrency) is established, but few studies have examined gender roles beliefs' relationship to ethnicity and class as well as concurrency. The current study examines these relationships among a household sample of sexually active 15-24 year olds (N=352) in Baltimore, MD.
Methods: Data were derived from a baseline assessment of a longitudinal study of gender norms (hypermasculinity and hyperfemininity) and STI risks among adolescents recruited from a stratified random household sample of African American and white adolescents who were low (primary guardian with no college) and middle (primary guardian with some college) SES. The hyperfemininity (among females) and hypermasculinity (among males) scales had alphas of 0.76 and 0.81, respectively. Weighted logistic regression models, stratified by gender, examined the relationships between SES/ethnicity, gender norms, and index concurrency.
Results: The sample was 63% female, 70% African American, 57% were middle SES, and the median age was 21. Twenty-five percent reported index and 26% reported partner concurrency. In adjusted (controlling for

age) weighted regression models among males, a significant relationship was found between middle and lower SES African American with stricter gender role beliefs compared to middle SES whites [(β:2.18, 95%CIs: 0.81-3.54, β:2.87, 95%CIs: 1.41-4.33)]. Among females, a significant relationship was found between both lower SES white and middle SES African American with stricter gender role beliefs, compared to middle SES white [(β:2.11, 95%CIs: 0.37, 3.85), (β:1.68, 95%CIs: 0.24, 3.13)]. Among middle SES white females, stricter gender role beliefs were associated with concurrency (AOR: 1.47, 95%CIs: 1.14-1.89).
Conclusions: Our findings indicate complex relationships between ethnicity, SES, gender norms, and concurrency. These intricacies suggest that both ethnicity and class influence gender role beliefs and sexual risk, indicating the importance of tailored interventions.
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TP 5
EVALUATING DIFFERENCES IN CHLAMYDIA SCREENING AMONG OLDER WOMEN ATTENDING FAMILY PLANNING (FP) CLINICS BY U.S. PUBLIC HEALTH SERVICE (USPHS) REGION, 2010

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Background: CDC recommends screening all sexually active women aged <26 years and older women with risk factors for Chlamydia trachomatis (CT). Evidence suggests too few women receive age-appropriate CT screening while older women may be overscreened. We evaluated differences in CT screening among women aged >25 years across 10 USPHS regions and assessed the proportion of tests that may reflect overscreening in one region.
Methods: We analyzed all CT tests performed among women attending FP clinics participating in national infertility prevention activities in 2010. We calculated the proportion of CT tests performed by age categories (<26 years, >25 years,) for each region. In Region X (the Pacific Northwest) we assessed the proportion of CT tests in women >25 years that did not have any clinical or behavioral risk factors and may represent overscreening events.
Results: A total of 1,619,275 CT tests were performed in the FP clinics in 2010 with 28.4% performed in women >25 years. Testing in older women ranged from 13.0% (Region VII) to 33.0% (Region IV). In Region X, 20.5% (n=16,257) were performed in women aged >25 years. Of these, 72.3% (n=11,758) had an identified risk factor justifying CT testing; 3.7% (n=2,947) of all Region X CT tests could be defined as overscreening events. CT positivity was 3.6% among women aged >25 years that met risk criteria compared to 2.1% among those over-screened.
Conclusions: In FP clinics, the proportion of CT tests performed in older women varied significantly by region. However, overscreening events may be uncommon as nearly three-quarters of older women screened in Region X had an identified risk factor. Further investigation of testing in older women in other clinical settings is warranted to see if there are high levels of overscreening.
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TP 6
TEN-YEAR EPIDEMIOLOGIC REVIEW OF CONGENITAL SYPHILIS, NEW YORK STATE, EXCLUDING NEW YORK CITY, 2003-2012

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Background: Elimination of congenital syphilis (CS) is a top national and New York State (NYS) priority. The study describes epidemiologic characteristics of CS cases which have been reported in NYS, excluding New York City (NYC) during the last decade. It also examines association of maternal prenatal care with syphilitic stillbirth for CS cases reported during 2003-2012.
Methods: A retrospective review of surveillance information was conducted. STD case report data are collected and maintained in Communicable Disease Electronic Surveillance System (CDESS). For cases with incomplete electronic surveillance information, data were extracted from CS case investigation and report forms.
Results: During 2003-2012, a total of 86 CS cases were reported to CDESS. Of these, 12 CS cases (14.0%) were adopted and were excluded from subsequent analysis due to lack of information on biologic mothers. The majority of CS cases were born to black non-Hispanic (29, 39.7%) or Hispanic (25, 34.2%) mothers and ranged 0-28 years old at diagnosis. While all administrative regions reported CS cases, the majority (56, 75.7%) of CS cases were reported in the three counties surrounding NYC. With exception of a set of twins, all other term deliveries resulted in singletons. Six (8.1%) CS cases were reported with classic signs of CS on physical examination. Five of the cases (6.8%) were syphilitic stillbirths and 1 (1.4%) newborn was born alive and subsequently died. Among these 6 cases, half of women did not have prenatal care compared to 10.5% of mothers who delivered at term. Overall, 10 (13.7%) mothers did not have any prenatal care.
Conclusions: Additional studies are needed to establish specific barriers to seeking timely and adequate prenatal care among women who deliver CS cases. In jurisdictions with high burden of CS, strategies to scale up antenatal screening programs to prevent adverse perinatal outcomes need to be considered.
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TP 7
TREATMENT AND TIME TO TREATMENT DIFFERENCES AMONG SYPHILIS CASES SEEKING CARE AT PUBLIC STD CLINICS VERSUS PRIVATE PROVIDERS

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Background: The impending expansion of health insurance to historically uninsured populations has led many to question the future necessity and utility of public health STD clinics. The aim of this study is to assess treatment completion and time to treatment differences among primary and secondary (P&S) syphilis cases attending public STD clinics and private providers in Maricopa and Pima Counties from 2009 to 2012.
Methods: Cases of treated primary and secondary syphilis (P&S) among Maricopa and Pima County residents were identified for the years of 2009 to 2012 form the Arizona Department of Health Services STD surveillance database. Cases were grouped based on classification of their screening and treatment providers into the following categories: (1) screened and treated at the Maricopa County STD Clinic or Teresa E. Lee STD Clinic, (2) screened privately, but treated at one of the aforementioned public clinics, and (3) privately treated cases. Time to treatment was defined as the number of days from specimen collection to treatment administration. Differences in the average time to treatment between groups were assessed using ANOVA.
Results: There were 884 cases of P&S reported during 2009-2012 from these counties. Average time to treatment was lowest among cases screened and treated at the public STD clinics in Maricopa and Pima counties (1.5 days vs. 9.6 and 6.3 days), ($F=81.63$, $p < 0.0001$). Among P&S cases the first two categories designating treatment at the STD clinics, 100 (%) reported treatment, compared to 84 (%) of patients tested and treated at private facilities.
Conclusions: Treatment completion was higher and time to treatment was shorter for P&S cases treated in public STD clinics. In Arizona, these clinics play a significant role in the expedited treatment of primary and secondary syphilis, which is essential in the prevention of disease transmission among exposed persons and disease transmission among those that are infected.
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TP 8
FINDINGS FROM AN OUTREACH STRATEGY BY THE MONROE COUNTY HEALTH DEPARTMENT, ROCHESTER, NEW YORK

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Background: Between 2005 and 2007, the city of Rochester accounted for over 70% of all incident chlamydia, gonorrhea, early syphilis and HIV infections in Monroe County. To better allocate resources, and understand possible social determinants of disease morbidity, we conducted a targeted outreach.
Methods: Neighborhood was selected using incidence surveillance data. Five Public Health Representatives and 1 Data Analyst conducted random interviews. The semi-structured questionnaire collected:

- Demographics
- Insurance status and interactions with medical systems
- STD/HIV knowledge and risk

Data were analyzed using inductive qualitative techniques.

Results: Sixty-nine residents were interviewed (53.6% males, 69.6% black, 26.1% white, average age 25). Themes: 1) Age and insurance status- Almost 50% of the "Teens" group had coverage through their parents. About half of the "Mid 20's" group had aged out of parental coverage, and used emergency rooms (ERs) and publicly-funded resources (i.e. walk-in centers) for care. Eight out of every 10 in the "30's" group had insurance coverage. 2) Interactions with medical systems- Younger, insured interviewees (<24) were more likely to use private providers. Conversely, older, insured participants (>=24yr) were less likely to have a PCP, and utilized ERs and walk-in centers for intermittent, need-based sexual health and preventive services. 3) Neighborhood context and risk of STI's- Participants used the term "contaminated groceries" to describe their perceived susceptibility to STI's. Over half were screened for STDs/HIV within the past year. Many were eager to receive condoms the teams were distributing.
Conclusions: Participants are aware of their risks for STIs, yet are limited by restricted interactions with medical systems. For older individuals, these interactions are not mediated by their health insurance status, but by need and accessibility. To reduce increasing burdens on publicly-funded resources, findings could be used to plan ongoing outreach activities that address utilization of public and private medical resources, preventive versus emergent care, and condom distribution.
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TP 9
SKETCHING LEGAL LANDSCAPES TO OPTIMIZE INTEGRATED SERVICE DELIVERY AND PROGRAM COLLABORATION

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Background: Communicable diseases, like HIV/AIDS, viral hepatitis, STDs, and tuberculosis, are likely to co-occur because of common risk factors and modes of transmission. Individuals with these diseases benefit from collaboration among prevention and treatment services and programs. However, collaboration often requires sharing personally identifiable information (PII), and state laws protecting PII confidentiality may produce real or perceived barriers for health departments introducing collaborative strategies.
Methods: We created a 50-state database of statutes and regulations to help health departments access and understand state confidentiality laws affecting how PII is reported to, released outside of, and used within health departments. We focused on 7 diseases: HIV/AIDS, hepatitis B, hepatitis C, syphilis, gonorrhea, chlamydia, and tuberculosis. Working with CDC, we developed research questions regarding (1) whether state law differentiates where PII for these 7 diseases is reported and (2) whether state law allows health departments to release and/or use PII for public health purposes. We developed a detailed research/coding protocol and duplicated research for 17/51 states to verify accuracy and consistency.
Results: All states require health providers to report the 7 diseases, however 9 states have laws that direct these reports to different department jurisdictions/levels, and 15 specify particular programs/units. 20 states have laws allowing health departments to release PII for "public health," and 23 permit release for "disease prevention/control." 41 states allow departments to use PII for purposes of "disease investigation" and/or "disease prevention/control."
Conclusions: Reporting laws may create information silos when PII goes to different levels/units according to disease, especially in states that also have strict confidentiality laws. Health department policymakers need to ascertain whether these laws actually impair their ability to implement collaborative strategies. In many states, broad public health exceptions may provide an opportunity to implement compliant information-sharing policies and thereby optimize the public health benefit of STD prevention programs.
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TP 10
ESTIMATING THE COSTS OF DELIVERING HIV/STD PARTNER SERVICES

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Background: CDC guidelines recommend Partner Services (PS) for HIV and STDs such as syphilis, gonorrhea, and chlamydia. However, there is limited research on the costs and effort related to the delivery of HIV/STD PS in health department settings.
Methods: Using a retrospective microcosting-staff allocation approach, fixed and variable program costs were collected from 2009-2011 in six regional offices in New York State undergoing HIV/STD field services program integration. Cost data was matched to PS outcomes data collected through statewide HIV and STD surveillance systems. All costs were adjusted for inflation and are presented in 2009 dollars.
Results: As FTE effort on HIV/STD PS increased following the integration of HIV and STD field services staff, the average cost per PS index interview and per partner notification increased 61% ($654 to $1,054) and 83% ($854 to $1,564), respectively. HIV cases constituted 4.8% of total PS assignments, with the cost per new HIV infection identified through HIV PS estimated at $21,863. Syphilis cases accounted for 2.5% of PS assignments. Based on case volume, the majority of PS program costs were allocated to chlamydia and gonorrhea diagnoses, which constituted 92.7% of total PS case assignments.
Conclusions: Increased staff effort on HIV/STD PS following program integration resulted in higher costs per PS outcome. Results strongly suggest that PS for HIV is a cost-effective method of identifying new cases of infection, but the majority of program effort and related costs are spent on PS for chlamydia and gonorrhea. More research is needed on the cost-effectiveness of partner services for STDs such as chlamydia and gonorrhea in order to better allocate limited public health resources.
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TP 11
DERIVATION AND VALIDATION OF A RISK-SCORING ALGORITHM FOR SCREENING ASYMPTOMATIC CHLAMYDIA AND GONORRHEA

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Background: This study aims to derive and validate a risk-scoring algorithm to accurately identify asymptomatic patients at increased risk for chlamydia and gonorrhea (CT/GC) infection.
Methods: We examined risk assessment data (2000-2012) from clinic visits at two Vancouver, British Columbia sexual health clinics. We conducted multivariate logistic regression of 7 years of clinic visits data (2000-2006). We identified significant predictors of CT/GC infection from the final regression model and then weighted and summed their regression coefficients to create a risk score. The model's performance was evaluated using the area under the receiver operating characteristic curve (AUC) and the Hosmer-Lemeshow (H-L) statistic. We examined the sensitivity and proportion of patients that would need to be screened at different cutoffs of the risk score. Temporal validation was assessed in clinic visits from 2007-2012.
Results: The prevalence of infection was 1.8% (n=13,791) and 2.1% (n=18,050) in the derivation and validation datasets, respectively. The final logistic regression model included male gender, younger age, non-white ethnicity, multiple sexual partners and previous CT/GC diagnosis. The model showed reasonable performance in the derivation (AUC, 0.74; H-L p=0.99) and validation (AUC, 0.64; H-L p=0.78) datasets. Possible risk scores ranged from -3 and 25. We identified a risk score cutoff point of ≥4 that detected cases with a sensitivity of 89% and 80% by screening 64% and 63% of the derivation and validation populations, respectively.
Conclusions: This is the first study in sexual health contexts that derived and temporally validated a well-performing risk-scoring algorithm for screening asymptomatic CT/GC infection, an issue particularly salient in this field because of the shift to more sensitive diagnostic tests over this time period. These findings support the use of the algorithm for tailoring risk assessment to the specific circumstances of the patient and have important implications for reducing unnecessary screening and saving costs.
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TP 12
I WANT THE KIT (IWTK) - WHAT'S YOUR RISK FOR HAVING A SEXUALLY TRANSMITTED INFECTION (STI)?

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Background: IWTK (an internet program that tested for chlamydia, gonorrhea, and trichomonas from self-collected genital swabs) has an educational component that informs users about STIs and uses a quiz for sexually active people to estimate their risk of having an STI.
Methods: November 2010-2013, IWTK asked users to take a six-question quiz:

- Are you ≤ 25 years old?
- Have you had new or multiple sex partners, last 90 days?
- Do you have more than one current sex partner?
- Have you been told you had, or treated for an STI in the past?
- How many sex partners have you had, last 90 days?
- Do you use a condom with sex?

Points were assigned to responses for each question and scores calculated. A score of 7-10 was considered very high risk; 4-6, high risk; 2-3, intermediate risk; 0-1, low risk.
Results: 1,168/2,460 females (47.5%) and 841/1,680 males (50.1%) who returned kits provided risk scores. Of females, 233/1168 (19.9%) were very high risk; 708/1168 (60.6%), high risk; 171/1168 (14.6%), intermediate risk; 56/1168 (4.8%), low risk. Trend for female infection by risk score category: p<0.001. Of males, 179/841 (21.3%) were very high risk; 407/841 (48.4%), high risk; 198/841 (23.5%), intermediate risk; 57/841 (6.8%), low risk. Trend for male infection by risk score category: p=0.001. Of very high risk females, 42/233 (18.0%) were infected (chlamydia, gonorrhea, and/or trichomonas); high risk, 80/708 (11.3%); intermediate risk, 12/171 (7.0%); low risk, 4/56 (7.1%). Of very high risk males, 22/179 (12.3%) were infected; high risk, 26/407 (6.4%); intermediate risk, 7/198 (3.5%); low risk, 2/57 (3.5%). There was a higher infection rate in the high risk group in females than males; (11.3% versus 6.4%, p=0.007).
Conclusions: Risk scores may predict the likelihood of having an STI. The score may help a user decide whether to order a test kit.
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TP 13
CHANGES ON CONDOM USE AND SELF PERCEPTION OF VULNERABILITY TO STDS/AIDS AMONG WOMEN OVER A 13 YEARS INTERVAL IN A BRAZILIAN CITY

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Background: Sexually transmitted diseases are a major public health problem. Condoms are the main preventive intervention available, and the perception of vulnerability is an important determination of its use. The goal of the study was evaluate the association between condom use and perception of vulnerability to STDs/AIDS among women in a medium size southern Brazilian city. We also evaluated time trends over a 13 year interval.
Methods: We compared the findings of two cross-sectional population based surveys performed in 1999 and 2012. Information on condom use in the last intercourse (yes, no) was obtained using a self-applied confidential questionnaire; information about perception of vulnerability (very probable, probable, barely probable, almost impossible and impossible) was collected through structured interviews.
Results: 1543 women were interviewed in 1999 and 1071 in 2012. The prevalence of condom use increased from 28% in 1999 to 36% in 2012 (P value<0,001). There were no significant differences between perceptions of vulnerability comparing the two studies (P value=0,058). In both studies, condom use varied significantly according to perception of vulnerability. In 1999, the highest frequency of condom use (42,6%) occurred among women who believed that it was very probable that they might acquire STDs/HIV. In 2012, this situation changed and the highest frequency of condom use (42,2) was among women who believed that it was impossible for them to get infected by STDs/HIV.
Conclusions: Our findings suggest that over a 13 year period, condom use is being incorporated as a general primary preventive measure, making women feel less vulnerable to STDs/AIDS.
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TP 14
ASSESSMENT OF PARTICIPANT CHARACTERISTICS AT A GAY MEN'S COMMUNITY HEALTH CENTER IN LIMA, PERU

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Background: Epicentro is the only gay men's community health center in Lima, Peru designed specifically for men who have sex with men (MSM) and transgender women (TGW). Characteristics of participants who choose to utilize community health centers for health services including HIV and STI testing are underreported.
Methods: Records of participants who attended Epicentro for a medical consultation from the years 2011-2013 were reviewed to produce descriptive characteristics of the population.
Results: 407 participants were included in our review, with several participants not responding to all questions in the 25 question survey. Of the respondents: 59.8% were between the ages of 18-30 years, 57% were employed, and 41% achieved a Superior/University level of education. Nearly half (45%) of patients learned of Epicentro through a friend (word of mouth), and 22% through Facebook. 80.3% reported having sex exclusively with men. Most participants reported a versatile sexual role (55.9%), followed by receptive (20.2%), then insertive (7.1%) roles for anal sex. Nearly 75% reported having an HIV test in the past, 30.9% reporting a positive test result. Over half of subjects (53.1%) were diagnosed with genital or anal warts during their examination.
Conclusions: Based on our review, the demographic most commonly seen at Epicentro is young, employed, well educated, self-identified as gay, and sexually versatile (moderno). The reported previous HIV test result is considerably higher than prevalence estimates from other studies of MSM in Peru. It is also high relative to the prevalence found in a separate sample of participants at Epicentro who visited the site with the intention of getting an HIV test (20.9%). Prevalence of genital warts was high, although this may be due to concurrent enrolment in a clinical study at the site. Community health centers are important to reach a demographic which may not attend traditional health services.
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TP 15
"I WAS PLANNING ON COMING BUT THE PROGRAMME PUSHED ME TO DO IT": STAFF RESPONSE AND CLINIC ATTENDEE REACTIONS TO PARTICIPATION OF A UK SEXUAL HEALTH SERVICE IN A REALITY TV SERIES

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Background: Entertainment-education television programmes provide opportunities to deliver effective sexual health promotion. Our service featured in six reality TV programmes: "Unsafe Sex in the City" (Firecracker Films) following real patients and staff in common STI and HIV testing scenarios. Programmes also featured patient background stories and were developed in dramatic and humorous style. The show was broadcast on BBC 3, a public service channel aimed at 16-34 year olds, the group at highest risk of STIs in the UK. We sampled staff and clinic attendee opinions to assess whether this format demonstrated features of entertainment, identification, viewer engagement and effective health education messages; and how acceptable such filming was to staff.
Methods: Questionnaires were distributed to staff and attendees during the programme broadcast period (October – November 2013).
Results: 194 attendee responses: 109 female (56%) and 175 (91%) aged 16-34. One in four attended because of viewing the shows.

- 32 (35%) felt the patient stories were similar to theirs.
- 59 (65%) agreed the show was entertaining.
- 70 (77%) felt the show was informative about sexual health and HIV.
- 34 staff responses: 28 female (82%), Age range 20 - 54.
- 18 (53%) agreed patient stories were similar to our clinic attendees.
- 17 (50%) found the programmes entertaining.
- 17 (50%) found the programmes informative.

Three quarters of staff supported the filming process, but half had concerns around threats to patient confidentiality, one third about patient exploitation and 40% about service disruption.
Conclusions: Our findings suggest that health promotion via reality television is acceptable and can lead to increased viewer knowledge and hence behaviour change.
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TP 16
EXTERNAL QUALITY ASSURANCE AND COMPARABILITY OF ANTIMICROBIAL SUSCEPTIBILITY TESTING OF *NEISSERIA GONORRHOEAE* IN CANADA

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Background: The National Microbiology Laboratory (NML), Public Health Agency of Canada conducts ongoing monitoring of antimicrobial susceptibilities in Neisseria gonorrhoeae. To standardize the susceptibility testing data and maintain the comparability of data generated from each province in Canada, the NML offers a proficiency testing program conducted two times a year.
Methods: Eight provincial public health laboratories from across Canada participated in 10 proficiency panel distributions between 2008 and 2012. Control strains included a combination of 4 of the following isolates: WHO B, WHO C, WHO F, WHO K, ATCC 49226. Each distribution included 5 N. gonorrhoeae test isolates. Minimum inhibitory concentrations (MICs) were determined using either the agar dilution testing method or the Etest method. MIC interpretations were based on the criteria of the Clinical Laboratory Standards Institute (CLSI) and the World Health Organization (WHO) criteria for decreased susceptibility to cephalosporins.
Results: A total of 90 isolates, including control strains and test isolates were included from 2008 to 2012. The overall agreement of MIC results (MICs±1 log2 dilutions) between all laboratories when compared to the calculated modal MICs was 95.1% (4,243/4,462). Percentage agreements between agar dilution and Etest MIC results were calculated for all strains tested by all laboratories during this time with the following results: penicillin, 100% (51/51); spectinomycin, 98.4% (61/62); tetracycline, 82.3% (56/68); ceftriaxone, 93.1% (54/58); ciprofloxacin, 96.7% (58/60); cefixime 100% (23/23); and azithromycin 98.5% (67/68); erythromycin, 100% (28/28).
Conclusions: Laboratories participating in this proficiency testing program achieved a degree of correlation of greater than 95% for antimicrobial susceptibility testing results. Participating in a proficiency testing program is beneficial to each laboratory as possible discrepancies in results are identified giving each laboratory the opportunity to improve testing protocols. This contributes to improved quality of results and leads to better quality patient care and public health prevention programs.
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TP 17
ADHERENCE TO GONORRHEA TREATMENT GUIDELINES IN SAN FRANCISCO

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Background: *Neisseria gonorrhoeae* has developed increasing resistance to cephalosporins. Correct treatment is essential to gonorrhea control efforts. The United States Centers for Disease Control and Prevention (CDC) has released two updated gonorrhea treatment guidelines in 2010 and 2012. This study examines adherence to these guidelines among clinicians in San Francisco.
Methods: Provider-reported treatment data from the San Francisco Sexually Transmitted Disease (STD) Surveillance Database was collected during three time periods. Time Period 1 was before the 2010 treatment update (January 1 to December 17, 2010), Time Period 2 was after the 2010 update (December 18 to August 10, 2012), and Time Period 3 was after the 2012 update (August 11, 2012 to August 1, 2013). Treatments administered for each case were categorized into recommended treatment (adhered to recommendations exactly), no treatment (inadequate treatment or no treatment), and recommended treatment + (correct or above adequate treatment). Chi-square tests were used for comparisons.
Results: There were 1,882, 3,831, and 2,283 cases of gonorrhea in Time Periods 1, 2 and 3, respectively. No treatment was recorded in 332 cases (17.64%) in Time Period 1, 543 cases (14.17%) in Time Period 2, and 279 cases (12.22%) in Time Period 3. In Time Period 1, only 659 cases (35.02%) were given correct treatment. Compared to Time Period 1, the proportion of correct treatment increased with statistical significance to 2,802 cases (73.14%) after the 2010 update ($p<0.0001$) and 1,873 cases (82.08%) after the 2012 update ($p<0.0001$).
Conclusions: The majority of San Francisco clinicians are using correct gonorrhea treatment after the release of the 2010 and 2012 CDC gonorrhea treatment guidelines. No studies to date examine the intervention components needed to effectively implement STD treatment guidelines in the outpatient setting. Future studies should explore which methods in guideline dissemination were most helpful in San Francisco.
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TP 18
ROUTINE HIV SCREENING IN PRIMARY CARE

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Background: In 2010, the state of Georgia had an estimated HIV prevalence of 187.1 diagnosed HIV infections per 100,000 people. Three of the four counties in the Metro Atlanta area had rates vastly exceeding the state's rate. The CDC estimates that 21% of the nation's estimated 679,590 people with HIV are still unaware of their status. The Centers for Disease Control and Prevention issued Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings to include routine testing of individuals ages 13-64 to determine HIV status.
Methods: Beginning June 1, 2012 and ending September 30, 2013, Opt-out serum HIV screens were offered to all individuals age 13-64 years, with known or unknown HIV status, presenting for a visit in a group of primary care clinics located in the Metro Atlanta area.
Results: During the fifteen months sited, 7718 serum HIV screens were performed with additional testing to confirm positive screens. Forty-five of the individuals tested (0.58%) were found to be HIV positive. (95%) of the individuals found positive were African-American, (57%) were male and (27%) were between the ages of 23-30 years.
Conclusions: Of the individuals (45) testing HIV positive, thirty (66%) did not know they were HIV positive and fifteen (34%) later reported they were previously determined positive for HIV prior to the routine HIV screen performed. All forty-five (100%) of these individuals, regardless of newly or previously determined HIV positive status, were linked to and completed at least one visit with a medical care provider and were given treatment related to their positive HIV status. It was also determined that 66% of the patients newly diagnosed were established patients within the primary care clinics and had not been offered HIV screening until routine HIV screening was established.
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TP 19
THE POTENTIAL IMPACT OF HEALTHCARE REFORM ON MSM UTILIZATION OF STD CLINIC SERVICES, SAN FRANCISCO, 2011

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Background: Whether healthcare reform will change care-seeking patterns among municipal STD clinic MSM clients is unknown; surveillance might be helpful to monitor the impact on utilization and delivery of sexual health services. The US National HIV Behavioral Surveillance (NHBS) system surveys a venue-based sample of MSM (men who have ever had a male sexual partner) every three years. We used NHBS to describe differences between insured and uninsured MSM in San Francisco surveyed in 2011.
Methods: We explored self-reported demographics, risk behaviors, and care-seeking behaviors, collected 07/21-12/19/2011, stratified by insurance status, using chi-square tests.
Results: Of 510 participants, 76% were insured, primarily by private insurance/HMO (65%). The insured were more likely than the uninsured ($p<0.05$) to identify as homosexual /gay (93% vs 83%), have visited a healthcare provider in the past year (92% vs 71%), have a physician/HMO for usual care (74% vs 14%) as opposed to a clinic/health center (17% vs 44%), and be HIV-infected (24% vs 14%). In the past year, the uninsured were more likely to have lacked needed healthcare due to cost (28% vs 9%) and used methamphetamine (19% vs 10%) or crack (9% vs 2%). There were no differences between insured and uninsured MSM in self-reported chlamydia, gonorrhea, or syphilis positivity, HIV testing, or use of PEP or PrEP in the past year. Insured and uninsured MSM were equally likely to have received STD

testing at the municipal STD clinic in the past year (11% among insured vs 15% among uninsured).
Conclusions: Despite having superior access to primary health care, MSM with insurance in San Francisco were equally likely to receive services at the municipal STD clinic as uninsured MSM, the reasons for which should be explored. Ensuring access to expert STD care and services for MSM will be essential as healthcare reform is implemented.
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TP 20
EXTRAGENITAL STI TESTING OF SEXUALLY ACTIVE HIV+ MSM IN NEW YORK STATE: ROOM FOR IMPROVEMENT

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Background: CDC STD Treatment Guidelines recommend that MSM and other high-risk HIV+ patients receive at least annual testing for asymptomatic gonorrhea and Chlamydia at each anatomic site of exposure. We have developed quality measures to determine extragenital (pharyngeal and rectal) STI testing rates among sexually active, HIV+ MSM in NYS.
Methods: The NYSDOH annually collects performance measurement data from HIV ambulatory care programs, which self-report using a web-based platform, eHIVQUAL. In 2011, new measures of sexual history taking and extragenital STI testing were developed. 186 HIV ambulatory care programs abstracted medical records from a random sample of active patients in care, calculated to achieve CI=90% ±8%. The statewide sample included 2361 MSM out of 9943 eligible patients. Indicator data was analyzed using SAS.
Results: In 2011, 1935 (82%) of HIV+ MSM were assessed for any sexual activity and 1412 (73%) reported that they were sexually active. Among 649 MSM asked about oral sexual activity, 561 (86%) reported oral sex, and the pharyngeal gonorrhea and Chlamydia testing rates among these MSM were only 15% and 10%. Of these tests, 8% and 10% were positive, respectively. Among 862 MSM asked about anal sexual activity, 821 (95%) reported anal sex, and the rectal gonorrhea and Chlamydia testing rates among these MSM were similarly low at 12% and 11%. Of these tests, 10% and 13% were positive, respectively.
Conclusions: Extragenital testing rates are very low among HIV+ MSM specifically reporting oral or anal sex. The relatively high positivity rates of extragenital STI tests, including pharyngeal Chlamydia, indicate that addressing barriers to extragenital testing should be a priority focus for improving care among the HIV+ and at-risk MSM populations moving forward. Timely detection and treatment of STIs are needed to reduce onward STI and HIV transmission.
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TP 21
HIV-CO INFECTION AMONG INDIVIDUALS INFECTED WITH NEISSERIA GONORRHOEAE, CHICAGO, IL 2000-2012

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Background: As with other inflammatory Sexually Transmitted Infections (STIs) gonococcal infection can facilitate transmission of HIV infection. Our objectives were to assess the proportion of HIV co-infection among individuals diagnosed with gonorrhea (GC) and describe demographic and behavioral characteristics of co-infected individuals.
Methods: GC cases reported to the Chicago Department of Public Health (CDPH) were matched to the enhanced HIV/AIDS Reporting System (eHARS). Co-infection (GC/HIV) was defined as occurring within 2 months of GC infection. Behavioral data were extracted from eHARS. Poisson regression models were used to estimate the association between prior GC and HIV seroconversion.
Results: Between 2000 - 2012, a total of 142,419 GC cases were reported to CDPH. During the same time period, 417(0.3%) GC cases were diagnosed with HIV within the 60 days of GC infection. The proportion of co-infected men increased from 0.22% of GC cases in 2000 to 1.14% in 2012(p-value<.0001) while proportion of co-infected women did not change (from 0.08% to 0.10%). Among co-infected individuals, men represented 85.1% (355/417), the majority of which were MSM (73.2%). Overall, the rate of GC/HIV co-infections per year was highest among Black males ages 15-24 and 24-34; 14.3 and 13.7 per 100,000, respectively. In a Poisson model, Black race (OR=2.3, 95% CI: 1.9-2.7), other race (OR=1.8, 95% CI: 1.3-2.2), and age groups 15-24 (OR= 2.6, 95% CI: 2.2 to 3.1), 25-34 (OR= 2.6, 95% CI: 2.1 to 3.0) were significantly associated with GC/HIV co-infection.
Conclusions: Our findings suggest that from 2000 to 2012 the proportion of co-infected men increased steadily by 418%. Young Black males are at increased risk for the acquisition of HIV within 60 days of GC infection. The changing epidemiology of GC in Chicago highlights the need for obtaining behavioral data for all reportable STIs and real-time STI and HIV data matching.
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TP 22
DISCLOSURE STRATEGIES, COMFORT WITH DISCLOSURE, AND HIV TRANSMISSION RISK AMONG HIV-POSITIVE MSM

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Background: Men who have sex with men (MSM) remain disproportionately represented in national HIV/AIDS statistics. Non-disclosure of an HIV-positive status to sex partners, now a felony in many states, has been shown to be a risk factor in HIV transmission. However the protective role of disclosure in MSM mental health and risk behavior is not fully understood. Data from a randomized-controlled trial (RCT) are used to examine MSM disclosure strategies, comfort using these strategies, and relationships to mental health and sexual behaviors.
Methods: Participants were 123 HIV-positive adult MSM recruited in two US cities to participate in an RCT of an intervention designed to assist MSM with disclosure to casual sex partners. Data were obtained from assessments administered at baseline and during session 1 of the 4-session disclosure intervention.
Results: Direct face-to-face disclosure (n=111, 90%) was the most commonly reported disclosure strategy, but only 60% (n=67) of those who used it reported being comfortable doing so. Sixty-eight participants (55%) reported disclosing only after being asked by a partner if they were HIV positive, and 50 participants (41%) reported posting their status in an online profile. Fewer than half of these participants reported being comfortable using these strategies. Comfort with face-to-face disclosure was positively related to disclosure self-efficacy (t104=3.3, p =.00) and outcome expectancy (t102= 3.0, p=.00), and negatively related to HIV-stigma (t103=4.2, p =.00). No significant relationships were found to unprotected anal intercourse (UAI) or non-disclosure.
Conclusions: A variety of strategies to disclose HIV status are employed by MSM, but comfort using these strategies remains relatively low. Interventions are needed to increase comfort with disclosure to sex partners as mandated by law. Comfort with specific strategies may be a protective factor in MSM mental health and self-efficacy, but the means by which disclosure impacts risk behavior requires further study.
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TP 23
PREP AS A PROTECTIVE BEHAVIOR FOR MSM

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Background: The US FDA approved Truvada as PrEP in July 2012. PrEP offers an important prevention option for men who have sex with men, who are disproportionately impacted by HIV. New York City has recorded more HIV cases among MSM than any other city in the country. Harlem United Community AIDS Center launched an online survey among MSM in to assess attitudes and acceptability of PrEP with the goal of informing a future awareness campaign.
Methods: A 30-question Survey Monkey-survey was launched on two online, male "hookup" sites during a four-week period in August 2013: Grindr and BGCLive.com. It was targeted to all MSM and transgender women on the respective sites who lived in one of the five boroughs of New York City and reported at least one instance of anal sex in the past 12 months.
Results: The survey yielded 1,946 total respondents, with 1,238 completes. Less than half of survey respondents report having heard of taking the drug Truvada for HIV prevention. Seventy-nine percent of respondents (n=1,500) would recommend PrEP to a friend or partner. Fifty-seven percent of respon-

dents would consider taking PrEP themselves. Regression analysis revealed that respondents are more likely to use PrEP if they have an HIV+ partner. Awareness of PrEP was positively correlated with education. Quantitative and qualitative data was also collected on respondents' HIV status, sexual risk behaviors, where they had previously heard about PrEP, and the most important motivators and barriers to using PrEP for prevention.
Conclusions: Awareness of PrEP still is limited. There exists a subgroup of MSM for whom PrEP may be a viable preventive option, including those with positive partners. Communities and localities will need to invest in interventions that will ensure access and awareness of PrEP and support HIV prevention among high-risk MSM.
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TP 24
TESTING TOGETHER: HIV/STI TESTING AND DIAGNOSES AMONG MALE COUPLES, CHICAGO, 2011-2012

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Background: Couples-based HIV/STI interventions for MSM are rare although approximately two-thirds of HIV transmission occurs in primary sexual dyads. We adapted and evaluated a couples voluntary counseling and testing intervention used with heterosexuals in Africa for MSM in the U.S.
Methods: Between September 2011 and November 2012, 177 male couples (354 individuals) provided consent and were enrolled in "Testing Together" at two Chicago clinics. Demographics and clinical data were abstracted from electronic medical records and an online survey.
Results: Median age was 29 and a significant percentage (44%) was aged 25-34. 60% were non-Hispanic White, 21% Hispanic, and 8% Black/African-American. 34% had been together for less than three months, and 69% were together less than a year. Twenty-three participants (6.5%) tested HIV positive. Four individuals reported a previous positive HIV result and may have used to the service to disclose their status to their partner, yielding 19 (5.4%) newly identified infections. Five couples were concordantly positive (2.8%) and nine were discordant (5.1%). All four previously positive participants had discordantly negative partners. 64% of individuals (227) also tested for syphilis and five new syphilis infections were diagnosed (2.2%); one couple was concordantly newly infected. Only 27% of individuals (95) tested for gonorrhea and Chlamydia at any anatomic site. Of these, 10 were diagnosed with gonorrhea (10.5%) and 9 were diagnosed with Chlamydia (9.5%); one couple was concordantly positive for each gonorrhea and Chlamydia.
Conclusions: Diagnoses of all infections was high, suggesting that Testing Together effectively targeted high risk participants, who may not otherwise have received testing services. Receiving HIV/STI results together may substantially reduce the risk of transmission within primary sexual dyads and enhance partner service outcomes. Identifying mechanisms to increase the proportion of participants receiving STI tests warrants attention. Further research and investment in couples-based interventions is needed.
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TP 25
EPIDEMIOLOGIC ANALYSIS OF LYMPHOGRANULOMA VENEREUM CASES IN CANADA, 2005-2011

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Background: Genital and extra-genital chlamydial infections are nationally reportable in Canada, however, lymphogranuloma venereum (LGV) is excluded from the national case definition. Within this context, and in response to emerging outbreaks of LGV among men who have sex with men (MSM) in Europe, a national enhanced surveillance system for LGV was initiated in 2005. This analysis describes the features of the LGV situation in Canada.
Methods: When clinical presentation is suggestive of LGV in chlamydia-positive cases, confirmatory testing is performed by the National Microbiology Laboratory. Provincial/territorial health authorities use a standardized national case report form to collect enhanced epidemiological data on each case, where possible, and submit the data to the Public Health Agency of Canada.
Results: As of December 31, 2011, 113 confirmed and 65 probable cases of LGV have been reported. With the exception of three probable cases in women, all cases were reported in men. Case report forms were received for 85 confirmed cases, all male. Response rates for specific data elements varied. Seventy-one of the 85 cases (83.5%) were aged 30 and older. The majority of cases (96.2%; 75/78) were MSM, and 3.8% (3/78) were of unknown sexual orientation. Travel-related sex was reported by 21.5% (17/79), and 66.7% (22/33) reported having unprotected sex in the 60 days prior to symptom onset. HIV co-infection was reported for 71.1% of cases (32/45), and 12.5% (5/40) were co-infected with hepatitis C.
Conclusions: In Canada, LGV is still uncommonly reported compared to other sexually transmitted infections, and is seen primarily in MSM who are co-infected with HIV. It is uncertain to what extent changes in testing patterns and laboratory procedures affect observed trends in diagnostic rates. Up-to-date epidemiological information on LGV will be used in an upcoming review of national guidelines for the diagnosis and management of LGV.
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TP 26
PRIMARY AND SECONDARY SYPHILIS IN MEN — UNITED STATES, 2005–2012

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Background: Primary and secondary (P&S) syphilis rates have increased since reaching historic lows in 2000. P&S syphilis increasingly affects males, particularly men who have sex with men (MSM). We describe P&S syphilis among U.S. men during 2005–2012.
Methods: We analyzed P&S syphilis case data reported to CDC during 2005–2012. We also analyzed P&S syphilis among MSM using 2009–2012 data from 34 states and District of Columbia where sex of sex partner data was ≥70% complete.
Results: In 2012, men comprised 90.6% of all P&S syphilis cases. During 2005–2012, the P&S syphilis rate among men almost doubled from 5.1 cases per 100,000 men (n=7,383) to 9.3 (n=14,190). Annual rates increased by 11–14% during 2005–2008, 1–2% during 2009–2011, and 14% during 2011–2012. During 2005–2012, rates increased among all age groups and race/ethnicities, but shifts occurred in 2009. During 2005–2009, rate increases were greatest among blacks (14.6 to 29.8) compared to Hispanics (5.0 to 7.6) and whites (3.1 to 3.7). During 2009–2012, rates increased among Hispanics (7.6 to 10.9) and whites (3.7 to 5.0) but decreased among blacks (29.8 to 28.1). Men aged 20–24 had the greatest increase (8.1 to 20.2) during 2005–2009; men aged 25–34 had the greatest increase (17.0 to 22.2) during 2009–2012. Preliminary 2013 data suggest a continuation of these trends. In 35 areas, MSM comprised 77% of male P&S syphilis cases in 2009 and 84% in 2012. Cases increased among MSM of all ages and race/ethnicities; Hispanics, whites, and men aged 25–34 had the greatest increases.
Conclusions: P&S syphilis rates continue to increase among men with a resurgence of cases in recent years. Although rates remain highest among blacks, recent increases were greatest in Hispanics and whites. P&S syphilis is currently an MSM epidemic.
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TP 27
EARLIER DIAGNOSIS OF HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN (MSM) AND HIV/STD-FOCUSED HEALTHCARE SERVICES

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Background: The creation and maintenance of clinics and medical provider networks that specialize in sexual health care for MSM may be one means to promote more frequent HIV testing and earlier HIV diagnosis.
Methods: We examined the relationship between provider type and time from last negative HIV test to first positive test (intertest interval, ITI) among MSM newly diagnosed with HIV infection. Public health staff routinely collected testing histories through partner services interviews and medical record reviews. We used median regression to compare ITIs.
Results: From 1/1/2010-6/30/2013, 730 MSM were diagnosed with HIV infection in King County, WA. Among 671 (92%) MSM with testing his-

tory data, 252 (38%) were diagnosed at publicly funded HIV/STD testing programs, 174 (26%) by MSM or HIV specialty providers, and 245 (37%) by other providers. MSM diagnosed at HIV/STD testing programs had the shortest median ITI (8.2 months, IQR=3.9-21), followed by those diagnosed by MSM/HIV providers (10.5 months, IQR=4.8-28) and men diagnosed by other providers (13.7 months, IQR=5.4-28) (p<0.001). Adjusting for race/ethnicity, nativity, age, homelessness, gender of partners, unprotected sex, methamphetamine use, and meeting partners in bathhouses, ITIs among MSM diagnosed by HIV/STD testing programs and MSM/HIV providers were similar, whereas the median ITI among MSM diagnosed by other providers remained 3.7 months longer. MSM diagnosed by other providers were most likely to have no prior negative test (12% vs. 8% and 3% for HIV/STD testing programs and MSM/HIV providers, respectively; p=0.004).
Conclusions: Although the differences we observed in ITI by diagnosing provider type may reflect unmeasured differences in the populations tested by different provider types, our findings suggest that venues providing specialized MSM HIV testing services may reduce the amount of time infected MSM spend unaware of their status. Because some MSM only seek care in non-specialized clinical settings, however, efforts to routinize testing remain critical.
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TP 28
HIGH RATES OF INCIDENT ANOGENITAL HUMAN PAPILLOMAVIRUS INFECTION AMONG TEENAGE MEN WHO HAVE SEX WITH MEN

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Background: Anogenital human papillomavirus (HPV) infection among men who have sex with men (MSM) is common, leading to morbidity including anal cancer. This study sought to elucidate incident anogenital HPV infection among teenage MSM.
Methods: We estimated incident type-specific HPV infection by HPV DNA from the anal canal and penis among 200 MSM aged 16 to 20 years in Melbourne, Australia. Men were seen at baseline, then month 3, 6 and 12. HPV infection refers to DNA of a specific type of HPV tested negative at baseline and positive at two or three follow-up visits.
Results: Median age was 19 years. At baseline, men reported a median duration of 1.9 years since first receptive anal sex and a median of 4 receptive anal sex partners. The incidence rates for infection of any, any high risk, any low risk and any 4-valent vaccine preventable HPV at the anus were 54.7 (95% confidence interval (CI): 41.7-67.2), 26.6 (95% CI: 16.5-38.6), 35.7 (95% CI: 24.5-48.5) and 30.6 (95% CI: 19.9-42.7) per 100 person years, respectively. The incidence rate for infection of anal HPV 16 was 5.8 (95% CI: 1.6-14.2) per 100 person years. The incidence rates for infection of any, any high risk, any low risk and any 4-valent vaccine preventable HPV at the penis were 7.2 (95% CI: 2.0-17.3), 7.1 (95% CI: 2.0-17.0), 3.5 (95% CI: 0.4-12.1) and 5.3 (95% CI: 1.1-14.6) per 100 person years, respectively. The proportions of men with incident anal and penile warts were 2.2% (4/186, 95% CI: 0.6-5.4) and 0.5% (1/199, 95% CI: 0.0-2.8), respectively.
Conclusions: Incident anogenital HPV was high and occurred soon after first sexual experiences among teenage MSM. HPV vaccination needs to commence early for maximal prevention of HPV among MSM.
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TP 29
CO-INFECTION WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) AMONG INDIVIDUALS WITH EARLY SYPHILIS, BY STAGE OF SYPHILITIC INFECTION, 17 AREAS — U.S., 2009–2012

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Background: This analysis describes co-infection with HIV among individuals with early syphilis, by stage of syphilitic infection, across multiple states of the U.S.
Methods: Case data from areas that reported stage of infection, sex of sex partner, and either HIV-positive or -negative status for ≥70% of cases of primary, secondary, and early latent syphilis reported each year during 2009–2012 were reviewed. Percent co-infected was calculated using individuals with HIV-positive status as the numerator, and individuals with either HIV-positive or HIV-negative status as the denominator.
Results: Data were analyzed from 16 states and Washington DC, comprising 57% of early syphilis morbidity in 2012 (51% of reported HIV morbidity in 2011). Proportions by stage of infection and proportions co-infected varied little during 2009–2012, so 2012 data are presented here. During 2012, 10,657 cases of early syphilis among MSM (15% primary, 39% secondary, 46% early latent (EL)), 2,174 cases among men having sex with women only (MSW) (22% primary, 34% secondary, 44% EL) and 2,098 cases among women (8% primary, 32% secondary, 60% EL) were reported. For primary syphilis, 42% of MSM, 6% of MSW, and 2% of women were co-infected with HIV. For secondary syphilis, 59% of MSM, 17% of MSW, and 6% of women were co-infected. For EL syphilis, 66% of MSM, 12% of MSW, and 4% of women with early latent syphilis were co-infected. Regardless of age group or race/ethnicity, co-infection was lower among individuals with primary syphilis (compared to secondary or EL syphilis).
Conclusions: Co-infection was consistently lower among individuals diagnosed with primary syphilis compared to secondary or EL syphilis. However, MSW were more likely to be diagnosed during primary syphilis, compared to MSM or women. Efforts to reduce transmission of syphilis (and co-infection with HIV) should promote earlier detection.
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TP 30
BODY IMAGE AND ANONYMOUS SEX AMONG MEN WHO HAVE SEX WITH MEN (MSM)

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Background: Men who have sex with men (MSM) have a higher prevalence of body image disorders than heterosexual men. While reports in women link body image and sexual behavior, few studies in MSM have investigated this association. We evaluated the association between body image and self-reported anonymous sex in the past 3 months in a convenience sample of MSM at an urban, public STD clinic.
Methods: MSM (n=112) self-administered a behavioral survey on tablet computers. Body image was assessed using the Male Body Attitudes Scale (MBAS), a validated scale that produces a total score and muscularity, body fat, and height subscores. Scores have a potential range of 1 to 6; higher scores indicate poorer body image. Anonymous sex was defined as sex with a partner without knowing his/her name. We used logistic regression to compute unadjusted and adjusted associations of the effect of poorer body image on anonymous sex in the last 3 months.
Results: Median total MBAS score was 2.83, while median body fat, muscularity and height subscores were 2.63, 2.95, and 2.00, respectively. Thirty men (29%) reported anonymous sex in the past three months. In unadjusted analyses, we observed a significant association between body fat subscore and anonymous sex (OR:1.38, 95% CI: 1.01,1.90), but no significant associations between total MBAS score, muscularity subscore or height subscore and anonymous sex. After adjustment for age, race, muscularity and height subscores, a 1-unit increase in body fat subscore (indicating worsening body image) was significantly associated with increased odds of anonymous sex in the last 3 months (OR:1.44, 95% CI: 1.02,2.03).
Conclusions: Men with poorer body fat body image had higher odds of reporting anonymous sex in the past three months. Further studies are warranted to understand the temporality of this relationship and whether other sexual risk behaviors are affected by body image.
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TP 31
THE SEXUAL RISK BEHAVIORS OF YOUNG BLACK MEN WHO HAVE SEX WITH MEN IN JACKSON MISSISSIPPI

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Background: This study examined the sexual risk behaviors of young Black men who have sex with men (YBMSM) by HIV serostatus.
Methods: Data were collected in an STI clinic of Jackson Mississippi. The men (N=207) were 15-29 years of age, identified as Black and engaged in sexual intercourse with a man in the past three months. Four risk outcomes were selected: 1) frequency of sex with an HIV+ partner, 2) unprotected anal receptive sex (UARS), 3) unprotected anal insertive sex (UAIS), 4) number of new sex partners. Bivariate associations between these outcomes and status of being HIV- (74%) or HIV+ (26%) were conducted.
Results: Mean age was 22.4 years (SD=2.96). Among HIV+ men, 50% reported sex with an HIV+ partner in the past 3 months. Among HIV- men, 17% knowingly had sex with an HIV+ partner in the past 3 months. When comparing HIV+ men to HIV- men, there were no significant differences in recent UARS (P=.832) and UAIS (P=.575). The number of new sexual partners among HIV+ YBMSM (M=6.69, SD=11.28) was similar to that of HIV- YBMSM (M=6.05,SD=13.08).
Conclusions: This group of YBMSM exhibit significant sexual risk behaviors regardless of their HIV status, underscoring the need for interventions targeted to this populations and their sexual partners.
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TP 32
TRANSGENDER M-F PERCEIVED RISK AND STD SERVICE ACQUISITION

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Background: Transgender individuals do not access health services well, including STD services. The purpose of the study is to provide a forum for transgender M-F to communicate their perceived risks for HIV/STDs and their preferred methods of service acquisition.
Methods: Transgender M-F were recruited by two primary investigators, 1 male and 1 female. Participants were recruited at a bar frequented by the transgender community, an HIV prevention agency primarily serving African-American LGBT, and a public STD clinic. The instrument used was an 18 question survey. Data was entered into Excel and analyzed in SPSS. This study is IRB approved.
Results: The study included 20 respondents. Of the respondents, 14 were African-American, 4 were Hispanic/Latino, 1 was White, and 1 was Bi-Racial. The average age of respondents was 29 years of age. In the last six months, 60% (n=12) had 1-5 partners and 25% (n=5) had 16 or more partners. Sex work was prevalent among respondents with 30% (n=6) exchanging sex for commodities, such as money, drugs, or a place to stay. The majority of respondents 55% (n=11) perceived themselves as low risk for contracting an STD. The majority of respondents 95% (n=19) are tested annually, however, only 25% (n=5) get tested every 3 months. When accessing testing 30% (n=6) preferred to receive testing services at a non-STD clinic site. An additional 10% (n=2) utilized both a non-STD clinic site and local STD clinic.
Conclusions: Their perceived risk likely has impacted the frequency in which they seek out services. When they do seek out services, the most preferred method in in a non-clinical setting. Despite substantial number of respondents having 16 or more partners and/or exchanging sex for commodities, respondents mostly perceived themselves at low risk for contracting STDs.
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TP 33
SURVEY OF HEALTH CARE PROVIDERS SERVING MEN WHO HAVE SEX WITH MEN SUGGESTS SUBOPTIMAL GONORRHEA DIAGNOSIS AND MANAGEMENT PRACTICES, NEW YORK CITY 2012

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Background: *Neisseria gonorrhoeae* (GC) antimicrobial susceptibility test results in New York City (NYC) suggest cephalosporin-resistant GC will first be identified among men who have sex with men (MSM), thus screening and appropriate treatment is critical. We characterized sexual history-taking, GC diagnosis, and treatment practices among NYC health care providers (HCP) serving MSM.
Methods: During 2012, we surveyed HCP reporting infectious syphilis (assumed indicative of HCP serving MSM) to the NYC Department of Health and Mental Hygiene in 2011, and calculated the prevalence of clinical practices.
Results: Surveys were completed by 54% (153/283) of HCP; 61% (93/153) were male, 42% (64/153) internists, 27% (42/153) infectious disease physicians. Most HCP (67% (99/148)) estimated >15% of their male patients were MSM. Taking at least an annual sexual history of male patients was reported by 68% (104/152), among whom 78% (81/104) ask about gender of recent partners. When taking a sexual history of MSM, 73% of HCP (109/150) ask about receptive anal intercourse, and 64% (96/150) about performing oral sex. More than a third of HCP reported testing extragenital sites for GC only when symptoms are present (34%, 48/140 performed anorectal, 37% (52/140) oropharyngeal testing only with symptoms). More than a quarter (29%, 43/150) reported sometimes/always treating for GC without sending a specimen for laboratory testing. To treat GC, 58% (88/151) of HCP reported using the CDC-recommended regimen (ceftriaxone 250 mg and azithromycin 1 gram). Regarding the greatest obstacle to STD screening in MSM, HCP reported: patient reluctance (20% (28/142)), time constraints (18% (26/142)), lack of clear screening guidelines (17% (24/142)), and lack of laboratories offering anorectal/oropharyngeal nucleic acid amplification tests (NAATs) (16% (23/142)).
Conclusions: GC diagnosis, and treatment practices are suboptimal and provider education is needed. HCP-identified obstacles to screening suggest encouraging laboratory validation of extra-genital NAATs for GC could facilitate necessary extra-genital screening.
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TP 34
TAILORING RECRUITMENT STRATEGIES FOR HIV RISK REDUCTION INTERVENTIONS FOR TRANSGENDER WOMEN OF COLOR: LESSONS LEARNED FROM THE T-TALK PILOT

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Background: Recruitment strategies for interventions targeted to women of transgender experience need to be tailored to reflect the specific needs of this hard to reach population at high risk for HIV infection.
Methods: T-Talk is a peer-led behavioral intervention for transgender women, based on motivational interviewing and cognitive behavioral skills training. It consists of 7 individual- and group-based sessions that are scalable in community settings through CBO collaboration. The intervention goals are to reduce sexual risk and substance use behaviors while increasing coping and resilience and reducing minority stress.
Results: Feedback provided from peer-health navigators and participants identified important aspects of a recruitment strategy targeted to transgender women of color. (1) Passive recruitment techniques that emphasize networking with CBOs and building trust and increasing visibility within the community are crucial. (2) Privacy and discretion should be exercised across recruitment venues and in recruitment materials. Active recruitment should be limited due to the sensitive nature of the transgender identity, and the intervention name should be representative of the community but avoid explicit reference to the transgender identity. (3) Recruitment materials should emphasize the benefits to be gained by study participation and limit negative messaging. (4) Recruiters should reflect the population being recruited and be able to interact comfortably with the women. (5) The transgender identity is distinct from lesbian, gay, and bisexual identities. Researchers and staff should recognize and incorporate the specific needs that arise from this distinction into recruitment strategies.
Conclusions: To maximize participation in HIV risk reduction interventions, it is necessary to specifically tailor recruitment strategies for transgender women of color.
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TP 35
"YEAH, WHATEVER:" DECONSTRUCTING PASSIVE AND INDIFFERENT ATTITUDES TOWARD CONDOM USE AMONG AFRICAN AMERICAN MSM—THE ROLE OF PRIORITY SETTING IN THE CHILDHOOD HOME

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Background: Understanding the drivers of passive and indifferent attitudes toward condom use provides important insights into African American MSM's sexual risk behaviors, and can inform prevention strategies for this highest priority HIV-risk population.
Methods: Thirty four semi-structured interviews were conducted with African American MSM in the northeastern US. In-depth thematic analysis sought to describe mechanisms driving passive and indifferent attitudes toward condom use in this population.
Results: The majority of participants who expressed passive or indifferent attitudes toward condom use (e.g. "yeah, whatever") did not raise the subject of condom use themselves, but did use condoms if it was suggested by their sexual partner(s). At the same time, they conveyed an awareness of protected sexual behaviors as "the responsible thing to do," and often expressed regret after engaging in unprotected sex. Childhood familial health promotion messages regarding personal responsibility emerged as an important driver of their present day attitudes toward condom use. In addition, because immediate or "near-future" needs (e.g., securing food or shelter) were prioritized over "distant-future" needs (e.g., sexual health and condom use) within their childhood family dynamics, this belief system extended into participants' current approaches to sexual health in adulthood such that immediate needs and benefits were prioritized over future outcomes. Within this context, preventing STIs/HIV was not considered a pressing need, and therefore not prioritized, leading to passive or indifferent attitudes toward condom use.
Conclusions: Prevention messages promoting sexual health may need to be broadened to consider the context of family and childhood dynamics that may affect HIV risk. Reframing HIV risk in a developmental context may provide insight into the low priority that some adult African American MSM place on their own sexual risk behaviors, and will be critical to improving men's attitudes and self-efficacy toward condom use and sexually protective behaviors.
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TP 36
THE NEED FOR RECTAL AND PHARYNGEAL SCREENING OF GONORRHEA AND CHLAMYDIA IN MSM

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Background: A number of studies show that a majority of Chlamydia and gonorrhea infection in men who have sex with men (MSM) would be undiagnosed and untreated if only a urine screening was conducted. CDC guidelines call for screening of these two infections at urethral, rectal and pharyngeal sites for MSM since both increase the chance of acquisition and transmission of HIV. This study shows the need to provide gonorrhea and Chlamydia extragenital screenings for MSM.
Methods: A retrospective analysis of MSM who attended two MSM Wellness Centers in Louisiana from 2011-2012 was conducted. The inclusion criteria were MSM who were screened for urethral, rectal, and pharyngeal Chlamydia and gonorrhea at first visit. To assess the prevalence of infection at each anatomical site, the urethral, rectal and pharyngeal positivity for Chlamydia and gonorrhea was calculated. The proportion of Chlamydia or gonorrhea infections that would have been missed by urine screen only was calculated.
Results: During 2011-2012, 174 clients were screened for gonorrhea and Chlamydia at all three anatomical sites. Chlamydia or gonorrhea was found in at least one anatomical site at first visit for 12.1% of the clients. Most MSM who were diagnosed with gonorrhea or Chlamydia were infected in the rectum or pharynx (90%). The prevalence of infection varied by anatomical site (Chlamydia: rectal, 6.9%; pharyngeal, 1.0%, and urethral, 0%; for gonorrhea: rectal, 1.7%, pharyngeal, 1.7% and urethral, 1.1%). If only urine screenings were performed, 100% of Chlamydia and 75% of gonorrhea infections would have been missed.
Conclusions: This study shows that the majority of gonorrhea and Chlamydia diagnoses among MSM are missed when only a urine screening is performed. The Louisiana Office of Public Health is working with the Louisiana State Laboratory to include extragenital screenings for gonorrhea and Chlamydia as a clinical standard at clinics serving MSM.
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TP 37
TWO-SPIRIT IDENTITIES THEN AND NOW: RECLAIMING THE HISTORICAL PLACE OF HONOR IN AMERICAN INDIAN CULTURE AS HIV PREVENTION AND INTERVENTION FOR LGBT NATIVE AMERICANS

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Background: The Northeast Two-Spirit Society (NE2SS) serves LGBT/Two-Spirit American Indians of New York, New Jersey, and Connecticut, with a mission to increase the visibility of the Two-spirit community, to provide health promotion and social, traditional and recreational opportunities that are culturally appropriate to the Two-spirit communities of tri-state area. Recent data on MSM Native populations indicate disproportionate risk for and prevalence of HIV which mandates that culturally appropriate and competent community engagement, mobilization and intervention is needed.
Methods: NE2SS has developed a prototype workshop targeted to both Two-Spirit at high risk for STD's and to Native-identified organizations and healthcare providers delivering primary, behavioral and HIV-related care to native populations. The workshop "Two Spirit Then and Now: Reclaiming Our Place of Honor" engages participants in understanding the impact of colonization, historical trauma and the subsequent dissolution of the role and the displacement of Two-spirit people from within their tribes and native communities, on increased HIV risk and Two-spirit health disparities. Approaches that utilize traditional practices, including those that incorporated the special role of Two-Spirit people in traditional Native communities; the work of Dr. Joseph Gone and Dr. Alex Wilson on the integration of traditional practices, with Two-spirit identity and role affirmation, and current behavioral health interventions are presented with practice case studies, resources for further learning and links to Two-Spirit organizations around the country.
Results: The training was evaluated qualitatively with 100% of participants indicating that the workshop increased knowledge about and ability to engage and work more effectively with Two-Spirit people within their communities.
Conclusions: The results will be used to refine the prototype and to develop quantitative as well as qualitative measures for the next phase of implementation within LGBT, Native American and Two-Spirit organizations which deliver HIV-related and other health promotion services.
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TP 38
MOVING FROM 2-SESSION TO 1-SESSION SEXUAL RISK-REDUCTION COUNSELING: IMPLICATIONS FOR HIGHER-IMPACT HIV PREVENTION AMONG MSM

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Background: National HIV/AIDS Strategy implementation has prompted agencies to evaluate their current HIV prevention services and favor those with the most potential for impact. This means placing more attention on HIV testing, linkage to medical care, and prevention for people with HIV; and less attention on multi-session and group-level behavioral interventions.
Methods: We received funding from the Centers for Disease Control and Prevention in 2010 to implement RESPECT, an HIV and STD risk-reduction intervention with evidence of effectiveness when delivered using either a 2-session or 1-session model, among MSM at a community-based site. RESPECT was paired with rapid HIV testing. In 2012 we moved from a 2-session intervention model to a single-session model.
Results: Implementing a 2-session risk-reduction intervention in the context of HIV rapid testing was challenging. RESPECT relied on the counselor using a "teachable moment" to increase the client's perceived HIV and STD risk and encourage behavior change. The teachable moment usually occurred at delivery of the HIV test result in the first session, but once clients received their results they were unlikely to return for session 2. Counselors had trouble persuading clients to return, which led to weak retention rates. Counselors began losing faith in the intervention and offering it to clients less frequently. Additionally, those clients who were offered RESPECT often opted out because of the added commitment of a second session. Adopting a 1-session model produced several effects: counselors offered the intervention more fre-

quently, more clients were willing to participate, and the intervention was completely embedded into our HIV testing program.
Conclusions: Moving to a 1-session model improved our ability to embed the risk-reduction intervention into HIV testing. Ultimately more clients participated in the intervention, thereby developing and implementing HIV and STD risk reduction plans.
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TP 39
RAPID TRICHOMONAS VAGINALIS (TV) TESTING FOR ADOLESCENTS WITH SUSPECTED SEXUALLY TRANSMITTED INFECTIONS (STIS) IN THE EMERGENCY DEPARTMENT (ED)

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Background: TV diagnosis is often based on microscopy exam of vaginal secretions with poor sensitivity. The OSOM Trichomonas Rapid Test (TRT; Sekisui Diagnostics) is a CLIA-waived, rapid test with sensitivity >83% and results in 10 minutes. The study purpose was to determine if adding TV testing to all routine ED STI evaluations increased TV identification and treatment.
Methods: Setting: Western New York State urban, children's hospital ED. Population: 13 – 20 year old females presenting to ED for STI testing. Time periods: Study Time 1 (T1): 4/11-9/11(prior to routine TV ED STI testing); Study Time 2 (T2): 11/11-10/12 (after routine TV ED STI testing implemented). Methods: We performed a retrospective review during T1 of consecutive medical records of eligible patients. We conducted a prospective study during T2 of enrolled females for STIs. TRTs and TV nucleic acid amplification tests (NAAT; Aptima, GenProbe) were ordered for enrolled patients. Chi-square tests and logistic regression were used to assess statistical significance.
Results: During T1, 234 female ED patients met study inclusion criteria, 13% (31/234) were TV tested with 1.3% (3/234) testing positive. During T2, 213 females were enrolled; 99.5% (212/213) were TV tested; 13.6% (29/213) tested TRT positive (p<.001) and 17.6% (33/188) tested TV NAAT positive (p<.001). TV treatment was given to 7% (17/234) of patients during T1 compared to 24% (52/213) during T2 (p<.001). TRT and NAAT TV testing were concordat in 94.6%(178/188) of patients. Of these 188 tests, thirty percent (10/33) of positive TV NAATs were TRT negative. Using logistic regression, we found no statistical significant trichomonas clinical predictors. During T2, 26 males were enrolled; 77% (20/26) were TV tested; 8% (2/26) tested positive.
Conclusions: Incorporating TRTs and TV NAATs into routine adolescent STI testing significantly increased adolescent TV diagnosis and treatment and are important tools for STI screening in urban EDs.
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TP 40
HEALTHY RELATIONSHIPS: CURRICULA FOR HISTORICALLY BLACK COLLEGE AND UNIVERSITY STUDENTS

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Background: Based on 2011 data, young African American men and women aged 15 – 24 years experienced the highest rates of chlamydia, gonorrhea, and infectious syphilis among all racial/ethnic groups, and studies suggest that historically black college and university campuses (HBCUs) are not immune to these disparities. Increasingly research calls for culturally-competent interventions to reduce STI transmission and promote healthy sexual behaviors.
Methods: Two curricula were developed providing tools and information on STI prevention, and healthy sexual behaviors and relationships. The 2-day training conducted by a health/sex educator and a trained counselor is designed to enable student participants to develop skills and action plans to reduce sexual risk-taking and promote healthy relationships with their partners and peers. Quantitative and qualitative methods were used to analyze participant responses to pre and post-tests, and a six-week follow-up assessment. The instruments measured STI and relationship knowledge and self-reported behavior.
Results: The curricula have been tested with 58 participants, in 8 sessions, on two HBCU campuses. Assessment findings indicated knowledge retention and reduction of sexual risk. Results also demonstrated the value of culturally-specific STI interventions, particularly where religious beliefs play a significant role in the college experience. Participant responses showed that interventions that cultivate and support healthy sexual relationships are instrumental in STI risk reduction. Such interventions should also address positive masculinity and femininity, relationship trust, and other emotional aspects of sexuality.
Conclusions: The implementation of the culturally-competent curricula in the campus setting provided opportunities for young African American men and women to increase their knowledge of STIs and improve their risk reduction skills. In addition, a majority of the participants indicated plans to develop more emotionally healthy sexual relationships. HBCU campuses can provide supportive environments for the effective implementation of interventions leading to the reduction of STIs in this disproportionately burdened population.
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TP 41
UNMET NEED FOR ADOLESCENT STI SCREENING ON INPATIENT PSYCHIATRIC UNITS

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Background: Adolescents with psychiatric disorders are at increased risk for sexually transmitted infection (STI) due to increased sexual risk taking behaviors, particularly if they reside in communities with high STI prevalence. The Centers for Disease Control and Prevention recommends routine STI screening in adolescents at risk for STIs when they interface with the medical system. Our study evaluated the existing STI screening practices for adolescents admitted for psychiatric care as a first step in determining unmet need for STI screening and in designing a screening and treatment protocol.
Methods: This IRB-approved study utilized administrative billing data to identify adolescents admitted onto the Child and Adolescent Psychiatry Unit within a major academic medical center. A standardized data extraction form was used to collect demographic, diagnostic, historical, and laboratory data from consecutive patients in the electronic health record (N=181). Logistic regression analyses were used to evaluate the factors associated with STI screening on the unit.
Results: The majority of patients were African American (57%), female (64%), and publicly insured (70%). Forty-eight percent of patients reported a history of sexual intercourse. Less than 1/3 of sexually active adolescents were screened for Neisseria gonorrhoeae or Chlamydia trachomatis. History of sexual activity, gender (female), and concerning sexual risk behaviors was more predictive of screening. After controlling for gender, patients with a history of prior sexual activity were 13 [AOR: 13, 95% CI (2.9, 58.5); p=. 001] and 28 times [AOR: 28, 95% CI (3.7, 214.6); p=. 001] more likely to be screened for gonorrhea and chlamydia respectively.
Conclusions: Psychiatric hospitalization presents an important opportunity for STI screening. A universal STI screening and treatment protocol may identify individuals at risk for STIs, addressing unmet need, and allow for effective treatment in a supportive environment.
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TP 42
SEXUALLY TRANSMITTED DISEASE PREVENTION FRAMING FOR HUMAN PAPILLOMAVIRUS VACCINATION: A MISSED OPPORTUNITY?

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Background: Vaccines that prevent human papillomavirus (HPV) infections are recommended for routine use in adolescents but coverage remains suboptimal. Because they are often promoted as cancer prevention vaccines, little

is known about the role of sexually transmitted disease (STD) prevention framing for increasing uptake.
Methods: A qualitative study of parents/caregivers (n=22, 86% black or Hispanic) of adolescents ages 11–18 years at an urban primary care clinic serving low-income families was conducted May–September 2013. Interviews were transcribed and coded using a thematic approach.
Results: Nineteen parents discussed attitudes about prevention framing with a substantial majority (n=15, 79%) expressing STD prevention framing as acceptable and important. Many of those parents (n=8, 53%) reported having children that had not received HPV vaccinations, and several had increased enthusiasm for the vaccine after realizing the sexually transmitted nature of HPV. Parents often invoked notions of wanting to "protect" their children because "you never know" when they might become sexually active and "a lot of diseases that are out there". STD prevention framing was viewed as important even at ages 11 and 12 years because "they are starting earlier and earlier", and was viewed by some as especially important for daughters because "little trickier with girls". A smaller minority of parents (n=4, 21%) preferred cancer framing, noting that cancer is "frightening" and "could kill her". Framing preferences were often influenced by personal experiences with both HPV infections and cancer; as parents described their own diagnosis of cervical dysplasia ("it wasn't nice") and/or family history of cancer ("don't ever want to see anybody go through") as motivating reasons to vaccinate children.
Conclusions: Promotion of HPV vaccination through STD prevention framing messages to parents is widely acceptable in this population and may be an under-utilized approach to increase uptake of this safe and effective vaccine.
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TP 43
ANOTHER REASON TO STAY IN SCHOOL: PARTNER MEETING PLACE IS SIGNIFICANTLY ASSOCIATED WITH CHLAMYDIA AND/OR GONORRHEA (CT/GC) INFECTION IN STUDENTS TESTING IN A LARGE HIGH SCHOOL STD SCREENING PROGRAM – PHILADELPHIA, 2009-2012

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Background: Over the past 10 years, the Philadelphia High School STD Screening Program has screened 126,053 students, and identified 8,089 CT/GC infections, ensuring treatment for 98%. Given these large numbers, a substantial population of at-risk adolescents probably participates in the program at least once during high school. As a means of identifying strategies to decrease CT/GC positivity in this group, we wanted to learn about behaviors associated with infection.
Methods: Standardized interviews were given to all infected students receiving in-school CT/GC treatment in 2009-2012. Similar interviews were given to students testing negative who called in for test results in 2011-2012. Separate multivariate logistic models for males and females were computed using significant bivariate variables, including those who met vs. who did not meet partners at a particular venue.
Results: 1,489 positive and 318 negative students were interviewed. Risks for females included black race (AOR 2.27, CI 1.1-4.6), history of arrest (AOR 2.26, 1.2-4.2), higher partner number (AOR 1.75, 1.1-2.9), meeting partners in their neighborhood (AOR 1.92, 1.29-2.86), and particularly meeting partners in venues other than their own school, neighborhood, or through friends ("all other", AOR 9.44, 3.7-24.1). For males, risks included early sexual debut (AOR 1.99, 1.2-3.3) and meeting partners at "all other" (AOR 2.76, 1.2-6.4). For males, meeting partners through friends was protective (AOR 0.63, 0.41-0.96). Meeting partners at their own school was protective for both sexes (males AOR 0.33, 0.20-0.55, females AOR 0.65, 0.44-0.96).
Conclusions: The risk of infection incurred by the same behaviors is different for male vs. female adolescents; however, partner meeting place is significantly associated with infection in both. Reasons for this are unknown but may be associated with partner age or risk of a given partner network. Prevention messages aimed at limiting partner meeting place may help curb transmission of CT/GC in this population.
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TP 44
GYT AWARENESS AND STD TESTING BEHAVIORS AMONG YOUTH AND YOUNG ADULTS

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Background: The national ***GYT: Get Yourself Tested*** campaign (GYT), targeting youth and young adults up to age 25, aims to: raise awareness of STDs; encourage STD testing; encourage talking with sex partners about STDs and STD testing; and encourage conversations with health care providers about STDs and STD testing.
Methods: To assess campaign awareness among youth, we sampled 4,017 respondents (aged 15-25 years) in a representative, probability-based, online survey. Parents provided consent for legal minors (under age 18) to participate; consent rate was 53%. Participation rate was 51% among those 18-25 years of age. Median survey duration was 27 minutes. The survey assessed GYT awareness; awareness of other campaigns; knowledge, attitudes, and behaviors related to STDs and sexual health; and behaviors related to health care-seeking for STDs. We used chi-square to assess the statistical significance of differences between those aware of the campaign and those who remained unaware.
Results: Overall, 20% of respondents had heard of GYT, which compared very favorably with awareness of campaigns targeted toward the same audiences or related to the same behaviors. A specific campaign image was recognized by 16.5% of the sample. The percentage of those aware of GYT (26%) who had been tested for non-HIV STDs in the past 12 months was greater than the percentage of those unaware of GYT (12.5%) who had been tested. The same pattern appeared for testing prior to the past 12 months (17.1% of the aware group vs. 10.3% of those unaware of GYT), and for both past-year and prior HIV testing, all $p<0.01$. Other target behaviors of the campaign, e.g., talking to providers and partners, were similarly and significantly related to campaign awareness.
Conclusions: Results of this survey indicate that awareness of the GYT campaign was significantly related to the behaviors that the campaign targeted for improvement.
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TP 45
YOUTH ATTITUDES TOWARD DIMENSIONS OF SEXUAL HEALTH

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Background: Definitions of sexual health from various organizations (e.g., WHO) address multiple dimensions of sexual health. We surveyed a U.S. sample of youth to assess their endorsement of these dimensions and aimed to understand the link between patterns of endorsement and age, gender and sexual behavior.
Methods: We sampled 4017 youth (15-25 years) via a representative probability-based survey, administered online. For those who were legal minors (n = 1197), parents provided consent; 53% agreed. Those 18 and older were contacted directly; 51% agreed to take the survey. Sexual health survey questions assessed endorsement of 7 dimensions on 4-point measures (very important – not at all important): emotional fulfillment, social connectivity, overall enjoyment, spiritual fulfillment, mutual benefits, mental and physical dimensions. Gamma was used to assess ordinal indices of association.
Results: Respondents described each dimension as important or very important to them, ranging from 94% for pleasure and 95% for emotional fulfillment to 76% for social connectivity and spiritual fulfillment. Importance of emotional, enjoyment, mutual and mental aspects of sexual health were all associated with oral, vaginal and anal sex at $p < .01$ (gammas = 0.12 – 0.39), with social aspects the only aspect unrelated to sexual activity. Female respondents (n = 2519) were more likely than males to describe all dimensions as important (gammas = 0.08 – 0.42, all $p < .01$). Endorsement varied by age, with older respondents more likely to endorse dimensions as important, with the largest effects for spiritual and physical dimensions (mean age difference for very important and not at all important were, respectively, 1.7 and 3.2 years, $p < .001$).

Conclusions: Understanding how aspects of sexual health are linked to our changing youth population helps elucidate which dimensions of sexual health may be (1) the most salient to youth and (2) the most amenable to intervention.
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TP 46
THE ESTIMATED IMPACT OF HPV VACCINATION COVERAGE ON LIFETIME CERVICAL CANCER CASES AMONG GIRLS CURRENTLY AGED 12 YEARS AND YOUNGER IN THE UNITED STATES

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Background: One of the immunization objectives of Healthy People 2020 is to increase 3-dose human papillomavirus (HPV) vaccine coverage to 80% among females by age 13 to 15 years. Currently, however, 3-dose coverage in this age group is about 30%. We estimated the potential lifetime benefits of increasing HPV vaccine coverage from 30% to 80% among young females in terms of cervical cancer prevention.
Methods: We used a published, deterministic, dynamic, population-based HPV model. We calculated lifetime cervical cancer incidence among 13 birth cohorts of girls (those currently aged 12 years old and younger) in the United States under four HPV vaccine coverage scenarios, in the context of current cervical cancer screening: (1) no HPV vaccination, (2) vaccination at age 12 years with 30% coverage, (3) vaccination at age 12 with 80% coverage, and (4) vaccination at age 12 with 30% coverage in year 1 and 80% in subsequent years. For simplicity, we did not include vaccination of females at ages other than 12 years and we did not include male vaccination at any age. We assumed 95%, lifelong vaccine efficacy against HPV 16 and HPV 18, with no "cross-protection" against other high risk HPV types.
Results: Among the 26 million girls currently aged 12 years and younger in the United States, HPV vaccination would avert 45,500 cervical cancer cases (including 14,600 deaths) at 30% coverage and 98,900 cervical cancer cases (including 31,700 deaths) at 80% coverage. Each year that vaccination coverage remains at 30% instead of the target of 80% results in a missed opportunity to prevent 4,400 lifetime cervical cancer cases and 1,400 cervical cancer deaths.
Conclusions: Our modeling results suggest substantial reductions in the burden of cervical cancer can be achieved over time, particularly if 80% vaccine coverage is achieved.
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TP 47
GET YOURSELF TESTED 2011-2012: FINDINGS AND RATES OF *CHLAMYDIA TRACHOMATIS* AND *NEISSERIA GONORRHOEAE* AT AN URBAN PUBLIC HEALTH SYSTEM

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Background: During the months of April 2011 and April 2012 the Get Yourself Tested campaign was launched throughout the Cook County Health and Hospitals System to promote testing of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) among 15-25 year olds in a high prevalence urban community.
Methods: Retrospective data was collected and statistical analysis was performed in SAS 9.2 (SAS Institute, Inc. Cary, NC, USA). Chi square tests and student's t tests were used to evaluate demographic differences by CT and GC positivity. Univariate and multivariate logistic regression was used to calculate factors associated with CT and GC status. All p value calculations were two-tailed, and an alpha level of .05 was considered statistically significant. Testing rates were compared to those during the same month in 2010.
Results: A total of 2,853 tests were conducted among individuals 15-25 years in April of 2011 and 2012. This represents a 36% and 44% increase, respectively, from April 2010 when 1,019 tests were performed. A total of 2,060 (72%) females and 793 (28%) males were tested. Of those tested, 488 (17%) individuals tested positive for either CT or GC or both, 400 (14%) were positive for CT, 139 (5%) were positive for GC. The rate for GC positivity was 8.8% (n=70) in males compared to 3.3% (n=69) in females ($p< 0.0001$), rate of CT positivity was 16% (n=127) for males compared to 13.3% (n=273) for women (p=.0569).
Conclusions: Women in a high risk population are more likely to get tested for STIs, however, men are more likely to test positive for any STI. GYT is an important campaign to encourage wider spread testing among populations at risk in Cook County.
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TP 48
GOT THE HOOKUP: EVALUATING A TEXT-MESSAGE-BASED SEXUAL HEALTH INFORMATION AND CLINIC REFERRAL SERVICE FOR CALIFORNIA YOUTH

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Background: Youth face many barriers to accessing health education and clinical services to prevent STDs. New mobile communication technologies offer unique opportunities to serve this population. In April 2009, with support from the California STD Control Branch, California Family Health Council (CFHC) launched the Hookup, a statewide text-message sexual health information and clinic referral service for youth.
Methods: To evaluate the Hookup, we conducted three focus groups at two teen clinics in Los Angeles (September 2010) and sent a text-based survey to all subscribers (January 2011).
Results: As of September 2013, there have been 9462 unique subscribers to the Hookup, with 4797 requests for clinic locations across 51 of 58 California counties. Focus group participants (n=26) found message content was informative (providing new and relevant information), simple (automatically limited to short words and phrases), and sociable (easily to share with friends). Participants also cited the convenience and ubiquity of text messaging and felt that the cost of messages was not a barrier. Most felt that text messaging provided a private way to learn about sensitive health topics, although a few expressed concerns about stigma from peers seeing the messages. There was a 34% response rate to the text-based survey (n=842). Respondents were primarily 14-25 years old (90%) and female (92%). Main Hookup referral sources included school (40%), friends (25%), marketing materials (22%), and online sources (10%). The majority of respondents (90%) indicated positive changes in response to subscription, including using condoms (33%), increased sexual health knowledge and awareness (24%), initiation of birth control (15%), and getting tested for STDs (15%).
Conclusions: Respondents reported high levels of satisfaction with the Hookup, and indicated positive changes in their sexual health. This project provides an excellent model of a low-cost program using health communication and mobile technology to facilitate youth access to sexual health information and services.
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TP 49
INCREASING ADOLESCENT ACCESS TO SEXUAL HEALTH SERVICES VIA SCHOOLS: FINDINGS FROM AN EXPERT PANEL

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Background: Adolescents and young people are at disproportionate risk for negative sexual health outcomes. Nearly half of the 20 million new sexually transmitted diseases (STD) reported each year are among 15-24-year-olds. Clinical services can help prevent STD by increasing testing, treating infections, and reducing risk behaviors. US schools have a critical role in facilitating delivery of needed adolescent preventive services as they have contact with nearly 15 million adolescent students in grades 9-12. For these reasons, CDC's Division of Adolescent and School Health (DASH) is engaging school-district partners to facilitate adolescent students' access to sexual health services.
Methods: DASH convened a panel of 14 experts in public health and school health to highlight promising strategies state and local school districts can use to increase adolescents' access to sexual health services. These were discussed within varying healthcare infrastructures in schools, including school based health centers (SBHCs) school nursing services, and schools that offered no services onsite.
Results: Suggested activities varied by health care infrastructure in schools. For instance, STD testing in SBHCs may require assessing and changing policies and increased reimbursement from third parties. For schools with nursing services, officials can expand scope of practice and develop a system to make

referrals to community providers. Schools with no healthcare infrastructure may implement public awareness campaigns and link with a health department to deliver routine onsite screening. More generally, essential activities included creating linkages with health departments and other community providers; developing a referral system from schools to community providers; assessing and changing policy; using data to target services; engaging parents as advocates; and increasing funding for services.
Conclusions: Regardless of school health care infrastructure, opportunities exist to expand adolescent access to sexual health services. Activities vary by school context and partnerships between schools and community providers are critical in these efforts.
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TP 50
HISTORY OF LIVE BIRTH PREDICTS SEXUALLY TRANSMITTED INFECTION ACQUISITION OVER 6 MONTHS OF FOLLOW-UP AMONG AFRICAN AMERICAN GIRLS RECRUITED FROM JUVENILE DETENTION CENTERS

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Background: We previously reported that pregnancy history predicts sexually transmitted infection (STI) acquisition among detained girls. Although pregnancy outcomes may differentiate unique populations of girls, studies have not assessed prior pregnancy outcomes and STI acquisition among detained girls. The objective was to examine two prior pregnancy outcomes (live birth and terminated pregnancy/stillbirth) as predictors of STI acquisition over 6 months among African American girls recruited from juvenile detention centers.
Methods: Non-pregnant, sexually active, detained African American girls (n=188), 13-17 years, were enrolled in an HIV/STI prevention trial. At baseline, 3- and 6-month assessments, participants completed audio computer-assisted self-interviews and provided self-collected vaginal swab specimens assayed for Chlamydia and gonorrhea. T-tests and chi-square statistics compared baseline characteristics (sociodemographics, sexual risk behaviors, partner characteristics) among participants with no baseline pregnancy history relative to participants reporting: 1) a baseline history of ≥1 live birth; and 2) a baseline pregnancy history but no live birth. Poisson models compared STI acquisition for each pregnancy outcome relative to no pregnancy history. STI acquisition was defined as a positive STI test result during follow-up subsequent to a negative result or documented treatment. Adjusted models controlled for baseline differences ($p<0.1$).
Results: Of 179 (95.2%) girls completing ≥1 follow-up assessment, 20 (11.2%) reported a live birth and 25 (14.0%) a terminated pregnancy/stillbirth. Over half (55.0%, n=11) of girls reporting a live birth and 44.0% (n=11) with a terminated pregnancy/stillbirth acquired an STI, whereas 30.6% (n=41) with no pregnancy history did. The adjusted relative risk of STI acquisition for girls reporting a live birth was 1.84 (95% CI: 1.08, 3.13). Terminated pregnancy/stillbirth was not significantly associated with STI acquisition.
Conclusions: History of live birth independently predicted laboratory-confirmed STI acquisition over 6 months. HIV/STI prevention may benefit by addressing the unique needs of detained African American girls with a live birth.
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TP 51
HOW EFFECTIVELY ERODING STD STIGMA FACILITATES PREVENTION

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Background: Social stigmatization of STDs and those who have them creates misconceptions (educational disparities, myths), fear (fear of infection, social repercussions, sexual rejection), and trauma (PTSD, depression, anxiety, isolation), which hinders prevention efforts and expedites the spread of STDs. Current technologies such as smart phone applications, partner notification systems, and social networks designed around sexual health cannot successfully reduce STD transmission rates without also addressing the underlying cause: stigma.
Methods: The STD Project (thestdproject.com) uses online storytelling—anonymous submissions—to erode STD stigma by advocating for awareness, education, and acceptance. In this medium, mindful conversations around STD prevention, risk, and transmission occur amidst an authentic backdrop of personal experiences which helps those seeking practical advice, resources, and tools to become sexually empowered without being influenced by misconceptions and stigma.
Results: Demographically, youth aged 15-25 are most adversely affected by STDs, and they are, by design, The STD Project's largest population of visitors (accounting for 47% of our 190,000 views per month). Readers submit personal stories and engage via the forum or contact form. Of those infected and participating online, the vast majority (over 95%) have been adversely affected—depression, anxiety, fear of rejection, or isolation—by STD stigma. A large number (80%) have not disclosed their status to past partners. All participants have improved (psychological improvements, safer sex practices and partner disclosure) after engaging with The STD Project.
Conclusions: When stigma and the associated trauma of being diagnosed with an STD are addressed via storytelling, prevention is possible, because those who are uninfected are effectively educated, those infected begin to heal psychologically, and both are interested in becoming sexually responsible.
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TP 52
EARLY DETECTION OF HIV PREVENTION IN ADOLESCENTS AS ILLNESS (AIDS) DUE TO LATE DIAGNOSIS

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Background: Mobilizing to early diagnosis of HIV in adolescents and young people as a preventive measure to illness (AIDS) infection and other STDs reduces vulnerability and hazards of delayed diagnosis
Methods: In April 2011/12 the Management of Education in collaboration with the National STD / AIDS / HV, implemented an intervention program and mobilization of early detection of HIV in adolescents and young High School in the 15 schools of public objective of these, assess their vulnerability (Nbr. Of partners XSTD X Infection). Sexual initiation before age 15 - 38 % in men and 19 % women; percentage of teenage pregnancy at the age of 12 to 14 years 0.2 %, 15 - 19 years 14.8 %. Notification of AIDS in 2011 in Santa Catarina 15-24 years until 30/06/2011 was 89 cases, 16 % of notifications in Itajai, Balneario Camboriu and of Camboriu
Results: From 07/10/12 to 07/12/12, 402 teens did workshops contained information on STD / HIV / AIDS Vulnerability, Sexual and Reproductive Rights and the questionnaire assessment of their vulnerability, 42 students diagnosed had more risk behavior, unsafe sex, exchanging various partners/yea, 16 did HIV testing, of whom 02 had a diagnosis of HIV +, 07 were in the window Immune, 03 returned for reexamination and 01 HIV +.
Conclusions: To create opportunities early diagnosis in young population whose prevalence rate of HIV infection has tended to increase in this age group, decreases vulnerability, reduce teenage pregnancy, avoidance / school failure, breaking the chain of transmission, slows disease and assists in the detection of other STD, especially HPV.
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TP 53
YOUTH HIV/STD PREVENTION AND SEXUAL HEALTH CONCEPTUAL FRAMEWORK: A GUIDE FOR ASSESSMENT, PLANNING, AND COMMUNICATION

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Background: Addressing the sexual and reproductive health of young people can complement and enhance HIV/STD prevention efforts by taking a holistic view of health, considering underlying social issues, emphasizing wellness, focusing on relationships, and coordinating prevention efforts. With this broader approach, assessment, planning, and communication are especially important to ensure strategic activities that address youth HIV/STD prevention and sexual health.
Methods: Drawing on theory, research, and programmatic experience, members of the Centers for Disease Control and Prevention's Workgroup on Ado-

lescent Sexual and Reproductive Health developed a conceptual framework for youth HIV/STD prevention and sexual health. The framework is based on the social-ecological model and stages (i.e., early, middle, late) and domains (e.g., physical, cognitive, emotional) of adolescent development.
Results: The framework provides a broad overview of possible ways to address youth sexual and reproductive health. It lists 15 relevant environments (e.g., school, health service settings, home) and within each environment, examples of factors that influence sexual and reproductive health. For example, school connectedness, parent engagement, peer norms, extracurricular activities, and health and mental health services are important factors to consider within schools. Public health functions can be applied across the environments and factors to address sexual and reproductive health, and the framework defines four overarching functional domains: surveillance, research, program, and policy.
Conclusions: This framework provides a way to assess public health efforts to improve youth sexual and reproductive health by considering what functions are used in which environments to address which outcome(s). Moreover, the framework can help strengthen planning efforts and define prevention services. Gaps and priority actions can be identified by comparing current activities with the range of possible approaches to youth HIV/STD/pregnancy prevention outlined in the framework. Finally, the framework can help communicate current activities and future directions to internal and external partners, which will enhance coordination.
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TP 54
THE ROLE OF PSYCHOSOCIAL CONDITIONS ON SEXUALLY TRANSMITTED INFECTION RISK AMONG U.S. YOUNG ADULTS

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Background: Numerous risk factors are associated with sexually transmitted infection (STI) risk; yet little is known about how co-occurring risk factors impact STI risk among young adults. The present study investigates: (1) if psychosocial conditions (illicit drug use, depression, childhood physical abuse and childhood sexual abuse) co-occur among sexually experienced young adults; (2) to assess if psychosocial conditions are associated with STIs (chlamydia and trichomoniasis) and sexual risk behaviors (early sexual debut, paying for sex, receiving money for sex, sex with a IV drug user and number of sex partners); and (3) to determine if there is evidence of a "syndemic" relationship between co-occurring psychosocial conditions and young adults' engaging in sexual risk behaviors and acquiring STIs.
Methods: Data were obtained from the National Longitudinal Study of Adolescent Health, Wave III (2001-2002) and the final analytical sample included 10,855 sexually experienced young adults, aged 18-28, with available STI biomarker results. Adjusted logistic regressions and incidence rate ratios were used to evaluate the associations and additive effects of psychosocial conditions on sexual risk behaviors and on STI outcomes. All analyses included survey weights.
Results: Five percent of sexually experienced young adults had chlamydia and 2.4% had trichomoniasis. Young adults that reported past histories of childhood sexual abuse were significantly more likely to report other co-occurring conditions such as childhood physical abuse, illicit drug in young adulthood or depression in young adulthood. Young adults with multiple psychosocial conditions also had a higher likelihood of engaging in early sexual debut (AOR=1.38; CI=1.26-1.53, p<.001) and paying for sex (AOR=1.70; CI= 1.35-2.14, p<.001). Study findings did not support the hypothesized relationship between multiple psychosocial conditions and either STI.
Conclusions: Interventions targeting this population should address how psychosocial conditions such as violence, depression and drug use may impact young adults' level of STI/HIV risk.
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TP 55
HEAT: HIV PREVENTION AND TREATMENT PROGRAM FOR YOUTH, IN BROOKLYN, 2011-2012

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Background: Youth ages 13-24 comprise 25% of incident HIV infections. Approximately 72% of new youth HIV infections are in men who have sex with men (MSM) and transgender youth. This study compares the characteristics of youth tested for HIV in 2011 versus 2012, as well as those who tested positive.
Methods: The Health & Education Alternatives for Teens (HEAT) is a clinical care and community outreach program for HIV-infected and high-risk adolescents in Brooklyn, New York. Youth participants are offered HIV testing. In 2011, youth were reached through 13 venues, including ballroom events, an LGBT youth support agency, college campuses, public libraries, and the HEAT clinic. In 2012, HEAT program expanded to 3 additional venues and more frequent outreaches at existing venues.
Results: In 2011, HEAT performed 575 HIV tests, of whom 5 unique individuals (0.87%) tested positive. In 2012, HEAT performed 1326 HIV tests, of whom 30 unique individuals (2.3%) tested positive: 21 MSM, three bisexual men, four heterosexual men, and two with undisclosed sexual orientation. The median age of HIV-positive was 21 (inter-quartile range: [17.5, 24.5]). Most (70%) positive results were identified through direct HEAT related events. More participants reporting addresses in the Bronx and Manhattan tested positive for HIV than participants reporting addresses in Brooklyn: 2.75% and 3.26% versus 1.88%. A majority (56.7%) of HIV-positive individuals entered HIV treatment.
Conclusions: Expanding an HIV screening program risks diluting the proportion of positives by contacting low-risk youth. HEAT's expansion increased the proportion of positive tests by six-fold in 2012, compared to 2011, and helped them enter care. Higher HIV seropositive rates from Bronx and Manhattan likely reflect higher volume of young MSMs attending LGBT friendly HEAT events and engagement at an LGBT youth program. The program expansion was effective in reaching more youth at highest risk for HIV.
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TP 56
SEXUAL RISK AMONG YOUNG AFRICAN AMERICAN WOMEN WHO USE ALCOHOL: RESULTS FROM TWO US CITIES

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Background: Alcohol use is related to sexual risk behavior among young African-American women. Few effective interventions address alcohol-related sexual risk among this population, although promising trials are underway. Little is known about the comparability of HIV/sexually transmitted infection (STI) risk among different samples of young alcohol-using African American women and, thus, how applicable interventions developed and tested in one geographic site might be for use in different geographic sites. The objective was to examine sexual risk behaviors among young alcohol-using African American women in two cities to determine if an HIV/STI prevention intervention developed and implemented at one site (i.e., Atlanta) is appropriate for another geographical site (i.e., Washington, DC).
Methods: African American females 18-24 years were enrolled in community-based studies conducted in Atlanta, GA, (n=428) and Washington, DC (n=101). Chi square and t-tests compared baseline characteristics between samples.
Results: Although a greater proportion of the Atlanta sample reported consuming >1 alcoholic drink/month (81% vs. 60%, p<0.001), ~75% of both samples reported recently using alcohol or drugs before sex (p=0.578), and 19% and 24% of Atlanta and DC samples, respectively, reported using alcohol or drugs before sex at least most of the time (p=0.229). Mean number of sexual partners in the past 3 months was 2.9 in Atlanta and 1.8 in DC (p=0.261). However, mean percent condom use was <50% in both samples. Further, 31% of the Atlanta sample and 21% of the DC sample reported never using condoms during sex in the past 3 months (p=0.054).
Conclusions: The results suggest high levels of HIV/STI risk among young alcohol-using African American women in two different US cities and reiterate a need for effective interventions to reduce sexual risk among this population. The findings suggest that effective interventions developed and implemented in Atlanta may be applicable for use in DC.
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TP 57
STD SELF COLLECTION EXPANDED SCREENINGS CONTRIBUTED TO UNDERSTANDING OF PREVALENCE OF GONORRHEA AND CHLAMYDIA AMONG GUAM'S CHUUKESE AND ADOLESCENTS

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Background: The prevalence of chlamydial and gonorrheal infections among targeted populations was unclear although high rates of chlamydial infections were consistently reported on Guam. To better understand prevalence among populations at risk, targeted screenings were done among adolescents and young Chuukese on Guam, at the STD Clinic and at nontraditional venues.
Methods: From October 2009 through October 2013, the STD/HIV Program, in collaboration with community partners and CDC, implemented a screening program using Aptima Combo 2 assay (Gen-Probe) self collected vaginal swabs and urine samples to test for Chlamydia and gonorrhea. Patients that tested positive for Chlamydia and/or gonorrhea were treated as recommended by CDC along with their sex partner(s). The prevalence was calculated from data abstracted from STD client records.
Results: From October 10/2009 to October31/2013, 4,727 self- collected tests were administered to clients at selected venues. The overall prevalence for Chlamydia was 25%, and gonorrhea was 3%. Of the 4,727 tests administered 780 (16%) were Chuukese, age group 15-49 and 2,533 (54.5%) were adolescents (15-24 years of age). Among Chuukese, a prevalence of 30% for Chlamydia and 5% for gonorrhea were noted. Among adolescents a prevalence of 25% for Chlamydia and 3% for gonorrhea were noted.
Conclusions: Expanded screenings for Chlamydia and gonorrhea provided solid epidemiological data. By conducting periodic analysis of the data (monthly/quarterly and annually), the STD Program was able to better target program resources and implement strategies to reach populations most at risk. As a result of expanded screenings, the STD Program better understands the prevalence of Chlamydia and Gonorrhea among Chuukese and adolescents. Self-collection of vaginal and urine samples for tests by clients, demonstrated that this testing method reduced missed opportunities by reaching populations who would not have accessed STD services.
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TP 58
THE EVOLUTION OF PARTNERSHIPS AND CONDOM USE AMONG YOUNG AFRICAN AMERICAN WOMEN

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Background: Condom use varies depending on partnership type. Generally, there is an inverse relationship between level of relationship commitment and condom use. While the status of partnerships can change at any time, condom use behavior may not. The purpose of this study was to quantify partnership changes and condom use within these relationships.
Methods: African American (AA) women aged 18-19 living in New Orleans were recruited from the community for a pregnancy prevention program. Women were administered a computer-assisted self-administered survey to elicit partnership type and condom use at baseline and again at 7 months.
Results: Of 155 partnerships named at baseline, 54.2% dissolved/woman did not acquire new partner(s), 22.6% were ongoing, and 23.2% dissolved/woman got new partner(s). At 7 months, condom use at last vaginal sex act was 37% for ongoing partnership and 71% for new partnerships. The categories of the 36 ongoing relationships were: boyfriends [BF] (64%), fiancé (11%), friend with benefits [FWB] (11%), ex-BF (11%), and wants relationship with [WRW] (3%). Of the 82 new partners, the most common categories were: BF (37%), FWB (37%) and just sex/not friend (23%). Of the ongoing relationships at 7 month, 25% had lesser commitment (e.g. BF to Ex-BF), 53% stayed the same and 22% had increased level of commitment (e.g. BF to fiancé). Condom use at last vaginal sex act for these ongoing relationships by status change was: diminished commitment (25%), commitment stayed same (53%), and increased commitment (13%), respectively.
Conclusions: High rates of partnership dissolution/acquisition were found. Among the ongoing relationships, one-quarter had a less committed status at follow-up and this group also had low condom use, contradicting the assumption of increased condom use with less intimate partners. Risk reduction interventions should consider the highly dynamic nature of young AA women's relationships and emphasize risk reduction in ongoing partnerships.
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TP 59
SEX PACT: EVALUATION OF AN INNOVATIVE APPROACH TO SEXUAL HEALTH PROMOTION AMONG YOUNG AFRICAN AMERICAN MALES

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Background: African-Americans bear a heavy burden of STDs in the United States, yet few sexual-health campaigns have attempted to reach African American males. Formative research with this population suggests the need to reach males at an early age with bold and empowering messaging. We sought to develop, implement, and evaluate a sexual health campaign for Black males, ages 14-17 years in Washington, D.C.
Methods: Public-health agencies teamed up with local art/design students and stakeholders in Washington, D.C. to design the SEX PACT Campaign (www.sexpact.org). This campaign utilizes youth civic engagement, unconventional ("guerrilla") marketing (e.g., sticker bombing), peer-to-peer outreach/education and new media to promote positive attitudes and behaviors related to condom use. The campaign ran for five weeks in an urban-housing community in D.C. Pre- and post-campaign surveys evaluated campaign awareness and ease of access to free condoms, acquisition and use of condoms among young males recruited from a community-based organization.
Results: The pre-campaign survey was completed by 36 males, ages 14-17 years. The post-campaign survey was completed by 51 males in the same age group. In this post-campaign group, awareness of SEX PACT was 76%. From pre- to post-campaign, increases were seen in the number of respondents reporting easy access to free condoms (55% vs. 100%), recent condom acquisition from community locations (12% vs. 61%), and condom use at last sex (68% vs. 71%).
Conclusions: Limited data indicate some initial successes of SEX PACT related to youth awareness and access and use of condoms in an urban-housing community. With correct training and implementation, such guerrilla-marketing efforts can offer a low-cost way to disseminate health messages while providing opportunities for youth to take ownership and leadership in protecting their health. The SEX PACT concept could be replicated and expanded to market other sexual-health behaviors.
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TP 60
SOCIOCULTURAL FACTORS ASSOCIATED WITH SEXUAL ACTIVITY AMONG HAITIAN AMERICAN ADOLESCENTS IN MIAMI, FL

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Background: Adolescents are at increased risk for unplanned pregnancies and STIs, including HIV. Haitian American adolescents remain understudied, despite their vulnerability to risky sexual activities, and experience the same structural and psychosocial problems (inadequate housing, education, and employment, delinquency, and marginalization/stigma) that disproportionately place other minorities at risk for HIV/STIs.
Methods: This study explored contextual variables related to sexual activity (SA) among 276 Haitian American adolescents in Miami who were participating in a sexual risk reduction intervention (2000–2005). At baseline, participants completed the NIH-developed Problem Oriented Screen Instrument for Teenagers, including the POSIT HIV/STD-Risk Mini-Questionnaire. These measures examined five domains of risk in adolescents' lives: Individual, Peer, Family, School, and Neighborhood. SA was measured by participants' reports of ever engaging in oral, anal, or vaginal sex. T-test and Chi-square were used to evaluate bivariate associations between SA and variables measuring the above domains. Variables that were significantly associated with SA at alpha ± 0.10 were entered into a logistic regression model to identify their independent associations with SA.
Results: In the overall sample, 51% males and 36% females were sexually active, and their median (SD) age was 16.0 (1.2) years. In multivariate analysis, age (Adjusted Odds Ratio [AOR]:1.6, 95% CI:1.18– 2.15), females (AOR:0.42, 95%CI:0.20–0.85), communication about sex (AOR:1.11, 95%CI: 1.04–1.2), currently living with mother only (AOR: 3.10, 95%CI: 1.54–6.20), and currently having sexually active friends (AOR:2.96, 95%CI: 1.31–6.66) were significantly associated with SA. In a female sub-sample,

age, sexual communication ability, mental health, and household composition were independently associated with sexual activity ($p<0.05$).
Conclusions: These findings offer important insight into the sexual behaviors of understudied and vulnerable Haitian American adolescent subgroup. The study reinforces the importance of probing gender differences and the roles of peer norms, sexual communication, and family household situation.
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TP 61
EXPLORING THE REALITIES OF YOUNG AFRICAN AMERICAN MEN TO INFORM SEXUAL HEALTH COMMUNICATION EFFORTS: FINDINGS FROM QUALITATIVE RESEARCH IN WASHINGTON, D.C

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Background: Few well-evaluated communications or social-marketing campaigns have attempted to address sexual-health attitudes, norms or behaviors among young African American males in the United States, despite the disproportionate burden of STDs in this population. Formative research sought to inform the development of campaign messages to increase healthy, responsible, and respectful sexual behaviors and relationships for young African American men and their partners in Washington, D.C.
Methods: The Institute for Public Health Innovation gathered information from African American males (ages 14-24 years) and their partners through five focus groups. Data from the focus groups were assessed for the degree of consensus or differences expressed by the groups, and emerging themes/patterns were reviewed and identified.
Results: Five themes emerged from the research: (1) Desire to feel respected is a critical factor in young men's behavior/decision making. (2) Many challenges in young men's lives take priority over sexual health. (3) Peer pressure is a driving force for early sexual debut (12-13 years) for males. (4) Consistent condom use is a challenge for young men. (5) Young men want messages to be delivered by trusted and relevant source(s). Interviews with partners supported these findings.
Conclusions: This research suggests that young males in Washington DC feel pressure to engage in sexual activity to prove their masculinity, fit in, and be accepted. Local sexual health campaigns focused on young Black men should be designed with an understanding of the complexities of their lives and the environment/circumstances surrounding the sexual health choices they make. Young Black men should be effectively engaged throughout the design and delivery of a social marketing intervention in order for the intervention to have the most long-lasting impact. Early sexual debut indicates that campaigns must reach youth at an early age (by end of middle school/beginning of high school).
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TP 62
SICKLE CELL DISEASE & SEXUAL HEALTH EDUCATION FOR YOUTH: A SOCIAL SKILLS MODEL APPROACH

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Background: Youth with sickle cell disease (SCD) do not receive adequate, coordinated SCD genetic inheritance and sexual health education. As more individuals with SCD live into childbearing years, appropriate education should be provided. To assess interest in an educational program about the inheritance of SCD and sexual health, we conducted a single center pilot study among youth with SCD. Secondarily, we studied the feasibility of implementing an education program. We hypothesized that knowledge about SCD inheritance, sexual health, and risk-reduction strategies would increase.
Methods: We used a mixed methods approach. Patients aged 11-19 years were approached in an urban hospital. Semi-structured interviews were conducted, recorded and transcribed. Qualitative data were analyzed and coded to identify themes. A social skills-based SCD inheritance and sexual health education program based on these findings and the Sisters Informing Sisters About Topics on AIDS (SISTA) reinvention framework was assessed using member-check. The program was then piloted for feasibility using the measures: participant acceptance of educational intervention, demand and attendance, and limited efficacy in knowledge gain. Feasibility was defined as 50% of individuals consenting to participate.
Results: All participants from the qualitative analysis demonstrated knowledge deficits and/or interest in SCD genetic education. Nineteen (95%) demonstrated deficits in sexual health knowledge and/or requested education. Seventeen (85%) demonstrated knowledge gain in SCD inheritance and/or sexual health. Twelve (60%) reported engaging in sexual activity, seven (35%) in risky behaviors, and three (15%) reported past STI diagnosis. Twenty (57%) consented to participate. An educational program and pre/posttest measures were created and assessed using member-check.
Conclusions: Youth with SCD lack an understanding of both the genetics of their disease and sexual health. With the feasibility of the qualitative analysis supported, the next phase of research will address the efficacy of implementing a genetic and sexual health education program.
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TP 63
HORMONAL CONTRACEPTIVE USE AND RISK OF CHLAMYDIA TRACHOMATIS (CT) INFECTION IN USPHS REGION X FAMILY PLANNING (FP) FEMALE CLIENTS

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Background: Research has examined the possible role of combined oral contraceptives (COC) on CT infection. Some studies suggest that COC use increases CT risk. We investigated associations between various contraceptive methods (CMs) and CT infection among female Region X FP clinic clients aged 15-44 years, 2009-2011.
Methods: We accessed Region X FP clinic visit records (CVRs), 2009-2011, where a CT test was performed (n=255,971), Infertility Prevention Project (IPP) CT test visits (n=274,573) for female FP clients, and U.S. Census 2007-11 American Community Survey (ACS) ZIP code-level records (n=1,536) used to generate area-based socioeconomic measures (ABSM). CVRs documented 19 CMs and were merged into IPP records via clinic, patient ID, birthdate, and visit date. We merged ABSM into IPP via client ZIP code. The final sample included 79,782 CT test records with known CM. CM was categorized as: no CM; non-hormonal, non-barrier; non-hormonal, barrier; hormonal progestin-only injection; and hormonal COC. CT result was stratified by demographic, behavioral, clinical, and ABSM characteristics. Crude/adjusted odds ratios (ORs) were generated by univariate and multivariate generalized mixed models with logistic link, incorporating clinic and ZIP code as random effects.
Results: 45% were aged 20-24 years; 71% were non-Hispanic white. Overall CT+ was 5.8%. CM and CT+ distributions were: no CM=9% (CT+=6.8%); non-hormonal/non-barrier=27% (CT+=5.9%); non-hormonal, barrier=24% (CT+=6.0%); hormonal progestin-only=8% (CT+=6.6%), and hormonal COC=32% (CT+=4.7%). Multivariate results adjusting for demographics, risk behaviors, clinical signs and ABSM, showed clients on COCs had significantly lower CT risk compared to women using no CM (AOR=0.71, 95% CI=0.65, 0.77).
Conclusions: Based on contraceptive method reported at their CT test visit, women using COCs attending Region X FP clinics had lower CT positivity than women using any other category of contraception. Historical CM use patterns and temporal ordering of CM and CT+ could not be assessed and is an area that warrants further investigation.
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TP 64
I'VE HAD A PAP, BUT I HAVEN'T BEEN SCREENED FOR CERVICAL CANCER: HPV HEALTH LITERACY AMONG WOMEN SCREENED FOR CERVICAL CANCER AT AN URBAN STD CLINIC

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Background: Observed cervical cancer morbidity and mortality health disparities are sociodemographically defined, but may also be explained by levels

of health literacy. Little is known about HPV and cervical cancer screening knowledge among women of color and uninsured women. Studies in these populations have asked directly about the meaning of Pap smear or HPV, but have not examined literacy as it might be expressed in the course of receiving health services. Health literacy regarding Pap testing and its relationship to cervical cancer screening were examined as part of a larger study of cervical cancer screening in an urban STD clinic.
Methods: Survey and test result consultation data were gathered from 103 women from June 2012-October 2013. HPV-related literacy indicators included congruence between reported Pap history and reported cervical cancer screening (whether participants who answered yes to the question "Have you received a Pap test?" also answered yes to the question "Have you ever been screened for cervical cancer?"), and question content during the results communication.
Results: Findings indicated limited HPV and cervical cancer literacy in this cohort of women (African American (55.3%), White (36.9%) and Hispanic (6.8%)). More than half (55.8%) did not know that Pap testing was the same as cervical cancer screening. About one-third (31%) of all women screened were confused about what HPV was, its symptoms, its connection to cervical cancer, and the HPV vaccine.
Conclusions: Despite increased dialogue surrounding HPV vaccination, Pap testing and cervical cancer, a substantial number of women still have low HPV-related literacy. This may have an impact on willingness to access screening and to follow up on high risk results, particularly in health service settings where literacy issues are likely expressed. Examining cervical cancer literacy by congruence checks between reported Pap smears and cervical cancer screening may be beneficial.
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TP 65
URINE BASED CHLAMYDIA SCREENING AT ILLINOIS PREGNANCY TESTING CENTERS

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Background: Guidelines recommend chlamydia screening for females less than 26 years of age. Women seeking pregnancy testing services at community based clinics have had unprotected sex and are at risk of acquiring chlamydial infections.
Methods: During 2012, the Illinois Department of Public Health, Sexually Transmitted Diseases Program recruited ten community based pregnancy testing centers to perform chlamydia testing on clients seeking pregnancy testing services.
Results: From January 1, 2012 through December 31, 2012, 521 females were tested for chlamydia, with 77 (14.8%) testing positive. Of the 521 females tested, 449 (86.2%) were less than 26 years old. Of the 449 females (less than 26 years of age) tested 75 (16.7%) were positive for chlamydia. Pregnancy testing center staff also encouraged females infected with chlamydia to refer male sex partners for chlamydia testing. During the same time period, 131 male clients were tested with 42 (32.1%) testing positive for chlamydia.
Conclusions: During 2012, chlamydia positivity rates in traditional STD clinics were 10.9 % for female STD clinic clients and 14.9% for male clients. Providing chlamydia screening services in nontraditional settings, such as pregnancy testing centers, identified higher rates of chlamydia infections in females and male sex partners of females infected with chlamydia.
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TP 66
PELVIC INFLAMMATORY DISEASE MANAGEMENT AT SELECTED U.S. STD CLINICS: STD SURVEILLANCE NETWORK, 2010-2011

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Background: Pelvic inflammatory disease (PID) is commonly due to *Neisseria gonorrhoeae* (GC) and *Chlamydia trachomatis* (CT). CDC treatment guidelines recommend treatment for PID based on the presence of at least 1 criterion (uterine, adnexal, or cervical motion tenderness). Little is known about how women with PID are diagnosed and managed in STD clinics. The objectives of this analysis were to evaluate the management of PID in STD clinics and assess how frequently PID was associated with laboratory-confirmed GC or CT.
Methods: A total of 1080 (1.3%) female patients diagnosed with PID in 14 STD clinics participating in the STD Surveillance Network were identified from January 1, 2010 through December 31, 2011. A sample of 219 (20%) women was randomly selected for medical record review. Patient history, physical findings, treatment and laboratory results were reviewed. We evaluated CT and GC positivity in the preceding year by age groups (≤25 years versus >25 years).
Results: Of 219 women diagnosed with PID, 96% had 1 or more criteria documented on physical examination. Adnexal tenderness was the most common sign in 66.2% and lower abdominal pain was the most common symptom in 58.9%. Sixty-eight percent of women diagnosed with PID received antibiotics consistent with CDC recommendations, with the remaining 32% receiving alternative therapies. Ninety-five percent were tested for either GC or CT in the preceding 12 months. Among younger women, 33.8% had CT, 12% had GC and 41.6% had infection with either organism compared to 15.9%, 7.9% and 18.9%, respectively, among older women.
Conclusions: Diagnosis of PID in STD clinics does follow recommended guidelines and appropriate treatment for PID was provided to the majority of, though not all, patients. Many young women and fewer older women had documentation of recent CT or GC infection.
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TP 67
PREVALENCE OF CHLAMYDIA TRACHOMATIS GENITAL INFECTIONS AMONG WOMEN SEEKING ELECTIVE ABORTIONS

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Background: The American College of Obstetricians and Gynecologists recommends prophylactic antibiotics for elective abortions to prevent post-surgical complications from STDs. However, the impact of this recommendation in preventing adverse outcomes depends on the prevalence of STDs in the patient population. Current STD prevalence among women who seek elective abortions in the United States is unknown. We analyzed laboratory testing data to estimate the positivity of chlamydia tests among women who had elective abortions.
Methods: Among women aged 15-44 years who had a chlamydia test performed by a large U.S. commercial laboratory between June 2008 and July 2010, we identified those who had an elective abortion using the International Classification of Diseases, 9th revision (ICD-9) codes (635.xx). Among women seeking an elective abortion who had a chlamydia test, we estimated the positivity by age.
Results: Of 2.3 million women who had a chlamydia test, 3,637 (0.2%) had elective abortion services. Of these 3,637 women, 21.1% were aged 15-19 years, 34.7% aged 20-24 years, 23.7% aged 25-29 years, and 12.7% aged 30-34 years. Overall, chlamydia positivity was 6.0%, and significantly decreased by age (8.5% in 15-19 year olds, 7.8% in 20-24 year olds, 4.8% in 25-29 year olds, 2.8% in 30-34 year olds, and 0.3% in 35-44 year olds ($p<0.05$)).
Conclusions: Prophylactic antibiotics in women undergoing an elective abortion might not be appropriate for all women. It is important to periodically assess data to update recommendations. Because overuse of antibiotics may lead to microbial resistance, prophylactic regimens might not be the best STD management strategies. Future point-of-care tests may make prophylactic regimens unnecessary, as well. Studies are needed to compare the cost-effectiveness of possible STD management strategies: 1) universal treatment without screening (the current strategy); 2) selective screening and treatment; and 3) universal screening and treatment.
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TP 68
GONORRHEA REINFECTIONS IN WOMEN FROM FLORIDA 2000-2011

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Background: Gonorrhea is the second most common bacterial sexually transmitted infection reported in the U.S. We wanted to describe how reinfections were impacting this epidemic in women.

Methods: The Florida state STD/HIV matched surveillance database containing all reports of STD from 2000-2011 was used for analysis. Reports of repeat gonorrhea infection within 30 days were not included in the analysis.
Results: 127,081 gonococcal infections were reported among 103,156 females over age 13 in Florida between 2000 and 2011. The number of infections reported by year ranged from 9,345 to 11,970. 17,500 females had subsequent infections reported. 4,459 females had more than two gonococcal infections reported. Of 9,923 women with gonorrhea reported in 2000, 27% had an additional infection reported between 2000 and 2011. Of 9,617 women with gonorrhea reported in 2011, 23% had a previous infection reported between 2000 and 2011. Life Table analyses indicated the following 12-year cumulative risks of repeat infection among women with gonorrhea: 17% for all women, 22% for African-American females aged 13 to 24 years, and 14% for white females aged 13-24 years. The highest number of additional infections was 10. The mean time to second recorded infection was 2.01 years with a median of 1.28 years. 21% of the repeaters were African-American and 25% were aged 13-19 at time of first diagnosis. Of 1,059 females that acquired their first gonococcal infection while they were HIV-infected, 16% were repeaters indicating possible risks of continued transmission of HIV to their partners.
Conclusions: Many of the women who were diagnosed with gonorrhea in Florida became re-infected, some repeatedly. This supports the recommendation to rescreen persons with gonorrhea after their diagnosis. Partner services (including EPT) and high-intensity behavioral counseling have been shown to reduce reinfection.
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TP 69
CHLAMYDIA SCREENING RATES AMONG FEMALES ENROLLED IN MEDICAID KANSAS

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Background: *Chlamydia trachomatis* is the most commonly reported notifiable disease in the US and is among the most prevalent of all sexually transmitted infections. Kansas reported over 10,600 cases in 2011. Rates were highest among young adults and females. In Kansas, adolescents and young adults (15–24) represented 14% of the population but 76% of reported cases. The U.S. Preventative Services Task Force recommends annual chlamydia screening for all sexually active (SA) non-pregnant women under 25 and non-pregnant women 25 and over who are at increased risk. CDC echoes this with a similar recommendation.
Methods: Kansas Medicaid claims data was analyzed for females 16-24 who were continuously enrolled for 12 months. Patients were identified as SA if they had claims or encounter data associated with: contraceptives, Pap test, pelvic examination, pregnancy-related, or STI-related services.
Results: Over 80% of females 16-24 enrolled in Medicaid were defined as SA; of which 40% or less received an annual chlamydia screening. Screening rates varied significantly. Blacks were twice as likely to be screened than Whites. SA adolescents (16–20) were also less likely to be screened than adults (21–24). In 2012, 35% of eligible females received an annual screening. This resulted in potentially under-identification of 625 new cases of chlamydia.
Conclusions: Kansas' annual screening rate (40%) under performs the national rate by 20 percentage points and Healthy People 2020 (16-20 at 74.4% and 21-24 at 80%). Whites and adolescents represent a significant proportion of the eligible population but were the lowest screened. Targeting these groups could significantly impact screening rates. Low screening rates potentially result in not identifying over 600 new cases yearly. Untreated cases can lead to Pelvic Inflammatory Disease (PID) in 10-40% of women. Higher screening rates would result in a significant reduction of disease morbidity including PID and infertility.
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TP 70
VULVOVAGINAL CANDIDIASIS CAUSED BY NON -CANDIDA ALBICANS SPECIES: NEW INSIGHTS

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Background: Candida is a normal commensal in 25-50% of healthy asymptomatic women. 50-70% women have at least one episode of candidiasis during their reproductive life. Symptomatic episodes of vulvovaginal candidiasis (VVC) is due to *Candida albicans* (80%) or non *candida albicans* species like *C.glabrata*, *C.tropicalis*, *C.krusei*. Recently there is an increase in the incidence of VVC caused by non *candida albicans* species especially *C.glabrata*.
Methods: All patients with complaints of vaginal discharge attending the female sexually transmitted disease clinic were included in the study. The study period was 6 months (January2013 -June 2013). Detailed history and clinical examination was carried out. The smears were taken from urethra, vagina and cervix. Gram staining, wet mount, vaginal pH and culture on Sabauroud's Dextrose agar medium were performed. All the candida culture positive isolates were subjected to species identification and drug sensitivity tests. The species were identified by germ tube , corn meal agar and sugar fermentation tests. In vitro antifungal susceptibility was determined by e-strip test.The tested drugs included ketoconazole, fluconazole, voriconazole, itraconazole, amphotericin-B and caspofungin.
Results: Out of 500 patients of vaginal discharge, 180 samples were culture positive for Candida. Among 180 Candidal isolates, 56.67%(102) were of C.albicans, followed by 50 % (90) *C.glabrata*, 2.78 % (5) *C.krusei* and 1.67 % (3) *C.tropicalis*. Antifungal drug susceptibility patterns to various systemic antifungals showed considerable resistance of non *candida albicans* species especially *C. glabratato* various azoles.
Conclusions: Among the non candida albicans species, *C.glabrata* is emerging as a significant cause of vulvovaginal candidiasis. *C.glabrata* demonsrates intrinsically reduced susceptibility to azole drugs. Mycological cultures should be performed wherever culture facilities are available to determine the species and drug sensitivity pattern especially if there is no response to therapy.
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TP 71
EMPOWERING WOMEN WHOSE PARTNERS HAVE BEEN LOCKED UP

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Background: Women Empowered & Standing Tall (WEST) is an HIV/STI prevention intervention designed to enhance the knowledge and skills of minority women who have a male partner that is incarcerated or recently released from prison. WEST empowers women in a group setting how to effectively communicate, relationship building, negotiation skills, and creates a positive view of self. Once this is accomplished women are trained to become peer educators to their family and friends. This helps to reduce the spread of HIV and enhance the lives of community members.
Methods: SISTA, VOICES & Community Promise are combined into a five-session intervention to educate and empower women in a safe environment. Women gain self-confidence in their abilities to negotiate safer sex, effectively communicate their wants and needs and make informed decisions based on the information they have obtained. SISTA is used to enhance negotiation skills, VOICES help to increase condom usage and Community Promise is utilized to turn women into peer educators which helps them talk to others about their new skills. Pre & post tests are used to establish a baseline of knowledge and measure outcomes. These are given at enrollment and graduation.
Results: A 22 question pre/posttest was distributed to assess knowledge, skills, and intentions at enrollment and graduation. At the base-line pre-test knowledge was 66% and at post-test it increased to 85%. Data was collected for 188 participants between 3/2010 and 9/2012.
Conclusions: Using the aforementioned combination of effective interventions WEST has proven to increase knowledge of HIV while empowering women to negotiate safer sex and enhance their negotiation skills. This helps to decrease HIV incidence in minority women and their families.
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TP 72
LADY: EVALUATION OF A HIGH IMPACT APPROACH TO SEXUAL HEALTH PROMOTION AND ADVOCACY AMONG AFRICAN AMERICAN COLLIGATES FEMALES

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Background: The burden of HIV/AIDS in the United States specifically in the south disproportionately impacts African Americans. Few sexual-health

campaigns target African American colligates. Formative research with this population proposes the need to reach females in this setting with assertive and empowering methods. We sought to develop, implement and evaluate a sexual health project for African American Females between the ages of 17-22 enrolled in college.
Methods: Lady Phronie, MPH (LPMPH), The Community Education Group (CEG), key stakeholders implemented LADY Project. It utilizes National Council of Negro Women, Inc. (NCNW) colligate members to promote positive attitudes and behaviors related to reproductive health. The campaign ran five weeks on an urban female college campus in Atlanta, GA. Pre-and post-test evaluated project effectiveness on HIV Knowledge, empowerment, advocacy and stigma.
Results: A total of 16 females age 18 - 21 completed the pre-project test and 11 completed the post-project test. The responses on the pre-test related to HIV transmission demonstrated a need for HIV/AIDS education. There was gain in HIV/AIDS knowledge from pre to post test. 100% of the project participants expressed overwhelming interest and motivation while designing the service learning outreach portion of the LADY Project.
Conclusions: Data indicate initial success of LADY on African American Colligate female's desire for self-efficacy and willingness to advocate around sexual health issues. When executed with fidelity, high impact projects are cost effective in promoting social and sexual reproductive justice, while providing opportunities for colligate females to take ownership in transforming their health as well as take leadership in promoting better health in their community. Replicated of the LADY Project Model could expanded to other colleges and universities and for other health behaviors.
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TP 73
AETIOLOGY OF INFECTIONS ASSOCIATED WITH 1228 CASES OF PELVIC INFLAMMATORY DISEASE IN AN URBAN AUSTRALIAN SEXUAL HEALTH CLINIC SETTING

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Background: Pelvic inflammatory disease (PID) commonly develops as sequelae of sexually transmitted infections (STIs). There are limited data on PID burden from different pathogens. We assessed the risk of PID from a range of STIs and bacterial vaginosis (BV) among females attending a large urban sexual health clinic in Melbourne.
Methods: Data were extracted from the clinic's electronic patient database for all females aged 16-49 years attending between Jan 2006-June 2013. PID diagnosis was based on presence of uterine, cervical motion, or adnexal tenderness in women at STI risk and experiencing lower abdominal pain. We calculated the proportion of PID cases due to a single STI and the association between concurrent infections (STIs/BV) and PID. We also calculated PID attributable risk (AR) due to each infection.
Results: During the study period, 1228 PID cases were diagnosed among 90,445 female attendances (1.36%; 95%CI:1.28-1.43). The proportion of attendances with PID ranged from 1.12% in 2008 to 1.55% in 2013 and fluctuated over time (p=0.27). The proportion of PID cases with a single infection was: BV (16.8%,95%CI:14.7-19.0); chlamydia (11.2%,95%CI: 9.5, 13.1); *Mycoplasma genitalium* (MG) (2.1%,95%CI:1.4-3.1); gonorrhoea (0.6%,95%CI:0.2-1.2); and trichomoniasis (0.5%,95%CI:0.2,1.1). In 63% of PID cases, no causative organism was identified. Compared to no infection, the odds of being diagnosed with PID due to a single infection was OR=6.4 (95%CI:5.6-7.3) increasing 3-fold for ≥two infections (OR=22.5; 95%CI:17.1-29.6). The PID AR percent was highest for gonorrhoea (85.3%,95%CI:70.3-92.7) and chlamydia (80.5%,95%CI:76.8-83.7) and lowest for MG (28.4%,95%CI:-2.9-50.2) and BV (16.3%,95%CI:2.5-28.1).
Conclusions: While BV and chlamydia were most commonly identified in PID cases, no causative organism was identified for over half of PID cases. Concurrent STIs increase the risk of PID considerably. In those with chlamydia, most PID cases were due to chlamydia, whereas for BV and MG, most PID cases were due to other causes.
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TP 74
WHAT DO WOMEN PATIENTS EXPECT FROM USE OF POINT-OF-CARE TESTS (POCT) FOR STDS IN A CLINIC?

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Background: Little information exists regarding what patients want for STD POCT, although clinicians have expressed their opinions. Therefore, we conducted a survey among women attending several adolescent health and STD outpatient clinics in order to determine end users' perceptions and needs regarding their ideal POCT for STDs.
Methods: Women attending the Baltimore City Health Department STD and Family Planning Clinics were asked to participate in a survey to gain opinions on future POCT on the day of visit to clinics. Questionnaires were given to women before they left the clinics after their initial visits with clinicians and included: preferences for the sample types they would choose, wait times to results, location of rescreening sites, ease of collection of vaginal swabs, and willingness-to-pay for POCT, if they were available over-the-counter (OTC).
Results: Of the 371 women participating, preferences for specimen type collection included: cervical, 57 (15.4%); vaginal, 189 (50.9%); urine, 125 (33.7%). For wait time for results and possible treatment before leaving the clinic: 20 minutes, 219 (59.0%); 40 minutes, 77 (20.8%); 60 minutes, 40 (10.8%); 90 minutes, 35 (9.4%). For preference for rescreening site: home collection, 172 (46.4%); clinic collection, 176 (47.4%); private doctor, 23 (6.2%). For rating previous experience of self-collection of a vaginal swab: very easy, 230 (62.0%); easy, 125 (33.7%); Ok, 15 (4.0%); hard, 0 (0%); very hard 1 (0.3%). For willingness-to-pay if POC tests were available OTC: $10.00, 173 (46.6%); $20.00, 115 (31.0%); $30.00, 40 (10.8%); $40.00, 10 (2.7%); $50.00, 33 (8.9%).
Conclusions: Self-collected vaginal specimens were the preferred and easiest specimen choice for POCT. Most women preferred to only wait 20-40 minutes for their results. Women were evenly divided as to home or clinic for rescreening site and most were willing to pay only $10-20 for a POCT if one were available OTC.
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TP 75
TO RE-TEST OR NOT TO RE-TEST? FINDINGS FROM THE ENGLISH NATIONAL CHLAMYDIA SCREENING PROGRAMME CONSULTATION ON ROUTINE RE-TESTING FOLLOWING A CHLAMYDIA DIAGNOSIS

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Background: Young adults who test positive for chlamydia are at increased risk of subsequent infection. The English National Chlamydia Screening Programme (NCSP) recommends that sexually active under-25 year olds are tested for chlamydia annually or on change of sexual partner. In 2012-13 the NCSP carried out a consultation on whether individuals diagnosed with chlamydia should be routinely offered a re-test around three months after treatment.
Methods: Existing models of service delivery were identified using telephone interviews with a convenience sample of service providers (n=19). Views of professionals and young adults were obtained using a web-based questionnaire, expert meeting and focus group. Baseline re-testing rates (the proportion of diagnoses where another test was recorded within 7-14 weeks) among 15 to 24 year olds were calculated for each local authority for January to March 2013 using routinely collected data on all chlamydia tests in England.
Results: Chlamydia re-testing practices varied from no routine re-testing to the mailing of home sampling kits. Health professionals and young adults were supportive of introducing re-testing following a chlamydia diagnosis. Both groups emphasised that the offer of a re-test should be part of case management and does not replace the need for partner notification or advice on safer sex. In October to December 2012 re-testing rates ranged from 0%–31% (IQR: 7%–17%) for tests in community settings and 0%–50% (IQR: 6%–14%) in genitourinary medicine clinics.
Conclusions: Following this consultation, the NCSP updated their recommendations for case management to include a routine offer of a re-test around three months after treatment. Local areas will be provided with a suite of guidance to support local decision-making and tools for enhanced data collection to investigate reasons for repeat diagnoses. Post-implementation re-

testing rates will be presented and compared to baseline rates to explore the impact of the recommendation.
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TP 76
NEONATAL HERPES SIMPLEX VIRUS INFECTION – IS THE UK SPECIAL ANYMORE?

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Background: Neonatal herpes simplex virus (HSV) infection is associated with high morbidity and mortality. UK surveillance of neonatal HSV from 1986-1991 yielded 76 cases, with an incidence of 1:60,000 live births annually, approximately 50% of Europe, and 25% of the USA. Provisional data from 2004-2006 yielded 86 cases, approximately doubling the incidence. Anecdotal reports of further increases in central England were presented in early 2013.
Methods: The LabBase database of laboratory reports of neonatal HSV in England and the GUMCAD database of diagnoses in Genitourinary Medicine (GUM) clinics from January 2010-March 2013 were reviewed. A questionnaire about neonatal HSV was distributed to GUM and obstetrics physicians at national conferences.
Results: 12 neonatal HSV infections were reported in January-March 2013, compared with 11 in October-December 2012. 66 cases were reported in 2012, 65 in 2011 and 44 in 2010, giving a 2012 incidence of 1:10,426 live births. Numbers of first episode genital HSV diagnoses among women reported from laboratories decreased slightly from 13,801 in 2010 to 13,167 in 2013, although reported diagnoses from GUM clinics between 2012 and 2013 increased from 18,744 to 19,311. 56 out of 113 physicians completing the questionnaire demonstrated basic knowledge of neonatal HSV, but 82.14% of these underestimated the vertical transmission rate with active HSV shedding at term.
Conclusions: The UK incidence of neonatal herpes has risen significantly from 1:60,000 live births from 1986-1991 to 1:10,426 in 2012, although there is no evidence of a more recent increase. New UK guidelines for HSV in pregnancy are in the process of being published, and recommend conservative management with vaginal delivery for women with recurrences of HSV. Ongoing incidence of neonatal herpes must be observed to ensure that a further increase is not seen. Lack of physician knowledge of transmission rates may lead to over reassurance of patients.
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TP 77
HUMAN PAPILLOMAVIRUS INFECTION AND CERVICAL CANCER PREVENTION IN BRITAIN: FINDINGS FROM THE THIRD NATIONAL SURVEY OF SEXUAL ATTITUDES AND LIFESTYLES (NATSAL-3)

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Background: Prevention of cervical cancer in Britain has included cervical screening since 1988. In 2008, a vaccination programme for human papillomavirus (HPV), school-based in 12-13 year olds with a catch-up programme in 14-17 year olds, was introduced. Population-based data linking sexual and demographic risk factors with biological high-risk (HR-)HPV prevalence, cervical screening attendance and HPV vaccination uptake are needed to inform cervical cancer prevention strategies.
Methods: The third British National Survey of Sexual Attitudes & Lifestyles (Natsal-3), a probability sample survey of men and women aged 16-74, resident in Britain was undertaken in 2010-12 and interviewed 8869 women. Urine samples collected from 2569 women aged 16-44 years who reported at least one lifetime sexual partner were tested for HPV. In multi-variable analyses we explored risk factors for HR-HPV, non-attendance for cervical screening and non-completion of the 3-dose HPV vaccination course.
Results: HR-HPV was detected in 15.9% of women and was associated with risky sexual behaviour, younger age, relationship status, lower social class and smoking. Not having attended for cervical screening in the last 5 years was reported by 8.1% of women aged 26-49 and this was similar in those with and without HR-HPV detected. Not attending for cervical screening in the past 5 years was associated with fewer partners, young age, housing status, Asian ethnicity and smoking. 61.5% of women eligible for the HPV catch-up programme completed the vaccination course. Non-completion was associated with increasing age at eligibility, lower education, non-white ethnicity, smoking, ever being pregnant and having 2 or more partners without a condom in the past year.
Conclusions: Socio-economic markers and smoking were associated with HR-HPV positivity, non-completion of vaccination and non-attendance at screening. Special efforts are needed to ensure those who missed vaccination are captured by the cervical screening programme to avoid widening of cervical cancer disparities in these catch-up cohorts.
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TP 78
THE MINNESOTA CHLAMYDIA PARTNERSHIP: AN INNOVATIVE PROJECT IN COMMUNITY ENGAGEMENT

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Background: The disease intervention model to address STDs has been insufficient in containing the epidemic of chlamydia. The Minnesota Department of Health (MDH) initiated an innovative method of addressing chlamydia using community organizing. MDH believes engaging communities in culturally specific actions of their choosing to address chlamydia at the local level is ultimately more effective at changing community norms and individual behaviors related to sexual health than large-scale, wide reaching activities designed by state health departments.
Methods: The Minnesota Chlamydia Partnership developed the Minnesota Chlamydia Strategy that rural and urban communities use to guide their planning. MDH funded a project to demonstrate how to implement ideas from the Strategy in rural Minnesota; an inner city project followed. These groups are creating coalitions, convening community forums, building new relationships and conducting media campaigns to raise community and provider awareness.
Results: A Summit was held, workgroups formed and the action plan was released in April 2011. The "Special Report: Chlamydia Prevention", was published in September 2012. Minnesota health plans worked with the MCP to create and distribute a Chlamydia Screening Toolkit to over 400 providers and delivered three webinars. The rural demonstration project held six community meetings, conducted a survey and distributed 50 information packets to providers, worked with an alternative school to create a You Tube video, and implemented a campaign to encourage parents to talk to their children. The project was featured in a front-page newspaper article. Local clinics held screening campaigns, designed billboards, and included information in their newsletters. Interest in replicating this model has been expressed from various locations in the U.S. and Canada.
Conclusions: High rates of chlamydia indicate long-term, multi-dimentional approaches created and led by the affected communities and populations are needed. Public health is a key partner in this collaboration.
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TP 79
CHLAMYDIA AND GONORRHEA DIAGNOSIS, TREATMENT, PERSONNEL COST SAVINGS, AND SERVICE DELIVERY IMPROVEMENTS FOLLOWING THE IMPLEMENTATION OF EXPRESS STD TESTING IN MARICOPA COUNTY, ARIZONA

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Background: The demand for low-cost STD services in Maricopa County (Phoenix area) is high. Improved methods for STD/HIV testing are needed to increase the number of patients receiving testing. To evaluate an STD/HIV express testing option for patients identified as being at lower risk for infection.
Methods: Clients reporting current STD symptoms, contact to an infected partner, or health department referral were identified via questionnaire and routed to a traditional provider visit (PV); those not reporting these situations were routed to express (lab-only) testing (ET). Demographics, treatment completion, and treatment intervals were compared among patients diagnosed with chlamydia and gonorrhea through ET and PV encounters during September 2008 to July 2011. Personnel costs were compared for each of the two visit types. The number of clinic turn-aways for the two-month

time interval prior to the start of the program was compared to the two-month interval at the end of the evaluation.
Results: Of the 36,946 clients seen at MCDPH, 7,466 (20.2%) were patients seen through express visits. Overall chlamydia and gonorrhea positivity was lower among express testing patients (527/7466, 7.1%) as compared to those tested through provider visits (6323/29,480, 21.4%). Treatment completion rates were comparable, but were higher among patients seen through provider visits (99%) as compared to express testing (94%). A savings of $2,936 per 1,000 patients seen was achieved when 20% of clients were routed through ET. Clinic turn-aways decreased significantly, from 159 clients during the two months prior to implementation of ET to 6 patients during the last 2 months of evaluation (96% reduction).
Conclusions: This express testing system included an effective patient routing process which provided an efficient way to increase access to STD testing among persons at lower risk, at a reduced cost per patient, while maintaining high treatment coverage.
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TP 80
STD DIAGNOSIS AND MANAGEMENT PRACTICES IN FEDERALLY QUALIFIED HEALTH CENTER CLINICS IN NEW YORK CITY, 2012

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Background: As millions of Americans gain health coverage under the Affordable Care Act, Federally Qualified Health Center (FQHC) clinics are expected to provide healthcare, including STD services, to a larger number of patients. There have been few evaluations of STD practices in these clinics. We describe a survey of FQHC clinics in New York City (NYC).
Methods: A survey was conducted using a convenience sample of 72 FQHC clinics in NYC in 2012. Data were analyzed using SASv9.3.
Results: Of clinics contacted, 51 (70%) completed the survey. Together, they had approximately 1,000,000 patient visits per year. Almost all (98%) used an electronic health record (EHR). More than half conducted anorectal or oropharyngeal nucleic acid amplification tests (NAATs) for gonorrhea (59%) and chlamydia (56%). Most (92%) reported women with chlamydia or gonorrhea were rescreened 3-4 months after treatment. Most encouraged patients to bring partners to clinic for diagnosis and treatment (chlamydia 88%, gonorrhea 90%, syphilis 84%), and 80% provided expedited partner therapy (EPT) for chlamydia. Few reported active involvement of staff in partner notification; provider partner contact was rare (chlamydia 6%, gonorrhea 6%, syphilis 8%), as was staff use of internet to contact partners (chlamydia 4%, gonorrhea 4%, syphilis 6%). A designated individual was responsible for reporting notifiable diseases in 46% of clinics. HPV vaccine was provided to females by 92% and to males by 71% of clinics. For patients diagnosed with HIV, 90% of clinics confirmed a visit to an HIV care provider.
Conclusions: Most surveyed FQHC clinics in NYC followed STD diagnosis and management recommendations. Improved partner services, case reporting, and vaccine uptake may be attained through electronic reminders, given the widespread use of EHR in FQHC clinics.
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TP 81
LOW STD SCREENING RATES AND HIGH STD PREVALENCE AMONG HIV-INFECTED PATIENTS IN PRIMARY CARE IN 5 US CENTERS

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Background: STD screening and treatment is an important part of HIV care, but adherence to CDC guidelines is not well-characterized.
Methods: Data from sexually active HIV-infected adults (N=2,747) who completed at least one computer-assisted self-interview in 2011 at one of 5 sites participating in the CNICS cohort were analyzed to identify correlates of STD screening and infection. Logistic regression models were fit to examine socio-demographic and behavioral predictors of 6- and 12- month screening for Syphilis, Gonorrhea, Chlamydia, and Trichomonas among those who reported or high (unprotected sex with >1 partner) or low (1 sexual partner and/or consistent condom use) risk behavior, respectively.
Results: Most participants (87.3%) were male, and 49.1% were non-White. A minority (27.0%) of high-risk patients underwent 6-month STD screening. High-risk men (odds ratio [OR]=0.69; 95% CI 0.56, 0.87) and Latinos (OR=0.41; 95% CI 0.41, 0.76) were less likely to undergo 6-month screening than women and non-Latino whites, after adjusting for other characteristics. Few (17.9%) low-risk patients received 12-month STI screening. Low-risk 30-39 year olds (OR=1.46; 95% CI 1.10, 1.95) and those who reported recent cocaine, opiate or amphetamine use (OR=1.71; 95% CI 1.52, 1.92) were more likely to receive 12-month screening as compared to older (50+) patients and those who did not report drug use, adjusting for other characteristics. Screening rates varied greatly by site, after adjusting for patient characteristics. STDs were highly prevalent among those screened (32.4% of high and 15.2% of low risk patients.)
Conclusions: Most HIV-infected patients in primary care at five U.S. health centers were not routinely screened for STDs as advised by CDC. Common detection of STDs suggests that routine screening is warranted for low and high risk patients. Research to understand variability in screening patterns in different sites and under-screening of key populations may identify additional intervention opportunities.
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TP 82
STI AND HIV SCREENING IN OLDER ADULTS

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Background: Recent studies indicate that cases of STIs and HIV among older adults (50 years of age and older) have increased, refuting the stereotype of the sexually inactive older adult.
Methods: A search for articles published between 1990 and 2013 was performed in PubMed, EMBASE, CINAHL, and Web of Science databases. Additional articles were identified via manual searches of reference lists and database searches for articles that cited the previously identified articles. A study was included in the review if it investigated STI or HIV testing rates, influences, or barriers among adults 50 years of age or older, or communication between older adults and health care providers regarding sexual health and HIV or STI testing.
Results: There is limited research on this topic and considerable diversity in the populations studied and outcomes measured. The search process yielded 20 articles meeting the eligibility criteria. Routine HIV testing of older adults is inconsistent with national recommendations. Risk-based STI screening in this population is also infrequent. Older adults are more likely to seek testing for genital symptoms than to be screened for STIs while asymptomatic. HIV testing among older adults is associated with their perceived risk of contracting HIV and influenced by encouragement from health care providers. Studies report that few providers collect routine sexual histories from older adult patients, due in part to their personal discomfort with discussing sexual issues. In contrast, studies indicate that older adults are receptive to sexual history-taking, and many prefer the provider initiating the discussion.
Conclusions: There are missed opportunities to identify asymptomatic STIs and HIV in older adults. Stereotypes regarding sexual activity among older adults and assumptions that sexual health discussions will be offensive and/or embarrassing have hindered providers from identifying older adults at higher risk for HIV and STIs and subsequently testing them.
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TP 83
FEASIBILITY OF SCREENING AND FOLLOW-UP FOR SEXUALLY TRANSMITTED INFECTIONS (STIS) USING RAPID AND STANDARD STI TESTING FROM A MOBILE HEALTH VAN

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Background: To determine feasibility of providing STI services from a mobile health van, free screening was provided twice at an annual public event.

Methods: During Year 1, women, ≥ 14 yr. were offered OSOM® Rapid Trichomonas Test (TV) (Sekisui Diagnostics, Lexington, MA); APTIMA Combo2 (Hologic, Bedford, MA) for chlamydia (CT) and gonorrhea (GC) using self-collected vaginal swabs; and syphilis Rapid Plasma Reagin (RPR). During Year 2, services were expanded for women to include Xpert® CT/NG (Cepheid, Sunnyvale, CA), and to include men, ≥ 14 yr. Men were offered Xpert® CT/NG using urine, standard APTIMA CT/GC using self-collected penile swabs, and RPR. OSOM and all Xpert® tests were completed on the van, providing immediate results. Standard tests (APTIMA and RPR) had a two-week turn-around time. Successful follow-up included contacting, educating, and treating participants with positive rapid/standard results. Rapid Xpert® CT/GC results were confirmed with APTIMA.
Results: In **Year 1**, 17 women chose screening; 16 consented to research. Sixteen chose TV; 1 (6.3%) was positive. Fifteen chose APTIMA CT/GC; 2 (13.3%) were positive for CT; 1 (6.6%) was positive for GC. Fifteen chose RPR; none were positive. Follow-up was successful except for one woman with CT. In **Year 2**, 17 women (15 consented for research) and 11 men (all consented) chose screening. Fifteen women chose TV; 3 (20%) were positive. Two chose only standard CT/GC; none were positive. Twelve chose Xpert® CT/NG; 2 (16.7%) were positive for CT; 0 GC positive. Twelve chose RPR; no positives. Among men, one chose standard CT/GC, 10 chose Xpert® CT/NG, 9 chose RPR. None were positive. Follow-up was successful for all participants. Confirmatory APTIMA and Xpert® CT/NG results were identical.
Conclusions: Men and women will seek STI services on mobile health vans at public events. Rapid tests facilitate successful immediate treatment of positive STI results.
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TP 84
SEXUALLY TRANSMITTED INFECTIONS IN THE U.S. MILITARY: HOW GENDER INFLUENCES RISK

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Background: Sexually transmitted infections (STIs) are prevalent in the U.S. military, particularly among females. However, there are limited data on risk-factor differences between genders.
Methods: We used data from the 2008 Department of Defense Survey of Health Related Behaviors among Active Duty Military Personnel to compare the prevalence of STI risk behaviors between sexually active unmarried male and female service members. Multivariable logistic and ordinal regression was used to determine variables associated with recent report of an STI and multiple sexual partners, respectively.
Results: There were 10,250 active duty personnel, mostly White (59.3%), aged 21-25 years (42.6%), and of enlisted rank (87.2%). The prevalence of any reported STI in the past 12 months was 4.2% for men and 6.9% for women. One-fourth of men and 9.3% of women reported five or more sexual partners in the past 12 months. Women were more likely to report unwanted sexual contact, high family/personal life stress, and less likely to report condom use at last sexual encounter. Among both genders, age was inversely associated with reported number of sexual partners whereas binge drinking, illicit substance use, and unwanted sexual contact were associated with increased report of sexual partners. Family/personal-life stress and psychological distress influenced number of partnerships more strongly for women than men. After adjusting for age, race/ethnicity, gender, condom use, unwanted sexual contact, and screening positive for any mental health indicator, we found that report of five or more sexual partners was significantly associated with report of an STI among men (Adjusted Odds Ratio [AOR]=5.87, 95% Confidence Interval [CI]=3.70, 9.31) and women (AOR=4.78, 95% CI=2.12, 10.80).
Conclusions: STI risk behaviors in the military differ by gender. Female service members may benefit from interventions to curtail gender-specific stressors such as family or personal life stress in order to reduce risk for STIs.
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TP 85
SEXUALLY TRANSMITTED INFECTIONS IN HIV INFECTED PATIENTS ATTENDING AN URBAN STD CLINIC

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Background: To evaluate the rates and types of Sexually transmitted Infections (STIs) in HIV infected (HIV+) patients who attended a public STD clinic in Miami, Florida.
Methods: Retrospective chart review of HIV infected individuals attending the Miami Dade County Health Department STD clinic from March to May 2012. Controls were a sample matched by age, of HIV uninfected (HIV) patients attending the clinic during the same period. Demographic and clinical information was abstracted and transferred to an electronic database. Data was analyzed using descriptive statistics. The study was approved by the Institutional Review Board.
Results: One hundred and seventy five charts were reviewed (89 HIV+ and 86 HIV-). Among the patients with HIV infection, 47 (53%) were in HIV care and 17 (19%) were diagnosed with HIV infection at the time of the study visit. There were more men in the HIV+ group than in the HIV- group (92% versus 57%; OR=8.8, CI=3.6-21.3). Among the males, there were more men who had sex in the HIV+ group (67% versus 15%, OR=2.62, CI=1.31-5.2). Prior to the study visit, more HIV+ patients had a history of STD (85% vs 38%; OR=3.1, CI=1.7-5.8). At the study visit, diagnosis of infectious syphilis was more common in the HIV+ group (35% versus 14%; OR=3.46, CI=1.63-7.3). There were no differences in the rates of chlamydia and gonorrhea.
Conclusions: HIV infected individuals who attended this urban STD clinic were more likely than HIV non-infected controls to have a prior history of STIs and to have an episode of infectious syphilis. A significant number of HIV infected patients attending this clinic are not under HIV care. STI prevention strategies should be emphasized in the HIV+ population.
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TP 86
CLOSING THE GAP: TRANSLATING RESEARCH EVIDENCE ON SOCIAL DETERMINANTS INTO PRACTICE TO REDUCE HEALTH DISPARITIES IN SEXUALLY TRANSMITTED AND BLOOD BORNE INFECTIONS

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Background: There is a large body of evidence of the impact of social determinants on health outcomes, including sexually transmitted and blood borne infections (STBBIs). While there is improved understanding of the contribution of social, economic, cultural and historical factors to vulnerability to infection, there is less clarity in how those working in the health sector can address these social determinants in practice. Translating research evidence into prevention policy or practice remains a critical gap in the prevention of STBBIs. This presentation will provide an overview of factors that facilitate translating knowledge into policy and practice, by highlighting examples of how knowledge translation has been achieved by the Public Health Agency of Canada (Agency).
Methods: A systematic review of the literature on methods of knowledge translation was undertaken to identify mechanisms and approaches to bridging the gap between research evidence and policy or practice. Using a series of documents published by the Agency as a case study, the presentation will provide an overview of how action on the social determinants of vulnerability to STBBIs can be supported at a national level. Using results from descriptive statistics of data collected from end-users of the documents through a computer-assisted self-administered survey (n=514), the presentation will highlight key elements of successful knowledge translation.
Results: Several elements are key in forming successful approaches to translation of research into policy or practice for the prevention of STBBIs. These include: presentation of results in brief, clear, accessible language; organization of material to address key issues and questions of the target audience; active consultation of end-users; and identification of feasible practice points.
Conclusions: There is potential to replicate these mechanisms of knowledge translation to facilitate the implementation of evidence-based practice for the prevention of STBBIs and to strengthen capacity of policy-makers and practitioners to interpret research findings.
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TP 87
FACTORS ASSOCIATED WITH UNWANTED SEXUAL CONTACT AND LACK OF CONDOM USE AMONG ACTIVE DUTY U.S. MILITARY SERVICE WOMEN

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Background: U.S. military women are exposed to risks for unintended pregnancies and sexually transmitted infections, such as unwanted sexual contact (USC) and barriers to condom use. These can have important implications for public health.
Methods: Using existing data from the 2008 Department of Defense Survey of Health Related Behaviors among Active Duty Military Personnel, we employed multiple logistic regression methods to investigate risk factors for reported USC since entering the military (includes touching of genitals) and lack of condom use at last sexual encounter among sexually active service women.
Results: The sample included N=6,779 sexually active female military personnel, of which 3,428 were unmarried. Almost 68% of unmarried women reported lack of condom use and 12.4% of all sexually active women reported USC. After adjusting for age, race/ethnicity, service branch, deployment within the past 12 months, and main partner at last sex, we found that positive reports of illicit substance use (Adjusted odds ratio [AOR]=1.85, 95% Confidence Interval [CI]=1.18, 2.89), unintended pregnancy (AOR=3.16, 95% CI=2.12, 4.71), family/personal-life stress (AOR=1.69, 95% CI=1.19, 2.40), and suicidal ideation (AOR=1.96, 95% CI=1.22, 3.17) were associated with lack of recent condom use among unmarried sexually active service women. USC was positively associated with screening positive for depression (AOR=1.69, 95% CI=1.34, 2.12) and elevated psychological distress (AOR=1.91, 95% CI=1.44, 2.52) after adjusting for age, race/ethnicity, and marital status (including whether or not the spouse was present in the military). In addition, we found that married women with their spouse present in the military were less likely than unmarried women to report USC (AOR=0.74, 95% CI=0.56, 0.98).
Conclusions: Indicators of current mental health status are associated with reports of recent lack of condom use and unwanted sexual contact among service women. Interventions could target unmarried sexually active female military personnel to improve sexual health.
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TP 88
FROM PROBLEM FOCUSED TO HOLISTIC: MENTAL HEALTH AND SUBSTANCE ABUSE SCREENING AT AN STD CLINIC

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Background: Persons with mental health issues are more likely to engage in risky sexual behaviors - like sex without a condom, substance abuse, and multiple partners - significantly increasing their risk of contracting an STD. The Southeast STD Clinic piloted mental health and substance abuse screening to assess the feasibility of expanding services beyond the identification and treatment of infections.
Methods: From August 1 through September 30, 2012 all clients were screened using the Global Appraisal of Individual Needs – Short Screener (GAIN-SS). Clients with high scores – which depended on the severity, quantity, and timing of symptoms – were counseled and linked to services, if needed. Pearson's chi-squared statistics were used to analyze associations between selected risk factors and need for referral.
Results: We screened 1,212 patients for mental health and substance abuse issues, 967 (79.8%) had scores that warranted additional assessment and 652 (67.4%) were counseled. Of those, 64 (9.8%) were already in care and 200 (30.7%) needed a referral for services. Of those, only 21 (10.5%) reported always using a condom, 121 (60.5%) reported >=2 sex partners in the last 90 days, 80 (40.0%) reported a new sex partner within 90 days, 39 (19.5%) had >=3 visits during the previous year, 141 (70.5%) self-reported a history of an STD, and 32 (16.0%) were diagnosed with an STD during that visit. When comparing these patients to those 245 who didn't need counseling, new sex partner (p=0.0039), >=2 sex partners (p<0.0001), and self-reported STD (p=0.0046) were all significantly associated with a need for additional services.
Conclusions: Focusing on the physical, mental, emotional and spiritual elements of clients may improve their sexual health and aid in STD prevention. To sustain and further evaluate this important initiative, we will begin targeted screening of patients who are at highest risk of needing additional services.
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TP 89
ADDRESSING ANOTHER SILENT EPIDEMIC: HEPATITIS C SCREENING IN A SEXUALLY TRANSMITTED DISEASES CLINIC

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Background: Approximately 3.2 million persons in the United States are infected with the hepatitis C virus (HCV) and most are unaware of their status. Baby boomers are five times more likely to be infected than the general population. Medicines are now available that are more effective with shorter treatment times. The Centers for Disease Control & Prevention recommends all baby boomers be screened once for hepatitis C.
Methods: In July 2013, the Southeast STD Clinic began hepatitis C antibody screening of clients born from 1945-1965 or those with a history of injection drug use. A descriptive analysis of the first three months of data from this new initiative was conducted.
Results: During this time, 69 patients were screened and 24 (34.8%) tested hepatitis C antibody positive. Of those, the average age was 54.5 years (range=33-67 years), 24 (100%) were Black, and 9 (37.5%) were female. Of the 20 patients notified of their positive results, 14 (70%) were unaware of their infection status and 15 (75%) were linked to care for further evaluation and possible treatment. Of the 18 patients interviewed; 14 (77.8%) admitted to injection drug use, 1 (5.6%) had a blood transfusion prior to 1992, 1 (5.6%) had a sexual partner known to be infected with the HCV, 1 (5.6%) had multiple tattoos and piercings, and the only risk factor for 1 (5.6%) was incarceration.
Conclusions: We found a high prevalence of hepatitis C among patients seeking services at our clinic and most of those who tested positive were not aware of their infection status. Most were also amenable to further evaluation and possible treatment. Because comprehensive care can help prevent liver damage, cirrhosis, and liver cancer, STD clinics may be an ideal venue to help address this emerging silent epidemic and perhaps help clarify why baby boomers have such high infection rates.
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TP 90
SEXUALLY TRANSMITTED INFECTION RISK AMONG AFRICAN AMERICAN MEN IN COMMITTED HETEROSEXUAL PARTNERSHIPS DISRUPTED BY INCARCERATION

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Background: Incarceration may contribute to sexually transmitted infection (STI) by disrupting committed partnerships. Research describing partnerships disrupted by incarceration is limited.
Methods: Project DISRUPT is an ongoing cohort study among African American men being released from prison in North Carolina who were in primary committed heterosexual partnerships at the time of incarceration. Baseline survey data collected just prior to release from incarceration (N=169) were analyzed to identify aspects of partnerships associated with protection against pre-incarceration sexual risk-taking and baseline infection with chlamydia, gonorrhea, or trichomoniasis. These STIs, not routinely assessed at prison intake, were measured just prior to release using urine-based nucleic acid amplification assays.
Results: The median relationship length was 3 years, 15% were married, 57% lived together before incarceration, 62% raised a child with their partners, and 32% reported being "very happy" in the relationship. Substantial proportions reported multiple (47%) and concurrent (36%) partnerships, paying for sex (9%), and anal sex with any partner (21%) in the six months before incarceration. Approximately 7% tested positive for a STI at baseline (3.2% trichomoniasis; 3.6% chlamydia; 0.6% gonorrhea). Odds of multiple

partnerships were lower among married (OR: 0.17, 95% CI: 0.06-0.52) and cohabitating (OR: 0.50, 95% CI: 0.25-0.99) participants and among those who had been with partners for more than 3 years (OR: 0.44, 95% CI: 0.23-0.84). Being "very happy" in the relationship *versus* "happy" or "unhappy" was associated with lower levels of multiple (OR: 0.44, 95% CI: 0.23-0.84) and concurrent (OR: 0.42, 95% CI: 0.21-0.82) partnerships; however, relationship satisfaction also was associated with elevated odds of anal sex (OR: 2.34, 95% CI: 1.11-5.01). Relationship characteristics were not associated with prevalent STI.
Conclusions: Partnerships characterized by higher levels of relationship satisfaction and commitment conferred greater protection against STI-related risk behaviors except anal sex among incarcerated men in committed heterosexual partnerships.
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TP 91
UNDERSTANDING STD SCREENING AND MANAGEMENT IN INDIANA COMMUNITY HEALTH CENTERS

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Background: STD rates in the United States have been reaching unprecedented levels over the past few years. Previous studies have determined that costs for treating STD infections were about 16 billion dollars in 2010 alone, with a substantial proportion of STD care being provided by community-based clinics/centers. The objective of this study was to assess and understand how Community Health Centers (CHCs) in Indiana identify and manage Chlamydia, Gonorrhea and Syphilis.
Methods: Online survey was completed by 28 (32.9%) of Indiana CHCs between April and May 2013. Measures included reported STD services, testing expectations, barriers to screening and management and partner services. Covariates included clinic characteristics such as census designation, FQHC/RHC designation and years in current position. Reported practices were compared with current CDC guidelines for STD testing in clinical settings.
Results: Most CHCs reported onsite testing and counseling for Syphilis (75%), Chlamydia and Gonorrhea (85.7%). Testing expectations for Chlamydia, Gonorrhea and Syphilis were mainly based on clinic policy (50%) and CDC recommendations (46.4%). Most clinics reported testing generally at patients request or when the patient was symptomatic for adults under the age of 65 and gay/bisexual men while testing expectations for pregnant women and gay and bisexual men were also unknown for quite a few CHCs. Most CHCs (75%) reported notifying the health department in response to positive syphilis tests, but do not provide on-site partner counseling or services. STD screening and treatment guideline trainings were offered to clinicians at the CHCs, but only a few (28.6%) reported being likely to have received this training within the past 3 years.
Conclusions: CHCs in Indiana overall did not follow the CDC guidelines for screening of Chlamydia, Gonorrhea and Syphilis. CHCs may consider understanding national and state guidelines while also discussing challenges to implementation to help implement more standardized care across the state.
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TP 92
AUTHENTIC AND MEANINGFUL COMMUNITY ENGAGEMENT TO REDUCE STD DISPARITIES: LESSONS LEARNED FROM THE 4-SITE CDC CARS INITIATIVE

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Background: Despite the increasing prioritization of community engagement as a key component to reduce sexually transmitted disease (STD) disparities, there is a need to better understand the characteristics and methods of successful community engagement and partnership.
Methods: We conducted an evaluation of the community engagement approaches and methods applied across the 4-site CDC Community Approaches to Reducing STDs (CARS) initiative. This initiative was designed to support the planning, implementation, and evaluation of innovative and interdisciplinary projects to reduce STD disparities, promote sexual health, and advance community wellness using community engagement methods and multi-sector partnerships to build local capacity to reduce STD disparities in communities with disproportionately high STD burden. We used a mixed-methods approach. We abstracted data from existing archival project documentation including proposal documents, logic models, memoranda of agreement, community advisory board/partnership meeting minutes, project materials (e.g., summaries of interventions and interim progress reports). We also collected qualitative and quantitative data through annual individual and small-group in-depth interviews and web-based quantitative assessments of site stakeholders including community members, representatives from local community-based organizations, and project staff and leadership. Data were collected, analyzed, and interpreted using standard procedures. Triangulation of findings from different methods was refined using a multitrait-multimethod matrix.
Results: Successful community engagement included: broad participation of partners in establishing a vision and mission together; open communication while respecting various ways of communicating; recognizing, acknowledging, and reducing power differentials; financial and motivational transparency; unflagging commitment to collaboration; working through conflict; non-token community decision-making power; strong charismatic leadership; leveraging talent and resources; and using a stepwise approach to build a shared history of success.
Conclusions: Findings from this evaluation provide insights for representatives from health departments, community-based organizations, and research institutions who want to harness community engagement and partnership approaches to reduce STD disparities and increase health equity.
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TP 93
INVESTIGATING STI RISK WITHIN THE SOCIAL ENVIRONMENT OF EXOTIC DANCE CLUBS IN BALTIMORE, MARYLAND

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Background: Despite evidence of high rates of sex exchange and drug use in exotic dance clubs (EDCs), dancers are an understudied STI-risk population. We hypothesized that social support and other social environmental factors mitigate STI risk (e.g., unprotected sex exchange) for dancers working in EDCs.
Methods: During summer 2013, anonymous surveys were administered to dancers and staff (e.g., managers, bartenders) (N=298) of EDCs (N=26) throughout Baltimore City and County. Surveys captured dancer and staff perceptions of the EDC economic, drug, policy, and social risk environments. Social environment risk measures included financial support ("there are people who work in this club that dancers could borrow $25 from"), emotional support ("if a dancer had a personal problem, they have at least one friend she works with that she could really talk to about it"), competition between dancers, and dancers' feelings of safety in the EDCs. Unprotected sex exchange was defined by report of dancers selling sex and irregular condom use in the EDCs.
Results: Sixty percent of respondents were dancers. Clubs were reported to be environments where dancers had financial (71%) and emotional support (88%), experienced competition between other dancers (76%), and felt safe (92%). Unprotected sex exchange was not associated with financial or emotional support within the environment. Clubs where employees reported competition between dancers (23% vs. 14%,) and where dancers did not feel safe (35% vs. 20%) had higher reports of unprotected sex exchange, although these differences were not significant.
Conclusions: The social environment of EDCs is characterized by a complex set of social factors, where competition and safety could influence risky sexual behavior among dancers. Additional qualitative research could help interpret these findings.
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TP 94
POUNDS FOR FLESH: PROFILE AND RISK BEHAVIOURS OF BRITISH MEN PAYING FOR SEX INSIDE AND OUTSIDE THE UK

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Background: Men who pay for sex are a key group in controlling sexually transmitted infection. The prevalence of men paying for sex in Britain doubled between 1990 and 2000 and remained consistent between 2000 and 2010. The paper aims to investigate the changing age profile and characteristics of men who pay for sex in Britain. Associations are also drawn between various socio-demographic, sexual, and health variables.
Methods: Complex survey analyses of data collected between 2010 and 2012 from a national probability sample survey of people resident in Britain aged 16-74 years (6293 men), focusing on men identifying as heterosexual and reporting sexual activity within the five years prior to interview (5048 men). Data from previous surveys were used to assess the changing age profile of men who pay for sex. Logistic regressions were used to find associations between paying for sex in the past five years and various socio-demographic, sexual, and health variables.
Results: Men who paid for sex were more likely to be 25-34, currently without a partner, and report high partner numbers in the past five years. Men who paid for sex had higher proportions of sexual risk and health-seeking behaviour. These men were more likely to have had new foreign sexual partners while outside the UK (AOR 20.51; 95% CI [13.57-30.98]). Sex outside of Europe was most commonly paid for in Asia.
Conclusions: Despite the drastic change in the prevalence of paying for sex in Britain between 1990 and 2000, the prevalence, age profile, and characteristics of men who report paying for sex in the past five years has not changed between 2000 and 2010. These men are at higher risk of acquiring and onward transmission of STIs. When men pay for sex outside of the UK they are most likely to pay in Europe or Asia.
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TP 95
CREATING A SUSTAINABLE FUTURE FOR SEXUALLY TRANSMITTED INFECTION SERVICES

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Background: The passage of the ACA and the changing landscape of medical coverage and clinical care make it increasingly important for agencies to work collaboratively to implement sustainable approaches to STI clinical services for vulnerable populations.
Methods: To assist LHD STI programs in their efforts to be sustainable, the Maryland Department of Health and Mental Hygiene's Center for STI Prevention, and Training 3, the Region III STD-Related Reproductive Health Training and Technical Assistance Center, convened a two-day training for fiscal, administrative, and clinical representatives from15 participating LHDs. The objectives included: educating participants on revenue cycle management and its impact on clinic operations; assessing the current status of clinic operations using 2012 data collected by each LHD before the training, including service utilization, cycle time, and cost analysis; and assisting LHDs in developing action plans addressing all aspects of operations to support program sustainability.
Results: Service utilization, cycle time, and service delivery costs varied by site. Preliminary analyses indicated an average of 2065.53 total annual visits per clinician; 3.93 total visits per hour; cycle time of 1:08, contact time of 0:43, and $120.81 cost per STI visit. An examination of county-specific and summative data supported a need for short- and long-term action-planning. Action plans included increasing regular staff communication, improving physical or staffing infrastructure, taking steps to implement or improve electronic health records systems, and establishing or continuing routine cost and cycle time analyses.
Conclusions: Routine LHD STI clinic data analysis and collaborative action-planning may be used as a tool to improve clinic sustainability. Analysis of a six-month post-training survey, available in April, will be used to determine improvement in sustainability of STI clinical services in participating LHDs, as a result of this training and follow-up TA.
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TP 96
SHREVEPORT, LOUISIANA: STRENGTHENING COMMUNITY AND PUBLIC HEALTH PARTNERSHIPS TO REDUCE SYPHILIS CASES

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Background: According to the Centers for Diseases Control and Prevention, STD national surveillance profiles for 2011, Louisiana ranked 1st in the nation for primary and secondary cases with a case rate of 9.9/100,000 population. Louisiana also ranked 3rd in the nation for congenital syphilis cases with a case rate of 27.6 cases/100,000 population. Even more alarming, in a ranking of counties in the United States with the highest number of syphilis cases, Caddo county, the primary county in the city of Shreveport, ranked 1st in the nation with a case rate of 59.2/100,000 population and 2nd in the nation with the number of diagnosed syphilis cases among women.
Methods: To address these high case rates, a strategic plan of action was developed in July 2013. Components include: increasing provider education, community awareness, and mobilization activities; expanding public health clinic access; maximizing opportunities to screen and treat persons infected with syphilis; increasing the availability of bicillin to providers; enhancing surveillance and partner services activities; and re-introducing a third trimester pre-natal syphilis screening bill to the Louisiana Legislature.
Results: A syphilis task force convened, which includes leaders from local community healthcare providers, educational institutions, Louisiana Department of Health and Hospitals Office of Public Health, and the Shreveport Mayor's Office. A **Syphilis Strategic Plan of Action** was developed to heighten awareness and work toward a solution for this public health emergency.
Conclusions: Regional healthcare providers have taken an enormous investment in this effort. A "Public Health Syphilis Alert" was distributed to over 250 medical providers and community leaders, an updated education packet is offered during provider visitations, the Mayor's Office and other public officials have committed their support in these efforts and additional regional staff (i.e. program monitor, nurses) has been hired. Other priority strategies will be initiated to accomplish our goals.
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TP 97
ADULT FILM PERFORMERS TRANSMISSION BEHAVIORS AND STI PREVALENCE

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Background: Adult film work involves multiple sex partners, unprotected intercourse and frequent oral/rectal contact. Data on sexual networks and sexual behaviors of adult film performers (AFPs) are limited.
Methods: From August 2012-May 2013, AFPs in Los Angeles, CA seeking care at two clinics that provide STD testing to performers were offered urogenital, pharyngeal and rectal Chlamydia/gonorrhea NAAT testing. A web-based survey was used to collect demographics, type of sexual practices on-set and off-set, substance use, and sexual network characteristics. Participants were at least 18 years of age and performed in at least one adult film within the past year.
Results: A total of 366 AFPs were enrolled; 75% (n=274) were female, 62% (n=219) were white and the median age was 25 years (IQR: 22-31 years). Most reported a main partner (74%), 23% reported non-film transactional partners, and 26% reported sex with an AFP off–set; only 6% reported always using condoms on-set and 13% off-set. Overall, 24% (n=86) tested positive for Chlamydia (15%, n=54) or gonorrhea (11%, n=41). The most common site of infection for Chlamydia was urogenital (43/54) and pharyngeal for gonorrhea (33/41). Prevalence of Chlamydia/gonorrhea varied by age (median 23 vs. 26 years; p-value<.01), time as a performer (median years 2 vs. 3; p-value=0.06), and days of adult film-work in the past 30 days (median 6 vs. 4 days; p-value=0.02). In multivariable analyses, age (adjusted odds ratio [AOR]=0.90; 95% confidence interval [CI] 0.85-0.96) and type of scene (AOR for double vaginal=2.89; 95% CI 1.29-6.48) were associated with Chlamydia/gonorrhea.

Conclusions: AFPs had a high burden of STIs at all anatomic sites and reported inconsistent condom use within the context of any occupational or other sexual partnerships. Targeted intervention strategies - both in and outside the workplace - are needed to limit the spread of STIs.
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TP 98
SEX TRADE AND STD RISK AND INFECTION: FINDINGS FROM ADOLESCENT AND YOUNG ADULT FAMILY PLANNING CLINIC PATIENTS

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Background: Globally, sex workers are key sexually transmitted disease population. STD-related research typically focuses solely on this population, hindering our understanding of the prevalence of sex trade among relevant clinical populations, the nature of such experiences, and comparison of their STD risk behavior, infection, and related clinical care-seeking.
Methods: Female family planning clinic patients ages 16-29 (n=3,526) participated in a cross-sectional survey in 2011-2012.
Results: Overall, 2.8% reported a lifetime sex trade history. The majority had traded for money (65.7%), or received drugs (60.6%), shelter (30.3%) and gifts (26.3%) in exchange. Trade partners ranged from strangers (27.3%) to boyfriends (12%). Over one third (38%) first traded as minors, and 12% traded under conditions of force or threats. Sex trade history was associated with recent sexual risk, specifically unprotected vaginal sex (AOR 1.81, 95% CI 1.07, 3.05), unprotected anal sex (AOR 2.02, 95% CI 1.28, 3.20), fear of condom negotiation (AOR 5.47, 95% CI 2.26, 12.27), partner violence (AOR 12.38, 95% CI 6.03, 25.43) and injection drug use (AOR 6.89, 95% CI 2.86, 16.6). Both recent STD and related care-seeking were more common among those with a sex trade history (AOR 3.33, 95% CI 1.66, 6.71, and AOR 2.71, 95% CI 1.78, 4.13, respectively).
Conclusions: Compared with general population estimates, sex trade was relatively common in this sample. Experiences spanned traditional concepts of sex work (e.g., trade with strangers for money), transactional sex (e.g., trade with boyfriends/acquaintances for gifts), and trafficking for exploitation (i.e., trade as minors or under force/coercion). Demonstrated associations of sex trade with recent STD risk, infection and related care-seeking affirm heightened risk to this population. Findings suggest the potential utility of clinical settings in reaching women involved in, and with a history of, sex trade, in addition to the more traditional targeted outreach efforts for this population.
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TP 99
IMPLEMENTING COMMUNITY DRIVEN PREVENTION STRATEGIES TO ADDRESS STI DISPARITIES IN HIGH PREVALENCE COMMUNITIES

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Background: Residents of two zip codes in San Antonio experience some of the highest STI rates in Texas. In these zip codes, women represent approximately 67% of Chlamydia infections and nearly half of gonorrhea infections, with minorities reporting the highest rates. We implemented a community driven STI prevention program, approved by the community, adapted from *RAPP,* designed to address STI disparities and increase condom utilization. One component of this intervention includes delivering a culturally relevant STI/HIV prevention class to 150 residents, in the targeted zip codes, yearly.
Methods: Since August 2011, a community advisory board (CAB), composed of 36 community members, business owners and key stakeholders from the two zip codes, met monthly in an effort to identify social determinants of sexual health, prioritize healthcare disparities, and increase access to health care in the community. Residents from public housing complexes in the area were hired as Community Health Workers and trained to provide STI/HIV education classes to the target population. The classes provided STI/HIV prevention information and condom utilization skills.
Results: Community participants were administered pre/post surveys at each class to determine willingness to start using condoms with main and other sexual partners. 171 of 202 participants fit our criteria of living in the two zip codes. 74% of respondents were female, and 94% of participants were Hispanic or African-American. Age ranged between 9 and 77 years of age. There was a significant increase (27%) in the proportion of respondents willing to use condoms consistently with their main partners ($X^2(1) = 67.292$, p=.019).
Conclusions: Our results mirror the findings of the original *RAPP* intervention, which found an increase in consistent condom use by women with their main sexual partners. Through the partnership of the CAB, the community continues to make advances in addressing the health disparities that they face.
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TP 100
THE CASE FOR CLASSIFYING THE US ARMY AS A VULNERABLE POPULATION

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Background: A population is vulnerable when disease risk is increased due to participation or assignment in a specific group. For sexually transmitted infections (STIs), at the population level, gender, young age, sex work, LGBT identification, co-infection with HIV, being institutionalized and being socio-politically displaced have all been identified as vulnerable populations. US Army Soldiers have been identified as a risk group for STIs. The demographics of this primary population alone may explain much of their elevated burden of many STIs. However, the question remains whether other variables associated with military service increase STI risk above the baseline for the Soldier population.
Methods: We evaluated STI rates for Soldiers compared to civilian data, the impact of deployment to hostile areas, behavioral risk studies, sexual networks, high-risk subgroups and barriers to access medical care.
Results: Rates for gonorrhea and chlamydia exceed age and gender stratified rates for the general population. In the military, low rates of condom use, high sexual concurrency, binge drinking, and other individual risk factors were reported in the literature. Both local and distant sexual bridging, and a high risk demographic population were associated with increased risk of STIs in military sexual networks. Available information indicated LGBT soldiers as well as those with behavioral health disorders may perceive barriers to care that are unique to military service, increasing their risk.
Conclusions: It is difficult to determine the attributable STI risk contributed by Army service as there is no counterfactual comparison group. The demographics and baseline risk behaviors of our population suggest a high STI risk even in the absence of military service. However, as with other vulnerable populations, there are situations and circumstances related to the social characteristics of the Army that likely lead to increased risk. Considering the available data, we conclude the Army meets the definition of a vulnerable population.
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TP 101
SYPHILIS AND THE US ARMY, NEW CONCERNS FOR AN OLD DISEASE

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Background: Consideration of syphilis in the US Army conjures images of WWII posters warning the unsuspecting Soldier of impending doom from 'venereal disease'. Seventy years later, both the politically incorrect posters and the threat of syphilis to military readiness are gone. However, like the bourgeoning epidemic in US civilian communities, the US Army is seeing a resurgence of primary and secondary syphilis. We undertook the current analysis to evaluate and quantify the magnitude of the problem and explore issues of screening, diagnosis and treatment.
Methods: Utilizing data from the Defense Medical Surveillance System (DMSS), we evaluated healthcare visits and notifiable medical event reports for primary and secondary syphilis for the years 2002 to 2012. Standardized case definitions were used to screen all healthcare visits for active duty Army

personnel. Additionally, we surveyed US Army Medical Center laboratories to collect information on current screening and diagnostics.
Results: Primary and secondary syphilis rates have seen a slight increase in the Army in recent years. During the surveillance period, the relative frequency of the diagnoses by gender has reversed with male cases now outnumbering females (2002 M/F ratio 0.41; 2012 M/F ratio 1.37). Similar to trends seen in the civilian community, incidence rates in black-non Hispanic soldiers far exceeds other racial groups with 64 cases per 100,000 Soldiers per year. Army medical centers conducted over 58,000 screening tests for syphilis with over 800 confirmed positives, although assay types and screening protocols varied across the labs.
Conclusions: Despite drastic reductions in syphilis rates in the US Army in the late 20th century, syphilis is staging a comeback that reflects the risk demographics seen in civilian communities. Although specific sexual risk categories are often unknown to military providers, even in the post- 'Don't Ask, Don't Tell' era, targeted screening and prevention campaigns should be considered to address this epidemic.
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TP 102
OFFERING COMPREHENSIVE RISK ASSESSMENT AND STI SCREENING TO HIV-INFECTED PERSONS: ASSURING THE STANDARD OF CARE

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Background: Atlanta is among the 12 U.S. cities with the highest burden of HIV/AIDS. In 2012, the HIV/AIDS Primary Clinic (HIVC) at Fulton County Department of Health and Wellness (FCDHW) and the Georgia Department of Public Health (GDPH) participated with the STD/HIV Prevention Training Center (PTC) in a project focused on the HIV providers at the HIVC to increase: 1) screening for sexual risk behaviors; 2) screening testing for other sexually transmitted infections (STIs) such as syphilis, gonorrhea (GC) and chlamydia (CT); and, 3) extra-genital screening to rule out asymptomatic STIs in the rectum or throat.
Methods: A baseline record review was done for all HIV-infected patients presenting for services at the HIVC in November, 2012. In December 2012, a brief training was offered to all the providers, two provider champions were identified and a risk assessment tool was introduced. These interventions were followed by a repeat record review in January 2013.
Results: During the month of November 2012, a total of 521 patients were seen at the HIVC (386 males and 135 females), of those, 9.3% (36/386) males and 8.9% (12/135) females were tested for CT/GC. No extra-genital tests were performed. In the month of January 2013, 557 patients presented for care (433 males, 124 females), 100% were assessed for STI risk, and CT/GC screening increased to 9.5% (41/433) in males and 12.1% (15/124) in females, an increase of 2% and 36% respectively. Based on the risk assessment, no extra-genital tests were performed.
Conclusions: These results indicate that there were gaps in service. Providers' increased awareness resulted in identifying patients at-risk for acquiring other STIs and offered an opportunity to counsel patients about risks for acquiring STIs. These findings indicate that offering provider training and incorporating a risk assessment reminder into the chart can assist the provider in identifying patients needing STI screening.
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TP 103
TARGETED SCREENING FOR CHRONIC ACTIVE HEPATITIS C IN A SEXUALLY TRANSMITTED DISEASE CLINIC AND LINKAGE TO CARE IN DURHAM, NORTH CAROLINA

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Background: Screening for hepatitis C virus (HCV) infection in high risk persons and one-time HCV screening for adults born between 1945 and 1965 is recommended. We provided targeted HCV screening and linkage to care for infected individuals in a public STD clinic, and analyzed these data to identify factors associated with HCV infection in this population.
Methods: The Durham County Department of Public Health received a federal grant to conduct early identification and linkage to care for HCV-infected patients. Targeted HCV screening using HCV antibody and reflex HCV viral load testing was provided to patients in the STD clinic beginning in December 2012. Screening was conducted using these criteria: birth year between 1945 and 1965; HIV-infection; current or past history of injection drug use (IDU); man who has sex with other men; long-term sex partner of HCV-positive person; history of multiple sex partners; and prior incarceration.
Results: To date, 369 patients have undergone targeted HCV screening in the STD clinic in the past 12 months. Fifty-one (14%) were identified with reactive HCV antibodies, of which 37 (10%) had confirmatory HCV RNA results. Among patients with chronic active HCV infection, 25 (68%) were male, 25 (68%) were Black, and 27 (73%) were born between 1945 and 1965. Other predominant risk factors among patients with chronic active HCV infection included current or past IDU (68%) and prior incarceration (65%). None of the patients with HCV had HIV co-infection. Despite use of an HCV Bridge Counselor to follow-up with HCV-infected patients, only 10 (27%) patients with chronic active HCV infection have been linked to care; barriers include accessibility to an HCV provider and transportation.
Conclusions: A targeted HCV screening program in an STD clinic can identify a significant proportion of patients with chronic active HCV infection, but additional measures are needed to facilitate linkage to care.
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TP 104
DISPARITIES IN HIV PREVALENCE IN A GLOBAL POPULATION IN URBAN UNITED STATES

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Background: The contribution of the foreign-born to the US HIV epidemic has been recognized as substantial, and is predicted to grow as immigration to the US continues from regions with higher prevalence. Disparities in prevalence have long been a signature of the domestic epidemic, yet the foreign-born are seldom included as a distinct group in such analyses. We seek to determine disparities in HIV prevalence in a global population undergoing HIV testing in Philadelphia.
Methods: In Philadelphia's city health centers rapid HIV testing is conducted in the walk-in clinics. From all individuals undergoing testing between 2007 and 2011 data collected included demographics, risk behaviors and world region of origin. To determine proportionality of representation by region, the proportion of the population tested was compared with the proportion of the cohort testing positive. Data analyses were performed with SAS 9.0 (Cary, NC).
Results: During the study period 14,216 individuals underwent testing. A majority (76.2%) were US-born and 59% female. The greatest HIV disparity was among Caribbean men who constituted 3.6% of the population tested and 11.4% of the HIV-positive. All world regions showed a gender disparity with men overrepresented and women underrepresented among the HIV-positive except sub-Saharan Africans for whom both genders were overrepresented (1.7% of the total, 3.4% of the positive for men; 3% of the total, 4.5% of the positive for women). For the US-born, there were no racial/ethnic disparities in HIV prevalence.
Conclusions: Substantial disparities exist by gender and by world region of origin in this global population in Philadelphia. The elimination of HIV disparities as mandated by the National HIV/AIDS Strategy is contingent upon the recognition of all disparities in our domestic epidemic, which increasingly includes the foreign-born. Further study is needed to evaluate the social determinants of these disparities and develop successful strategies for their elimination.
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TP 105
PROGRAM COLLABORATION AND SERVICE INTEGRATION: BUILDING STI TESTING AND TREATMENT CAPACITY IN COMMUNITY-BASED CLINICS

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Background: Community-based clinics are important in increasing the accessibility and availability of STI testing and treatment services during non-

traditional times and venues. Many providers lack the resources to bridge service gaps where deserts of health inequity exist among underserved populations. Public and private partnerships and integrated STD prevention services are necessary to build capacity among community-based providers.
Methods: The Empowerment Resource Center (ERC) Comprehensive Intervention Clinic offers STI prevention education programs, counseling, testing, and treatment services and primary care linkages which target underserved, vulnerable, and high-risk populations. By leveraging resources and integrating programs and services, ERC enhanced the availability and accessibility of STI testing services in Atlanta, Georgia. Metrics were developed and collected to evaluate the impact of program collaboration and service integration on the provision of STI testing and treatment services.
Results: During 2012, ERC incorporated Syphilis testing into its existing repertoire of services (HIV testing; Chlamydia and Gonorrhea urine NAAT). Within an 18-month period, ERC added on-site treatment for infected clients and the collection of oral, rectal, and genital specimens, significantly increasing the number of unduplicated clients served. During this period, new services were added—Bacterial Vaginosis, Hepatitis C, Herpes, Trichomonas—making STI testing and treatment services more accessible and available to clients.
Conclusions: Through collaborative agreements with the Georgia Department of Public Health, the Fulton DeKalb Hospital Authority, and the Elton John AIDS Foundation, ERC expanded its array of services and enhanced the comprehensive continuum of care for clients. Leveraging resources and building community capacity can improve STI detection and prevention and increase treatment options in urban areas. In this time of shrinking resources and competing priorities, taking a long view of the interrelatedness between STI programs, services, and resources is essential to sustaining community-based clinical services.
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TP 106
ATTENTION TO SOCIAL DETERMINANTS IN STATE AND LOCAL HIV EPIDEMIOLOGICAL PROFILES

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Background: Through RFA-PS12-1201, the CDC funds the HIV prevention efforts of 59 state and local health departments (LHD). The LHDs must complete HIV epidemiological profiles to describe their epidemics and inform local allocation. The CDC issues guidance on profile completion, encouraging attention to social determinants of risk. Yet, the guidance does not offer specific suggestions for data capture on some groups shown by research to have elevated rates of and risk for HIV: 1) homeless individuals, 2) transgender individuals, 3) individuals with a serious mental illness, and 4) survivors of trauma. Without local data, these populations will not receive targeted HIV prevention services with these funds. This study explores if and how LHDs consider HIV rates among these four particularly vulnerable populations.
Methods: The HIV epidemiological profiles of 58 LHDs are posted online. Those 58 profiles were analyzed to determine the level of attention given to the four populations, using five ordinal categories: 1) primary epidemiological data, 2) supplemental data, 3) local Ryan White data, 4) discussed, and 5) ignored.
Results: Few profiles included data on the four populations. For primary epidemiological data, only 5 profiles (8.6%) attended to transgender, 3 profiles (5.2%) attended to homeless, 1 profile (1.7%) attended to SMI, and 0 profiles attended to trauma. Percentages increased slightly when we considered supplemental data sources: transgender (n =9, 15.5%), homeless (n =7, 12.1%), SMI (n =4, 6.9%), and trauma (n =2, 3.4%).
Conclusions: Although the CDC encourages attention to social determinants, some relevant factors are largely ignored in LHD data and CDC guidance, precluding targeted prevention. This also prevents exploration of how these factors intersect with other risk factors. These findings argue for increased attention to social determinants in local HIV epidemiological data and CDC guidance as a means of enhancing the overall quality of HIV prevention.
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TP 107
CASE FINDING OF ACUTE HEPATITIS C AFTER IMPLEMENTATION OF A NEW HEPATITIS C REGISTRY — ARKANSAS, 2013

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Background: In January 2013, the Arkansas Department of Health (ADH) established a registry to track individuals infected with hepatitis C virus (HCV) using CDC's NEDSS (National Electronic Disease Surveillance System) Base System. Before 2013, HCV reports received through state-mandated communicable disease reporting were not reviewed. ADH reported less than five acute HCV cases per year to CDC from 2003-2012.
Methods: Surveillance procedures implemented in 2013 included review of all HCV reports. Reports noting symptoms or elevated liver enzymes were suspected acute cases and were investigated by communicable disease nurses. Epidemiologists also investigated all suspected chronic cases aged <30 years. Final case status was assigned using the 2012 CSTE case definitions for acute and chronic HCV. Confirmed acute cases reported from January 1–September 30, 2013 were reviewed to determine their identification mode. The true number of acute cases in 2013 was estimated using CDC methodology.
Results: From January 1–September 30, 2013, 18 total confirmed acute cases were identified. Fourteen cases were reported with signs or symptoms of acute hepatitis, most frequently elevated alanine aminotransferase levels. Four cases were initially investigated as chronic and identified as acute after physicians returned the ADH case report form used to investigate cases <30 years. The true burden of acute HCV in Arkansas was estimated as 322 cases in 2013.
Conclusions: Review of all received hepatitis C reports resulted in the identification of 18 confirmed acute cases and an estimated rate of 2.08 per 100,000 adult Arkansans. The increase in case count in 2013 compared with prior years is likely due to increased detection attributable to intensive surveillance efforts begun in 2013. Without investigation of cases aged <30 years, 22% of the acute cases would not have been identified. Ongoing commitment to investigate all cases is needed to accurately characterize the burden of acute HCV.
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TP 108
IMPROVING VISUAL CASE ANALYSIS OF SYPHILIS INFECTIONS

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Background: Visual Case Analysis (VCA) is a tool with a proven history of providing necessary assistance in determining course of infection for early syphilis cases. The VCA process is an essential piece of critically analyzing the multiple possibilities of ongoing early syphilis investigations. However, the process has been perceived as lengthy and complicated, dissuading Disease Intervention Specialists (DIS) and program management alike from utilizing the VCA.
Methods: Microsoft Access was utilized as the platform for the automation of the VCA process. The VCA Creator was created to make VCA more efficient and accessible to STD Prevention Programs. Simple data entry with familiar terminology and field placement similar to a traditional field record creates a user-friendly method of VCA creation.
Results: The amount of time required to plot information is drastically reduced, allowing more time for analysis of the disease process and source/spread analysis. The VCA creator plots the basic elements of the cases, allowing the investigator to focus on critically thinking through the investigation. In addition, the end result of the VCA creator is an easy-to-read, clear, and concise VCA product. The automated format provides great flexibility by allowing for easy addition, deletion, or editing of information as it becomes available during investigations without extensive staff time to re-create the VCA product.
Conclusions: The VCA creator is an efficient and effective way of creating VCA diagrams for related syphilis cases to determine source/spread analysis and to review the epidemiology of early syphilis cases.
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TP 109
USE OF ADMINISTRATIVE HEALTH CARE DATA FOR SEXUALLY TRANSMITTED DISEASE SURVEILLANCE

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Background: Surveillance for sexually transmitted diseases (STDs) in the United States relies primarily on case reports from clinicians and laboratories

and sentinel surveillance; however, nationwide reporting is not required for viral STDs and clinical sequelae of STDs. We evaluated the potential usefulness of three sources of administrative health care data for STD surveillance.
Methods: The Healthcare Cost and Utilization Project Kids' Inpatient Database (KID) has been used to estimate national and regional incidence of neonatal herpes simplex virus infection. The MarketScan Commercial Claims and Encounters (CCAE) data, containing records from employee-sponsored private insurance plans, were used to examine trends in anogenital wart prevalence by gender and age group. Access to national Medicaid Analytic Extract (MAX) data for 2003-2009 has recently been acquired.
Results: Strengths of all these sources included availability of diagnosis and procedure codes for large numbers of records: KID – 3.4 million birth and hospitalization discharge records for children/adolescents through age 20 in 2009; CCAE – 1.1 billion inpatient and outpatient claims records for employees and their dependents in 2011; MAX – 2.3 billion inpatient and outpatient claims records for child and adult beneficiaries in 2009. The relatively low cost of these standardized data sources is also beneficial. None of the sources included laboratory results or inpatient medication data, although CCAE and MAX contain outpatient prescription claims. Access to these data is not timely; currently, KID and MAX are available through 2009 and CCAE through 2011. Race/ethnicity information is available in only KID and MAX. However, this information is incomplete; in 2009, 15% of race/ethnicity values were missing for KID and 28% for MAX.
Conclusions: Administrative health care data provide new opportunities for STD surveillance among large numbers of health care consumers, despite limitations. These sources will be particularly useful for non-reportable STDs and clinical sequelae of STDs.
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TP 110
DEVELOPMENT OF AN AUTOMATED ONLINE CLINICAL CONSULTATION WITH ELECTRONIC ANTIBIOTIC PRESCRIBING FOR THE REMOTE MANAGEMENT OF GENITAL CHLAMYDIA TRACHOMATIS INFECTION WITHIN THE ESTI2 CONSORTIUM

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Background: Modern rapid microdiagnostic technologies, which have in-built capacity to send data through mobile phone networks (as being developed within *e*STI[2]; *e*STI2.org.uk) will enable accurate self and home testing for sexually transmitted infections (STIs) and are well suited to online medical management. However, no UK specific regulatory guidance exists for such online clinical care pathways. Objective: to develop an automated online clinical consultation, meeting existing regulatory and legal requirements, which takes people from diagnosis of chlamydia, through clinical assessment, leading to electronic prescription and partner management.
Methods: 1.Review of legislation, regulations, ethical and perceptual barriers to introducing online clinical care pathways in the UK National Health Service; 2.development of a framework to subdivide the pathway into functional units against which legal and regulatory findings were mapped; 3.development of a prototype care pathway; 4.refinement through an iterative process of expert and user review and comprehension testing.
Results: Six key functional units form the online clinical care pathway: diagnosis, history taking, decision support, *e*-prescribing, information exchange and electronic health records. Within this framework, the automated, online clinical consultation includes risk assessment of sexual behaviour; assessment of safety of prescribing; antibiotic collection from a community pharmacy; and partner referral and epidemiological treatment. A linked telephone helpline supports people with complex medical and psychological needs. We believe we meet current regulatory and legal guidance
Conclusions: It is possible to develop an online clinical consultation, using robust methods of review, pathway design and testing. In the UK existing legal and regulatory guidance lags behind advances in diagnostic technologies, presenting challenges to adoption of innovation particularly in relation to online management and remote prescribing for STIs. Our pathway will be tested as part of an exploratory trial in 2014. The methodology described has potential for application to different conditions suited to remote care.
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TP 111
ARE GISP PATIENTS REPRESENTATIVE OF UROGENITAL GONORRHEA IN SAN FRANCISCO?

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Background: The Gonoccocal Isolate Surveillance Project (GISP) is a national program to monitor trends in antimicrobial susceptibility of *N. gonorrhoeae*. Data from GISP is used to inform national gonorrhea treatment recommendations by the Centers for Disease Control and Prevention. However, GISP represents less than 5% of all reported U.S. gonorrhea cases, and little is known about how well patients whose specimens are submitted to GISP represent all urogenital male disease.
Methods: Specimens from the first 25 male patients with symptomatic urogenital gonorrhea seen at San Francisco City Clinic (SFCC) each month are submitted to GISP. Using data in the STD surveillance database from 2009-2012, we compared demographic characteristics among men with specimens submitted to GISP to two other groups of men diagnosed with urogenital gonorrhea: other men diagnosed at SFCC, and men diagnosed by other providers and reported to the San Francisco Department of Public Health (SFDPH). Chi-square tests were used to compare groups.
Results: During the time period, 2,900 urogenital cases of gonorrhea were reported to SFDPH; of these, 763 (26.3%) were submitted to GISP. Of the 2137 cases not submitted to GISP, 257 (8.9% of total cases) were diagnosed at SFCC and 1880 (64.8% of total cases) were reported from other providers. The age distribution of cases was similar across all three groups (p=0.63). Patients diagnosed by outside providers were less likely to be Black (p<0.0001) and less likely to be men who have sex with men (p<0.0001) compared with patients whose specimens were submitted to GISP or diagnosed at SFCC.
Conclusions: While patients whose specimens were submitted to GISP were similar to other patients with urogenital gonorrhea at SFCC, the comparability to patients with urogenital gonorrhea citywide is limited. Given the importance of monitoring for gonococcal antibiotic resistance in the United States, surveillance platforms beyond GISP may be required.
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TP 112
CAN THE SPECIMEN ADEQUACY CONTROL (SAC) IN CEPHEID XPERT® CT/NG PREDICT INFECTION?

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Background: The Xpert® CT/NG (Cepheid Inc., Sunnyvale, CA) is a rapid, fully automated real-time PCR test that simultaneously detects *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG). Xpert ® CT/NG assay has high sensitivity and specificity, but also includes a Specimen Adequacy Control (SAC) that targets hydroxymethylbilane synthase (HMBS), a human cellular house-keeping gene. SAC controls for false negative results by confirming adequate patient sample and appropriate testing conditions. SAC is quantified by its cycle threshold, the number of cycles required to detect the presence of 1 HMBS gene target. A lower SAC indicates an earlier cycle threshold (C_t) and more cellular material detected. Our objective was to determine if SAC values could be used as a marker for inflammation and assist in potentially predicting clinical disease.
Methods: As part of NICHD HPTN 040, a multi-center clinical trial evaluating new treatment regimens for the prevention of HIV mother-to-child transmission, urine samples from 1167 HIV-infected pregnant women, collected at the time of labor/delivery underwent Xpert® CT/NG testing. Invalid results were excluded from analysis. Mean SAC Ct values and standard deviation (SD) were calculated. Student's t-test was used to compare SAC C_t mean values compared to a reference of urine samples negative for CT and NG.
Results: The urine CT positivity was 18.3% (214/1167) and NG, 4.6% (54/1167). The mean SAC C_t value in urine from women without CT or NG was 28.19 (SD: 4.20) and higher than the mean SAC C_t for CT positive specimens (27.43, SD: 3.83(P=.0153)), NG positive specimens (26.19 (SD: 3.01(, P<.0001), and in those CT/NG co-infected was 26.45 (SD: 3.01), P=.0049).

Conclusions: Lower SAC Ct values were significantly associated with chlamydial and gonococcal infections. While further studies are needed, SAC C_t values may show promise identifying the presence of inflammation and infection.
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TP 113
ASSESSING DIFFERENT PARTNER NOTIFICATION METHODS IN ASSURING PARTNER TREATMENT FOR GONORRHEA

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Background: In 2011, 321,849 cases of gonorrhea were reported in the United States (104.2 cases per 100,000 population). Partner notification (PN) is an important element of gonorrhea control: initiated through public health professionals (provider referral), patients (patient referral), or patient-delivered partner therapy (PDPT). We examine how patterns of notifying and treating partners of persons with gonorrhea differ by PN approach.
Methods: For provider referral estimates, we obtained 2010–2011 referral data for 1,959 patients (with 4,595 partners) seen in US STD clinics in 3 states. From the published literature (2005–2012), we extracted 10 estimates of patient referral data from 7 studies (3,853 patients, 7,490 partners) and 5 estimates of PDPT data from 5 studies (1,781 patients, 3,125 partners). We calculated the proportion of partners identified who were notified and who were treated. We also calculated notification and treatment ratios per 100 patients for each approach and made simple treatment cascades from the numbers of partners identified, notified and treated.
Results: With provider referral, 21% of all partners named by patients were notified and 19% were treated. With patient referral, 56% were notified and 34% were treated. With PDPT, 57% were notified and 46% were treated. Per 100 patients seen in the clinic, 50 partners were notified and 44 (88% of those notified) treated via provider referral; 96 partners were notified and 61 treated (64% of those notified) with patient referral; 90 were notified and 73 (81% of those notified) treated with PDPT.
Conclusions: Higher proportions of partners were treated through patient-based methods, but the highest proportion treated among those notified in provider referral. A mix of PN methods in a prevention program must be scalable and sustainable. The long-term goal of using a blend of notification strategies is to maximize reach to exposed persons in the population and provide some intervention for all.
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TP 114
REVISITING STD DATA RE-RELEASE GUIDELINES

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Background: Currently, CDC is restricted from re-releasing county-level STD case surveillance data stratified by demographics. Revision to the re-release guidelines based on a combination of denominator and disease proportion rules could maximize the amount of data released while maintaining a low risk of individual re-identification. We quantified the amount of county-level case report data that would be released using a denominator threshold of 100 or greater and a case proportion threshold of less than 10%.
Methods: We stratified 2010 county-level chlamydia, gonorrhea, and syphilis case report data by age, race, and sex. For each disease, we identified and suppressed all cells (i.e., county by age by race by sex categories) that had a denominator <100 or had a disease proportion >10%. We determined the percentage of total cells and cases suppressed by revised guidelines, stratified by urban/rural status. The need for secondary suppression (i.e., additional suppression so that back-calculation of suppressed cells is impossible) was explored.
Results: Applying the specified denominator and proportion rules, 17.3% of chlamydia cells (11.6% of cases), 9.1% of gonorrhea cells (1.5% of cases), and 2.3% of syphilis cells (0.9% of cases) would be suppressed. Suppression was greater in rural counties (e.g., 25.8% of chlamydia cells suppressed in rural counties versus 11.2% in urban counties). Additional cells would need to be suppressed secondarily, to avoid back-calculation of sensitive cells.
Conclusions: A denominator rule of 100 and a proportion rule of 10% would allow for the re-release of the majority of county-level STD case report data, increasing the utility of the data. However, secondary suppression rules are needed. Rural counties with small, homogenous populations are expected to contain more cells suppressed under these rules than larger, urban, racially diverse counties. More research into confidentiality protection measures at smaller geographic areas and more detailed variable stratifications are needed.
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TP 115
MODELING THE IMPACT OF CEPHALOSPORIN-RESISTANT NEISSERIA GONORRHOEAE

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Background: *Neisseria gonorrhoeae* has developed resistance against sulfonamides, penicillins, tetracyclines, and fluoroquinolones. Cephalosporin resistance may now be emerging. Without new antimicrobials, cephalosporin-resistant *N. gonorrhoeae* could greatly complicate treatment. Theoretically, the public health impact of screening programs may suffer as resistance increases, leading to increases in gonorrhea prevalence and sequelae, such as pelvic inflammatory disease (PID). In this work we explore these potential impacts of resistance.
Methods: We used an agent based model of sexual infection transmission that encompasses 1) sexual partnership formation and dissolution, 2) infection transmission and recovery, 3) screening, testing and treating for *N. gonorrhoeae*, and 4) resistance conversion of strains within people (either sensitive to resistant in the presence of antimicrobial treatment, or resistant to sensitive in the absence of treatment). We explore the impact of resistance by comparing scenarios with and without resistant strains, and explore the performance of different screening scenarios compared to only testing and treating symptomatic women.
Results: In one screening scenario and without resistance, testing and treating symptomatic women and men results in 42.8% lower infection prevalence and 39.0% lower annual PID compared to only testing/treating symptomatic women. With resistance, there is only 13.8% lower prevalence along with 450% higher resistance prevalence; this leads to 10.5% higher PID rates. In another screening scenario, screening of asymptomatic women and ignoring symptomatic men results in more modest prevalence reductions both with and without resistance (6.2% and 8.7%), while still managing to decrease PID incidence (1.1%) with resistance because resistance only increases by 84%.
Conclusions: In the presence of resistance, screening and treating men can increase the prevalence of resistant strains, thus ultimately increasing PID in women. This finding suggests that certain gonorrhea prevention strategies that are beneficial in the absence of resistance might be less effective or even detrimental in the presence of resistance.
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TP 116
EXPLORING THE COST-EFFECTIVENESS OF A HYPOTHETICAL CHLAMYDIA VACCINE FOR YOUNG FEMALES

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Background: In spite of existing chlamydia screening and treatment programs in most developed countries, the high burden of chlamydia persists, especially among the youth (15-24-year-olds). Although there is currently no chlamydia vaccine, future development of an effective chlamydia vaccine is possible. In this study, we explore the potential cost-effectiveness of a hypothetical chlamydia vaccine for young females in the United States (US) and British Columbia (BC), Canada.
Methods: We constructed a simple heterosexual deterministic compartmental transmission model. Parameter values were obtained from the literature. The strategies we assessed included vaccination of 14-year-olds and catch-up vaccination for 15-24-year-old females in the context of an existing chlamydia screening program. For our base case, we assumed 30% annual screening coverage, 30% vaccine coverage, 75% vaccine efficacy, 10-year duration of vaccine-conferred immunity and $500 vaccine cost. We analyzed costs and benefits over a 50-year period and calculated the incremental cost-effectiveness ratio (ICER) of adding a chlamydia vaccination program to an existing

chlamydia screening program. We also examine which model parameters had the most impact on the ICERs.
Results: In the base case, the estimated ICERs of vaccinating 14-year-olds were $32,244/QALY (US) and $14,829/QALY (BC) when compared to screening only. Extending the program by including catch-up vaccination for 15-24-year-olds (US) and 15-35-year-olds (BC) resulted in an estimated ICER of $48,564/QALY (US) and $24,074/QALY (BC). When we assumed a vaccine with perfect performance (i.e., 100% efficacy and lifelong duration of efficacy), the ICERs were reduced by more than half; vaccinating only 14-year-olds was cost-saving in the BC analyses. The estimated ICER was most sensitive to pre-vaccination chlamydia prevalence followed by the cost of vaccination, the duration of vaccine-conferred immunity and vaccine efficacy.
Conclusions: Our results suggest that an effective chlamydia vaccine could be cost-effective, particularly in high morbidity areas.
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TP 117
MONITORING STI RISK BEHAVIOUR AND PARTNER NOTIFICATION OUTCOMES THROUGH ROUTINE NATIONAL SURVEILLANCE: A PILOT STUDY IN ENGLAND

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Background: Surveillance for sexually transmitted infections (STI) in England is performed using the Genitourinary Medicine Clinic Activity Dataset (GUMCAD). This allows longitudinal linkage of patient-care episodes, but only basic clinical and demographic data are collected. Recent outbreak investigations in England have highlighted the impact of dense sexual networks, club drug usage and suboptimal partner notification (PN) on STI incidence. Thus, a pilot was designed to determine the feasibility and acceptability of routinely collecting data on risk behaviour and PN outcomes through GUMCAD.
Methods: Using national guidelines for sexual history-taking, an electronic proforma was designed to collect data on sexual partnerships, alcohol and drug use before/during sex, history of STI diagnoses and PN outcomes. A convenience sample of STI clinics was enlisted in the pilot, with rolling admission from September 2013–January 2014. Each site was required to collect behavioural data for 4–8 consecutive weeks on all new patient-care episodes, then, where applicable, PN outcome data for 4 additional weeks. A web-based survey was disseminated to the clinic staff to collect feedback on the pilot, and participation is being sought for key-informant interviews.
Results: Eight clinics in England agreed to participate in the pilot. By end-October 2013, behavioural data collection was completed at three sites. Initial feedback from the web survey suggested that this enhanced data collection of risk behaviour and PN outcomes is feasible and desirable. The major challenge has been the collection of data regarding drug and alcohol use, as this was a new activity for some sites.
Conclusions: The feedback from this pilot will be used to design an acceptable proforma to routinely collect behavioural and PN data through national STI surveillance. This will improve the evidence-base on specific behaviours associated with poor health outcomes and enable the development of clinic-based risk assessment tools for triaging patient management.
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TP 118
TARGETED CULTURE OF MICROSCOPY-POSITIVE *NEISSERIA GONORRHOEAE* SPECIMENS CREATES COST-EFFECTIVE OPPORTUNITIES FOR ANTIMICROBIAL SUSCEPTIBILITY SURVEILLANCE IN BOTH LOW- AND HIGH-RESOURCE SETTINGS

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Background: *Neisseria gonorrhoeae* has developed antimicrobial resistance (AMR) to all drugs introduced for treatment of gonorrhea. In this serious situation, the World Health Organization (WHO) has published a global action plan and an essential component of this action plan is to substantially enhance the AMR surveillance globally. However, in many settings only microscopy or nucleic acid amplification tests are used for diagnosis. Herein, targeted culture of microscopy-positive *N. gonorrhoeae* specimens to provide isolates for AMR surveillance was evaluated.
Methods: Stained urogenital smears from 65 male patients (median age: 34.5 years; range: 18-51 years) showing Gram-negative diplococci in microscopy were cultured within three hours. After preparing the microscopy smears, the swabs were placed in a plastic box with a wet paper towel until cultured on selective agar media. Growth was confirmed as *N. gonorrhoeae* by Gram stained smear, oxidase and superoxol test. Calibrated dichotomous sensitivity (CDS) disc diffusion method and minimal inhibitory concentration (MIC) testing by Etest method was performed on all isolates. Beta-lactamase production was identified with nitrocefin discs.
Results: *N. gonorrhoeae* isolates were recovered from 100%, 100%, 97% and 97% of the microscopy-positive samples within 0.5 hour, 1 hour, 2 hours and 3 hours, respectively. The proportions of AMR in *N. gonorrhoeae* isolates were as follows: ciprofloxacin 96.9%, penicillin G 75.4%, tetracycline 53.8%, and azithromycin 3.1%. No isolates resistant to ceftriaxone, cefixime, cefpodoxime or gentamicin were found, however, 4.6% of isolates showed a decreased susceptibility to all those extended-spectrum cephalosporins and gentamicin. All isolates were susceptible to spectinomycin. Of the gonococcal isolates, 67.7% produced beta-lactamase.
Conclusions: Targeted culture of microscopy-positive *N. gonorrhoeae* specimens provides cost-effective opportunities for AMR surveillance in both low- and high-resource settings, where culture of *N. gonorrhoeae* is not used for routine diagnosis. Enhanced AMR surveillance in *N. gonorrhoeae* globally is crucial for public health purposes.
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TP 119
MOLECULAR ANALYSIS OF CIPROFLOXACIN RESISTANCE IN *NEISSERIA GONORRHOEAE* ISOLATES COLLECTED FROM STD PATIENTS FROM ACROSS THE COUNTRY

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Background: The public health burden related to *N. gonorrhoeae* infections is heightened by the high levels of resistance to previously used antimicrobials including fluoroquinolones. However, data on specific genetic events leading to ciprofloxacin resistance in Indian isolates is limited. This study was undertaken to investigate the mutations in *gyrA* and *parC* genes in isolates from across the country exhibiting a range of MICs to ciprofloxacin.
Methods: A total of 82 isolates (Delhi 64; Manipur 7; Srinagar 1; Madurai 5; Mumbai 5-centers of ICMR study) collected from STD patients during November 2010 to October, 2012 were studied. Antimicrobial susceptibility testing was done by disc-diffusion method and E test & results were interpreted as per CDS criteria. DNA sequence analysis of *gyrA* and *parC* gene was done as previously described. *N. gonorrhoeae* WHO F (ciprofloxacin-S) and K, M (ciprofloxacin-R) were used as controls.
Results: Out of 82 isolates tested, only 2 (2.4%) were susceptible to ciprofloxacin while 7 (8.5%) were less-susceptible & 73 (89%, 95% CI: 80.2% - 94.9%) were resistant (MIC ≥ 1μg/ml). Amongst these, 45 (61.6%, 95% CI: 49.5% – 72.8%) demonstrated high-level resistance, i.e., HLR (MIC ≥ 4 μg/ml). A S91F substitution in *gyrA* gene was demonstrated in all ciprofloxacin non-susceptible isolates. All resistant isolates demonstrated double mutations in *gyrA* gene. This was coupled with single mutation in *parC* gene in 20/28 (71.4%, 95% CI: 51.3% - 86.8%) with MIC 1-3 μg/ml and 43/45 (95.6%, 95% CI: 84.9% - 99.5%) of isolates with MIC ≥ 4 μg/ml. Double mutations in *parC* gene were observed in 2 isolates in MIC range of 1-3 μg/ml and 2 in MIC≥ 4 μg/ml. In addition, S87R mutation in *parC* gene was restricted only to HLR strains. One isolate (MIC 32 μg/ml) had a previously undescribed G85D substitution in the *parC* gene.
Conclusions: It was observed that the number of mutations in *parC* gene does not determine the level of ciprofloxacin resistance. Perhaps the efflux pump plays a significant role and warrants further investigation.
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TP 120
EXPANDED SEXUALLY TRANSMITTED INFECTION SURVEILLANCE EFFORTS IN THE UNITED STATES MILITARY: A TIME FOR ACTION

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Background: To enhance the ability of the US military and partner countries to make informed decisions about sexually transmitted infections (STI) beyond HIV, AFHSC-GEIS is supporting surveillance and research studies amongst military and host country high-risk civilian groups.
Methods: Review of STI initiatives supported by the Division of GEIS, Armed Forces Health Surveillance Center (AFHSC-GEIS) program from October 2010 to December 2013.
Results: A network of activities has been established with the collaboration of a dozen partners in ten countries resulting in expansion of STI surveillance, research and education initiatives in both the United States and overseas. Key initiatives have taken place in four areas: 1) surveillance for emergence of antimicrobial-resistant *Neisseria gonorrhoeae* (NG), 2) screening for and assessment of the impact of STI infections among recruits, 3) seroepidemiologic studies of non-HIV viral STIs (such as HSV and HPV), and 4) conduct of clinically-relevant educational efforts for US military healthcare providers.
Conclusions: STI surveillance and research have been enhanced in the global US military community and partner countries beginning in 2010. These have strengthened the capability of US Forces and partner countries to identify and characterize STI pathogens, assess their morbidity, and develop interventions.
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TP 121
A SOCIAL NETWORK ANALYSIS OF CONTACT TRACING DATA REVEALS STRATEGIES TO IMPROVE CONTACT TRACING PROTOCOLS

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Background: Contact tracing is a core component of most STD programs in the US. It results in a large amount of data on sexual networks that is stored within STD surveillance databases, but is typically not fully utilized. Supplementing our traditional focus on individuals and their behavior, the Florida STD Program conducted an exploratory social network analysis (SNA) of a subset of contact tracing data. This was done in order to ascertain what could be learned by using a network lens. This information can be used to point to potentially more effective contact tracing protocols in STD prevention efforts.
Methods: Contact tracing data obtained from two syphilis cases revealed a sexual network of 139 men who have sex with men (MSM). Routinely collected surveillance data were utilized, including demographics, current and previous STD diagnosis (chlamydia, gonorrhea, syphilis and HIV), and MSM status. Networks were visualized using SNA software.
Results: Of the 139 men, 29 (21%) were designated as MSM and 20 (14%) were positive for an STD during the current investigation. Considering only those we were able to test during the investigation (n=73), 27% were positive. 27 (19%) had at least one diagnosis of an STD in our database prior to the current investigation. Despite the high-risk nature of these networks, only 12 (9%) received contact tracing interviews during the current investigation.
Conclusions: Visualizations of the networks highlighted three important findings: 1) the number of MSM at risk for STDs in Florida may be underestimated due to the reliance on interview data to determine MSM status, 2) contact tracing protocols may need to take into consideration past positivity and network characteristics in determining who should be interviewed, and 3) contact tracing activities by local STD programs potentially provide a wealth of data on high-risk networks otherwise difficult to obtain.
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TP 122
ASSESSING CHRONIC HEPATITIS B AND C COINFECTION WITH HIV/AIDS USING REGISTRY MATCHING, CALIFORNIA, 2011

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Background: Among persons living with HIV/AIDS (PLWHA), coinfection with chronic hepatitis B virus (HBV) and chronic hepatitis C virus (HCV) can lead to severe liver-related morbidity and mortality. Surveillance data on HIV coinfection with HBV and HCV are not routinely collected.
Methods: Chronic HBV and HCV cases were matched to the California Office of AIDS Enhanced HIV/AIDS Reporting System registry using a probabilistic algorithm including first and last names, birthdate, sex, race, and social security number. Risk ratios were calculated to compare persons coinfected with HBV or HCV and HIV to those only infected with HIV (monoinfected), stratified by demographic and risk characteristics.
Results: At the end of 2011 there were 120,921 PLWHA, 231,888 persons ever reported with chronic HBV, and 516,814 persons ever reported with chronic HCV in California. Overall, 5% of PLWHA were coinfected with HBV (5% male and 2% female) and 12% were coinfected with HCV (12% male and 14% female). HBV coinfected persons were 1.8 times as likely as HIV monoinfected persons to be Asian/Pacific Islander. HCV coinfected persons were more likely than monoinfected persons to be 55-64 years old or American Indian/Alaska Native, especially among females. Among HCV coinfected persons, heterosexual transmission in females (RR=0.4), and male sexual contact in males (RR=0.6), were less common HIV risk factors than among monoinfected persons. Correspondingly, injection drug use (IDU) as a HIV risk factor was 5.2 times more common among HCV coinfected males and 4.1 times more common among HCV coinfected females compared to monoinfected persons.
Conclusions: Coinfected persons have risk factors consistent with known risk factors for HBV and HCV such as IDU; however, key differences between coinfected and monoinfected populations exist. Given the consequences of coinfection, PLWHA with ongoing risk should be tested regularly for HCV, vaccinated against HBV, and counseled on reducing viral hepatitis risk.
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TP 123
EVALUATING HIGH IMPACT HIV PREVENTION IN 12 U.S. CITIES: LESSONS FOR THE STD PROGRAM EVALUATOR

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Background: In the Enhanced Comprehensive HIV Prevention Planning (ECHPP) project (2010-2013), health departments in 12 U.S. cities with high AIDS burden were funded to implement a high-impact prevention approach. Grantees enhanced local efforts to affect the epidemic, including improved STD screening for HIV-positive persons. The ECHPP evaluation team analyzes process, outcome, and impact indicators for these cities from existing data sources, using a data triangulation approach to obtain a comprehensive picture of the epidemic and the public health response in these areas. Lessons learned from this evaluation approach may inform STD program monitoring/evaluation activities.
Methods: During the development of the ECHPP evaluation, several STD-related process, outcome, and impact indicators were created. Additionally, challenges regarding data availability gaps were encountered (e.g., data sources not available in all 12 areas, survey questions not asked in the desired way and survey questions not consistent across evaluation years).
Results: Process indicator-data related to STD screenings can be used to monitor implementation of STD screening guidelines. Outcomes reported for priority populations living in these cities can be used to assess trends in risk behaviors and service uptake. Surveillance data can be used to monitor changes in disease burden, assess program impact, and identify areas with large numbers of co-infected individuals to help prioritize areas for prevention efforts. Data gaps can be addressed using an analytic strategy that uses extrapolation methods and proxy data, and triangulates quantitative and qualitative data.
Conclusions: When new data collection is not feasible for program evaluation, existing data sources may be available, that when integrated, can provide a comprehensive picture of the HIV/STD epidemic in specific geographic areas while reducing data burden on grantees. Lessons learned through the ECHPP evaluation may contribute to the monitoring/evaluation of STD prevention activities and improve efforts to link local STD programs to community impact.
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TP 124
EVALUATION OF GONORRHEA SURVEILLANCE – CONNECTICUT, 2011–2013

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Background: Gonorrhea is the second most commonly reported notifiable disease in the United States. Characterization of reporting processes is essential for accurate surveillance data to guide public health interventions. This study evaluated the Connecticut gonorrhea surveillance system to determine strengths and weaknesses and provide recommendations to improve future use.
Methods: An evaluation of system processes and attributes was conducted using the Centers for Disease Control and Prevention Guidelines for Evaluating Public Health Surveillance Systems. Quantitative measures of timeliness and data quality were obtained through analysis of 2011–2012 state surveillance data and through an audit of state laboratory data from April–September 2013. Simplicity, acceptability, and utility were assessed qualitatively through interviews with staff and a survey among the highest reporting healthcare providers by setting type, representing 40% of all reported cases in the state.
Results: The system has high utility for monitoring incidence and trends. While most demographic variables had high completeness, over 30% of race and ethnicity fields were unknown. System simplicity is decreased due to complicated paper-flow, manual data entry, and substantial provider follow-up for missing treatment information (64% of cases). Twenty percent (4/20) of surveyed providers indicated that reporting cases is a large time burden and 35% (7/20) cited lack of time, staff, and/or electronic reporting as barriers to effective reporting. Despite this, timeliness of provider reporting from exam date to report date significantly improved from a mean of 17.5 days in 2011 to 12.9 days in 2012 (p<.0001).
Conclusions: Strengths of the system include its usefulness for monitoring trends, data quality, and improved timeliness. Identified weaknesses, including excessive complexity, missing treatment information, and time burden for both health department staff and reporting providers, contribute to lower acceptability. Streamlined paper-flow or utilization of electronic reporting systems would greatly benefit the system's simplicity and data completeness.
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TP 125
SYNDROMIC VALIDATION AND CLINICO- AETIOLOGICAL CORRELATION OF SEXUALLY TRANSMITTED INFECTIONS IN A TERTIARY CARE HOSPITAL

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Background: World health organization (WHO) has placed emphasis on syndromic approach for an STI case management, especially in areas having inadequate laboratory facilities and transport facilities. The study evaluates the validity of syndromic management and correlation with clinical and laboratory based management of STIs.
Methods: Patients numbering 251 presenting with complaints of STIs who attended the STI clinic from September 2010 to December 2011were included. The three treatment approaches - clinical, laboratory based and syndrome based were evaluated for sensitivity and specificity. These parameters were also evaluated for individual syndrome. Data was analysed using the Statistical Package for Social Sciences, Version 19.0 of Microsoft Office (Excel 2007).
Results: Out of 251 patients, 118 female (47.01%) patients had vaginal discharge syndrome, 49 males (19.52%) had urethral discharge syndrome, 53males (21.1%) and 31females (12.3%) had presented with genital ulcer disease (GUD). Syndromic management of urethral discharge had high validity with 100% sensitivity. The sensitivity, specificity of clinical approach of gonorrhoea was 92.5% & 95.45% respectively and of non gonococcal urethritis was 88.8% & 62.5% respectively but the clinical approach may have missed few cases and would have led to over-treatment in some cases of non-gonococcal urethritis. The sensitivity of syndromic approach for GUD for herpes and syphilis was 100% & 92.4% while specificity was 90% & 40% respectively. The sensitivity, specificity of syndromic approach for vaginal discharge was 89.65% , 61.66% whereas it was 87.93% & 66.66% by clinical approach.
Conclusions: Syndromic management of urethral discharge stood highly validated and was better than clinical or laboratory based treatment. Syndromic management for GUD was also highly suitable in comparison to clinical and laboratory based approach. The sensitivity of the syndromic approach for vaginal discharge was high, but had low specificity thereby causing unnecessary increase in the cost of treatment.
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TP 126
THE RELATIONSHIP BETWEEN SEXUALLY TRANSMITTED DISEASES AND INVASIVE MENINGOCOCCAL DISEASE (IMD) IN NYC, 2000-2012

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Background: Invasive Meningococcal Disease (IMD) is acquired through respiratory droplets. From 2012-2013, an IMD outbreak occurred in men-who-have-sex-with-men (MSM) in NYC. We measured the association between diagnosis of sexually transmitted diseases (STDs), a marker for risky sexual behavior, and IMD.
Methods: IMD cases ages 15 to 64 reported during 2000-2012 were matched to the STD registry. The relative risk (RR) of IMD for persons with an STD was defined as the ratio of: the number of persons with both IMD and STD divided by total persons in the STD registry, to the number of persons with IMD but without STD divided by the city population without STD. Relative risks were examined by age group, sex, type of STD, and year. RRs were calculated for two non-sexually transmitted diseases, *Haemophilus influenzae* (*Hi)*and Rocky Mountain Spotted Fever (RMSF).
Results: Among 285 IMD cases, 26 (9%) were in the STD registry. The RR of having IMD given an STD was 13.3 (95% confidence interval [CI] 8.9-20.0). RRs were highest for persons ages 45-64 (52.8 [95% CI 21.3-130.0]), men (22.4 [95% CI 13.3-37.6]), and men with syphilis (79.5 [95% CI 40.5-156.2]). The RR before the outbreak (2000-2011) was 7.6 (95% CI 4.6-12.4); during the peak outbreak year (2012), it was 67.9 (95% CI 28.1-163.8). RRs for *Hi*and RMSF were 7.9 (95% CI 5.4-11.7) and 5.0 (95% CI 2.4-10.6), respectively. The RR of IMD for persons in the STD registry was 2.7 times the RR for persons with RMSF (RR Ratio: 2.7, 95% CI 1.13-6.3).
Conclusions: Presence in the STD registry was positively associated with IMD. The association was especially strong for men and during the outbreak year, suggesting the relationship between STD and IMD may be driven by MSM. Further research is needed to understand the interaction of STDs, HIV, and social network with the risk of IMD.
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TP 127
RECENT TREND IN HIV CO-INFECTION AMONG PERSONS DIAGNOSED WITH EARLY SYPHILIS, GONORRHEA, AND CHLAMYDIA IN SAN FRANCISCO, 2007-2011

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Background: The epidemiology of HIV and bacterial STDs overlap substantially. To better understand subpopulations burdened by multiple conditions, we examined the recent trend in persons diagnosed with STD who were co-infected with HIV by matching HIV and STD cases reported to the San Francisco (SF) Department of Public Health.
Methods: Persons reported with early syphilis, gonorrhea, or chlamydia among SF residents from 2007-2011 were linked to persons diagnosed with HIV through 2011 and reported as of August 13, 2013 using a sequential matching algorithm. STD cases were considered to be co-infected with HIV if HIV was diagnosed prior to or through one month after STD diagnosis. STD diagnoses within one month of an HIV diagnosis were considered to be concurrent diagnoses. The proportion of HIV/STD co-infection was determined for each STD including all episodes of that particular STD in a given year. The analyses by race/ethnicity, transmission risk and age were restricted to males only, since the HIV epidemic in SF is predominately among males.
Results: During 2007-2011, the proportion of persons with known HIV infection increased among early syphilis cases (53% to 62%) and chlamydia cases (12% to 15%), and remains stable among gonorrhea cases (26% to

25%). No apparent trend was observed for concurrent HIV infection among STD cases. Across all years, HIV co-infection with a bacterial STD was more common among men who have sex with men (MSM), compared with heterosexual males. HIV-co-infection for the STDs examined was also higher among white, Latino and older males.
Conclusions: In San Francisco, a large burden of HIV co-infection is observed among MSM, white, Latino, and older males with STDs. These data highlight the need to integrate STD prevention into routine HIV care.
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TP 128
METHODS FOR DISTINGUISHING ONGOING CARE FOR CHLAMYDIA AND GONORRHEA INFECTIONS FROM RECURRENT INFECTIONS IN MILITARY BENEFICIARIES

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Background: Chlamydia and gonorrhea are among the most commonly reported diseases in the United States. A meta-analysis showed a reinfection rate of 13.9% for chlamydia cases and 11.7% for gonorrhea cases. Distinguishing between duplicate cases and reinfections is necessary for accurate burden assessment. The Department of Defense (DOD) performs routine public health surveillance for these conditions. The DOD and other public health entities use differing methods to assess disease burden. Comparison is necessary to assess impact of varying methods and ensure proper data source utilization.
Methods: Within the DOD, the two most common methods used to identify unique infections are the 30 day running clock method and the 30 day gap in care method. The 30 day running clock method considers any diagnosis or positive test within 30 days of an original record as the same case. The 30 day gap in care rule requires 30 days without any encounter or positive test for a new case. Chlamydia and gonorrhea outpatient encounters and laboratory results identified for DOD military health system beneficiaries during 2012 were extracted. The two methods for unique case identification were compared.
Results: Most cases were not affected by the application of two different case identification methods. The use of the 30 day gap in care method reduced chlamydia cases by 0.2% and gonorrhea cases by 1.9%, as compared to the 30 day running clock method.
Conclusions: Small differences in case volume were identified when the two methods were applied to the same data. The 30 day gap in care rule has the ability to reflect clinical process and is essential to an accurate assessment of disease burden. The 30 day running clock method may overestimate the burden and not adequately assess the impact of reinfections.
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TP 129
IDENTIFYING PERSONS LIVING WITH HIV INFECTION THROUGH SOCIAL NETWORK HIV TESTING – A COST EFFECTIVENESS ANALYSIS

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Background: The authors compared the cost effectiveness of 3 HIV testing and counseling (HTC) scenarios: a social network HIV testing (SNT) research study, a hypothetical SNT program conducted outside the research setting, and conventional client-initiated and/or outreach-based HTC.
Methods: Outcomes and cost data were collected from research study records and key informant interviews. For each approach, the cost per HIV test and the cost per person living with HIV (PLHIV) identified were computed. Sensitivity analyses explored the effect of varying costs and effectiveness
Results: Cost per HIV test was 340% greater in the SNT research study and 282% greater in the hypothetical SNT program compared to conventional HTC ($99.42, $82.44, and $29.22, respectively). However, cost per PLHIV identified was 39.7% less in the SNT research study and 50% less in the hypothetical SNT program than conventional HTC ($2,684.42, $2,225.79, and $4,450.46, respectively). The hypothetical SNT program could be roughly twice as costly as estimated (or half as effective) and remain more cost-effective than conventional HTC.
Conclusions: Social network approaches to HTC are cost-effective strategies for identifying PLHIV and should be considered for wider implementation.
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TP 130
MULTI-ANTIGEN SEQUENCE TYPES (NG-MAST) AND ANTIMICROBIAL SUSCEPTIBILITIES ON NEISSERIA GONORRHOEAE ISOLATED IN CANADA, 2010-2012

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Background: *Neisseria gonorrhoeae* have acquired resistance to many antibiotics and developed decreasing susceptibilities to third generation cephalosporins.
Methods: NG-MAST sequence types and minimum inhibitory concentrations (MICs) were determined by agar dilution for 3422 *N. gonorrhoeae* isolates submitted to the National Microbiology Laboratory between 2010-2012. Isolates were submitted when the provincial laboratories identify resistance to at least one antibiotic or if the provincial laboratories do not conduct antimicrobial susceptibility testing. MIC interpretations were based on the criteria of the Clinical Laboratory Standards Institute (CLSI) and the World Health Organization (WHO) criteria for decreased susceptibility to cephalosporins.
Results: Among all the isolates tested in Canada during 2010-2012, 22.0% (2103/9366) were resistant to penicillin, 31.3% (2935/9366) to tetracycline, 27.0% (2529/9366) to erythromycin, 31.1% (2916/9366) to ciprofloxacin and 0.8% (76/9366) to azithromycin. Decreased susceptibility to cefixime (MIC ≥ 0.25 mg/L) was identified in 3.3% (98/2970) of isolates in 2010; this increased to 4.2% (140/3360) in 2011 and decreased again to 2.2% (68/3036) in 2012. Decreased susceptibility to ceftriaxone (MIC ≥ 0.125 mg/L) declined from 7.2% (218/2970) of isolates 2010 to 6.2% (208/3360) in 2011 and further to 5.5% (168/3036) in 2012. In 2010, 249 sequence types (STs) were identified: the most common STs were ST1407, ST3150 and ST3158 at 13.3%, 11.3% and 9.0% respectively. In 2011, 238 STs were identified: the most common STs were ST1407, ST3307 and ST3550 at 15.3%, 9.3% and 5.9% respectively. In 2012, 258 STs were identified: the most common STs were ST1407, ST2400 and ST3150 at 11.1%, 7.3% and 6.6% respectively.
Conclusions: Comparing 2010 and 2012 there has been a decline in the proportion of *N. gonorrhoeae* isolates with decreased susceptibilities to ceftriaxone and cefixime. Continued monitoring of antibiotic susceptibilities of *N. gonorrhoeae* isolates in Canada is imperative and is associated with modifications of treatment guidelines.
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TP 131
CONNECT (FOUR) MORE: VIRGINIA'S STRATEGIC "GAME" OF INTEROPERABILITY

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Background: The Virginia Department of Health (VDH) - Division of Disease Prevention (DDP) has historically used the Sexually Transmitted Disease Management Information System (STD*MIS) for STD surveillance. In October 2011, CDC announced STD*MIS development discontinuation, requiring jurisdictions to implement alternative data management solutions. Increased integration efforts across STD/HIV/TB/Hepatitis programs have heightened requirements for improved data interoperability and linkage to healthcare services, including the need for efficient comorbidity analyses, electronic laboratory reporting (ELR), and cross-programmatic data sharing.
Methods: The DDP determined a STD*MIS database replacement should serve as a division-wide interoperability system and position Virginia for improved data sharing capabilities. Staff evaluated customized database development and commercial-off-the-shelf (COTS) systems, and assessed existing market analyses conducted by CDC in 2012. Virginia's functional requirements included: data modules for STD/HIV/TB/Hepatitis surveillance,

HIV care services and refugee/immigrant health; case management capacity; export functionality to the electronic HIV/AIDS Reporting System; data sharing flexibility; and HL7 architecture for ELR processing.
Results: The DDP worked with the VDH Office of Information Management and HealthIT, and the Virginia Information Technologies Agency to determine the most cost-effective option. Consilience Software, Inc. was chosen as the vendor based on existing market analyses, functional requirements and multi-jurisdictional data sharing potential. Using an interoperability concept, software licensing and project management cost sharing has resulted in 40% of expenditures from non-STD funds. Server specifications, including the incorporation of additional DDP network requirements, have resulted in a reduction of approximate annual server fees of $36,000.
Conclusions: Programs considering a new surveillance system should evaluate all available options and determine if other programs with similar functions (i.e. HIV/TB/Hepatitis) would benefit from inclusion in the project scope. Virginia's cross-programmatic system design has resulted in improved business process modeling, program integration decision points, and project cost sharing. This integrated approach to system implementation will provide greater operational efficiency across all DDP programs.
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TP 132
SYNDEMIC ANALYSIS OF PEOPLE LIVING WITH HIV/AIDS IN NORTH CAROLINA

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Background: In the United States, HIV and STDs have become syndemic due to shared modes of transmission and social determinants of health. However, there are few studies that have described the extent of disease overlap in the Southeastern US. In North Carolina, HIV, early syphilis, gonorrhea, chlamydia, and viral hepatitis B are reportable conditions, and as of November 2012 all reports are managed in one fully-integrated surveillance system.
Methods: Nine legacy surveillance systems were converted into the North Carolina Electronic Disease Surveillance System (NCEDSS). Persons in NCEDSS with more than one disease were identified, matched, merged, and de-duplicated to create a single comprehensive view of each reportable event. Descriptive analyses were performed on HIV-positive individuals with and without syndemic infections using SAS 9.3.
Results: From 1984 to 2013, 48,285 cases of HIV/AIDS were reported in North Carolina; 35,136 (72.8%) were male, 31,811 (65.9%) were black, and 2,252 (4.7%) were Hispanic. Among HIV-positive males, 6,195 (17.6%) had at least one syndemic infection: 12.5% with syphilis, 6.2% with gonorrhea, 2.9% with chlamydia, and 2.5% with chronic hepatitis B. Among women, 1,514 (11.5%) had at least one syndemic infection: 7.0% with syphilis, 3.3% with gonorrhea, 3.1% with chlamydia, and 1.1% with chronic hepatitis B. Syndemic infections were commonly (43.8%) reported at least one year after the initial HIV diagnosis.
Conclusions: Our findings highlight the extent of disease overlap in NC and the need for improved STD prevention and control among HIV-positive individuals. The high concurrence of co-infections at least one year after HIV diagnosis indicates that initiatives aimed at better educating HIV-positive individuals on STD prevention are necessary to control HIV/STD syndemics in North Carolina.
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TP 133
USING NON-PROBABILITY WEB SURVEYS TO MEASURE SEXUAL BEHAVIOURS AND ATTITUDES IN THE BRITISH 'GENERAL POPULATION

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Background: There is increasing interest is using non-probability web surveys from access panels for collecting epidemiological data, as they can provide a relatively cheap and quick alternative to traditional surveys. However, studies in other countries have raised concerns about their lack of representativeness. This is the first study in Britain to compare results from web panel surveys from a number of research agencies with each other. Results are also compared with the third British National Survey of Sexual Attitudes & Lifestyles (Natsal-3), a probability sample interview survey.
Methods: Natsal-3 questions were included on four non-probability web panel surveys administered by three commercial research agencies. Two of the surveys used 'traditional' quota controls of age and sex, and two used 'modified' quotas with additional controls on variables related to key estimates. Results were compared with external benchmarks for participant characteristics and with Natsal-3 data for sexual behaviours and attitudes.
Results: Compared with external data, results for all four web surveys were less representative of the general population than Natsal-3. Moreover, for all four web surveys, around two-thirds of the key estimates of sexual behaviours were significantly different from Natsal-3. There was no one web survey that consistently performed better than any other. The modified quota web surveys slightly improved results for males, but not for females.
Conclusions: Consistent with results found elsewhere, web surveys in Britain using volunteer panels are unlikely to provide representative estimates for the general population. The use of more sophisticated quotas may lead to some improvement, but many estimates are still likely to differ. Surveys of volunteer web panels may be useful in some circumstances, but not if accurate prevalence estimates are a key objective of the study.
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TP 134
VALIDATING SELF-REPORTED HIV STATUS FROM STD SURVEILLANCE NETWORK (SSUN) ENHANCED GONORRHEA INTERVIEWS: PHILADELPHIA, 2009-2013

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Background: Since 2009, Philadelphia has been a recipient of SSuN cooperative agreement funding. SSuN interview questions include: "Have you ever been tested for HIV?" and "What was the result of your last HIV test?". To identify persons who might have benefitted from partner services in addition to the enhanced surveillance interview, we compared self-reported HIV status to HIV surveillance data.
Methods: Selected GC cases were matched to HIV surveillance data (eHARS) by name and date of birth. HIV status at time of GC diagnosis from eHARS and self-reports from SSuN were compared.
Results: From July 2009 to August 2013, almost 30,000 GC cases were reported in Philadelphia with 2,817 (9%) completing the SSuN interview. Based on the GC SSuN—eHARS match 139 interviewed GC cases either self-reported as HIV positive or were identified in eHARS. SSuN responses correlated with HIV surveillance data 98%: HIV positive in both (N=99) and HIV negative/not in eHARS (N=2,678). Those with HIV in both systems were more likely to be older, male ,MSM, and previously diagnosed with GC than those who were reported being HIV negative and were not in eHARS (Age: 30 years versus 23 years; Male: 90% versus 48%; MSM/Males: 83% versus 21%; previous GC: 24% versus 13%). Of the 40 individuals with discordant results, 36 reported being HIV negative but were in eHARS and 4 said they were HIV positive but were not in eHARS.
Conclusions: According to our analysis, HIV positivity among SSuN interviewees was almost 5% (139/2,817). These persons are HIV infected and have had a recent gonorrhea infection, therefore, are candidates for partner services. The majority of responses to this question are valid, but further investigation is needed to understand the discordant responses.
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TP 135
EPIDEMIOLOGIC CHARACTERIZATION OF REPEAT CHLAMYDIA INFECTIONS IN MISSISSIPPI 2005-2012

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Background: Chlamydia is the most commonly reportable bacterial STD in the United States. Repeated infections may be associated with worse health outcomes including increased susceptibility to HIV. For over a decade, Mississippi reported among the highest rate of chlamydia. The purpose of this study is to describe the epidemiology of chlamydia infections and identify risk factors associated with multiple infections.
Methods: Demographic data was reviewed from chlamydia cases reported to the Mississippi State Department of Health's STD Management Information System from January 1, 2005, through December 31, 2012. Characteristics of individuals with one chlamydia infection were compared to individuals with repeat infections. Further analyses were performed to assess risk factors

associated with recent repeat chlamydia infections (more than one infection between 1 and 6 months).
Results: During 2005-2012, Mississippi reported 172,030 chlamydia episodes (96,567 single cases and 30,011 repeat infections). Among repeat infections, 9,076 or 30.2% were recent repeat infections. The mean age of individuals with chlamydia infection was 22 ± 6.4 years, with 76% of cases among individuals under 25 years old. The number of repeat infections reported ranged from 2-13 per individual (mean = 2.5 + 0.9 cases) and the mean time between first and second repeat infection was 19 months ± 17 months. In the multivariate analysis, the factors associated with recent repeat infections included younger age, African American race, and female gender.
Conclusions: Our analysis shows that recent repeat chlamydia infections are associated with younger age, individuals who are African American, and female. Improved strategies are needed to address all potential factors contributing to repeat chlamydial infections including appropriate treatment of infected patients, partner's treatment, routine re-screening. Public health programs may use this data to target populations and areas with the highest proportion of recent repeat infections for more intense counseling of infected patients and re-screening programs.
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TP136
ESTABLISHING A QUALITY ASSURANCE PROGRAM FOR SYPHILIS SEROLOGY
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Background: Early detection and treatment of pregnant women infected with HIV and/or syphilis is an essential component of basic antenatal care, and critical for current global and regional initiatives for eliminating mother-to-child transmission (MTCT) of HIV and syphilis. The government of Zambia plans a syphilis national reference program to provide expertise in diagnostic testing and oversee the quality of testing via administration of a proficiency testing quality assurance program. Zambia invited CDC to support the national laboratory to develop such a program.
Methods: CDC laboratory scientists conducted an initial laboratory assessment exercise at the proposed site for the syphilis national reference laboratory. They assessed existing laboratory practices and documentation; evaluated availability of reagents, equipment and supplies; conducted competency assessments with laboratory staff on qualitative RPR; and provided training on quantitative RPR and TPPA assays. Model approaches on syphilis testing quality assurance were presented; and facilitated discussion was provided about the roles and responsibilities of a national syphilis reference laboratory.
Results: The laboratory had developed standard operating protocols (SOPs) relevant to techniques for HIV, but lacked documents specific to syphilis testing. Laboratorians did not have direct control of the source or manufacturer of tests ordered, causing inconsistencies and limited access to needed supplies. At the time of the evaluation, only qualitative RPR was performed on samples received for syphilis testing. RPR competency assessment found the staff competent with minor corrections. All staff were successfully trained on quantitative RPR and qualitative TPPA.
Conclusions: The assessment identified that Zambia's national laboratory requires essential supplies, SOPs, and additional training. Zambia's commitment through an external PT program, with periodic assessments, would ensure sustainability and scalability of a national syphilis proficiency testing program. If successful, the capacity building approach used for Zambia could serve as a model for other resource-poor countries.
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TP 137
FREQUENCY AND TIMING OF HIV/GONORRHEA CO-INFECTIONS IN NORTH CAROLINA: A PROGRAM COLLABORATION AND SERVICE INTEGRATION (PCSI) ANALYSIS
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Background: In 2012, the North Carolina Electronic Disease Surveillance System (NCEDSS) became fully integrated and includes named HIV cases to 1985, Gc cases to 2005. Co-infection of HIV with Gonorrhea is of concern due to increased susceptibility to HIV and the possibility of Gc treatment resistance.
Methods: Data from NCEDSS were cleaned and matched for co-infection. HIV cases diagnosed prior to March 2005 were retained only if matched to a Gc case. Co-infected persons were classified according to the timing of the HIV and GC infections and diagnoses occurring within 30 days were classified as occurring at the same time. Descriptive and bivariate analyses were performed using SAS 9.3.
Results: Case reports for 115,986 individuals included 100,148 persons with Gc only; 13,810 with HIV only; and 2,028 co-infected persons. Men represented 74.5% of all HIV cases, 44.6% of GC cases, and 82.4% of co-infected persons. Men were more likely than women to be co-infected among both HIV cases (OR 1.7, 95% CI 1.5-1.9) and GC cases (OR 6.0, 95% CI 5.3-6.7). The majority (n=1,671, 72.7%) of co-infected men had a single GC case reported but 27.3% had repeat GC infections. Taken together, a high proportion were already HIV infected when they acquired Gc (n=1101, 65.9%) and 29.9% (n=352) were Gc repeaters. A third (n=550, 32.9%) of co-infected men had at least one Gc case more than 30 days prior to their HIV diagnosis.
Conclusions: Co-infection with HIV and Gonorrhea disproportionately affects men in NC. The 550 men with Gc prior to HIV represent a very small proportion of the 55,671 cases reported in NC and the utility for targeted prevention is limited. The high proportion of co-infected men with GC infections subsequent to HIV diagnosis both stress the importance of STD testing among HIV-infected persons and indicate an opportunity for enhanced prevention efforts.
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TP 138
GYT: ADAPTING A NATIONAL STD TESTING CAMPAIGN FOR A LOCAL AUDIENCE IN SANTA CLARA COUNTY, CALIFORNIA
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Background: One in two sexually active people will get a sexually transmitted diseases (STD) by age 25. The sooner people know they have an STD, the sooner they can seek treatment and take measures to protect themselves and their partners. For STD Awareness Month in April 2013, California's Santa Clara County Public Health Department (PHD) adapted "Get Yourself Tested" (GYT), a national, youth-focused, STD testing campaign developed by CDC, MTV, Kaiser Family Foundation, Planned Parenthood Federation of America, and other partners. The purpose of GYT is to encourage youth to get tested for STDs.
Methods: JSI conducted formative research to determine appropriate communication channels for reaching youth and adapted existing GYT outdoor advertising, PSAs (radio and movie theaters), and printed materials. Novel campaign materials included Pandora Internet radio ads, Facebook ads, and radio PSAs. JSI and PHD distributed approximately 150 toolkits to community organizations that included posters, fliers, postcards, palm cards, and buttons.
Results: PHD and JSI tracked the distribution and placement of GYT materials, social media metrics, and web analytics. JSI conducted 100 intercept surveys with youth in the County. Twenty three percent of eligible intercept survey respondents had heard of GYT and of those 19% (n=4) said they got tested as a result of seeing the ad. HIVtest.org saw a 200% increase in STD-related searches using the Santa Clara County ZIP codes in April 2013 compared with April 2012.The GYT Pandora ad's click-through rate of 2.39% was double the average rate of other Pandora ads.
Conclusions: By leveraging and adapting a national campaign, the County reached youth with messages about STD testing and direct its limited resources to campaign dissemination, rather than development. Across communication channels, we estimate the total reach of GYT in the County at over 30 million impressions.
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TP 139
PERFORMANCE OF CYTOLOGY AND HPV16/18 GENOTYPING AMONG A LARGE COHORT OF HPV POSITIVE WOMEN AGED 30 YEARS AND OLDER
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Background: Co-testing for HPV, the most commonly diagnosed sexually transmitted infection, has recently been incorporated into U.S. cervical cancer screening guidelines. Currently, women who are HPV positive (HPV+) with ASC-US or worse cytology (ASC-US+) are referred to immediate colposcopy. Those with normal cytology may be triaged with HPV16/18 genotyping and referred to colposcopy if HPV16/18+; however implementation of this approach in routine clinical practice has not been evaluated. Here we use co-testing data from the Persistence and Progression cohort at Kaiser Permanente Northern California (KPNC) to evaluate the performance of cytology and HPV16/18 genotyping among HPV+ women 30+ years of age.
Methods: We evaluated 34,242 women who tested HPV+ by Hybrid Capture 2 (Qiagen, Gaithersburg, MD). Cases of cervical intraepithelial neoplasia grade 2 or worse that developed within approximately two years (CIN2+, n=4,154) plus a subset of <CIN2 (n=3,517) were genotyped using the Cobas HPV test, which separately detects HPV16/18 genotypes plus a pool of 12 additional carcinogenic HPV types (Roche Molecular Systems, Pleasanton, CA). We calculated sensitivity and specificity, simulating the performance of cytology and HPV16/18 genotyping for triage of HPV+ women.
Results: Sensitivity and specificity of cytology for CIN2+ were 72.3% and 58.8%, respectively. Among women with normal cytology, the sensitivity and specificity of HPV16/18 genotyping for CIN2+ were 41.7% and 81.1%, respectively. Sensitivity and specificity for the combination of cytology and HPV16/18 detection for CIN2+ were 84.4% and 47.7%, respectively.
Conclusions: Among HPV+ women, a combination of ASC-US cytology and HPV16/18+ genotyping would immediately refer 84% with CIN2+ to colposcopy, leaving 16% who would be referred at 1-year follow-up. Nearly half of HPV+ women who do not develop CIN2+ would still be sent to colposcopy. Management of HPV+ women while avoiding overtreatment remains a key challenge; whether this performance is adequate will depend on cost-effectiveness analyses.
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TP 140
THE SPATIAL, TEMPORAL AND ENVIRONMENTAL TRENDS OF GONORRHEA IN ERIE COUNTY, NY

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Background: Spatial and temporal analysis can be used to identify disease outbreaks within small areas of a community, but have been largely absent from past gonorrhea epidemiological studies. From 2010-2012, methods were employed to exhibit the importance of both space and time in the understanding of gonorrhea incidence patterns.
Methods: Three methods were implemented to account for the spatial and temporal interactions of gonorrhea within the population. Both an ordinary least squares regression and spatial lag regression models were used to determine the socio-demographic factors most closely associated with high gonorrhea rates; the latter indicating the influence of space. Secondly, the Getis-Ord *Gi** statistic was implemented to identify census blocks where gonorrhea rates were considered to be clustered. Finally, a multi-region cumulative sum (CUSUM) method was utilized to determine when the number of cases exceeded a threshold, indicating a spatiotemporal pattern of gonorrhea.
Results: While preserving the spatial context, the percentage of African-Americans within a neighborhood was still found to be the most influential demographic characteristic in determining the spatial distribution of gonorrhea. The Getis-Ord *Gi** statistic was able to identify regional hotspots of gonorrhea on an annual basis while simultaneously displaying a trend of convergence on the East Side of Buffalo, NY over time. The temporal analysis yielded an understanding of when and where the number of gonorrhea cases exceeded the expectation, results displayed similar geographic trends to the cluster analysis.
Conclusions: The Getis-Ord statistic can identify small scale areas that require immediate implementation of disease control strategies. Spatial regression presented a more geographically relevant understanding of the socio-demographic factors driving gonorrhea which can aid in targeted outreach to specific groups of people. The CUSUM method can provide public health officials with insight into the spatiotemporal nature of gonorrhea, ultimately aiding in disease surveillance and mitigation policies.
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TP 141
USING AUDIENCE POLLING DATA FROM CLINICIAN STD COURSES TO GUIDE EDUCATIONAL INITIATIVES FOR GENERALISTS AND SPECIALISTS

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Background: In 2010, the CDC-funded Ratelle STD/HIV PTC of New England integrated real-time audience polling (Turning Point Audience Response System (ARS), Turning Technologies, v2008) into continuing education targeting clinicians who diagnose and manage STDs. ARS data were analyzed to identify testable hypotheses to inform future training efforts of the Ratelle PTC.
Methods: From 2010-2012, clinicians attended 12 educational lectures. Two topics were analyzed: "Highlights from the 2010 STD Treatment Guidelines" for generalists (n = 72-132, including general pediatricians, family practitioners, advanced practice nurses, and emergency medicine physicians); and "Management of Sexually Transmitted Infections in HIV-Infected and At-Risk Patients" for infectious disease (ID) specialists (n =59-147). Data were analyzed for themes by examining audience responses stratified by provider specialty. Microsoft® Office Excel 2003 was used for analyses.
Results: The following hypotheses were generated: *a small proportion of generalists* (1) take race/ethnicity into account when interpreting results of a disease that disproportionately affects non-white patients (herpes type-specific serologic testing), (2) consider the possibility of a test result being a false positive (herpes type-specific serologic testing), and (3) use Expedited Partner Therapy for treating partners of patients infected with chlamydia; *an increasing proportion of ID specialists*(4) see 6+ infectious syphilis cases/year, (5) use reverse sequence serologic testing for syphilis; and (6) have access to rectal/pharyngeal nucleic acid amplification testing. Finally, (7) counseling patients to self-refer partners remains the most common way ID specialists treat partners of chlamydia patients.
Conclusions: Interpretation of results was limited due to differences in questions across topics and relatively small sample sizes. However, data were useful for maximizing PTC hypothesis-generation, and can be examined further for trends, practice limitations, and knowledge gaps, and can inform future PTC training efforts. Additional demographic variables (e.g. practice settings and years in practice) can be collected for further analysis.
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TP 142
IMPROVEMENTS IN TIMELINESS OF SYPHILIS SURVEILLANCE AND DISEASE INTERVENTION ACTIVITIES FROM A NEWLY IMPLEMENTED SURVEILLANCE/CASE MANAGEMENT SYSTEM

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Background: Timeliness of disease reporting by laboratories and providers is a critical attribute of surveillance systems; improvements can lead to earlier disease detection and intervention efforts. The New York City Department of Health and Mental Hygiene has taken measures to improve timeliness of reporting, including mandating electronic laboratory reporting (ELR), and transitioning from a surveillance/case management system that required time intensive manual importation of ELR to one that automatically receives ELR nightly. We compared the timeliness of syphilis reporting and related activities following the introduction of a new CMS.
Methods: Syphilis tests reported to two different systems (STD*MIS, February-May, 2010 and Maven, February-May, 2012) were compared using independent sample t-tests. We determined timeliness using the following dates: specimen collection date, test receipt date by system, and surveillance staff review date.
Results: Nearly 10,000 syphilis tests were received by ELR during each evaluation period. Average time between specimen collection and test receipt decreased significantly from 8.6 days (median=6) using STD*MIS to 4.1 days

(median=3) using Maven (p<.001). Average time between test receipt and staff review increased from 3.0 days (median=2) using STD*MIS to 6.4 days (median=3) using Maven (p<.001). Overall, average time between specimen collection and staff review decreased from 11.6 days (median=8) using STD*MIS to 10.5 days (median=7) using Maven (p<.001).
Conclusions: Automated receipt of ELR by Maven improved overall timeliness of syphilis surveillance and initiation of disease intervention activities. Because Maven receives ELR nightly (versus the less systematic, manual importation using STD*MIS), tests are available for review on weekends and holidays when staff are not working; this may account for the observed increase in average staff review time. Nevertheless, worker performance is an area for further improvement and evaluation. This analysis will be used to set system and staff performance standards that are continuously monitored, evaluated, and improved.
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TP 143
A SIMULATION STUDY OF USING COMPOSITE HPV GENOTYPING ASSAY RESULTS TO MONITOR HUMAN PAPILLOMAVIRUS INFECTIONS

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Background: Researchers often group various HPV types into composite measures based on vaccine subtypes, oncogenic potential, or phylogenetic position. Composite prevalence estimates based on various genotyping assay results have been calculated to assess the burden of HPV infections and to monitor HPV vaccine effectiveness. While these prevalence estimates have been used to assist development of prevention strategies, research on how well these estimates measure the true underlying infection burden is limited.
Methods: A simulation study was conducted to evaluate use of composite genotyping assay results to monitor HPV infections when underlying infection rates change or assays with different performance are used. Data were generated based on mathematical algorithms with pre-specified type-specific infection rates, assay sensitivity and specificity, and correlations between various HPV types. Estimated-to-true infection rate ratios and percent reduction of vaccine types were calculated.
Results: When the true underlying type-specific prevalence was specified as the reported prevalence between 2003-2006 in the US and genotyping assays with high sensitivity and specificity (0.95, 0.95) were used, estimated-to-true rate ratios were 2.31, 2.17, 2.12 and 1.62, for composite measures with 2 vaccine high-risk types, 4 vaccine types, 14 high-risk types and 37 HPV types, respectively. For a given composite measure, estimated-to-true rate ratios increased when the true underlying infection rates or assay specificity declined. When underlying type-specific infection rates were reduced by 50%, the true composite infection rate of any of the 4 vaccine types decreased by 47%, but the estimated rate only decreased by 15%.
Conclusions: Composite infection rate estimates calculated based on panels of genotyping assay results generally over-estimate the true infection burden and could under-estimate effectiveness. The impact of assay specificity is as or more important than sensitivity and should be considered in selecting a genotyping assay to monitor HPV.
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TP 144
NATURAL RUBBER LATEX PROTEINS AS AN OBJECTIVE MARKER OF CONDOM USE

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Background: Current methods for assessing condom use are prone to uncertainty and bias. As most condoms are made from natural rubber latex (NRL), NRL proteins are an excellent candidate marker for condom use. The purpose of this study was to determine if an available assay could accurately discriminate latex and non-latex products.
Methods: We used the ASTM D6499 standard test method to quantify antigenic NRL protein concentrations in extracts from latex and non-latex products (n=166). We tested major latex condom brands and varieties (non-lubricated, lubricated, and lubricated plus spermicide), non-latex condoms; vaginal lubricants, transvaginal ultrasound probe covers, and buffer (PBS). Per ASTM protocol, condoms were cut up and soaked in PBS (5mL/g) for 120 minutes at 25°C. Extracts were also prepared by soaking the outer surface of the intact condom in PBS (10mL/g) for 30 minutes at 37°C. Lubricants were prepared by dipping a swab in the product and extracting in PBS at 25°C.
Results: Extracts prepared per protocol yielded inconsistently higher NRL protein concentrations, which were not critical for distinguishing latex and non-latex products. The median concentration was 0.879μg/mL for latex products (n=106, range: 0.056 - 25.090μg/mL) and below the limit of detection (b.d., <0.008μg/mL) for non-latex products (n=60, range: b.d - 0.127μg/mL). Some non-latex products (n=13) yielded very low false-positive results. Using a cut-off of ≥0.1μg/mL afforded 95% sensitivity and 98% specificity. Adding Tween-20 to the extracts further increased specificity. High area under the ROC curve (0.996, CI: 0.991-1.00) and a high Youden Index (0.94) provide evidence of the test's accuracy.
Conclusions: NRL proteins are detectable in extracts from latex products and almost always absent in extracts from non-latex products. A human study is necessary to establish NRL proteins as an objective marker of latex condom use. Such a marker would significantly strengthen contraceptive and HIV/STI research methods.
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TP 145
DECREASED SUSCEPTIBILITY TO CEFTRIAXONE IN *NEISSERIA GONORRHOEAE* IN THE ABSENCE OF A MOSAIC PENICILLIN-BINDING PROTEIN 2 (*PENA*) ALLELE

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Background: In February 2012, a 32 year old African American, heterosexual man in Oklahoma presented with gonorrhea exhibiting reduced susceptibility to ceftriaxone, with a minimum inhibitory concentration (MIC) of 0.5 μg/ml. No history of travel, drug use, or sex work was reported, and the individual denied having prior gonococcal infections.
Methods: Whole genome sequencing of this isolate was performed using next-generation sequencing techniques (Roche 454 and Pacific Biosciences SMRT), and a suite of known gonococcal resistance determinants were examined to identify mutations potentially associated with reduced susceptibility to ceftriaxone.
Results: The penicillin-binding protein 2 gene (*penA*) has been associated with both reduced susceptibility and treatment failure to the cephalosporins due to the presence of a mosaic *penA* allele; however, this particular isolate possessed a non-mosaic penA allele not normally associated with decreased susceptibility to cephalosporins.
Conclusions: These results suggest that while a mosaic *penA* allele can be predictive for reduced susceptibility to cephalosporins in *N. gonorrhoeae*, it is not absolutely necessary. In this case, it appears that other mutations are responsible for the reduced susceptibility to ceftriaxone.
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TP 146
COMPARISON OF THREE PARTNER NOTIFICATION (PN) MODELS FOR EARLY SYPHILIS (ES) WITHIN A HIGH MORBIDITY REGION OF LOS ANGELES COUNTY (LAC), 2012

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Background: Partner Notification (PN) is a core public health activity aimed at preventing syphilis by ensuring that sexual contacts of reported cases are notified and treated. In this analysis, we compare outcomes between three PN models utilized by the Los Angeles County (LAC) Department of Public Health (DPH) for residents living in a high early syphilis (ES) morbidity region, Service Planning Area 4(SPA4-Metro).
Methods: Using STD surveillance data, we examined the records of 657 ES cases among SPA 4 residents reported in 2012 and assigned to one of the following PN models: 1) a community-embedded disease intervention specialist(CEDIS) located at one of two non-county high-morbidity clinics (n=187); 2) a District Public Health Investigator(PHI) assigned to one of the twelve public STD clinics (n=73) and 3) a DPH PHI working cases countywide (n=397). Type of PN services was compared by timely interview of the index case defined as the number of days between specimen collection

and interview, and three indices that measure the number of contacts elicited, examined and treated per 100 cases assigned.
Results: The CEDIS interviewed 32% (n=60) of their cases within 7 days and 88% (n=164) overall. By comparison, district PHIs interviewed 18% (n=13) of their cases within 7 days and 84% (n=61) overall. DPH PHIs interviewed 7% (n=26) of their cases within 7 days and 77% (n=305) overall. For every 100 cases assigned, CEDIS elicited 104 contacts, examined 47 contacts and treated 35 contacts. The respective indices were 45, 21 and 12 for District PHIs and 28, 9 and 6 for DPH PHIs.
Conclusions: The CEDIS model in high-morbidity non-county sites augments traditional PHI approaches to PN services. Reasons for CEDIS success may include efficiencies associated with co-location of PN and clinical services and improved patient trust associated with the delivery of PN services from a known health care provider.
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TP 147
USING NARRATIVE MEDICINE TECHNIQUES TO SUPPORT THE DEVELOPMENT OF A NEW PROTOCOL FOR EVALUATING AND TREATING PATIENTS WITH PERSISTENT AND RECURRENT NON-GONOCOCCAL URETHRITIS, NEW YORK CITY, 2013

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Background: A subset of patients with non-gonococcal urethritis (NGU) has repeated visits with recurrent or persistent symptoms. Narrative medicine is used to improve understanding of the experiential aspects of illness. In addition to reviewing the medical literature and quantitative data from our clinics, a group composed of the seven Physicians in Charge (PICs) of the New York City STD clinics used narrative techniques to improve our understanding of this subset of patients.
Methods: Men with frequent use of STD services for NGU were defined as those with >2 visits in 2012 for NGU and ≥10 visits to the STD clinic for any reason since 2005. The STD Clinics' Medical Director reviewed the entire electronic medical record of a random sample of ten men meeting these criteria. For each visit, the following was abstracted: demographics, chief complaint, interval since last visit, interval since last sex, number and sex of partners in the previous three months, type of sex (anal-oral-vaginal), exchange of money for sex , urethral discharge, laboratory results and treatment. A single case was selected, based on the biomedical and psychosocial information extracted. The PICs used abstracted information to invent a biography of the patient that included a description of his daily life and his sex life.
Results: The characteristics ascribed to the patient by the PICs were similar when they described his living situation; all PICs concluded that the patient had an anxiety disorder. However they differed in the elaboration of his sex partners and the circumstances under which the sex took place.
Conclusions: We concluded that the diversity in the descriptions of his sexual partners, and of the circumstances under which sex occurred identified an important deficiency in the data we routinely collect as part of the sexual history. This deficiency may contribute to difficulties in differentiating persistent from recurrent NGU.
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TP 148
ACCEPTABILITY AND PERCEIVED ACCURACY OF RAPID AND STANDARD SEXUALLY TRANSMITTED INFECTION (STI) SCREENING AND SELF-COLLECTION OF SAMPLES ON A MOBILE HEALTH VAN

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Background: To assess attitudes about STI screening on a mobile health van.
Methods: Confidential, written questionnaires were offered to men and women (≥14 years) visiting a van during a family-oriented community event. Questionnaires assessed (1) acceptability of van-based STI testing given five different turn-around times, (2) acceptability of self-collected samples for STI testing on a van, doctor's office, and home, and (3) perceived accuracy of rapid versus standard (turn-around time 2-14 days) STI tests. Acceptability was rated using a 5-point Likert-like scale (1=very acceptable, 5=very unacceptable). Analyses included descriptive statistics and t-tests.
Results: Twenty women and 11 men completed questionnaires. A majority reported that getting tested on a van was acceptable for each of the five different turn-around times; the proportion reporting that getting tested for an STI on a van was somewhat to very acceptable increased with decreasing turn-around time: 4-14 days (40%), 1-3 days (57%), more than 2 hours but on the same day (70%), 1-2 hours (80%), <1 hour (93%). Women rated van and office as equally acceptable locations to collect urine (van: median (M) =1.58, office: M=1.32, p=ns) and vaginal samples (van: M=1.45, office: M=1.30, p=ns). Van was more acceptable than home to collect urine (home: M=2.11, p=.05) and vaginal samples (home: M=2.17, p=<.01). Men rated van and home as equally acceptable locations to collect urine (van: M=2.38, home: M=2.38, p=ns) and penile samples (van: M=2.31, home: M=2.62, p=ns). Van, however, was less acceptable than office to collect urine (office: M=1.68, p=.02) and penile samples (office: M=1.77, p=.05). All respondents perceived rapid testing to be either as accurate (men: 78%, women: 79%) or more accurate (men: 22%, women: 21%) than standard testing.
Conclusions: STI screening on health vans using rapid or standard tests with urine or self-collected swabs may be accepted by community-event attendees.
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TP 149
MULTI-SITE LABORATORY EVALUATION OF THE SD BIOLINE DUO HIV/SYPHILIS DUAL POINT-OF-CARE RAPID TEST

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Background: Recently, test developers created rapid point-of-care tests that can detect multiple infections with the same specimen using a single device. The SD BIOLINE Duo HIV/Syphilis rapid point-of-care test uses a solid phase immunochromatographic assay to detect IgG, IgM and IgA antibodies to HIV specific antigens (HIV-1 gp41, sub O, HIV-2 gp36) and recombinant *Treponema (T.) pallidum* antigens (17KDa) in human serum. This study was a multisite laboratory-based evaluation of performance of the SD Bioline HIV/Syphilis Duo test using well- characterized sera in six countries.
Methods: Laboratories in Ghana, Mexico, Laos, Togo, Kenya, and Myanmar participated in the evaluation in 2012 and 2013. Each site characterized sera using a combination of *T. pallidum* particle agglutination assay or *T. pallidum* Hemaglutination Assay and HIV enzyme immunoassay, Western Blot, and HIV antibody rapid tests. Those gold standard test results were compared with SD BIOLINE Duo test results. Because of the lack in heterogeneity of performance between sites we combined the data and calculated the sensitivity and specificity of test performance. We used the exact binomial method to calculate 95% confidence intervals (CI).
Results: The combined sensitivity and specificity for the HIV antibody component (N=2336) were estimated at 99.91% (95% CI: 99.51%, 100%) and 99.67% (95% CI: 99.16, 99.91%), respectively. For the *T. pallidum* component (N=2059), the combined sensitivity and specificity were estimated at 99.67% (95% CI: 98.82%, 99.96%) and 99.72% (95% CI: 99.29%, 99.92%), respectively.
Conclusions: The sensitivity and specificity of the SD Bioline HIV/Syphilis Duo test using serum was consistently high across sera specimens from 6 countries around the world. This dual test could be a timely breakthrough for the UNAIDS and WHO strategy for dual elimination of maternal-to-child transmission of HIV and syphilis. Dual rapid tests should be considered for improved HIV and syphilis screening coverage.
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TP 150
ARE EDS USEFUL VENUES FOR IDENTIFYING UNDIAGNOSED HIV INFECTIONS?

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Background: HIV remains a major public health problem that disproportionately affects the urban poor who often utilize emergency departments (ED) for primary care. Baltimore City's HIV incidence rate remains high, (81.4/100,000) warranting the need to continue scaling up various testing efforts to find undiagnosed infections. BCHD initiated routine HIV testing in EDs in 2008 and have identified over 400 positives within the first five years. This study estimates how many HIV positive cases tested in the EDs were not previously screened elsewhere.
Methods: Records of HIV positive cases identified through the ED program from July 2012 to June 2013 were retrospectively searched on BCHD electronic databases to check if the patient was ever tested by any of the public-funded programs that report HIV testing activities to BCHD. Proportions of new and previous HIV cases that had previous tests reported to BCHD versus those lacking evidence of previous reporting were compared.
Results: The EDs conducted 19,625 tests and 87 positives were identified. 48/87 were new, 32/87 were previously diagnosed, and 7/87 were discordant tests. 34/87 (39%) of all positives and 30/48 (63%) of all new positives had no previous testing history.
Conclusions: 63% of all new HIV positive cases identified by the EDs in this period had probably not been previously tested. Despite the declining new positivity rates, (1.05% in 2008; 0.5% in 2009; 0.5% in 2010; 0.3% in 2011; 0.25% in 2012), Baltimore EDs still surpass the cost-effectiveness threshold of 0.1% for undiagnosed rate that warrants routine testing. Limitations of this study include small sample size and incomplete reporting of negatives. Nonetheless, this finding gives merit to the utility of ED testing programs in identifying acute HIV positive cases, those utilizing the EDs for primary care, and those not perceiving themselves to be at risk that might not be tested elsewhere.
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TP 151
DUAL DRIED TUBE SPECIMEN FOR QUALITY CONTROL FOR SYPHILIS AND HIV RAPID TESTS: DOES IT WORK?

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Background: The use of point-of-care tests (POCTs) for infectious diseases such as HIV and Syphilis has expanded and there are now several rapid tests on the market. However, some tests lack good standards and regulatory approval. Additionally, quality control for POCTs is still a significant challenge. Laboratories regularly use serum samples for the quality control of syphilis and HIV tests. However, it is infrastructure-intensive and costly to maintain these samples. Therefore, we tested the effectiveness of dual Dry Tube Specimens (DTS) for the quality control of HIV and syphilis rapid tests.
Methods: We used dried tube specimen (DTS) and allocated different antibodies concentrations for the diagnosis of HIV and syphilis in the same tube. DTS uses a small volume (20uL) of serum per tube. It is colored and then dried overnight. It is stable at room temperature for at least one month. It can then be rehydrated at the location where the quality control will take place. We compared the DTS with the gold standard. Our positive gold standard for syphilis was RPR and rapid syphilis test positives and our positive gold standard for HIV was rapid HIV test positives. Our negative gold standard for HIV and syphilis were rapid test negatives. This was a laboratory-based evaluation.
Results: We found 100% specificity and 100% sensitivity when using DTS to carry out the quality control of syphilis and HIV rapid test positives, respectively. In other words, DTS is equivalent to the gold standard.
Conclusions: We recommend the use of syphilis and HIV DTS panels for external quality control in the field. DTS is easy to prepare, simple to distribute and perform, and should improve syphilis and HIV rapid test quality control programs.
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TP 152
ARIZONA DEPARTMENT OF HEALTH SERVICES ONLINE SOCIAL FOR AWARENESS & PREVENTION

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Background: The Arizona Department of Health Services (ADHS) is active in numerous social media environments (including Twitter and Facebook) with the goal of growing our online community and communicating public health messaging with a broad audience. This supports ADHS efforts to improve population health outcomes.
Methods: Public health-related prevention and awareness messaging represents the majority of ADHS online social content and includes STD-related information, resources and events. The ADHS Web & New Media team (WNM) partners with subject matter experts (SMEs) and communications staff to identify priority messages, contribute to trending topics and reply to comments. ADHS also shares messages from other public health entities that promote topics for which we provide leadership. ADHS policy establishes a centralized workflow for social media administration. Content intended for online channels is submitted to WNM for review and posting via an online application. The ADHS communications calendar drives much of the social messaging, which is developed by WNM and content owners. WNM identifies additional messaging via online listening and develops related content, consulting with other ADHS representatives as needed. Many posts are scheduled ahead of time and spaced out throughout the day, seven days a week. Volume varies by online channel. ADHS attempts to reply to feedback at least same day, although time must be allotted for consulting with SMEs when needed.
Results: Examples of online social STD messaging from ADHS and resulting interactions with our online community include http://storify.com/AZDHS/stds. ADHS social properties are available at http://azdhs.gov/socialmedia.htm.
Conclusions: ADHS has experienced significant growth in our online presence and maturation of our process over the years we've been active in social media. Communicating ADHS public health information via social, which includes STD-related prevention and awareness, has been effective in building online community—having authentic and relevant conversations with the public that we serve.
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TP 153
MOBILE TECHNOLOGY AND MODERN PUBLIC HEALTH PRACTICE: THE DEVELOPMENT OF A MOBILE APPLICATION FOR THE CANADIAN GUIDELINES ON SEXUALLY TRANSMITTED INFECTIONS

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Background: The Public Health Agency of Canada's (the Agency) Canadian Guidelines on Sexually Transmitted Infections (the Guidelines) are a key resource for Canadian clinical and public health professionals. More innovative and efficient means of dissemination of such resources are needed, and clinicians increasingly look to electronic tools to update their clinical knowledge and inform practice. In 2013, guided by needs-assessments and baseline research, the Agency embarked on the multi-phase development of a mobile application for the Guidelines, in order to facilitate use and improve uptake by practitioners in clinical and other settings where they may need to reference material on a mobile device.
Methods: A multi-disciplinary team assembled in August 2013 to manage the development of the mobile application. The process included a research phase (healthcare practitioner needs-assessments and environmental scans of health information technology, including the CDC STD mobile application); a planning and analysis phase; wireframe testing; an application development phase; and prototype testing by healthcare practitioners.
Results: The bilingual (English and French), multi-platform (iOS 6+, Android 2.2+, Windows 7+, and Blackberry 7+) mobile application is scheduled for launch July 2014. The native software is being written in HTML 5 and will allow for offline clinical use. Guidelines content on diagnosis, treatment, risk assessment and counselling will be streamlined and adapted for the mobile environment. The mobile application will be focus-tested twice by Agency physicians and nurses during the development process. A prototype will be available for demonstration at the conference.
Conclusions: Mobile applications can be used to disseminate up-to-date, evidence-informed guidelines and other resources to clinical and public health

professionals. The multi-phase development process for health-related information technology requires a variety of skill sets, including technical expertise, as well as the participation and engagement of healthcare practitioners. Performance and uptake of the tool will be evaluated after the launch.
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TP 154
INCREASING EXTRA-GENITAL STI TESTING WITH NAAT: PUBLIC HEALTH DETAILING IN HIGH-PRIORITY SETTINGS

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Background: CDC has recommended use of nucleic acid amplification test (NAAT) for extra-genital STI testing in men who have sex with men (MSM) since 2010, but uptake outside of dedicated STD clinics has been minimal. In 2011, CDC funded an initiative to increase extra-genital STI screening among HIV-infected MSM. We describe public health detailing efforts to increase this practice through directed outreach, education and technical assistance to high priority clinic-based settings in the Pacific Northwest.
Methods: From October 2012 –13, we identified clinics based on HIV care focus and high-risk patient population in Washington and Oregon States. We inquired clinics about current STI screening procedures, and developed individualized implementation plans for interested clinics, including education and technical assistance via email, phone, and in-person communication.
Results: Seven clinics represented sites where the majority of urban HIV-infected persons seek care in WA and OR were contacted: three private practices in Seattle; university-affiliated clinic and a private provider in Spokane; FQHC in Portland; and the Tacoma-Pierce County Health Department (TPHD). Two of the private providers were already providing appropriate screening. Two clinics were not aware of recommended use of NAAT for extra-genital STI testing and switched to NAAT after appropriate education. We worked with TPHD to implement a rectal STI self-testing protocol through developing and delivering training on epidemiology of extra-genital STIs, efficacy of STI self-testing, and clinic procedures for the clinic's staff. Despite our efforts, not all clinics participated; reasons included our inability to work directly with clinic staff due to mediation by the local health jurisdiction, and competing priorities for clinic staff time during efforts to implement countywide primary care initiatives.
Conclusions: Public health detailing, that is the practice of directed outreach and education of providers, is a strategy that can be used to change clinical practice and increase STI screening.
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TP 155
KNOWLEDGE ABOUT VIRAL HEPATITIS TYPE B AND C FROM NURSING AND DENTISTRY COLLEGES IN A STATE OF BRAZIL

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Background: Viral hepatitis is a serious health problem in the world. It is estimated that two billion people in the world have contracted the type B virus. About 325 million people are chronic patients of hepatitis B and 170 million people have type C. Health professionals are the references to the population about diseases. Therefore, the formation of these professionals should have special attention, ensuring knowledge about sexually transmitted diseases (STD). The objective was to evaluate the knowledge of professors from nursing and dentistry colleges in a city of Brazil's Northeastern area about aspects of Hepatitis B and C.
Methods: It's a cross-sectional exploratory study, conducted through interviews with professors. The data were stored in a software Bioestat® 5.0 databases, 2007.
Results: Professors answered correctly when approached about prevention (93.75%) and signs and symptoms (87.5%), however presented difficulties about transmission (53.12%), diagnosis (62.5%) and treatment (43.75%).
Conclusions: The professors had wispy knowledge about hepatitis. When comparing the professors from both colleges, there were no statistically significant differences. This result suggests a weakness in knowledge about hepatitis type B and C.
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TP 156
COST-CONSEQUENCES EVALUATION OF POC TEST FOR CD4 CELLS IN BRAZILIAN HEALTH SYSTEM

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Background: The Brazilian response tot AIDS has been seen as a success story and it is frequently cited as a model for other developing countries facing the AIDS epidemic. The Brazilian National AIDS Program (NAP) has been working to guarantee the universal provision of antiretroviral (ARV) drugs and a free quality treatment for AIDS patients. In Brazil, the expansion of ART program into rural areas, such as the Amazon region, brings the necessity to improve the laboratory logistics to carry out patients' needs all over the country and CD4 rapid test has been shown as an interesting tool to improve the ART range. CD4 rapid test or point of care (POC) can reduce the logistical barriers and delays in timely dissemination of CD4 results for AIDS patients. At the end, it reflects in the quality of treatment, reducing delay in intervention or loss of follow-up care.
Methods: A costing instrument was designed to collect cost data related to ART treatment. The costs related to both tests (standard CD4 and POC CD4) were collected and compared. In addition, a sort of different scenarios and benefits related to the introduction of POC test for CD4 cells were identified and organized in different group of information (geographic, logistics, etc.).
Results: The analysis of costing instrument data denotes a similar estimated cost for each CD4 test strategies. The cost analysis demonstrated that the introduction of POC CD4 test can be a feasible strategy, and also can reflect in the quality of ART treatment, especially in Amazon region
Conclusions: The introduction of POC CD4 test can alleviate testing burdens at centralized laboratories (LACEN) and also it can improve CD4 test access in rural areas, such as Amazon region. In terms of patient needs, it can bring more quality for AIDS treatment, reducing delay in intervention or loss of follow-up care.
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TP 157
IN VITRO IMMUNE RESPONSE TO ANTIGENS OF HUMAN PAPILLOMAVIRUS (HPV) IN MEN OF SAO PAULO, BRAZIL

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Background: Human Papillomavirus is associated with different types of human cancers, such as anogenital and oral cancer. Some studies show that the appearance of lesions and progression to cancer are related to the type of host immune response. Thus, evidence indicates that the host immune response has a role key in the course of HPV infection. The aim of this study was to evaluate the specific immune response *in vitro* to HPV in men with lesions caused by HPV and without injury caused by HPV.
Methods: We recruited 31 patients and 11 volunteers, who formed four groups, with 12 patients in Group A (HIV+/HPV+); 09 patients in Group B (HIV-/HPV+); 10 patients in Group C (HIV+/HPV-) and 11 healthy subjects in Group D (HIV-/HPV-). Cells culture assay was performed to measure the specific immune response "*in vitro*" Th1/Th2/Th17 (IFN-γ, IL-2, TNF-α, IL-4, IL-10 and IL-17) under the stimulation of quadrivalent HPV vaccine (HPV 6, 11, 16 and 18) and the E7 protein of HPV-16.
Results: The coinfected group (HIV+/HPV+) had higher levels of cytokines, especially Th2 profile, compared with data from the other study groups. The coinfected group showed high levels of IL-6 and IL-10 (Th2 profile) compared to the control Group (HIV-/HPV-), with statistical significance ($p<0.0001$ and $p<0.0001$, respectively).
Conclusions: This study demonstrated a high production of cytokines in the coinfected group, suggesting a strong immunomodulation by coinfection HIV/HPV. However, further studies should be conducted to confirm these data. In addition to presenting essentially a Th2 profile, especially by high levels of IL-6 and IL-10 presented, suggesting that these two cytokines may serve as biomarkers for viral persistence, since HIV seropositive patients have

a higher persistence of HPV, and monitor the progression to more serious injuries.
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TP 158
RISK FACTORS FOR ANO-GENITAL WARTS IN A OMMUNITY-BASED SAMPLE OF HIV-UNINFECTED MEN WHO HAVE SEX WITH MEN IN LIMA, PERU

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Background: Ano-genital warts (AGW) in men who have sex with men (MSM) are common and may be a risk factor for HIV acquisition. We explored the feasibility of measuring external AGW prevalence, and reported condom use for anal sex to identify risk for HIV acquisition among MSM in Lima, Peru.
Methods: 600 MSM (300 with AGW) were recruited from a community-based setting in Lima, Peru in a prospective cohort study to examine the effect of AGW on incident HIV infection. Participants completed a self-administered questionnaire on sexual behavior, and underwent physical examination. Logistic regression was used to assess the association between sexual behavior and AGW.
Results: The median age of study participants was 24 years, with 83.8% reporting sex exclusively with men, and 47.9% self-identifying as gay. During the past three months, 70% of participants had at least one episode of anal sex without a condom, and nearly half reported current STI symptoms (41.2%) including burning while urinating, penile lesions, genital warts, and anal lesions. Upon physical exam, the majority of AGW were limited to anal only (60%). A first experience of anal sex at age 19 years or older (OR=2.9, 95%CI 1.5-5.6) and self-reporting of current STI symptoms (OR=3.4, 95%CI 2.2-5.1) were significant predictors of prevalent AGW. A self-reported receptive role during anal sex (OR=0.55, 95%CI 0.35-0.89) was protective against AGW. An upwards trend for increased AGW risk was identified with an increasing number of episodes of unprotected anal sex, albeit not significantly (p=0.4).
Conclusions: Prevalence of AGW was associated with later age at first anal sex, and STI symptoms. Further research should examine the role of receptive anal sex in protection against AGW, with a larger sample size. Objective tools to measure HIV-risk behaviors are needed, and STI co-infection including HPV related manifestations may be a good proxy.
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TP 159
MATERNAL AND CONGENITAL SYPHILIS AT A HOSPITAL IN EL ALTO / LA PAZ, BOLIVIA, 2012

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Background: Beginning in 2008, the compliance of regulations established by the Health Ministry for pregnant women has been reinforced at the "Hospital Municipal Los Andes" (HMLA) in El Alto, including screening for syphilis and HIV, prevention of vertical transmission and syphilis treatment. Objectives: To find out the proportion of syphilis and HIV in pregnant women, during the first semester of 2012 in the HLMA to follow up on the screening, the procedures to handle congenital and maternal syphilis, and prevention of vertical transmission of HIV.
Methods: Reviews of laboratory notebooks were conducted, which allowed us to obtain the number of pregnant women who had lab tests for syphilis and HIV taken, and the number of newborns who had syphilis tests taken. Medical files of pregnant women who are syphilis-positive and their newborns were identified and reviewed.
Results: A total of 3,308 pregnant women were admitted to the HMLA, with a mean of 28 years of age. 52 women gave a reactive result for VDRL with titers between 1:2 and 1:256, with 51 rapid-tests that resulted in syphilis-positive and a proportion of 1.54%. Out of the 3,308 pregnant women who had the HIV rapid-test taken, 10 gave a reactive result and two were WB confirmed, with a proportion of 0.06%. The 51 pregnant women, during the hospitalization, received the first dose of benzathine penicillin, and so did their partners. Meeting was arranged with those partners prior to discharging the women patients from the hospital. The out-patient treatment was initiated to 10 RN with congenital syphilis, 7 (70%) finished the treatment with 10 doses; the rest with 7, 8 and 9 doses.
Conclusions: The continuous follow-up performed to health personnel was key to ensure full compliance of norms and protocols of MSD. Maternal and congenital syphilis treatment requires to be followed-up on.
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TP 160
PILOT STRATEGY CO - INFECTION TB / HIV IN EL ALTO LA PAZ BOLIVIA

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Background: Pilot Strategy Co - infection TB / HIV in El Alto La Paz Bolivia Introduction - Tuberculosis is a major cause of mortality in developing countries, especially in HIV-infected people. People infected with HIV are more likely to get other infections and diseases than those that are not infected. The first step is to ensure that people with Tuberculosis get tested for HIV rapid timely manner. The second step is to help to carry out the treatment for tuberculosis subsequently it will continue with antiretroviral
Methods: It was analyzed in the city of El Alto La Paz Bolivia with the co-infection committee from June, 2010 to July 2011 in 22 health facilities that realize supervised treatment of tuberculosis, with the following activities: training of health personnel, implementation of actions in environments DOTS,1st training supervision,2nd designing supervision instrument,methodology offer rapid HIV testing people with tuberculosis:

- In everyday attention DOTS environment in each health facilities
- In the meetings organized by Tuberculosis patients each health facilities

Results: The total number of patients with tuberculosis in all its forms reported in 21 health facilities in El Alto it was 528 to 345 which was offered the HIV rapid test and to 183 was not offered From the 345 offered 68 tests were rejected and 277 were accepted. From 277 realized tests and 273 were not reactive and 4 were reactive.
Conclusions: The results of the study of the implementation of rapid tests for HIV co-infection the pilot study for tuberculosis and HIV in El Alto indicates that it is important to implement rapid tests in DOTS health facilities to attract people living with HIV and provide appropriate follow-up , and then to begin with respective ARV treatment.
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TP 161
FACTORS ASSOCIATED WITH HIV AMONG MEN WHO HAVE SEX WITH MEN IN 2 CITIES IN EL SALVADOR: THE IMPORTANCE OF OTHER STIS

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Background: In Central America, men who have sex with men (MSM) have the highest HIV prevalence of any high-risk population. We sought to understand factors associated with HIV infection among MSM using results of the most recent behavioral and biologic survey conducted in El Salvador.
Methods: We used 2008 data from the "Survey of Sexual Behavior and HIV/STI Prevalence among Vulnerable Populations" conducted in San Salvador and San Miguel. Investigators used respondent-driven sampling to recruit MSM, conducting interviews using audio computer-assisted self-interviews and collecting blood for HIV (EIA), genital herpes (HSV-2 EIA), and syphilis (RPR/TPPA) and urine for gonorrhea and chlamydia (NAATS). We conducted univariate and multivariate analyses using crude data to identify factors associated with prevalent HIV infection.
Results: Among 710 MSM tested for HIV, 96 (13.5%) had positive tests. HIV-infected men were young (47% <25 years), reported early sexual debut (mean=13.2 years), history of forced sex (43.9%), and selling sex for money (36.5% past year). Compared to uninfected MSM, HIV-infected men had higher prevalence of laboratory-defined gonorrhea (11.0% vs. 3.3%; p=.009), syphilis (27.1% vs. 11.2%; p<.0001), and HSV-2 (80.2% vs. 42.1%; p<.0001), and similar chlamydia prevalence (5.5% vs. 5.6%; p=1.0). HIV prevalence was higher in San Salvador than San Miguel (14.7% vs. 10.3%;

p=.133); overall bacterial STI (gonorrhea, chlamydia, syphilis) prevalence was similar (17.0% vs. 16.0%, p=.751). Adjusting for age, location, and age of sexual debut, HIV-infected men were more likely to have had forced sex (Adjusted Odds Ratio [AOR= 2.3; p=.007); a positive gonorrhea test (AOR = 3.7; p=.033); a positive HSV-2 serology (AOR= 4.3; p<.0001); and recent STI-related symptoms (AOR=1.8; p=.004).
Conclusions: HIV-infection and STIs were common among MSM in San Salvador and San Miguel. These results highlight the importance of targeted efforts among both HIV-infected and uninfected MSM to reduce risk for HIV acquisition and transmission.
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TP 162
IDENTIFICATION OF STAPHYLOCOCCUS AUREUS IN THE NOSTRILS OF PEOPLE LIVING WITH HIV/AIDS

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Background: Hypothesis: Individuals living with HIV/AIDS have a higher predisposition to colonization, and a likely infection by *Staphylococcus aureus*, depending on their clinical and immunological conditions.
Methods: Cross-sectional study performed at two hospitalization units of a hospital located in upstate São Paulo, Brazil. A sample of nasal secretion was collected from HIV/AIDS patients hospitalized between August/2011 and February/2013, using a Stuart swab. The samples were processed in the microbiology laboratory, and descriptive statistics was used for data analysis. All ethical aspects were complied with.
Results: A total of 265 nasal secretion samples were collected, 60 (22.6%) of which tested positive for *Staphylococcus aureus*, 12 (20.0%) of which were oxacillin-resistant *Staphylococcus aureus*. Regarding the participants' gender, 38 (63.3%) were male, and 22 (36.6%) were female; the predominant age group was 30 to 39 years (40.0%). Regarding the time since they received the HIV diagnosis, 17 (28.3%) had been aware of their condition for five years or less; 36 (60.0%) reported having been exposed to HIV through sexual relations; 23 (38.3%) reported not having been hospitalized over the previous six months. As for the clinical exam results, 16 (26.6%) patients had an HIV count ≤ 100 copies/mL; 25 (41.6%) of lymphocytes T CD4+ below 200 cells/mm^3. It is emphasized that 42 (70/0%) were not following antibiotic therapy and 33 (55.0%) using antiretroviral therapy.
Conclusions: A growth of *Staphylococcus aureus* was observed in 22.6% of the collected nasal secretion samples of people living with HIV/AIDs, with oxacillin-resistant *Staphylococcus aureus* in 20.0% of these. Knowledge of the factors associated to the colonization by *Staphylococcus aureus* is essential for the implementation of prevention and control of infections caused by this microorganism, most of all, for this particular population.
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TP 163
CONDOM USE SELF-EFFICACY AND EXPOSURE TO SEMEN AMONG FEMALE STI CLINIC PATIENTS IN KINGSTON, JAMAICA

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Background: Research on correlates of condom use, including condom use self-efficacy (CUSE), generally has relied on self-reported behavior.
Methods: We evaluated correlates of testing positive for prostate-specific antigen (PSA), a marker of recent semen exposure, among adult female participants in the Assessing Counseling Message Effectiveness (ACME) Study. Participants attended an STI clinic in Kingston, Jamaica and received syndromic treatment. At enrollment and 6-day follow-up visits, women were administered a questionnaire on sexual behavior, which included a validated instrument on CUSE. Vaginal swabs were collected for testing for on-site, rapid PSA testing (ABAcard p30). We conducted principal component analyses (PCA) on the 23 items in the CUSE instrument, which yielded a single component. We used multivariable logistic regression (with generalized estimating equations) to assess predictors of PSA detection.
Results: Of the 300 women in ACME, 285 and 286 had PSA data at the enrollment and follow-up visits, respectively. PSA was detected in 9.3% of visits. PSA detection was more common among single women than those in a relationship (adjusted odds ratio [aOR], 3.7; 95% CI, 1.2-11.1) and among those reporting no contraception use at enrollment compared to condom use only (aOR, 2.9; 95% CI, 1.2-7.2). PSA also was detected more often in women reporting recent sex or recent transactional sex. Finally, women with a lab-confirmed STI diagnosis at enrollment were more likely to have PSA detected than those not diagnosed (aOR, 2.2; 95% CI, 1.1-4.2). The PCA factor (OR, 1.2; 95% CI, 0.9-1.6) and the items from the CUSE instrument that were assessed individually were not associated with PSA.
Conclusions: Although prior research suggests that CUSE is a strong predictor of condom use, we found no evidence of an inverse association between CUSE and semen exposure. Reliance on self-reported condom use in earlier studies could have introduced bias.
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TP 164
RELATIONSHIP BETWEEN LATE HIV/AIDS DIAGNOSIS AND DEATH

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Background: The late HIV/AIDS diagnosis is the risk factors of death these patients. The aim of the study is to correlate the time between diagnosis HIV/AIDS and the mortality.
Methods: This research was conducted through survey data file Specialized Assistance Service of the Cáceres, the state of Mato Grosso in Brazil, in the period 2009-2012.
Results: There were 38 deaths during the study period, being the year of occurrence: 03 (8 %) deaths in 2009, 15 (39 %) in 2010, 13 (34 %) deaths in 2011 and 07 (18 %) deaths in 2012. Of the total of 26 deaths (68 %) were male and 12 (32 %) were female. The average age was 43 years (09-65 years). The average time between diagnosis and the occurrence of death was 30 months (0-175 months) , with 17 deaths (45 %) occurred in the first 12 months, 08 (21 %) of 13 deaths 24 months , 05 (13 %) deaths 37-48 months and 08 (21 %) deaths over 49 months. Regarding the underlying cause of death mentioned on the death certificate, 45 % was related to HIV and other infections.
Conclusions: Of deaths during the study period there was a higher occurrence in 2010 and in males. Cases studied most of the deaths occurred in the first year after diagnosis, which may suggest that the initiation of treatment was delayed. We note that in 2012 there was a significant reduction in total mortality, which may be related to early diagnosis and/or advancement in antiretroviral therapy associated with good adherence to treatment and rapid testing that facilitate access to diagnosis.
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TP 165
SEX WORK CHARACTERISTICS ASSOCIATED WITH FORCED SEX IN THREE CITIES IN HONDURAS, 2013

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Background: A 2006 study of female sex workers (FSW) in Honduras found HIV prevalence rates of 5.5% in Tegucigalpa (TG), 4.6% in San Pedro Sula (SPS), and 1.9% in La Ceiba (LC), and identified sexual violence as an HIV risk factor. This report focuses on sexual violence and HIV among FSW in those three cities.
Methods: Respondent driven sampling was used to recruit FSW who received a face-to-face computer-assisted survey and were tested for HIV (Determine and ELISA, plus Western Blot if discordant). RDSAT 7.1.38 and STATA 12.0 were used for statistical analyses.
Results: HIV prevalence (and 95% CI) was 3.5% (1.3-5.8) among 584 FSW in TG, 6.6% (4.1-9.3) among 588 in SPS, and 15.6% (7.7-23.8) among 189 in LC. Prevalence (and 95% CI) of sexual violence (ever forced sex) was 37.5% (32.1-43.5) in TG, 39.0% (34.3-45.1) in SPS, and 38.1% (28.9-48.7) in LC. Rates of sexual violence were higher ($p < .005$) among FSF who started sex work at an older age (≥18 vs. <18): 85.8% vs. 14.2%; 76.5% vs. 23.5%; 67.9% vs. 32.1%. Rates were also higher ($p < .005$) among FSW who had engaged in sex work longer (> vs. < 1 year): 85.8% vs. 14.2%; 74.9% vs. 25.1%; 80.8% vs. 19.2%).
Conclusions: HIV prevalence rates were similar to those reported in 2006, except for noticeably higher rates in LC. Rates of sexual violence were high in all three cities and consistently associated with older age at initiation and more than 1 year of sex work. Violence sex among FSW is a complex issue in Honduras. It is recommended that public health interventions to reduce sexual violence among sex workers are reinforced with the support of other sectors such as the economy, political leadership and gender inequality in Honduras.
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TP166
PREVALENCE OF HIV INFECTION IN SEX WORKERS IN A CAPITAL CITY OF NORTHEAST BRAZIL

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Background: OBJECTIVE: To estimate the prevalence of HIV infection in female sex workers in Northeast Brazil.
Methods: Cross-sectional study performed with sex workers in Teresina, Northeast Brazil. Data collection was performed using an instrument containing sociodemographic information and risk behavior for contracting HIV. Next, a 10ml peripheral blood sample was drawn for an anti-HIV test using the ELISA method. Data analysis was performed using the SPSS statistical package, version 21.0. This study was approved by the Research Ethics Committee.
Results: The participants were 402 female sex workers. Their mean age was 30.5 years (SD=9.2; min = 18; Max= 64). Most women referred not having a steady partner (63.4%), and three to six years of schooling (67.2%). Regarding their sexual behavior, 57.7% had their first intercourse before the age of 15; 16.9% reported a history of sexually transmitted infections, with warts being the most commonly cited. The number of sexual partners per week ranged from one to over 20, with a mean 2.4 (SD=1.8). A total of 122 (30.3%) sex workers were unaware of the signs and symptoms of these infections; 380 (94.5%) women agreed to provide a blood sample, of whom 2.4% tested positive for anti-HIV.
Conclusions: The high prevalence of HIV, added to the multiplicity of sex partners and the women's poor knowledge regarding sexually transmitted infections reveal the vulnerability of these women to HIV. Knowledge on HIV epidemiology among populations of difficult access such as sex workers is essential to plan effective prevention and control programs in regions were the epidemics is concentrated, as in Brazil.
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TP 167
DETERMINANTS OF CONGENITAL SYPHILIS FROM NATIONAL SURVEILLANCE DATA ANALYSIS IN BRAZIL

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Background: According to national surveillance data the notification of congenital syphilis in Brazil increased in the last 10 years (incidence: 3.9/100.000 in 2012). Achieving elimination (<0.5/100.000) by 2015 is a strategic goal and challenging target for the Ministry of Health (MOH).
Methods: We assessed frequency of potential determinants of vertical transmission of syphilis in Brazil analyzing surveillance data from the National Information System of Diseases Notification (SINAN). Analysis was done by Region and State.
Results: Regarding cases of syphilis in pregnant women in 2012: 22,9% were diagnosed in the first trimester, 30,3% in the second and 38,7% in the third; 83,4% were treated with penicillin, 3,3% with other drugs, and 7,3% did not receive any treatment (range:0-22,4%) - in 6,0% data were not available. Frequency of untreated mothers varied among States: in Acre (22.4%), Tocantins (15.0%), Paraná (11.8%), Rio de Janeiro (11.2%), Mato Grosso do Sul (10.4%), Espirito Santo (10.1%), Minas Gerais (9.4% Pernambuco (8.9%) and Bahia (8.2%) frequency was higher than national average. Regarding cases of congenital syphilis in 2012: 73.3% of their mothers had at least one antenatal consultation and, among these, 56.8% had their syphilis diagnosed during antenatal care. Among syphilis positive mothers, 14.4% did not receive any treatment and in 61.9% their male partner was not treated. In addition, the proportion of mothers of cases of congenital syphilis with 1-3 (8.9%) and with 4-7 (31.6%) years of education was greater than in pregnant women in general, respectively 5.4% and 24.7%(data from National Live-birth Information System).
Conclusions: Gaps still exists in antenatal care and a significant number of cases may be averted with timely diagnosis and adequate treatment of syphilis during pregnancy. In 2014 MOH will implement Local Congenital Syphilis Committees in capital cities and to scale up the use of penicillin during pregnancy in primary health
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TP 168
ACCEPTANCE OF HIV/SYPHILIS DUO RAPID TESTING: SURVEY OF ATTITUDES OF ANTENATAL CARE PROVIDERS

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Background: Mother-to-Child Transmission of HIV and congenital syphilis are two important public health problems in many developing countries. In Peru, syphilis and HIV screening coverage has improved since the introduction of rapid tests by the CISNE Project (Spanish acronym "Immediate Cure for Neonatal Syphilis") and Ministry of Health (MOH) in 2010. The aim of this study was to determine the acceptability of HIV/Syphilis Duo rapid testing among antenatal care service providers.
Methods: In September 2013, a cross-sectional survey was conducted with professional midwives in Ventanilla in northern Callao, Peru. First, we trained midwives from 10 health centers in the operation of the HIV/Syphilis Duo (SD Bioline) rapid test. After one month, we surveyed the midwives about their attitudes regarding the test.
Results: Of the 28 midwives surveyed, 100% reported satisfaction with the Duo rapid test and 100% considered that the Duo test is better than separate HIV and syphilis rapid tests. Participants' reasons for preferring the Duo test were: 72% since it uses only one drop of blood to provide both results, 21% because it uses only one test cassette, and 7% since they felt well-trained. Thirty-two percent (9/28) also identified difficulties with the test cassette (packaging, color of the numbers and letters).
Conclusions: Antenatal care service providers are very receptive to the use of the HIV/Syphilis Duo rapid test. They identified many advantages of the test that could support the introduction of Duo tests as the standard of care in pregnancy care and recommendations that, if modified, could optimize the testing process.
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TP 169

SYPHILIS IN THE MBYA-GUARANÍ POPULATION OF MISIONES (ARGENTINA): EVIDENCE PROVES THE NEED TO DESIGN AND IMPLEMENT A SCHEDULED INTERVENTION

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Background: In May 2012, the indigenous population of the ethnicity Mbya-Guaraní was included for the first time in the School Health Program (Ministry of Health) in the province of Misiones, Argentina. Due to the lack of data about syphilis in this population, we decided to study the presence of *Treponema pallidum*infection among the program participants and their communities.
Methods: Between May 2012 and August 2013, 652 indigenous people (52.3 % women) living in 19 villages were studied. Age ranges were, from 0 to10 years (n=250); from 11 to 20 years (n=333), from 21 to 40 years (n=50), more than 41 years (n=19). The presence of anti-*T. pallidum*antibodies in blood serum samples were screened by a non treponemal test (VDRL). Positive samples were then confirmed using a treponemal test (TPHA).
Results: Antitreponemal specific antibodies were detected in 5.98 % (39 cases) of the population tested. The distribution of cases was highly variable among the communities and 8 (42%) with no cases reported. Fifty-three point eight percent of the cases were male. Age distribution was: from 0 to10 years (4 cases), two cases of congenital syphilis diagnosed in the hospital at the time of birth and two children 7 years old, which had not previously been diagnosed; from 11 to 20 years (22 cases), from 21 to 40 years (11 cases), and > 40 years (2 cases).
Conclusions: This study has shown a high prevalence of syphilis in some indigenous communities in the province of Misiones (Argentina). The idiosyncrasy and high mobility of the Mbya-Guaraní population, based on a semi-nomadic lifestyle, makes necessary to design a comprehensive program of intervention, for the detection, clinical assessment, treatment, control and prevention of this re-emerging and under-diagnosed disease.
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TP 170

CLINICAL EVALUATION OF A DUAL RAPID DIAGNOSTIC TEST FOR HIV AND SYPHILIS, SD BIOLINE HIV/SYPHILIS DUO, LIMA, PERU 2013

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Background: Screening for HIV and syphilis is highly recommended in pregnant women and at-risk groups by the World Health Organization. Recently, test developers have created rapid point-of-care tests that can detect multiple infections with a single specimen using a single device. The aim of this study was to evaluate the clinical performance of the BIOLINE HIV/Syphilis Duo test.
Methods: Participants included men who have sex with men and transgender women and were recruited at two sexual health clinics in Lima, Peru. Gold standard testing was? conducted using blood samples collected by venipuncture, included *Treponema Pallidum* Particle Agglutination (SERODIA-TPPA, Fujirebio Diagnostics, Inc., Japan) and 4th-generatation enzyme immunoassay (Genscreen™ ULTRA HIV Ag-Ab, Bio-Rad, France) with a confirmation Western Blot test (NEW LAV BLOT I, Bio-Rad, France). The SD BIOLINE HIV/Syphilis Duo test (Standard Diagnostics, Korea) uses a solid phase immunochromatographic assay to detect IgG, IgM and IgA antibodies to HIV-specific antigens (HIV-1 gp41, sub O, HIV-2 gp36) and specific antibodies to recombinant *Treponema pallidum*antigens (17KDa) in human blood. For the Duo test, a finger prick blood specimen was used. Sensitivity and specificity were calculated and the exact binomial method was used to determine 95% confidence intervals (CI).
Results: Of the 126 participants, the TPPA was positive in 52 (41.2%) specimens and HIV positive in 20 (15.9%). The Duo test was positive for syphilis antibodies in 46 and positive for HIV antibody in 20 specimens. The Duo test sensitivity for detection of *Treponema pallidum*antibodies was 88.5% (95% CI: 76.6%, 95.7%) and specificity 100% (95% CI: 95.1%, 100%). For HIV antibodies, the sensitivity was 100% (95% CI: 83.16%, 100%) and specificity 100% (95% CI: 96.6%, 100%).
Conclusions: The SD BIOLINE HIV/Syphilis Duo test shows high clinical performance in point-of-care settings in Lima, Peru. This test should be considered for the use in clinical settings to increase dual screening of HIV and syphilis.
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TP 171

RECENT SYPHILIS INFECTION AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN (MSM) IN LIMA, PERU

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Background: Syphilis prevalence continues to be high among at-risk populations such as men who have sex with men (MSM). In low and middle-income countries, syphilis remains a neglected epidemic with a lack of effective prevention strategies.
Methods: PICASSO is a clinic-based study of MSM in Lima, Peru that includes behavioral surveys and syphilis testing with rapid plasma reagin (RPR) titers (BD Macro-Vue RPR, Becton-Dickinson, NJ) and *Treponema pallidum* Particle Agglutination (Serodia TP-PA, Fujirebio Inc., Japan). Participants with recent syphilis infection (RPR titer ≥1:16) were compared to participants with non-reactive titers. Participants with RPR titers 1:1-1:8 were excluded. Age in years was analyzed as a continuous variable. HIV perceived risk was self-reported on a 4-point scale. Factors associated with recent syphilis were explored using Poisson regression to compute risk ratios (RR).
Results: The frequency of recent syphilis infection was 26/171 (15.2%). More individuals with recent syphilis infection were HIV-infected; 6/26 (23.0%) compared to 18/91 (19.8%) participants with nonreactive RPR titers (RR 1.16, p = 0.711). Recent syphilis infection was associated with younger age (RR 0.95, p =0.016) and higher self-perceived risk of HIV (RR 1.33, p =0.06). Insertive anal sex was associated with a lower relative risk of recent syphilis infection (RR 0.25, p = 0.05) compared to receptive or versatile. Other sexual behaviors, substance use and alcohol use were not associated with recent syphilis infection.
Conclusions: Recent syphilis infection was common in the clinic-based sample of high-risk MSM. Frequent syphilis and HIV co-infection suggest an integrated strategy is necessary for prevention and treatment efforts. Our findings suggest that patterns of syphilis transmission are only partially explained by current measures of behavioral risk.
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TP 172

EXAMINING ASSOCIATIONS BETWEEN SEX VENUES AND RECENT UNPROTECTED ANAL INTERCOURSE AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN (MSM) IN LIMA, PERU

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Background: Published literature on MSM has linked unsafe sexual behavior with certain sex venues. For sex venues previously described and frequently

reported by high-risk MSM in Lima, Peru, we explored whether participants reporting anal sex at these venues also engage more frequently in recent unprotected anal intercourse (UAI).
Methods: MSM and male-to-female transwomen (TW), 18 years or older and at high-risk for syphilis, were recruited for a clinic-based study. The interview-administered survey collected socio-demographics and recent sexual behavior, including reported anal sex at particular venues: saunas, disco/club, public places (i.e. public bathrooms/parks), and hair salons. Poisson regression was used to calculate prevalence ratios (PRs), adjusted for age and gender identity (MSM vs. TW), between anal sex at venues and reporting UAI in the past 3 months (labeled as "recent UAI"). Due to collinearity between sex venues, separate models were created for each.
Results: Of the 175 participants, 38 (22%) were TW and mean age (+/- standard deviation) was 31.1±10.4 years; 91 (52%) reported recent UAI. Of the 37 (21%) reporting anal sex in public places, 26 (70%) reported recent UAI. Of the 29 (17%) reporting anal sex in saunas, 20 (69%) reported recent UAI. Of the 27 (15%) reporting anal sex at discos/clubs, 17 (63%) reported recent UAI. Of the 15 (9%) reporting anal sex in hair salons, 8 (53%) reported recent UAI. Participants reporting recent anal sex in public places were more likely to report recent UAI than participants who didn't report anal sex in public places (aPR 1.71, 95% CI: 1.32, 2.22).
Conclusions: High-risk MSM and TW in Lima, Peru, reporting anal sex in public places are also more likely to report recent UAI. HIV/STI prevention efforts for MSM and TW in Lima should target public places, such as public bathrooms or parks, with sex education and screening activities.
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TP 173
ADVANTAGES OF FILTER PAPER PRENATAL SCREENING FOR SYPHILIS AND HIV IN MUNICIPALITIES IN RIO DE JANEIRO STATE

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Background: Prenatal screening to prevent congenital syphilis and perinatal HIV is challenging in municipalities with low laboratory capacity. A screening program utilizing filter paper processed by a centralized state lab was implemented in the 92 municipalities of Rio de Janeiro state beginning in 2010.
Methods: Interviews were conducted with a sample of program coordinators in 7 municipalities of Rio de Janeiro to gauge program acceptance and advantages/disadvantages of filter paper screening in municipalities with varying socio-economic-environmental profiles. All interviews were recorded and transcribed. Transcriptions were analyzed and cross-referenced with secondary data obtained from the Ministry of Health and the Brazilian Institute of Geography and Statistics.
Results: Filter paper screening was most accepted and viewed as the most useful in municipalities where traditional laboratory testing was problematic due to local laboratory inefficiencies shortages and, in at least one case, natural disaster that led to the laboratory closing. Some municipalities reported filter paper screening as a facilitator in partner testing and treatment. Increased notification resulting in improved patient follow-up was identified as an advantage of the program, especially in municipalities with lower institutional capacity where underreporting is common. Higher cost of filter paper and delayed results were identified as disadvantages in municipalities with higher laboratory capacity.
Conclusions: Screening with filter paper processed by a centralized lab is advantageous for municipalities with low laboratory capacity, reducing wait times for testing and results, and improving reporting and follow-up to prevent vertical transmission of HIV and syphilis. Municipalities may require different screening processes depending on their institutional capacity.
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TP 174
HIGH PREVALENCE OF CT/NG INFECTION IN EXTRAGENITAL SITES AMONG MSM IN LIMA, PERU

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Background: *Chlamydia trachomatis* (CT) and *Neisseria Gonorrhoeae* (NG) are among the most common STIs worldwide. In Peru, routine screening and testing for CT and NG is lacking as syndromic management for urogenital infections is used. Pharyngeal and anal CT and NG infections may represent an unrecognized burden limiting effective STI control these in Peru
Methods: We conducted a cross-sectional, clinic-based study with high-risk men who have sex with men (MSM) and transgender women (TW) in Lima, Peru and screened them for pharyngeal and anal CT and NG infection (CT/NG Aptima Combo2, GenProbe-Hologic, San Diego, CA) using self-collected anal and pharyngeal swabs. Participants with positive results received treatment based on Peruvian and US-CDC guidelines. Prevalence ratios (PRs) were calculated for associations between socio-demographics, sexual risk behaviors, and infection
Results: We enrolled 133 MSM and 38 TW with a median age of 29.5 years (interquartile range (IQR) 23.4 – 37.9), a median of 5 recent male partners (IQR 2 - 10). Prevalence of CT or NG infection at either anatomical site was 29.8%. Pharyngeal CT and NG infection was 8.8% and 6.5%, respectively, while anal CT and NG infection was 16.3% and 7.6%, respectively. Among CT or NG infected participants, 74.5% had one infection at one anatomical site, 7.8% had the same infection at both sites, and the remaining 17.6% had multiple infections at multiple sites. Pharyngeal CT infection was significantly higher among TW, PR 3.03 (95% CI 1.17 – 7.87). Anal NG infection was significantly associated with younger age, PR 0.93 (95% CI 0.87 – 0.98). No significant associations were found for pharyngeal NG or anal CT infection
Conclusions: Prevalence of pharyngeal and anal CT and NG infections are considerable among high-risk Peruvian MSM/TW. In accordance with WHO guidelines for MSM and transgender sexual health, increasing access to CT/NG screening including non-genital sites should be implemented
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TP 175
PLACE MATTERS: SEXUAL PRACTICES, HIV TESTING AND HIV STATUS AMONG TRANSWOMEN SEX WORKERS IN PERU

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Background: Studies in Peru have shown that transwomen are at high risk of HIV/STIs and that sex work and compensated sex are associated with higher HIV/STI prevalence among transwomen. However, there has been no systematic description of transwomen sex workers (TSWs). Our objective was to describe TSWs in metropolitan Lima.
Methods: Following extensive ethnographic mapping of sex work venues, we randomly selected venues and sampled the TSWs present with pre-established guidelines. We used smartphones to survey TSWs about their socio-demographic characteristics, recent sexual practices, and HIV testing history and status. We analyzed differences between groups of TSWs in different geographic zones using bivariate analyses and appropriate tests of association.
Results: We surveyed 261 TSWs from 28 sex work venues in central, south, north and east Lima. All TSWs reported male/transwomen sex partners, with 69% reporting only client partners. The frequency of receptive anal intercourse (RAI) with clients was high across zones (range: 94%-100%), with the highest non-condom use in east Lima (7% vs. 2% elsewhere, $p<0.01$). Insertive anal intercourse (IAI) with clients was lower in south Lima (20% vs. 54% elsewhere, $p<0.01$), accompanied by higher non-condom use in south Lima (16% vs. 6% elsewhere, $p<0.01$). Of the 81 TSWs reporting non-client male/transwomen sex partners, 91% had RAI with a median of 8% for non-condom use and 24% had IAI with a median of 33% for non-condom use. Ever HIV testing was lower in east (76%) and central (84%) Lima versus elsewhere (95%) ($p=0.01$). Among those tested, report of being HIV positive varied greatly: 5% (north), 12% (south), 17% (center), and 46% (east) ($p<0.01$).

Conclusions: Our results show that sexual and HIV testing practices and HIV prevalence vary by geographic zone. This information should be used to better target future prevention efforts with TSWs in Lima.
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TP 176
LOCALLY GENERATED DATA 2012 FROM THE ARGENTINEAN GONOCCOCAL ANTIMICROBIAL SURVEILLANCE PROGRAM

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Background: Syndromic treatment of gonorrhea infection in Argentina was implemented in late 90s since it's considered an important tool to reduce HIV transmission and it's recommended in developing countries where laboratory diagnosis is usually not available. To ensure valid results a previously epidemiological local survey become necessary to assess the bacterial susceptibility, since one of the disadvantage in the management application is the emergence and transmission of resistance to most antimicrobials used for treatment. Unfortunately, this strategy decreased the recovery of strains for susceptibility studies. The aims of the present study were to examine and describe the prevalence of *N gonorrhoeae* antimicrobial resistance (AMR) in 2012 in Argentina.
Methods: We report the susceptibility data collected during 2012 over 404 *N. gonorrhoeae* isolates submitted by 34 laboratories distributed in all country belonging to the AR-GASSP. The strains were examined at the National Reference Laboratory in STI, regarding their susceptibility to ceftriaxone, azithromycin, penicillin G, ciprofloxacin and tetracycline using agar dilution method, according to CLSI and WHO protocols. β-lactamase production was identified using nitrocefin discs. Susceptibility to spectinomycin was discontinued in 2011.
Results: The AMR (intermediate susceptibility) levels were as follows: Ceftriaxone 0% (0%), MIC50 0.008μg/ml – MIC90 0.032μg/ml; Azithromycin 0% (32.7%), MIC50 0.25μg/ml – MIC90 0.5μg/ml; Penicillin 36.6% (57.7%), MIC50 1μg/ml – MIC90 8μg/ml; Ciprofloxacin 49% (0%), MIC50 0.016μg/ml – MIC90 16μg/ml and tetracycline 29.7% (60.4%), MIC50 1μg/ml – MIC90 16μg/ml.
Conclusions: The AMR of *N. gonorrhoeae* is high, actually in Argentina only a few of isolates are susceptible to all antibiotics used in gonorrhea treatment. Ceftriaxone may still be used as first-line treatment. Surveillance programs to monitor levels of antibiotic resistant isolates are essential to ensure therapeutic success.
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TP 177
PERCEPTION OF HIGH SCHOOL STUDENTS ON RISK FOR ACQUIRING HIV AND UTILIZATION OF VOLUNTARY COUNSELING AND TESTING SERVICE IN DEBRE-BERHAN TOWN, ETHIOPIA: A QUANTITATIVE CROSS-SECTIONAL STUDY

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Background: HIV epidemic among youth is largely ignored and remains invisible to both young people themselves and to the society as a whole, for which reason the young are more likely to carry the virus for years without knowing that they are infected. The study aimed to determine the extent of HIV risk perception and utilization of VCT service among high school students in Debre-berhan Town of Amhara Region, Ethiopia.
Methods: A descriptive cross-sectional study was conducted among public secondary schools in Debre-berhan Town from November 2010 to January 2011. A stratified random sampling technique was used to recruit study participants and semi-structured administered questionnaire was used to collect the necessary data. Data was entered and analyzed using SPSS version 17.0 packages.
Results: We attained a response rate of 96.3% and a total of 339 students were participated in the study. The result showed that 30(8.8%) of the students were sexually active with mean age of first sexual encounter being 16.4 +/- 2.05SD in years. About 12(3.5%) of sexually active students admitted having sex with different persons within the last 6 months. Among sexually active respondents, only 13(3.8%) had ever used condom and 15(4.4%) had VCT service. There was no statistical significant association between risk perception and ever use of VCT service (p-value > 0.05; AOR (95% CI) =1.0 (0.3, 4.02).
Conclusions: Students in the study area were engaged in risky sexual behavior despite high level of knowledge about HIV. The perception of risk for acquisition of HIV and rate of VCT utilization was low. Thus, education on HIV/AIDS by making a part of school curriculum and encouraging the existing health institutions to provide youth-friendly sexual **Key words:** Students, Risk perception, VCT use, Debre-berhan Town
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TP 178
HIV PREVALENCE AND SEXUAL RISK BEHAVIORS AMONG MEN WHO HAVE SEX WITH MEN IN NIGERIA

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Background: Men who have sex with men have a higher burden of HIV, yet they remain understudied in Nigeria. We evaluated the prevalence and correlates of HIV among men who have sex with men (MSM).
Methods: Cross-sectional study using respondent-driven sampling was conducted in six states in Nigeria in 2010. MSMs underwent interviewer-administered surveys and HIV tests. Weighted HIV prevalence was calculated using RDS analytic tool. Logistic regression was used to determine correlates of HIV infection, stratified by state.
Results: Total number of MSM recruited ranged from 199 in Federal Capital Territory (FCT) to 313 in Cross River State (CR). Median age ranged from 22 years in Cross River to 26 years in Kano state. HIV prevalence was highest in the FCT at 37.6% and lowest in CR (2.4%). It was 8.2% in Kano, 16.2% in Kaduna, 3.3% in Oyo and 15.8% in Lagos state. Overall 36% of all respondents had engaged in male sex work (MSW) in the last 12 months. Overall consistent condom use during transactional and non-transactional sex was 34%. By state, it was lowest in Kano (12%) and highest in CR (52%,p≤0.001) while it was lowest in Kano (8%) and highest in the FCT (57%, p≤0.001) during non-transactional sex. Factors associated with HIV varied by state; this includes being older than 25 years in Kaduna [AOR: 3.8; 95%CI: 1.28-11.00] and Oyo state [AOR: 6.7; 95%CI: 1.80-24.25] being the insertive partner in Kano state [AOR: 0.17; 95%CI: 0.05-0.67] and being the receptive partner in Lagos state [AOR: 4.11; 95%CI: 1.21-14.00].
Conclusions: MSM in Nigeria have a high burden of HIV with considerable heterogeneity across states. Engaging in male sex work and low consistent condom use sustains a potent HIV transmission bridge between MSM network and between MSM and the general population. Further research is needed to understand the divergent factors associated with HIV at state level.
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TP 179
VIOLENCE EXPOSURE, STD AND SEXUAL HEALTH RISK OUTCOMES: A NATIONALLY REPRESENTATIVE STUDY FROM KENYA

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Background: The Kenya Violence against Children Study (VACS) is the first national survey of violence against children in Kenya and was designed to yield lifetime and current estimates of violence and the association of such violence with HIV/STD transmission risk. The purposes of this presentation are to (1) examine relationships between how forms of violence may co-occur in childhood, including emotional, physical and sexual violence and (2) understand how patterns of violence exposure are linked to distinct sexual health outcomes.
Methods: VACS, a nationally representative household survey of 1,306 females and 1,622 males 13 to 24 years of age, used a three-stage cluster sample survey design. 238 clusters were randomly selected; an equal probability systematic sampling method was applied in each cluster to select a uniform sample of households per cluster. In each selected household that had an eligible 13 to 24 year old, one female or male was randomly selected using the Kish method.
Results: Among 18 to 24 year olds, 13% of females and 9% of males experienced sexual, physical *and* emotional violence prior to age 18. Only 6% of females and 1% of males experienced childhood sexual violence without reporting physical or emotional violence. Initial analyses indicate that males who experienced childhood sexual violence were more likely to meet criteria for a STD diagnosis in the past year than males who had not experienced

sexual violence ($p < .01$). Additional analysis will examine how multiple violence exposures are linked to sexual health outcomes.
Conclusions: Results indicate that the prevalence of violence against children should be further addressed in Kenya and that children often face multiple forms of exposure. Such research has implications for breaking down silos of medical care and the design of increasingly effective HIV/STD service delivery for those children who continue to experience violence.
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TP 180
SEROPREVALENCE AND ASSOCIATED RISK FACTORS OF SYPHILIS INFECTION AMONG PREGNANT WOMEN AT GONDAR, NORTHWEST ETHIOPIA

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Background: Sexually transmitted infections (STIs) are a serious public health problem in developing countries, including Ethiopia. Syphilis caused by *Treponema pallidum*remains a major cause of reproductive morbidity and poor pregnancy outcomes in developing countries. Stillbirth, perinatal death, serious neonatal infection and low-birth weight babies are attributed from syphilis seropositive mothers. Therefore, for better understand the syphilis epidemiology among pregnant women in Ethiopia; the seroprevalence of syphilis and risk factor correlates was assessed.
Methods: The study was done on 2385 pregnant women attending antenatal care clinic (ANC) at Gondar, Northwest Ethiopia, from January 2009 to December 2011. After obtaining a written informed consent sociodemographic and clinical characteristics of each study participant was collected using structured questionnaires. All study participants were screened serologically for syphilis infection. Data were analyzed by SPSS version 16. A descriptive analysis was used to determine demographic characteristics of the study participants. Chi-square test was employed to examine possible risk factors for syphilis infection and significance levels were chosen at 0.05 levels with a two-tailed test.
Results: Of the total, 69(2. 9%) were confirmed as seropositive for syphilis. Pregnant women with an age group of 21-25 years of old were the most seropositive (3.4%), followed by 26-30years of old (3.1%). The prevalence of syphilis infection was 3.2% in urban and 2.2% in rural pregnant women. Relatively high prevalence of syphilis infection were identified among students (4.2%) followed by governmental employee (3.8%).
Conclusions: The study indicated that the prevalence of syphilis among pregnant women attending ANC is declining. However, relatively syphilis is more prevalent in the young and urban pregnant women. Emphasis on education to young people on STI risk behavioral change and partner follow up and notification for exposure to syphilis and treatment should be given.
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TP 181
THE BURDEN AND RISK FACTORS OF MULTIPLE REPRODUCTIVE TRACT INFECTIONS AMONG HIV-SEROPOSITIVE WOMEN IN NORTH INDIA

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Background: Screening of women for Reproductive Tract infection (RTI) e.g. Human Papillomavirus (HPV), *Chlamydia trachomatis (C. trachomatis)* etc., in developing countries is highly desirable because of asymptomatic infection. Presence of sexually transmitted diseases (STDs) facilitates shedding of human immunodeficiency virus (HIV). Therefore, the present study was conducted to investigate the presence of HPV, *C. trachomatis, Trichomonas vaginalis (T.vaginalis)* and *Neisseria gonorrhoeae (N. gonorrhoeae)* infections in HIV-seropositive women in North India.
Methods: The study included a total of 220 women, of which 120 cases were HIV-seropositive, and attending the antiretroviral therapy (ART) clinic at New Delhi. The remaining 100 control subjects were coming for routine check-up in Gynecological clinic. Cervical scrapes were used for evaluation of RTIs with prior informed consent. The samples were tested for HPV, *C. trachomatis, T. vaginalis* and *N. gonorrhoeae by* using *PCR*, and *Bacterial vaginosis* was detected through cervical cytology.
Results: Among the HIV-seropositive cases, positivity for infections including HPV 19% (23/120), *C. trachomatis* 12% (14/120), *T. vaginallis* 6% (7/120) and *Bacterial vaginosis* was observed 21% (25/120). In control subjects, prevalence of HPV 4% (4/100), *C. trachomatis* 2% (2/100), *T. vaginalis* 2% (2/100) *and B. vaginosis* was observed in 4% (4/100). We observed multiple partners (p=0.0005, OR=0.1933, 95%CI=0.077-0.48) and smoking (p=0.0164, OR=2.54, 95%CI=1.26-4.7) as a positively associated risk factors for RTI. *N. gonorrhoeae* infection was not observed in any sample. So, prevalence of RTIs is more in HIV patient in comparison to healthy controls.
Conclusions: The presence of HPV, *C. trachomatis, T. vaginalis and B. vaginosis* infection demonstrates its role in HIV-seropositive women in North India. There is need to continuously screen, counsel, treat and monitor trends of RTIs, Future studies may be conducted on evaluating the role of host genetic factors in the development of RTIs and related complications in symptomatic and asymptotic women.
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TP 182
TTANGO: OPERATIONAL PERFORMANCE OF A MOLECULAR BASED CHLAMYDIA AND GONORRHOEA POINT-OF-CARE TESTING IN REMOTE AUSTRALIAN ABORIGINAL COMMUNITIES

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Background: TTANGO (Test, Treat ANd GO) will measure the clinical effectiveness, cost-effectiveness, and acceptability of a molecular-based point-of-care (POC) test (GeneXpert) for chlamydia (CT) and gonorrhoea (NG) infections in remote Australian Aboriginal communities. TTANGO is a crossover randomized control trial, with 12 participating primary health care centers; six services will use POC in year 1, and the other six in year 2. Services not using POC will maintain standard practice in each year. Routine reference laboratory tests for CT and NG will continue throughout the trial in both study arms.
Methods: Since June 2013, five of the six sites have been randomized to using the GeneXpert CT/NG test. We describe the sensitivity and specificity of the GeneXpert CT/NG test compared to routine laboratory NAAT tests.
Results: Of the 444 POC tests performed, the sensitivity and specificity of the GeneXpert test for CT infection was 100% (95%CI: 92.3-100.0) and 99.2% (95%CI: 97.8-99.8), respectively and for NG infection the sensitivity and specificity was 100% (95%CI: 88.4-100.0) and 100% (95%CI: 99.1-100.0), respectively. There were three discordant CT results which were positive on GeneXpert and negative on the laboratory NAAT test. There were 25 errors (5.6% of all tests) predominately due to operator error in sample preparation; repeat testing of all samples gave valid results. Further errors have been minimized with training and/or changes to the sample transfer device (plastic pipette to syringe).
Conclusions: The sensitivity and specificity of the GeneXpert CT/NG test is both excellent and consistent with laboratory and field evaluations. An updated sensitivity and specificity estimate will be provided in June 2014. The uptake of CT and NG testing generally has been higher than expected, possibly related to initial enthusiasm surrounding the use of this new technology and increased awareness about STI screening during trial implementation. Testing rates will be monitored to confirm if this unexpected benefit is sustained.
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TP 183
TRENDS OF RESISTANCE TO ANTIMICROBIALS RECOMMENDED CURRENTLY AND IN PAST FOR MANAGEMENT OF GONORRHEA IN A TERTIARY CARE CENTRE IN INDIA: 2007-2012

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Background: *Neisseria gonorrhoeae* continues to expand the resistance equally to older, less expensive antimicrobials and to new agents. Antimicrobial resistance (AMR) and lack of new antimicrobials are ongoing challenges. AMR surveillance is recommended to ensure that first-line treatments remain effective and local or international trends should be documented. The study was aimed to analyze the AMR profile and trends in resistance to antimicrobials used in past and at present for treatment of gonorrhea.
Methods: Antimicrobial susceptibility testing of 261 consecutive isolates was determined for penicillin, tetracycline, ciprofloxacin, ceftriaxone, azithromycin and spectinomycin by calibrated dichotomous sensitivity technique and Etest method. ß-lactamase production was identified by chromogenic cephalosporin method. Trend data were analyzed statistically using chi-square test and p value was determined.
Results: During the study period, penicillin resistance was 53.3%; out of them penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was 47.9%. Rate of PPNG increased significantly from 36.4% in 2007 to 65.4% in 2012 (p=0.008). In tetracycline, 25.3% and 74.7% were tetracycline-resistant *Neisseria gonorrhoeae* (TRNG) and Not-TRNG respectively. For ciprofloxacin, resistance was 89.7% (including 42.1% high level resistance. TRNG isolates and ciprofloxacin resistance increased significantly from 12.1% and 75.8% in 2007 to 32.7% and 96.4% in 2012 respectively. Decreased susceptibility to ceftriaxone was 1.8% in 2008 and it increased to 15.8% in 2010 (p=0.01). However, it decreased subsequently in 2011 and 2012 to 11.1% and 1.8% respectively. Only 2%, 2.6% and 3.6% isolates were resistant to azithromycin in 2009, 2010 and 2012 respectively. All isolates were susceptible to spectinomycin.
Conclusions: The study highlights that there is continuous significant increase in resistance to penicillin, tetracycline and ciprofloxacin in spite of their disuse for management. Emergence of decreased susceptibility to ceftriaxone and azithromycin resistance is of serious concern. Unrelenting local surveillance studies are urged to observe emerging AMR and to guide interventions to diminish its incidence.
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TP 184
STI RISK AND PROTECTIVE FACTORS AMONG THE GENERAL POPULATION IN LAGOS STATE

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Background: Sexually transmitted infections (STIs) increase transmission of HIV. Vulnerability and sequelae are attributable to biological susceptibility and behavioral factors including sexual practices and health-care seeking behavior. The aim was to document sexual risk and protective behaviors of the general population in Lagos State.
Methods: A cross-sectional study of 300 people in 10 randomly selected LGAs in Lagos State was carried out using interviewer-administered questionnaires for knowledge, attitude and practice of STIs. Results were presented as frequencies, means and modes in tables or charts as appropriate. Tests of significance using chi-square and comparison of means were also used.
Results: Cronbach alpha determination put reliability of the instrument at 0.86. Only 293 questionnaires were retrieved giving a response rate of 97.7%. Males accounted for 63.8% of the respondents and the modal age group was 21 to 25 years. About a third of the respondents (35.8%) had poor knowledge of gonorrhoea and its consequences. Only 8.5% have had gonorrhoea before. About 21% did not believe that gonorrhoea can be prevented. Sixty percent of the respondents said they use condoms with eight of them re-using the condoms (all between 15 to 35 years of age and mainly due to cost considerations). Only about 52% of the respondents indicate that they have one sexual partner currently while 68% of them have had more than two lifetime partners. Statistically significant differences exist between sex and age range of the respondents and use of condoms, number of partners ever and those that have suffered from gonorrhoea before.
Conclusions: It is concluded that risk for STIs in Lagos is high as sexual protective behaviors are inadequate and about a quarter believing gonorrhoea cannot be prevented. Public enlightenment campaigns using various media should be embarked upon to enhance awareness of the risks they are exposing themselves to.
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TP 185
GENDER DIFFERENCES IN STIGMA AND SHAME RELATED TO SEXUALLY TRANSMITTED DISEASE AND ITS PREVENTIVE INTENTIONS IN KOREAN ADULTS

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Background: It is necessary to know the gender differences in perceptions related sexually transmitted disease and its prevention applied to effective nursing practice. This study examined to identify the gender differences in stigma, shame related to sexually transmitted disease (STD), and its preventive intentions in Korean adults.
Methods: A survey design was utilized to collect cross sectional and retrospective data. A convenient sample of 1890 Korean men and women living in Korea were recruited to the study. Using the questionnaires, assessment was done including stigma, shame of STD, and intentions of limiting numbers of sexual partners and regular condom use for STD prevention, and sociodemographic factors. Data analysis procedures included descriptive analysis, Mann Whitney test, Spearman rho coefficients using SPSS+IBM package program.
Results: Of the 1890 Korean recruited in this study, 763 male (46.7%) and 905 female (54.3%). There were significant differences in shame related to STD (z=-7.14, p<.001), intention of limiting numbers of sexual partner (z=-5.92, p<.001), and intention of condom use (z=-3.01, p=.003). Stigma and shame of STD were significantly associated with preventive intentions of STD in both men and women. And Sociodemographic factors were significantly associated with stigma and shame of STD.
Conclusions: Gender differences in STD perceptions and STD preventive intentions were identified in Korean adults. Thus, it is necessary that reducing the negative feelings and perceptions regarding STD for Korean women, and whereas enhancing awareness of limiting sexual partners and condom use for Korean men. This study provided the necessity of gender specific STD prevention by sociodemographic levels in the Korean community.
Acknowledgement: This research was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT & Future Planning (grant number: 2012-R1A1A301-5525).
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TP 186
THE 2013-14 IUSTI ECCG REPORT ON THE MANAGEMENT OF HERPES SIMPLEX VIRUS IN PREGNANCY

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Background: The European incidence of neonatal herpes simplex virus (HSV) varies widely between 1-3 in 30,000 live births. Neonatal HSV is associated with high morbidity and mortality, and any effective opportunities to reduce its incidence should be incorporated into management having carefully considered the possible adverse consequences of interventions. Historically, management of HSV in pregnancy has varied widely across Europe. The current 2010 European HSV guidelines attempted to bring consistency with best evidence based practice across Europe. However management still varies widely. The European Collaborative Clinical Group (ECCG) is a network of sexual health specialists under the umbrella of the International Union against Sexually Transmitted Infections (IUSTI) who conduct questionnaire based research across the European Region. The aim of this study was a service evaluation of current practice in the management of HSV in pregnancy across the European region.
Methods: A number of European experts in the field of neonatal herpes were interviewed about controversies in management, and a case-based questionnaire developed based on their responses. The questionnaire was then reviewed and validated by the core group of the ECCG. It was then circulated electronically to the 120 sexual health specialists from 38 countries that make up the ECCG.
Results: Pilot results indicate that the management of neonatal herpes across Europe varies widely and that management is not always in line with the

IUSTI European Guideline for the Management of Genital Herpes 2010. The full data set will be available by the conference.
Conclusions: An updated European Guideline for the Management of Genital Herpes is currently being developed to be published in 2014. The release of the updated guidelines may act as a prompt for standardization of care across Europe to ensure that best practice is being followed.
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TP 187
COMPARISON OF SEXUAL BEHAVIOR AND KNOWLEDGE ABOUT HIV/AIDS IN STD PATIENTS AND APPARENTLY HEALTHY CONTROLS IN NORTH INDIA

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Background: Through a self-administered questionnaire, we compared the sexual behavior and knowledge about HIV in STD clinic attendees with healthy adults.
Methods: 106 (Mean age 19.1 years, 78% married, 66% males) patients attending STD clinic and 64 (Mean age 21 years, 38% married, 69% males) healthy adults were assessed for their sexual behavior, knowledge and awareness about HIV.
Results: 70% controls and 100% patients ever had sex (P=0.000). 31% male controls vs. 42% male patients but none of females ever had same-sex experience (P=0.028). 93% controls vs. 45% patients had only one or no sex partner during the last year (P=0.000). More male STD patients talked about HIV/AIDS. Television and Newspapers were the common sources of information. 37% patients and 58% controls were aware that apparently healthy persons could be HIV infected. 59% controls and 40% patients were aware of mother-to-child HIV transmission (P=0.036). 66% of controls vs. 50% of patients were willing to take care of a family member if HIV infected (P=0.085). For 58% controls and 40% patients it was acceptable for a HIV positive to teach students in school (P=0.028). Only 8% controls vs. 55% patients shared HIV results with regular sex partners. 7% controls and 98% patients knew where HIV can be tested. 38% controls and 64% patients said they would support unmarried girls buying a condom (P=0.000).
Conclusions: The awareness levels were significantly lower in patients. Stigma attached to HIV was much less than in 1990's. Patients were more likely to be married at early age, sexually experienced, agreeable for unmarried girls buying condoms, tested for HIV, share HIV test results with regular sex partners. Condom use was low in both patients and controls however the risk of acquiring HIV and STI was offset in controls by delayed marriage and sexual debut, less number of sex partners and absence of concurrency.
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TP 188
THE 2013-14 ECCG REPORT ON THE MANAGEMENT OF NON-GONOCOCCAL URETHRITIS (NGU) ACROSS EUROPE

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Background: Much controversy surrounds the management of NGU, with many issues not fully addressed by the current 2009 European guideline. For instance, definitive strategies for the integration of *Mycoplasma genitalium* (MG) testing into diagnostic protocols must be considered; with MG diagnosis currently only occurring in eastern and northern Europe. Another concern is the first line antibiotic choice, with single dose treatment strategies possibly promoting MG resistance. Furthermore, definitive partner management strategies require urgent clarification. The European Collaborative Clinical Group (ECCG) is a network of sexual health specialists under the umbrella of the International Union Against Sexually Transmitted Infections (IUSTI) who conduct questionnaire based research across the European Region. The aim of this study was to evaluate the current practice of NGU management across Europe.
Methods: Five European experts in the field of NGU were interviewed about controversies in management, and a case-based questionnaire developed. The questionnaire was then reviewed and validated by the core group of the ECCG. The final questionnaire was then circulated electronically to the 120 sexual health specialists from 38 countries of the ECCG.
Results: Pilot data suggests there are significant differences in first line treatment pathways across Europe. MG testing is not used on a regular basis by the majority of clinics sampled. There is evidence that divergent and conflicting clinical algorithms are utilized by clinicians, demonstrating their underlying uncertainty and the crucial need for refined guidelines. A full complement of results will be available by the Congress.
Conclusions: Many clinicians argue that ineffective eradication of MG may be significantly associated with recurrent/persistent NGU; further that their practice promotes this. Clinicians are highly concerned that current management strategies are encouraging antibiotic resistance and that this will become established before MG testing becomes more accessible. Our research identifies key areas of uncertainty that will require further scrutiny.
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TP 189
IMPLEMENTING MEDICAL MALE CIRCUMCISION FOR HIV/STI RISK REDUCTION: EXPLORING ACCEPTABILITY AMONG MEDICAL CARE PROVIDERS IN HAITI

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Background: Medical male circumcision (MMC) has been recommended by the World Health Organization to reduce risk of acquisition and transmission of sexually transmitted infections, including HIV. In order to address barriers to potentially scale up the procedure, it is important to consider health care providers' perspectives on MMC, especially in resource limited settings.
Methods: Medical care providers (N=62) receiving training on HIV/STI treatment at the GHESKIO Centers in Port-au-Prince, Haiti, participated in a survey examining experience with and attitudes about MMC. Descriptive analyses investigated respondents' views on MMC.
Results: Seventy one percent of respondents were females (n=44). Respondents included nurses working in hospitals (35%), 34% physicians and the rest were dentists, lab technicians, and psychologists. Ninety six percent of respondents believed MMC improved hygiene; 84% believed MMC was beneficial for STI prevention; 61.8% believed that MMC reduced HIV infection risk; and 43% believed that MMC reduced penile cancer risk. Over 80% of respondents were willing to undergo further training to practice performing or assisting MMC. Furthermore, 84% of respondents believed their patients would accept MMC for prevention of HIV/STIs and 74% believed that the best age for MMC was during infancy. Only eight respondents (13%) reported that they had received previous training in performing MMC, nine had performed MMC in the past, and an additional 11 respondents had ever assisted in MMC procedures.
Conclusions: The results of this study suggest that MMC has high acceptability among medical providers in Port-au-Prince, Haiti. The majority were knowledgeable about the advantages of MMC. However, as in other resource limited settings, the lack of a trained workforce is one of the barriers in implementing MMC on a large scale. Although medical providers believed that their patients might be willing to undergo MMC, increasing the availability of such services remains a crucial first step.
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TP 190
PREDICTORS OF CONDOM USE AMONG FEMALE SEX WORKERS WITH THEIR CLIENTS IN NIGERIA

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Background: Clients of female sex workers (FSW) are important in HIV transmission dynamics in Nigeria. Understanding sexual behavior of clients of FSW is important in designing effective HIV prevention programs. Little is known about clients of FSW and their HIV prevalence in Nigeria. Unfortunately, they are possible bridge population between FSW and the general population. This study examined the predictors of condom use among FSW with their clients in Nigeria.

Methods: Secondary data analysis was done using the 2010 Integrated Biological and Behavioral Surveillance Survey (IBBSS). Behavioral and biological information from 4459 brothel and non-brothel FSWs was collected in nine states. Multiple logistic regression models were used to assess the predictors of condom use with their clients.
Results: Average age of FSW was 26.5±5.8years; overall HIV prevalence was 21.2%; brothel-based FSW was 25.6% and non-brothel based was 16.5%. The mean age at first sex was 17±2.7years; average clients/day was 4; 29.3% of married FSWs were HIV+, 21.7% of HIV+ FSW used condom with their last client while 21.9% of HIV+ FSW used condom consistently. About 10.6% had been forced for sex by their clients and 60.2% tested and received HIV result within the last one year. Significant predictors of clients' condom use were FSW knowing their HIV test result in the last 12monts OR=2.5 and 95%CI 1.4 -4.5; not being currently married OR =2.5 and 95%CI 1.1 - 5.4 and consistent condom in other sexual relationships OR=8.0 and 95%CI 6.3 and 11.0.
Conclusions: Condom use with clients depends on sex worker knowing their HIV status and currently unmarried. There is a need to increase awareness and uptake of HIV testing among FSW even if it is difficult to reach their clients. Additionally, targeted health education and motivational programs are needed to increase their uptake of condom and HIV testing.
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TP 191
PASSPORT TO PARTNER SERVICES: EVALUATION OUTCOMES OF A BLENDED LEARNING NATIONAL TRAINING MODEL

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Background: In April 2013, nationally standardized Partner Services training migrated to a blended learning format, replacing previous instructor-led courses (9-day ISTDI , 3-day HIV PCRS) for disease intervention specialists (DIS) with the Passport to Partner Services curriculum that includes web modules, webinars, and instructor-led (3-5 day) training. Given the paradigm shift in training delivery mode, numerous evaluation methodologies were incorporated.
Methods: Users completed 13-14 end-of-module, 1 end-of-Track (all online), and 1 in-classroom end-of-course evaluation(s), answered quiz questions, rated course features (scale: 1=Strongly Disagree to 5=Strongly Agree) and the relative strengths/usefulness of the web vs. instructor-led components, identified challenges experienced and suggested improvements. Retrospective pre-post self-ratings on 33 key skill/competency areas (22 assessed during the web component and 12 assessed at the instructor training) were also included (scale: 1=not at all confident to 5=very confident), with change scores analyzed using a paired samples t-test.
Results: Data from 19 Passport courses (N=224 participants from 31 states, April-September 2013) showed all end-of-track ratings for online training had mean scores > 4.0, with little cross-track variation [e.g., "recommend this training for employees in positions similar to mine" (4.1); "content/activities will improve the quality of my practice" (4.2), with an overall 4.2 effectiveness rating. Pre-post learning gains were seen on all key skill proficiencies and were particularly high for the instructor course, where all 11 areas showed significant improvement (p<.001). On the end-of-course evaluation, the mean rating for enhanced knowledge and skills from the instructor component was higher (3.8 on 4 pt. scale) than for the web-based component (2.8). Key qualitative feedback included technical challenges experienced by some participants.
Conclusions: An effective well trained Partner Services staff is critical for the public health assurance function. Preliminary data show positive outcomes for the newly designed training, and highlight areas of needed improvement and ongoing support.
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TP 192
ACYCLOVIR 1 GM TWICE A DAY FOR 3 DAYS FOR THE TREATMENT OF RECURRENT GENITAL HERPES

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Background: Recurrent genital herpes is conventionally treated with acyclovir 200 mg 5 times a day orally which is inconvenient to take. We studied the effectiveness and safety of acyclovir 1 gm twice daily orally for 3 days in treatment of genital herpes.
Methods: Patients presenting with recurrent genital herpes were included in the study. After a complete clinical and laboratory evaluation, the patients were treated with acyclovir 1 gm twice daily orally for 3 days and followed up on days 3, 5 and 7 to determine the response to treatment and adverse effects.
Results: There were 23 patients (21 males and 2 females, between 18-55 years of age), of which 22 complete the study. Nine (41%) of them had complete healing of the ulcer on day 3, whereas 17 (77%) and 20 (91%) had it by day 5 and 7 respectively. Mean percentage healing of ulcer was 77.95 ± 26.03, 90.00 ± 16.20 and 95 ±7.07 on day 3, 5, and 7 respectively. Visual analogue score (VAS) showed complete improvement in VAS in 9 (41%) patients on day 3, 21 (95.5%) on day 5 and 22 (100%) on day 7. The mean time of complete improvement in VAS was 4.27 ± 1.16 days. Mean of percentage improvement in VAS was 80.45 ± 25.30 on day 3 and 100 ± 0.00 on day 7. Mean healing time of the lesions was 4.67 ± 1.87 days (range 3 - 10 days). There were no significant adverse effects of the therapy.
Conclusions: The study demonstrated that oral acyclovir 1 gm twice daily is effective and safe for the treatment of recurrent genital herpes. There was rapid healing of lesions, which reduces morbidity, psychological distress and risk of transmission of infections to sexual partner. Further studies are however needed to confirm our results.
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TP 193
BEYOND THE NATIONAL RATE: REGIONAL VARIATION IN GONORRHEA TRENDS—UNITED STATES, 2009–2012

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Background: Gonorrhea is the second most commonly reported notifiable disease in the United States (US), and is associated with important health sequelae, including pelvic inflammatory disease, tubal infertility, ectopic pregnancy, and facilitated transmission of HIV. After reaching an historic low in 2009, the US gonorrhea rate increased each year during 2009–2012. We examined national gonorrhea case report data to identify the populations most impacted by the increase in gonorrhea.
Methods: Gonorrhea case report data were extracted from the National Electronic Telecommunications System for Surveillance, the system through which the Centers for Disease Control and Prevention receives notifiable STD data from all 50 states and the District of Columbia. Rates were calculated using population estimates obtained from the US Census Bureau.
Results: During 2009–2012, the national gonorrhea rate increased 9.6%, from 98.1 to 107.5 cases per 100,000 population. Gonorrhea rates increased substantially in the Northeast (38.2%) and West (39.1%), but increased just 0.4% in the South and decreased 1.2% in the Midwest. However, in 2012, gonorrhea rates remained highest in the South (131.9) and Midwest (114.6) and lower in the Northeast (92.6) and West (73.3). Nationwide, the rate among men increased 16.3% while the rate among women increased 4.0%. The increase among males was seen in all regions, but was most marked in the Northeast (43.9%) and West (45.4%) compared with the South (4.8%) and Midwest (4.3%). Rates among females increased in the Northeast (32.3%) and West (31.0%), but decreased in the South (3.1%) and Midwest (4.7%).
Conclusions: While the overall gonorrhea rate increased in the US during 2009–2012, the observed increase in national gonorrhea rate during 2009–2012 was largely attributable to increased rates in the Northeast and West and among males.
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TP 194
BURDEN OF HPV-ASSOCIATED HIGH-GRADE CERVICAL LESIONS, CHLAMYDIA, AND GONORRHEA—CONNECTICUT, 2011

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Background: Chlamydia and gonorrhea are the first and second most common reportable diseases in the US. Human papillomavirus (HPV) is estimated to infect three times the number of adolescents and young adults as chlamydia, but many infections are transient and HPV infections are not nationally notifiable. Surveillance for high-grade cervical lesions (HGCL)

caused by HPV that are important precursors to cancer can provide a way to assess the burden of disease.
Methods: Reporting of HGCL is mandatory in Connecticut (CT) in part to support the Centers for Disease Control and Prevention HPV-IMPACT project. Rates of HGCL (cervical intraepithelial neoplasia 2/3 and adenocarcinoma in situ) were compared to rates of chlamydia and gonorrhea in the US and CT obtained from surveillance for 2011. Comparisons were age-specific (15–19, 20–24, 25–29, 30–34, and 35–39 years), and rate ratios (RR) were used for comparison with HGCL rates in the numerator.
Results: HGCL rates in CT were lower than chlamydia in US and CT for all age groups with RRs ≤ 0.89 except for women ages 35–39 years in which rates were comparable to the US (RR=0.99) and higher than CT (RR=1.26). Conversely, HGCL rates in CT were comparable to or higher than gonorrhea in US and CT in all age groups between 20–39 years with RRs ranging from 1.03–5.02.
Conclusions: HGCLs are more common than gonorrhea among women ages 20–39 years. These data reveal a high burden of HGCL that may go unrecognized because few population-based surveillance efforts exist. Additional surveillance efforts may be warranted to expand our understanding of disease burden as well as monitor HPV vaccine impact. Though the current high rate of HGCL is troubling, it also signals the tremendous impact that vaccines might have if uptake rates can be improved.
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TP 195
DEVELOPMENT OF A STD COMMUNICATIONS TOOLKIT FOR PIOS/COMMUNICATORS IN LOCAL AND STATE HEALTH DEPARTMENTS

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Background: CDC's Division of STD Prevention and the National Public Health Information Coalition (NPHIC) are collaborating to develop an STD communications toolkit. The purpose is to provide tools, resources and materials that will help communications staff and STD program managers in state and local health departments communicate effectively about STDs.
Methods: To help inform the contents of the toolkit, NPHIC conducted two focus groups of its board members, all of whom work in health department communications offices. Next, NPHIC and CDC worked together to develop and conduct key informant interviews with staff in seven state and two city health departments. Interview questions were designed to better understand current STD communications practices and the types of toolkit resources that would be helpful to both PIOs and STD program staff.
Results: Key findings were divided into several categories—staffing, communications planning, material development, social media, barriers/challenges, evaluation, and suggested resources for the toolkit. In addition, the interviews guided the decision to develop toolkits for two audiences – the STD Programs that work directly with the end user; and the PIOs who work through various channels (news media, social media, and partner organizations) to reach the end user.
Conclusions: Suggested resources were grouped into three categories of development: 1) Communication products that CDC currently has available. 2) Products that CDC does not have but can develop easily. 3) Items that would take more resources to develop. CDC prioritized resources based on need expressed by key informants and CDC/NPHIC resources to develop new materials. Phase 1 of the online toolkit is to be ready by the end of May 2014 and will include high priority products that we already have or can develop with minimal resources. Phase 2 will include those products that require additional time/resources to develop and will also incorporate feedback received after the launch of Phase 1.
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TP 196
TREATMENT VERIFICATION AMONG CASES OF GONORRHEA REPORTED FROM FEDERALLY QUALIFIED HEALTH CENTERS, NEW YORK CITY, 2012

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Background: The emergence of *Neisseria gonorrhoeae* (GC) with reduced susceptibility to cephalosporins makes it critical for public health programs to monitor appropriate gonorrhea treatment in the community. In New York City, approximately two-thirds of GC case reports from laboratories and/or providers do not include information about treatment, so it is unknown what proportion of patients with GC received treatment.
Methods: During March–May, 2012, 2,470 (65%) of 3,774 reported GC cases did not have treatment documented. Treatment verification was attempted for all cases diagnosed by Federally Qualified Health Centers (FQHCs) (10% of all diagnosing facilities; 234/2,470 cases) to estimate the proportion of patients without treatment documentation that did receive treatment. We gathered information for 91% (212/234) of these cases through 121 phone calls, 18 faxes, and 3 site visits. This information included whether treatment was provided, treatment date, regimen used, and reasons for no treatment.
Results: Treatment was received by 81% of patients (171/212), 99% (169/171) of whom received a CDC-recommended regimen. Forty-five percent (77/171) received treatment on the day they were diagnosed. Of the 41 patients who did not receive treatment, 22 had not returned for treatment, 1 had refused, and 18 had no reason available.
Conclusions: Our study shows that, combined with the 33% of cases that already had treatment documented, the majority (>87%) of FQHC patients received treatment, at minimum (those for whom no treatment could be documented might have been treated elsewhere). Most patients received a CDC-recommended regimen, but additional work is needed to ensure treatment for the remaining 13%. Treatment rates from FQHC facilities might not be representative; further efforts are needed to obtain more generalizable estimates. GC treatment verification might not be feasible as a routine surveillance activity, as substantial effort was necessary to collect this information.
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TP 197
"TIMES ARE CHANGING:" TRAINING DISEASE INTERVENTION SPECIALISTS (DIS) TO CONDUCT RAPID ETHNOGRAPHIC ASSESSMENT: IMPLEMENTATION AND EVALUATION OF A PILOT PROJECT IN NEW JERSEY

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Background: The changing health care environment presents both challenge and opportunity for STD programs. Program planners and staff need practical, low-threshold research tools and skills that help them obtain timely information on emerging trends, develop new partnerships, and engage new populations. Disease Intervention Specialists (DIS) have a skill set that may be uniquely suited to carrying out rapid ethnographic assessment, a team-based, practical approach to collecting locally relevant qualitative data that can be used for program planning.
Methods: New Jersey STD program staff attended a 2-day workshop on rapid assessment techniques, including team-based interviewing, observation, field note expansion, and team debriefing. Immediately following the workshop, DIS conducted 24 semi-structured interviews and observations in 4 local health departments. CDC provided coaching, and assisted the STD program with qualitative data analysis and report writing. CDC evaluated the workshop and conducted follow up phone interviews with DIS and managers to solicit feedback about their experiences.
Results: Nineteen of 21 workshop participants completed evaluations. All (100%) agreed that the workshop met the objectives and provided an understanding of rapid assessment; a majority (84%) agreed that they learned new skills. Qualitative interviews indicated that DIS saw value in "hearing directly" from partners about activities and challenges; most felt they obtained new information they could use in their jobs; and said that debriefing sessions facilitated useful information sharing. Challenges included note-taking during interviews, establishing rapport, and feeling unprepared to answer questions about the overall project. DIS wanted more involvement in planning and more preparation time. Managers wanted more training in qualitative data analysis.
Conclusions: The assessment resulted in a written report that is being used by a planning workgroup. Training DIS to carry out focused, small-scale rapid assessments is feasible, expands on their existing skill set, and may be a good use of their time.
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TP 198

THE IMPACT OF BUDGET CUTS AMONG LOCAL STD PROGRAMS IN NEW JERSEY: RESULTS OF A RAPID ETHNOGRAPHIC ASSESSMENT

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Background: New Jersey is experiencing challenges due to the changing health care landscape and diminishing resources. The New Jersey Department of Health STD Program conducted a rapid ethnographic assessment to better understand the impact of budget cuts on local STD programs, including the current level of STD service provision, challenges encountered in delivering services, opportunities to collaborate with partners to address gaps, and the current level of STD/HIV service integration in local programs. Data are being used by a state-level workgroup to identify training and technical assistance priorities, develop recommendations, and inform planning.
Methods: Twenty-four semi-structured interviews and observations were conducted with from health department staff in four sites: Camden, Jersey City, Newark, and Paterson. Interviews were carried out by pairs of STD program disease intervention specialists (DIS) who were trained in rapid assessment techniques immediately prior to data collection. Interviewees included local health department Administrative (7), Clinical (4), Field (5), Financial (2), and Management (6) staff. Qualitative interview data were analyzed using NVivo 10.
Results: Significant funding and staffing decreases were reported as major concerns in all sites, and across all job functions. Interviewees reported increased workload and low morale as staff take on additional roles and responsibilities; reduced staff and clinic hours have resulted in longer patient wait times, less time spent counseling patients, and clinic turnaways. At the same time, demand for STD services has remained steady or increased due to the expansion of rapid HIV, and chlamydia testing for men, in some clinics. Interviewees recommended further integration of STD and HIV programs, including cross-training in testing, counseling and partner services. Interviewees also recommended expansion of electronic health records and requested assistance with billing for STD services.
Conclusions: Diminishing resources are negatively impacting local STD program services and staff, even as STD morbidity continues to increase in these communities.
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TP 199

CHANGING TRENDS IN DECREASED SUSCEPTIBILITY OF NEISSERIA GONORRHOEAE TO CEPHALOSPORINS IN ENGLAND AND WALES: 2012 DATA FROM THE NATIONAL GONOCOCCAL RESISTANCE TO ANTIMICROBIALS SURVEILLANCE PROGRAMME (GRASP)

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Background: Gonorrhoea is the second most commonly diagnosed bacterial sexually transmitted infection in the United Kingdom. Effective treatment is threatened by the emergence of decreased susceptibility (DS) of *Neisseria gonorrhoeae* to currently prescribed cephalosporins. In 2010, ceftriaxone replaced cefixime as the recommended front-line therapy. We investigated recent patterns and risk factors associated with gonococcal DS to cephalosporins in response to this change using national surveillance data.
Methods: GRASP is a national sentinel surveillance programme that monitors antimicrobial resistance in *N. gonorrhoeae* in England and Wales. Between July-September, 2012, consecutive gonococcal isolates from patients diagnosed with gonorrhoea attending 25 STD clinics were submitted for antimicrobial susceptibility testing to determine the Minimum Inhibitory Concentrations (MICs). Antimicrobial results and linked patient clinical data from the national STD surveillance database (GUMCADv2) were analyzed using Pearson's chi-square test and univariate logistic regression to determine risk factors associated with isolate(s) exhibiting DS to specific antimicrobials.
Results: 1535 gonococcal isolates, representing 5.9% of all gonorrhoea diagnoses in England and Wales in 2012 were included. There was a significant decline ($p<0.001$) in the proportion of isolates exhibiting DS to cefixime (MIC≥0.125mg/L) from 10.8% in 2011 to 5.6% in 2012. This second year of decline followed a rise from 1.5% to 17.1% between 2007 and 2010. The risk of infection with an isolate exhibiting DS to cefixime (MIC≥0.125mg/L) increased with patients' age ($p=0.004$), being male or reporting sexual contact outside the UK ($p<0.0001$). Three isolates (0.2%) infecting men who have sex with men exhibited DS to ceftriaxone (MIC≥0.125mg/L) and an increasing drift in ceftriaxone MICs was clearly evident in this group.
Conclusions: There may have been a reduction in DS in cefixime in response to changes in UK treatment guidelines in 2010; however, identification of increasing MICs to ceftriaxone needs continuous monitoring for early detection of treatment failures.
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TP 200

CONDOMS, CONDOMS EVERYWHERE! - EXAMINING THE REACH AND AWARENESS OF TAKE CONTROL PHILLY! AT TWO YEARS

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Background: In 2011, Philadelphia launched an extensive adolescent STD/HIV prevention program, Take Control Philly, in response to the high rates of STDs amongst that population. This program included a youth-centric website, expansion of condom distribution efforts, and a Philadelphia-branded Freedom Condom. Six Facebook advertisement campaigns, two traditional media campaigns, and over 60 community events were strategies used to promote this campaign. During 2012, condoms were made available in select Philadelphia high schools. Baseline assessment of the program was completed in summer 2011 and follow-up assessment was completed in summer 2013 to assess program effectiveness and reach.
Methods: Youth ages 13-24 were interviewed using a standardized survey during summer 2013. Participants were recruited based on predetermined criteria relevant to the study objectives. 2011 baseline assessment data served as comparison for the 2013 study.
Results: 301 individuals ages 13-24 were interviewed for this assessment. Results showed 82% of all individuals reported being sexually active with no change since baseline. Knowledge about where to get free condoms increased from 58% to 70% since baseline. 24% of individuals reported getting their last free condom from high school (70% increase) and 9% received it from a commercial business (800% increase). 97% of youth were aware of at least one aspect of the campaign, 82% had seen the Freedom Condom, and 69% had received a Freedom Condom (increases of 83%, 355%, and 900%, respectively). 68% of sexually active individuals reported condom use at last sexual encounter with no significant change from baseline.
Conclusions: Comparison of data over time shows teens continue to engage in risky sexual activity, and efforts to expand access and awareness of free condoms have been successful. Community-wide condom distribution expansion is a promising approach for addressing STDs in youth. Using multiple strategies for increasing program awareness is necessary for reaching Philadelphia youth.
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TP 201

RELATIONSHIP LEVEL PREDICTORS OF PATIENT INITIATED PARTNER NOTIFICATION OF CHLAMYDIA TRACHOMATIS INFECTION AMONG MEN IN NEW ORLEANS

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Background: While expedited partner treatment and provider assisted referral are options for STD partner notification, legal complications and budget limitations cause patient referrals to remain the most commonly used strategy. Most research on patient referral has been done among women and few have examined how relationship factors influence notification rates beyond main/casual. This purpose of this study was to examine partner notification rates in a population of heterosexual men treated for *Chlamydia trachomatis* (Ct) at a STD clinic in New Orleans, LA.
Methods: Heterosexual men attending an STD clinic in New Orleans, who were treated with 1 g azithromycin for Ct were re-tested at 1 month. Participants completed an ACASI survey at baseline and follow-up eliciting detailed

behavioral information surrounding all female sexual partners in the past 2 months.
Results: At baseline, 350 men were Ct+ and 65.4% returned for follow up. These 229 men identified 435 female partners at baseline, of which they reported notifying 319 (73.3%). Frequency of partner notification varied by partner type and ranged from 57.4% of one night stands to 89.7% of girlfriends and similarly from 61.9% of casual partners to 88.8% of main partners. At baseline, patients believed that they could contact 84.1% partners, that they would have sex with 54.1% again and that 45.5% of partners were infected. In univariate analysis, patients were more likely to notify partners perceived as infected (OR 2.15, 95% CI 1.29-3.59), partners they believed they would have sex with again (OR 2.89, 95% CI 1.76-4.73) and partners they thought were contactable (OR 3.87, 95% CI 2.08-7.18).
Conclusions: Partner level factors are associated with partner notification. Identifying and utilizing these factors to better council patients could possibly improve patient referral and subsequent partner treatment which is vital to reducing further transmission, repeat infections and serious sequelae in women.
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TP 202
AN EVALUATION OF STI TRAINING AND CURRICULUM IN CANADIAN MEDICAL PROGRAMS

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Background: In 2010, little was known of the coverage of sexually transmitted infections (STIs) in the curricula of Canadian medical schools and residency programs. An evaluation was completed to examine the current status of STI curriculum and training in Canadian undergraduate medicine (UM), family medicine (FM) residency and obstetrics and gynecology (OBG) residency programs. In 2013, four additional programs were added: emergency medicine (EM), public health and preventive medicine (PHPM), medical microbiology (MM) and infectious diseases (ID). The additional data provide a more comprehensive evaluation of the use of STI Guidelines in medical school and residency programs.
Methods: Directors or Deans from all 17 Canadian medical schools representing identified programs (N=102) were contacted to do a self-administered paper questionnaire.
Results: 83 (81.4%) completed the surveys. Overall, the management and treatment of specific infections (60.2%) and specific syndromes (54.2%) received the most emphasis. Education and counselling to specific populations (25.3%) received the least emphasis, followed by epidemiology of STIs in Canada (28.9%). HIV pre-test counselling was given considerable or heavy emphasis by 34.9% of programs. The main training method used was clinical experience (91.6%), followed by core lectures (81.9%). 38.2% of programs reported considerable or heavy use of the *Canadian Guidelines on Sexually Transmitted Infection*. The Canadian STI Guidelines Online were used by 68.7% of programs overall, while the hardcopy binder format was used by 43.4%.
Conclusions: This expanded evaluation allows individual programs to compare themselves to other programs and provides insight on the use of STI training resources. Results will inform knowledge translation activities of the Public Health Agency of Canada as it develops resources in preferred formats and with content designed to meet the specific needs of particular disciplines. Future assessments will examine the impact on uptake and adherence.
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TP 203
EVIDENCE-BASED KNOWLEDGE TRANSLATION ACTIVITIES TO SUPPORT PUBLIC HEALTH MANAGEMENT OF GONOCOCCAL INFECTION

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Background: The Canadian Guidelines on Sexually Transmitted Infections (the Guidelines) were updated in July 2013 to include new recommendations for the diagnosis and treatment of gonococcal infections. A series of evidence-based knowledge translation products were developed and include a 2-page summary of the full guideline, a more fulsome summary submitted for peer review and publication, contribution to a mobile application, and the development of an online continuing professional development module (eCPD).
Methods: An extensive literature review and two surveys informed the development of the tools. Survey 1 occurred at the Guelph Sexual Health Conference (GSH 2012) and included primarily nurses (*n*=72). Survey 2 occurred at the (Canadian) Family Medicine Forum (FMF 2012) and primarily surveyed family physicians (*n*=207). Both surveys assessed user experience with the Guidelines and preference for future products.
Results: GSH 2012 respondents preferred formats were hard copy (82%), online copy (66%), and mobile applications (32%). 59% of GSH respondents preferred shortened versions of the full guideline. FMF 2012 respondents also preferred shortened versions of full guidelines (algorithms/flowcharts/decision trees - 60%) and abbreviated pocket guides (34%). In addition, 34% of FMF 2012 respondents were interested in mobile applications; preference for mobile applications was highest among medical residents (50%). However, hard copy was the first preference of 18%, and half of respondents would continue to use a hard copy in the presence of online or mobile sources. Online continuing professional development (25%) and scientific articles (27%) were chosen as important ways to update clinical knowledge.
Conclusions: Surveys of the two primary user populations of the Guidelines indicated a preference for shortened versions of the full guideline content, electronic versions (mobile or online), and continuing demand for traditional hard copy. An evaluation will estimate the relative importance of each knowledge translation product.
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TP 204
STD POLICY ON THE FEDERAL LEVEL: WHAT'S HAPPENING AND WHAT DOES THE FUTURE HOLD?

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Background: STD programs across the country are greatly affected by funding and policy changes at the federal level. The federal political landscape has been fraught with gridlock and partisanship from all sides recently. A number of budget deals have been struck recently however, not to mention the implementation of the Affordable Care Act (ACA), that impact not only the funding for STD programs but also their role in the community as public health entities.
Methods: This presentation will use the presenter's first-hand experience as an advocate on behalf of STD programs and funding as well as a former Congressional staffer in the office of a senior member of the Senate Budget and Appropriations Committee to discuss the impacts of these budget deals and the implementation of the ACA has on the funding of STD programs and the political and budget processes behind these deals.
Results: Funding reductions through sequestration have greatly reduced all federal discretionary health spending, through which STD and HIV programs are funded. In addition, the expansion of general health care insurance coverage as well as preventative care coverage through the ACA has led to questions of duplication of federal health care dollars going to public health services such as STD and HIV prevention and treatment.
Conclusions: Congress appears to be a stagnate body with few legislative accomplishments, but the implementation of sequestration, addition to other budget deals and the impacts of ACA implementation have serious funding implications for STD policy across the country.
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TP 205
RECOGNIZING SEXUAL RELATIONSHIP DYNAMICS IN PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS (STIS)

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Background: Sexually Transmitted Infections (STIs) are very prevalent among young men and women, particularly in urban areas. To date, the primary prevention activity to reduce STIs among sexually active men and women is consistent condom use. However consistent condom use, in contrast to other forms of contraception such as IUDs, hormonally-based birth

control pills, long-term injectable contraception and emergency contraception, requires consent and participation from both sexual partners.
Methods: The aims of this project are to determine the sexual partner relationship dynamics and the individual factors surrounding inconsistent condom use among young, sexually active men and women seeking care at the Locust Street Planned Parenthood Health Center for STI testing and/or treatment. We are interested in examining if the length of the sexual relationship, the exclusivity of the sexual relationship, the other types of contraception used, physical or emotional violence in the relationship, or any pregnancy coercion or reproductive control behaviors predict inconsistent condom use. In addition, we are interested in assessing individual factors that may be related to inconsistent condom use such as low self-esteem, low sexual self-efficacy, depressive symptoms, or a history of violence.
Results: Focus groups and individual interviews were conducted among sexually active men and women in long-term relationships and among sexually active women and men with multiple partners seen at the Center. Initial focus group results identified several factors related to consistent condom use including longer duration of an intimate relationship, higher self-esteem and higher levels of sexual self-efficacy.
Conclusions: The results from this project will provide useful information to identify the factors most strongly involved with inconsistent condom use among young, sexually active men and women. These findings will inform interventions and/or the design of health-related materials to promote consistent condom use among young, urban men and women.
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TP 206
DECREASED SUSCEPTIBILITY TO ORAL CEPHALOSPORINS AMONG *NEISSERIA GONORRHOEAE*: TRENDS IN DRUG-RESISTANT GONORRHEA – CHICAGO, 2008-2012

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Background: Effective treatment of gonorrhea is essential to disease control efforts; however, the ability of gonorrhea to develop resistance to successive waves of antimicrobial agents has hindered public health strategies. We examined surveillance data to ascertain local trends in antimicrobial resistance among *Neisseria gonorrhoeae* isolates.
Methods: We analyzed data from the Gonococcal Isolate Surveillance Project (GISP) for male patients attending two sexually transmitted infection clinics in Chicago between 2008 and 2012. We assessed trends in susceptibility to cephalosporins among gonococcal isolates. We performed univariate analyses to identify risk factors associated with cephalosporin-decreased susceptibility.
Results: The prevalence of isolates with decreased susceptibility to cefpodoxime increased between 2008 and 2012 from 0.4% to 2.9%, respectively. The prevalence of isolates with decreased susceptibility to cefixime increased between 2008 and 2010 from 0.4% to 0.8%, and then declined in 2011 and 2012 to 0.0% and 0.03% respectively, concomitant with the change in CDC treatment guidelines in 2010 that no longer recommended the routine use of cefixime, and instead recommended combination therapy with ceftriaxone 250 mg plus azithromycin or doxycycline. No isolates with decreased susceptibility to ceftriaxone were identified from 2008 to 2012. Univariate analyses revealed isolates with decreased susceptibility to cefpodoxime were associated with infection among men who have sex with men (crude odds ratio 3.9, 95% CI 1.3-11.6; $p<0.01$).
Conclusions: Gonococcal cephalosporin resistance might emerge more rapidly among men who have sex with men in Chicago. Ongoing enhanced surveillance is needed to determine the frequency of cephalosporin-decreased susceptibility and -resistant *N. gonorrhoeae*. Alternative oral antibiotics for the treatment of gonorrhea are urgently needed.
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WP 1
STATUS UPDATE ON CDC-FUNDED PS 12-1201 CATEGORY C DEMONSTRATION PROJECTS: HIV TESTING, LINKAGE TO CARE, AND PARTNER SERVICES

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Background: Under Category C of the PS 12-1201 Comprehensive HIV Prevention Programs Funding Opportunity Announcement, CDC funds 30 health departments who conduct their own High Impact HIV Prevention (HIP) demonstration projects during 2012-2014. We provide a status update of results and challenges that relate to HIV testing, linkage to HIV medical care, and Partner Services (PS).
Methods: Data are based on project applications, Interim and Annual Progress Reports, conference calls and email communications between CDC and grantees, and CDC site visits through September 2013. We categorize project status as planning/implementing or implemented with results and present aggregated results and challenges.
Results: Of the 30 grantees, 28 focus on at least one activity specific to HIV testing, linkage, or PS: 17 conduct HIV testing, of whom 7 (41%) reported results; 24 conduct linkage, of whom 11 (46%) reported results; and 6 conduct PS, of whom 2 (33%) reported results. From the 7 grantees with HIV testing results, 0.5% (40/7,890) of persons tested were newly diagnosed with HIV. From the 11 grantees with linkage results, 78% (955/1,222) of newly diagnosed or out-of-care HIV-infected person were linked to HIV medical care. From the 2 grantees with PS results, 292 partners were named, of whom 146 were tested; of these 146 partners, 14% (21/146) were newly diagnosed with HIV. From these 28 grantees, the most frequently reported challenges were hiring, staffing, or staff turnover (n=15), delayed federal or state funding (n=12), IT problems (n=5), and data sharing (n=4).
Conclusions: Progress has occurred, but many grantees have experienced challenges with project implementation. Grantees behind schedule should focus on the highest priority HIP activities and seek any needed technical assistance. Grantees on schedule with successful demonstration projects should consider how their work could help routine HIV prevention activities and further advance HIP.
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WP 2
FEASIBILITY OF HIV SELF-TEST VOUCHERS TO RAISE COMMUNITY-LEVEL SEROSTATUS AWARENESS, LOS ANGELES

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Background: Up to half of all new HIV cases in Los Angeles may be caused by the 20-30% of men who have sex with men (MSM) with unrecognized HIV infection. MSM are at higher risk for being sero-unaware and might benefit from increased access to novel testing methods, such as the recently FDA-approved OraQuick In-Home HIV Test.
Methods: From July-November 2013, we examined the feasibility of implementing a voucher program for free OraQuick tests targeting high-risk MSM in Los Angeles. We determined feasibility based on: (1) the establishment of a voucher redemption and third-party payment system, (2) the use of community-based organizations (CBOs) to disseminate vouchers, and (3) an anonymous telephone survey collecting user demographics, sexual behavior, prior testing practices and self-testing experience. We defined high-risk MSM as those with > 1 partner, untested for HIV in the past 6 months and with inconsistent condom use. We calculated descriptive statistics using Microsoft Excel and STATA 12.
Results: We partnered with Walgreens to create a voucher and third-party reimbursement system for free OraQuick tests. Of the 641 vouchers supplied to CBOs and other distributors, 274 (42.7%) went to clients; 50 (18.2%) clients redeemed a voucher. Forty-one (82%) of 50 voucher-redeemers were surveyed: 10 (24.4%) were high-risk MSM. Three (30%) high-risk MSM reported being comfortable or very comfortable while redeeming their voucher. Seven (70%) reported being likely or very likely to use a voucher again. Three (100%) of 3 respondents newly testing HIV-positive sought medical care.
Conclusions: Developing a voucher system to promote HIV self-testing with linkage-to-care was feasible. Our survey suggests that high-risk MSM will likely use a voucher again, but their comfort level during redemption needs improvement. Further research on providing access to free HIV self-test kits through different methods like the US mail or vending machines is warranted.
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WP 3
COMPREHENSIVE CANCER CONTROL EFFORTS TO PROMOTE HUMAN PAPILLOMAVIRUS VACCINATION

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Background: Human papillomavirus (HPV) vaccine coverage remains low in the U.S. *The Community Guide* includes evidence-based interventions to increase vaccination coverage through provider and community-based interventions. Little is known regarding the current role and activities of Comprehensive Cancer Control (CCC) programs in promoting HPV vaccination.
Methods: We conducted a content review of CCC program action plans from 2012 - 2013 that were reported to the Chronic Disease Management Information System (CDMIS), a web-based program monitoring tool. Action plans were searched by response options for HPV vaccine or "HPV" as a keyword using the CDMIS search function. Content on five-year project period objectives and annual objectives were abstracted from the system into Excel and coded according to categories that reflect *Community Guide*-recommended approaches to increase vaccination and infrastructure-building strategies. Associated activities in the action plans were reviewed in CDMIS to resolve ambiguous information provided in annual objectives. Frequency counts and percentages were calculated by categories that described the approaches used.
Results: Out of 69 funded CCC programs, 13 had specific annual objectives that addressed efforts to promote HPV vaccine. Four reported using recommended strategies, with most using multiple community-based interventions. Five programs reported activities to improve their ability to plan and implement interventions (i.e. build partnerships and assess data). Eight programs described interventions with insufficient evidence from the *Community Guide*, with community-wide education alone being most frequently reported.
Conclusions: Few CCC programs specifically addressed HPV vaccination in their action plans. CCC programs and their coalitions are a potential resource to support implementation of evidence-based interventions found in *The Community Guide*. Additional efforts to promote HPV vaccine include consideration of promising practices to reach the adolescent population and a focus on strategies that remind both parents and health care providers and reduce missed opportunities for vaccination.
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WP 4
PREVALENCE OF CHLAMYDIA TRACHOMATIS — UNITED STATES, 2007–2010

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Background: Chlamydia is the most commonly reported infection in the United States with over 1.4 million cases reported in 2011. As chlamydia is usually asymptomatic and can lead to adverse reproductive outcomes, routine screening is recommended for sexually-active young women. However, it is likely that many infections are not identified and case reports underestimate true morbidity.
Methods: We estimated prevalence of chlamydial infection by sex, age, race, and self-reported sexual activity (measured through audio computer-assisted self-interview) with corresponding 95% confidence intervals (CI) using data from the most current National Health and Nutrition Examination Surveys (2007-2010); data from the 2011–2012 survey will be added if available before the conference. Estimates were weighted to be nationally representative and to account for oversampling and nonresponse. We estimated the number of infections in the population by multiplying census estimates by weighted prevalence estimates.
Results: Among the 5,610 participants aged 14–39 years tested for chlamydial infection, 1.7% (95% CI: 1.3%, 2.0%) were infected, suggesting that there are 1.8 million prevalent infections nationally (range: 1.4–2.1 million).

Among the 48% of female adolescents (aged 14–19 years) who reported being sexually-active, prevalence was 7.7% (95% CI: 4.7%, 10.8%). Prevalence among sexually-active, non-Hispanic black female adolescents (17.5% (95% CI: 11.0%, 24.0%)) was higher than prevalence among sexually-active, non-Hispanic white female adolescents (4.9% (95% CI: 0.4%, 9.4%)).
Conclusions: Based on findings from a nationally-representative survey, we document a large burden of prevalent chlamydial infections suggesting that many infections are not diagnosed and reported. High prevalence among sexually-active young women suggests that routine screening is warranted and substantial racial disparities highlight the need for targeted interventions.
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WP 5
HOW HAVE PID RATES CHANGED DURING THE ERA OF CHLAMYDIA SCREENING IN ENGLAND? DATA FROM PRIMARY CARE AND GENITOURINARY MEDICINE CLINICS, 1995-2012

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Background: *Chlamydia trachomatis* (CT) is an important cause of pelvic inflammatory disease (PID). Rates of CT testing and diagnosis have increased in England since the 1990s, especially following widespread implementation of the National Chlamydia Screening Programme in 2008. We investigated trends in PID diagnosed in both genitourinary medicine (GUM) clinics and general practice (GP) settings, during this period of increased chlamydia screening.
Methods: Rates of clinical PID among 15-44 year old women, diagnosed in GP settings, were calculated using the Clinical Practice Research Datalink (CPRD, diagnoses from a sample of primary care sites) for 2000-2011. Diagnoses were classified as 'definite', 'probable' or 'possible' PID. For the same period, rates of PID diagnoses in GUM among 15-44 year old women were calculated from the KC60 statistical returns and the GUM Clinic Activity Dataset (GUMCAD). Identification of chlamydial and gonoccocal PID was possible for the GUM diagnoses. Trends were calculated using negative binomial regression.
Results: The rate of PID among 15-44 year olds was higher in GP than in GUM settings; in this age group, the rate of 'definite/probable' GP PID diagnoses declined while rates of all-cause GUM PID increased throughout the study period. A similar pattern was observed for the under 25s with GUM rates surpassing GP rates after 2007. Within GUM, chlamydial PID rates fell post 2008 (IRR=0.92, 95%CI: 0.90-0.95) while no change was observed in gonoccocal PID (IRR=1.03, 95%CI: 0.96-1.12).
Conclusions: Although combined rates declined over the study period, divergent trends were seen in rates of PID diagnosed in different settings. However, the increase in GUM PID could be partly due to increases in GUM attendances. Interpreting trends in CT sequelae is complicated by diagnostic coding, multiple aetiologies and health-seeking behavior. The likelihood of causes other than CT screening leading to changes in PID needs to be carefully assessed.
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WP 6
EXTRAGENITAL GONORRHEA AND CHLAMYDIA IN EXPOSED WOMEN ATTENDING TWO BALTIMORE CITY SEXUALLY TRANSMITTED DISEASES CLINICS

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Background: Recommendations from the CDC call for pharyngeal screening of *Neisseria gonorrhoeae* (GC) and rectal screening of GC and *Chlamydia trachomatis* (CT) in HIV-infected and at-risk men who have sex with men (MSM). There are currently no recommendations to routinely screen women at extragenital sites. Our aim was to define the prevalence of extragenital GC and CT in women accessing care at two public STD clinics in Baltimore, Maryland and compare it to the prevalence of extragenital infections in MSM and men who have sex with women (MSW).
Methods: All patients attending two inner city STD clinics in Baltimore City between June 1, 2011 and May 31, 2013, who reported extragenital exposures and who were receiving standard genital testing were included in this analysis. Routine testing using nucleic acid amplification tests for extragenital CT began six months into our study so fewer patients were tested. Prevalence estimates with 95% confidence intervals (CI) are presented.
Results: A total of 10,539 patients were included in this analysis (88% African American, mean age 29 years, 42% women, 7% MSM, 2.5% HIV infected). The prevalence estimates of any extragenital GC and CT were: 2.4% [95%CI: 1.9-2.9] GC and 3.7% [95% CI: 3.1-4.4] CT in women; 2.6% [95%CI: 2.2-3.1] GC and 1.6% [95% CI: 1.3-2.0] CT in MSW; 18.9% [95%CI: 16.0-22.0] GC and 11.8% [95% CI: 9.4-14.5] CT in MSM. Among women, 30.1% [95% CI: 23.3-37.7;] of all cases of GC and 12.8% [95%CI: 9.8-16.2] of all cases of CT would have been missed if extragenital testing were not done.
Conclusions: Although the prevalence of extragenital gonorrhea and chlamydia is highest among MSM, nearly one third of gonorrhea cases in women would be missed with genital-only testing.
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WP 7
COMMUNITY BASED RESPONSE TO DECREASE GONORRHEA IN ANDROSCOGGIN COUNTY

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Background: Gonorrhea is a reportable sexually transmitted disease caused by the *Neisseria gonorrhea* bacterium. In Maine, gonorrhea cases increased from 96 cases in 2008 to 456 cases in 2012. In 2012, 42% (n=194) of statewide cases were in Androscoggin County, at a rate of 180.64/100,000 population, which exceeded the statewide rate (34.48/100,000 population) by five times. The majority (64%, n=125) of cases in Androscoggin County occurred among females.
Methods: In 2013, Maine CDC engaged in a community based response to raise awareness about gonorrhea, promote and publicize new treatment guidelines for health care providers. A Health Alert Notice was released in December 2012 to promote treatment guidelines among providers. We conducted venue-based outreach at 65 retail and health care venues using social marketing materials that were developed to promote prevention and testing messages. We presented to community and health care workers at five sites in Androscoggin County to raise awareness and promote revised treatment guidelines. We also utilized social media and targeted advertising to highlight testing venues and promote awareness.
Results: From January through June 2013, 1400 social marketing materials (1000 palm cards and 400 posters) and 5000 condoms were distributed to outreach settings. Between January 1 through September 30, 2013, 202 cases were reported statewide which reflects a 38% decrease from 326 cases reported from January 1 through September 30, 2012. Between January 1 through September 30, 2013 69 cases were reported in Androscoggin County, which reflects a 51% decrease from 143 cases reported in from January 1 through September 30, 2012.
Conclusions: Maine CDC and partners conducted extensive public health action throughout Androscoggin County from January 2013 through June 2013. The decrease in reported positive gonorrhea cases suggests these outreach and awareness raising efforts may have contributed to the decline in the incidence of gonorrhea cases.
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WP 8
SCREENING, BRIEF INTERVENTION AND REFERRAL TO TREATMENT MODEL TO REDUCE HIGH RISK SEXUAL BEHAVIOR AND SUBSTANCE USE IN NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE'S SEXUALLY TRANSMITTED DISEASE CLINICS, MAY 1, 2008- SEPTEMBER 30, 2013

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Background: Alcohol and other drug (AOD) use has been associated with sexual risk taking and acquisition of sexually transmitted diseases (STDs), including HIV. Identifying substance use disorders (SUDs) and providing timely screening and intervention could reduce AOD use and STDs. The

Screening, Brief Intervention and Referral to Treatment (SBIRT) model, an evidence-based approach addressing substance use in clinical settings has been in use at NYC STD clinics since May 2008. Outcomes are presented below.
Methods: From May 1, 2008 through September 30, 2012, the SBIRT model was used to screen patients for SUD. Patients answering 'yes' to any of the self-administered screening questions were offered a single-session brief intervention using the SBIRT model. The intervention utilizes stages of change theory and motivational interviewing techniques to address patients' AOD use. When warranted, patients were referred to substance abuse treatment. Screening results were documented in the electronic medical records. Analyses, using SAS 9.2, measured changes from SUD positive screening during initial visit to a negative screening during subsequent visits (N= 3,684). STD diagnoses at initial and subsequent visits were also examined.
Results: SUD positive screened patients who received a brief intervention were more likely to screen negative for SUD [OR 1.46 (95%CI 1.27-1.67) p <0.001] and less likely to be diagnosed with an STD [OR 0.68 (95%CI 0.54-0.86), p = .0016] in subsequent STD clinic visits as compared to SUD positive screened patients who did not receive an intervention.
Conclusions: Results demonstrate the effectiveness of SBIRT within NYC STD clinics in reducing reported substance use and STD diagnoses in subsequent NYC STD clinic visits.
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WP 9
BANG FOR THE BUCK: THE PARTNER SERVICES EXPERIENCE IN WASHINGTON, DC

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Background: Partner Services (PS) are reportedly cost-effective and cost saving with many benefits that extend to people living with STDs/HIV, their partners, and the community. In 2012, the HIV/AIDS, Hepatitis, STD and TB Administration (HAHSTA) offered PS to all persons reported with new HIV infection, early syphilis infection, or an incident STD with prevalent HIV.
Methods: Case Management Reports were run within STD*MIS October 30, 2013 for all HIV and early syphilis cases reported to the District of Columbia during 2012. A descriptive analysis comparing these cases was done looking for the number of new infections identified.
Results: Of new HIV cases; 273 were reported, 189 (69.2%) were interviewed, and 195 partners were elicited (contact index = 1.0). Of these partners; 4 (2.1%) were new infections, 59 (30.2%) were previous positives, 28 (14.4%) were HIV negative, 28 (14.4%) refused testing, 31 (15.9%) were not locatable, and 45 (23.0%) were "other" – Internet, Out of Jurisdiction and those with insufficient information to initiate. Of early syphilis cases; 439 were reported, 338 (77.0%) were interviewed, and 402 partners were elicited (contact index = 1.2). Of these partners; 25 (6.2%) were new infections, 71 (17.7%) had previously been treated, 57 (14.2%) were preventatively treated, 33 (8.2%) were negative, 70 (17.4%) refused testing, 93 (23.1%) were not locatable, and 53 (13.2%) were "other."
Conclusions: Although the contact indices were similar, a greater number of early syphilis cases were identified or prevented through PS. A new HIV diagnosis rate of 2.1% is greater than that of HIV screening at the Southeast STD Clinic (<1.0%) but less than some targeted outreach (3.4% through weekly screenings in a local bathhouse). Thorough cost-benefit analyses need to be done comparing PS to other endeavors with the goal of computing and comparing cost of new HIV or early syphilis case detected.
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WP 10
ESTIMATED EFFECTS OF HEALTHCARE REFORM ON STD CLINIC PATIENT GENERATED REVENUE

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Background: Many public health sexually transmitted disease (STD) clinics in the U.S. closed in recent years. The remaining clinics are increasingly pushed to increase patient generated revenue as a means to becoming financially sustainable as health care reform increases insurance coverage in the U.S. population.
Methods: We calculated the costs associated with operating a Public Health STD Clinic in Seattle, WA, and estimated the amount of patient generated revenue the clinic might obtain assuming varying levels of Medicaid and private insurance coverage among patients. Because our clinic is part of a Federally Qualified Health Center (FQHC), we assumed that each visit by a Medicaid patient would generate $279; reimbursement for private insurance was based on visit and lab test costs, and that 88% of all billings would be reimbursed.
Results: Based on 2012 data, the clinic had 11,233 patient visits. The estimated 2013 operating costs of the clinic are $2,863,670, or $255 per patient visit. These costs include 40% for staff providing direct patient care, 10% for registration desk staff, 12% for administration and technical support, and 38% for medications, supplies, laboratory costs, rent and overhead. Assuming that 50% of patients were on Medicaid and 30% were privately insured, the clinic would generate $1,048,389 in revenue or 37% of the operating costs. If 60% of patients were on Medicaid and 30% privately insured the clinic would recoup 43% of its operating costs.
Conclusions: Health care reform should allow our STD Clinic to recoup substantial patient generated revenue, but is unlikely to allow the clinic to become sustainable in the absence of significant increases in efficiency; provision of new, more highly reimbursable services; and continued public health funding.
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WP 11
THE FEASIBILITY OF USING HIV INFECTION AS THE SOLE CRITERION FOR INITIATING FIELD INVESTIGATIONS AMONG PERSONS WITH REACTIVE SEROLOGIC TESTS FOR SYPHILIS, NEW YORK CITY, 2012

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Background: Syphilis-HIV co-infection may enhance the infectiousness and severity of both diseases. In New York City, >60% of men-who-have-sex with-men with primary or secondary syphilis are co-infected with HIV. Current criteria for syphilis investigation do not include HIV status. We assessed HIV positivity (HIV+) among persons with reactive serologic tests for syphilis (STS+) to determine if, given current resources, HIV infection alone could be used as a criterion for initiating syphilis investigations.
Methods: We ascertained HIV status for all persons with STS+ reported during December 2012 by providers diagnosing high volumes of syphilis. We first checked HIV status in the STD surveillance registry, which contains limited HIV data. If HIV status was unavailable, we then searched the HIV/AIDS registry (HARS). HARS is supported on an independent network requiring separate login.
Results: Of 675 persons with STS+, 223 (33%) were determined to be HIV+ by checking the STD registry. Of the remaining 452, 24% (163/452) were found to be HIV+ in HARS. Overall, 57% (386/675) persons with STS+ were known to be HIV+ (92% male, median age 41). Among the 11% (74/675) which met existing criteria for syphilis investigation, 69% (51/74) were HIV+ either in the STD or HIV registry.
Conclusions: Checking HARS resulted in a 73% increase in known HIV+ status among persons with STS+. If HIV-infection was the sole criterion for initiating syphilis investigations, an additional 335 persons would have been initiated in one month; given current resources for investigation, this would not be feasible. Instead, we implemented HARS checks for all STS+ persons meeting syphilis investigation criteria who have unknown HIV status. This approach allows field staff to prioritize co-infected persons for investigation. Automated matching of STD and HIV registries would reduce the burden of reviewing two separate surveillance systems, but would not address limited field resources.
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WP 12
PROBABILITY OF OCULAR, AUDITORY OR NEUROSYPHILIS WITH NEGATIVE SERUM RAPID PLASMA REAGIN (RPR) AND POSITIVE TREPONEMAL ANTIBODY TESTS

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Background: New reverse sequence syphilis testing algorithms have detected significant numbers of serodiscordant patients with a confirmed positive treponemal tests and negative non- treponemal tests. The risks of sequelae in these patients in the antibiotic era are unknown. Our goal was to determine the probability of neurosyphilis, auditory or ocular syphilis among persons with serodiscordant serum syphilis serologies.
Methods: A retrospective chart review was conducted on all subjects in the Johns Hopkins Patient Database who had a positive serum treponemal test and who underwent a cerebrospinal fluid (CSF) examination between 1994 and 2012. More detailed information such as demographics, clinical presentation, HIV status, CD4 count, HIV RNA and CSF abnormalities were abstracted in the subset of patients who were found to be serodiscordant. We defined 'confirmed neurosyphilis' as a positive CSF VDRL with or without pleocytosis. We defined 'suspected neurosyphilis' as CSF pleocytosis (≥ 5 cells/ml) with or without CSF protein elevation. Ocular/auditory syphilis was defined as compatible ocular/auditory findings in a person with serological evidence of syphilis independent of CSF abnormalities.
Results: Of the 470 patients who had positive serum treponemal tests and underwent a CSF examination, 48(10.2%) adults were serodiscordant. Only 5 (10.4%) of those were diagnosed and treated for ocular (N=3) auditory (N=1), or neurosyphilis (N=1). All patients had negative CSF VDRL. Those with ocular syphilis presented with bilateral uveitis, anterior uveitis, and bilateral optic neuritis. The patient with auditory syphilis presented with hearing loss. All had normal CSF parameters. The patient with suspected neurosyphilis was an HIV- infected alcoholic male who presented with subacute altered mental status and pleocytosis on CSF examination.
Conclusions: Neurological complications of syphilis occur rarely in persons with serodiscordant serum syphilis serologies. Ocular complaints were most frequent and diagnoses were presumptive.
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WP 13
INTEGRATED USE OF VIDEO-BASED IMPROVISATION AND FOCUS GROUP DISCUSSION TO DEVELOP AN HIV/STI PREVENTION TELENOVELA FOR MEN WHO HAVE SEX WITH MEN (MSM) AND TRANSGENDER WOMEN (TW) IN LIMA, PERU

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Background: Video-based interventions have been effective in improving HIV/AIDS knowledge and reducing risk behavior. We used a combination of focus-groups and videotaped role-playing exercises to develop content for an HIV/STI prevention *telenovela* (Spanish soap opera) for MSM/TW in Peru
Methods: We conducted 15 workshops between June-July 2012 with three groups of purposively sampled MSM/TW (low income MSM, n=9; middle/high income MSM, n=6 and TW, n=8). During the first workshop, each group created three main characters that provided the basis for subsequent improvisations. Each workshop included a focus group discussion (1 hour) followed by role playing/scene improvisation and follow-up discussion (1 hour). Qualitative data analysis compared audio and video recordings of focus groups and scene improvisations.
Results: Participant-generated protagonists reflected each group's predominant sexual orientation, sexual role (e.g., *activo*, *pasivo*, *moderno*), social context (employment, family structure), and support systems (family, friends, health promoters). Substantial differences emerged between understandings of key HIV/STI prevention topics articulated in focus group discussions with those enacted in scene-based improvisations. Focus group discussions reflected idealized norms of condom use, HIV/STI testing practices, serostatus disclosure, partner notification, and sexual identities/roles. Scenic improvisations demonstrated imperfect and inconsistent patterns of behavior described in post-improvisation discussions as more reflective of participants' lived realities.
Conclusions: Integration of focus-group discussions with scenic improvisation encouraged participants to explore multiple dimensions of vulnerability, health awareness, and modifiable barriers to HIV/STI prevention. Use of combined methods allowed for an iterative data collection process, probed for divergent themes between diverse MSM/TGW subpopulations, and informed development of a *telenovela* intervention.
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WP 14
CLIENTS OF MALE AND TRANSWOMEN SEX WORKERS IN PERU: SEXUAL PARTNERS AND PRACTICES AND HIV TESTING AND STATUS

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Background: Globally, little is known about the clients of sex workers, particularly male and transwomen sex workers (MTSWs). Clients represent a bridge population between high-risk MTSWs and clients' female partners. Our objective was to describe the clients of MTSWs in Lima, Peru.
Methods: Following ethnographic mapping of sex work venues, we revisited venues to survey clients of MTSWs. We used smartphones to ask clients about their socio-demographics, recent sexual practices (last 3 months), and HIV testing history and status. We present descriptive analyses.
Results: We surveyed 102 clients from 25 sex work venues. Clients were well-educated (41% complete secondary, 27% at least some post-secondary education). They identified as bisexual (47%), homosexual (34%) and heterosexual (19%). Forty-three (42%) had stable romantic partners; 67% were women. All participants had male/transwomen sex partners, with a median of 7 [IQR 4-12] total partners and 6 [IQR 2-10] sex worker partners. Only 26% reported male/transwomen partners who were not sex workers. Clients reported only insertive anal intercourse (44%), only receptive anal intercourse (23%) and both insertive and receptive anal intercourse (25%) with male/transwomen sex workers, with 94% consistent condom use. Half of participants had recent female sex partners, with a median of 0.5 [IQR 0-2] partners. Seventy-one percent had only non-sex worker female partners and 22% both sex worker and non-sex worker partners. Among those with non-sex worker female partners: 100% reported vaginal sex, with 66% inconsistent condom use; and 47% reported anal sex, with 36% inconsistent condom use. Ever HIV testing was 69%, with 29% testing in the last 6 months. Thirteen percent reported being HIV positive.
Conclusions: Clients of MTSWs have diverse types of sex partners and practices, with sub-optimal prevention practices, particularly with female partners. This information should be used to guide prevention efforts with clients and their female partners in Lima.
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WP 15
MYCOPLASMA AS A FREQUENT FACTOR OF CHRONIC SCROTAL PAIN SYNDROME (CSPS) IN HIV SEROPOSITIVE MALE PATIENTS IN LVIV, UKRAINE

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Background: Chronic scrotal pain syndrome (CSPS) – is a common clinical condition of HIV+ male patients evaluated by infectious disease physicians in Lviv Regional AIDS Center (LRAC). The purpose of this study was to define the most frequent causes of CSPS in HIV + male patients.
Methods: Patients recruited to the study were males from Lviv region of Ukraine with CSPS according to chronic pelvic pain classification by European Association of Urology. Ultrasound examination of the scrotum, semen analysis, and semen and urine PCR (polymerase chain reaction) for Chlamydia trachomatis(CT), Trichomonas vaginalis (TV), Ureaplasma urealyticum (UU), Mycoplasma genitalium (MG), Mycoplasma hominis (MH) and Neisseria gonorrhoeae (NG) were performed for the study group. Physical examination and detailed patient history were taken into consideration as well.
Results: During September 2011-October 2013 52 eligible men (age range 19- 46 years; mean 33 years) with CSPS were enrolled in the study. Ultrasound examinations of the scrotum revealed the following: varicocele (4.2%), hydrocele (2.1%), small epididymal cyst (2.1%), testicular tumor (2.1%), and normal ultrasound examination (89.6%). The semen analysis revealed that 18,6% patients had < 1,000,000/ml white blood cell count while

81,3% patients had 1,000,000- 8,000,000/ml . PCR testing for infectious diseases demonstrated that MH, MG, UU or combination was identified in 59 .8 % while CT and NG were found in 12.4% of patients. In 27.8% of patients PCR testing was negative. Pain was reported in 81.3% as a primary complaint and a history of multiple, unsuccessful treatments had low correspondence between symptoms and medical findings.
Conclusions: This study suggests that Mycoplasma is common in HIV + male patients with CSPS. However, this finding needs to be confirmed in a larger sample population and calls for further research to explore the potential role of these microorganisms in the pathogenesis of CSPS.
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WP 16
FACTORS ASSOCIATED WITH SYPHILIS ACQUISITION AMONG HIV-INFECTED MSM ON ANTIRETROVIRAL THERAPY

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Background: Syphilis is a re-emerging sexual transmitted infection among HIV-infected Thai men having sex with men (MSM) in Bangkok. We assessed factors associated with acquiring syphilis and risk behaviors among patients with positive syphilis serology in our HIV cohort in Bangkok, Thailand.
Methods: Screening tests, VDRL and Architect Syphilis TP (Abbott), were performed. Self-assessment questionnaire on the history of sexually transmitted infections (STIs) and risk behaviors including condom use, substance abuse and alcohol intake was administered during August 2011-2012. Syphilis cases were compared between MSM and heterosexual men.
Results: From a total of 1110 screened subjects, 649 were male (275 MSM, 374 heterosexual men), 127 (11.4%) were positive for syphilis screening (73 MSM and 30 heterosexual men), 36.4% had a history of STIs and only 47.3% had history of known or diagnosed syphilis infection in the past. The prevalence of syphilis among MSMs and heterosexual men were 26.5% and 8%, respectively. Compared to heterosexual men, MSM were younger (39 vs. 46 years), had a higher educational level and shorter duration of known HIV, and fewer HCV co-infections (1.9% vs 8.4%) and were living alone (85.7% vs. 25%). High titers of VDRL (≥ 1:8) were found in 55.6% of the MSM with positive VDRL. MSM were significantly at risk for acquiring syphilis ($p<0.001$) with an RR of 5.07 (95%CI: 3-8.5) by multiple logistic regression. Older age, no regular sexual partner and HBV co-infection were also significantly associated with syphilis acquisition among MSMs [RR (95%CI): 0.81 (0.73-0.9), 17.43 (3-101.15) and 14.93 (1.3-170.7), respectively].
Conclusions: High titer of syphilis was prevalent among HIV-infected men in our cohort. Frequent syphilis screening is required among HIV-infected MSM at risk of acquiring syphilis. Regular condom use should strongly be encouraged to prevent STIs.
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WP 17
RECENT DECLINE IN *NEISSERIA GONORRHEA* EXTENDED-SPECTRUM CEPHALOSPORIN MINIMUM INHIBITORY CONCENTRATIONS IN CALIFORNIA, 2011-2013

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Background: *Neisseria gonorrhoeae* strains resistant to ceftriaxone have been described in both Asia and Europe and strains with reduced susceptibility have been reported worldwide. *Neisseria gonorrhoeae* multi-antigen sequence typing (NG-MAST) genogroup 1407 (G1407), an internationally successful strain group associated with men who have sex with men, has resulted in multiple treatment failures with extended-spectrum cephalosporins. We performed phenotypic and genotypic surveillance for G1407 strains in California during 2011-2013.
Methods: Urethral *N. gonorrheae* isolates (N=1,756) were collected from men visiting public health clinics in San Francisco, Los Angeles, Orange and San Diego counties during 2011-2013. Minimum inhibitory concentrations (MIC) were determined by Etest and NG-MAST was used to assess strain diversity.
Results: G1407 isolates were detected in all four counties sampled, were responsible for 100% of the ceftriaxone alert value MICs (MIC >= 0.125 μg/mL) seen during the study period and represented 6.2 % (109/1,756) of all isolates. After grouping isolates by quarter, we observed an increase in both mean G1407 ceftriaxone MIC and the alert value MIC rate between the first quarter of 2011 and the first quarter of 2012. Both measures then decreased between the second quarter of 2012 and the second quarter of 2013.
Conclusions: The international spread of G1407 has reached California, although it is unknown whether it has resulted in treatment failures. It is notable that during the study period, both the United Kingdom and United States instituted novel treatment recommendations that included dual therapy with ceftriaxone and azithromycin. The ceftriaxone MIC decreases seen in California were preempted by the treatment recommendation changes in the UK and began one quarter before treatment recommendations were changed in the United States.
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WP 18
PROVIDER-OFFERED EXPEDITED PARTNER THERAPY FOR CHLAMYDIA AND GONORRHEA IN WASHINGTON STATE: RESEARCH TO SUSTAINABLE PRACTICE

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Background: The practice of Expedited Partner Therapy (EPT) allows partners to be treated for chlamydia or gonorrhea (CT/GC) without clinical evaluation, to augment traditional partner services. EPT in Washington State (WA) was initially implemented and promoted statewide by the University of Washington in collaboration with the WA Department of Health (DOH) as an evaluation study. Private and public medical providers received EPT education and access to free treatment packets at local pharmacies. After research funding ceased, the DOH maintained key aspects of the EPT program. This analysis examined the impact of transitioning EPT from research to routine public health activity.
Methods: Provider-identified plans for treating partners, including referrals to public health departments, were collected for all CT/GC cases between March 1, 2010 and October 31, 2013. Cases were randomly selected for interview and asked whether their provider offered EPT. Analyses were restricted to women and heterosexual men, 14 years and older at time of diagnosis, and stratified by research period (2010-2011) and program period (2012-2013). Statistical significance was calculated using chi-square tests.
Results: More EPT packets were available in 2012-2013 than in 2010-2011. Fewer CT/GC cases were referred to the health department for partner services in 2012-2013 (50.9%) than in 2010-2011 (51.5%) ($p=.0024$). In 2010-2011, 7,381 cases of CT/GC (17.1% of cases) were randomly selected for interview and 3,965 (8.4% of cases) were selected in 2012-2013. Of completed interviews (56.2%), the proportion of CT/GC cases that reported being offered EPT by providers decreased from 44.1% in 2010-2011 to 36.4% in 2012-2013 ($p<.0001$).
Conclusions: While declines in EPT use were observed, our findings suggest that providers continue to offer EPT to a substantial proportion of CT/GC cases even in the absence of ongoing promotion. Future analyses should include evaluation of reestablishing active provider education and other measures of EPT success.
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WP 19
HPV VACCINE COVERAGE AMONG MEN WHO HAVE SEX WITH MEN — UNITED STATES, 2011

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Background: Quadrivalent HPV vaccine was licensed in the United States for females in 2006 and for males in 2009. At the end of 2011, ACIP added it to the routine immunization schedule for boys at age 11 or 12 and through age 21 if not previously vaccinated or through age 26 for men who have sex with men (MSM). MSM are at high risk for HPV-associated disease; anal cancer prevalence is 35/100,000 among HIV-uninfected MSM, compared with 2/100,000 for all men. We assessed 2011 baseline HPV vaccine uptake among MSM.

Methods: We analyzed data from the 2011 National HIV Behavioral Surveillance System, an anonymous cross-sectional survey. MSM age ≥18 were recruited using time-space sampling at venues where MSM congregate in 20 U.S. cities. Using chi-square analysis, we assessed self-reported HPV vaccine uptake according to demographic characteristics, behavioral risk factors, and other sexual health care.
Results: Among 3221 MSM age 18–26, 157 (4.9%) reported having received ≥1 dose of HPV vaccine by 2011. Coverage was significantly higher (p<.05) among men who had a usual place of care (5.4%), had seen a health care provider in the past year (5.9%), had disclosed male-male sexual attraction/behavior to a health care provider (6.3%), had been vaccinated against hepatitis (7.2%), had been tested for an STD in the past year (7.8%), or reported having had an STD (7.8%) or a positive HIV test (13.4%). Of unvaccinated MSM, 75.9% had seen a health care provider in the past year.
Conclusions: These are the first national data on HPV vaccine coverage among MSM. Coverage was low before HPV vaccine was routinely recommended for males. These data serve as a baseline for future studies of HPV vaccine uptake among U.S. MSM as vaccination recommendations are implemented. Health care settings may offer opportunities to increase coverage in this population.
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WP 20
HIV VIRAL LOADS AMONG YOUNG HIV-INFECTED MEN WITH EARLY SYPHILIS

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Background: Increasing rates of syphilis have been reported among men who have sex with men (MSM), with high rates of HIV co-infection among these cases. HIV viral load data as a surrogate for HIV infectivity was evaluated among young men diagnosed with HIV and syphilis in Maricopa County, Arizona.
Methods: Syphilis case report and HIV and STD surveillance data were abstracted to identify cases meeting the following criteria: (1) male, (2) 24 years of age or younger, (3) diagnosis of early syphilis (primary, secondary, or early latent) during 2009-2012, and (4) HIV-infected at the time of syphilis diagnosis. HIV viral load and CD4 cell count data nearest to the time of syphilis diagnosis were abstracted.
Results: During 2009-2012, there were 56 HIV-infected, early syphilis cases meeting the age criteria. The median age was 22; 23 (41%) were Hispanic; 17 (30%) were White; and 14 (25%) were African American. Of men with available information on gender of sexual partners (N=54, 96%), 53 (98%) reported MSM behavior. Syphilis stages included: 5 (9%) with primary; 23 (41%) with secondary; and 28 (50%) with early latent syphilis. Of the 56: only 4 (7%) patients had an undetectable viral load (< 100 c/mL) collected within a year of syphilis diagnosis; 32 (57%) had a detectable viral load collected within one year of syphilis diagnosis (median 21,000 c/mL, range 130 – 302,844 c/mL); and 20 (36%) had no reported viral load or a viral load collected greater than one year from syphilis diagnosis. The median CD4 count was 375 cells/mm^3 (N = 20, range 28 – 862 cells/mm^3).
Conclusions: Among this group of young men, primarily MSM, co-infected with HIV and early syphilis, few had undetectable viral loads suggesting the potential for HIV transmission.
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WP 21
INTERNALIZED HOMONEGATIVITY AND DISCLOSURE OF SAME-SEX SEXUAL BEHAVIOR TO HEALTHCARE PROVIDERS AMONG YOUNG MEN WHO HAVE SEX WITH MEN

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Background: Because men who have sex with men (MSM) are over-represented among persons with HIV and STDs, it is important to understand how often they disclose their sexual behaviors to healthcare providers. This analysis tested the hypothesis that internalized homonegativity is negatively associated with disclosing same-sex sexual behaviors to healthcare providers.
Methods: The Young Men's HPV (YM-HPV) study is a cross-sectional study of young gay, bisexual, and other MSM aged 18–26 years from health clinics in two U.S. cities: Chicago, IL, and Los Angeles, CA. Men who reported ever having a male sex partner were eligible for this analysis. Participants completed an online standardized computer-based questionnaire including demographics, sexual behavior, disclosure, and a condensed 11-item version of Mayfield's Internalized Homonegativity Inventory (IHNI), with each item rated on a six-point Likert scale. An independent groups t-test with a correction for lack of homoscedasticity was used to test for significance (p<0.05).
Results: A total of 541 young men enrolled in the YM-HPV study during the one-year period July 18, 2012 through July 17, 2013. There were 405 valid responses to questions in the IHNI and the question about disclosure to a regular healthcare provider. More than one-third of the men (n=153, 37.78%) had never disclosed same-sex sexual behavior to their usual healthcare provider. These men scored significantly higher on the measure of homonegativity compared to men who had disclosed same-sex sexual behavior to their regular provider: the mean homonegativity score was 23.33 among those never disclosing versus 21.38 among those ever disclosing (t=1.90, p=0.047).
Conclusions: Internalized homonegativity may be a barrier for young MSM to disclose same-sex sexual behavior to healthcare providers. Providers might benefit these men by de-stigmatizing same-sex sexual behaviors and helping MSM overcome their own negative feelings about their behaviors.
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WP 22
SEX PARTNER MEETING PLACES REPORTED BY NEWLY DIAGNOSED HIV-INFECTED MSM IN BALTIMORE CITY: EXPLORING INDIVIDUAL CHARACTERISTICS AND VIRAL LOADS BY MEETING PLACE

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Background: Men who have sex with men (MSM) experience more than half of U.S. HIV infections annually. Targeted control strategies, including identifying venues with ongoing HIV transmission, are needed. The internet as a sex partner meeting venue has been associated with higher risk behavior among MSM. Surveillance efforts, however, traditionally focus on physical venues which may miss key places for targeted control. The objective was to identify individual characteristics and utilization patterns associated with reported sex partner meeting venues among newly diagnosed HIV-infected MSM.
Methods: Public health surveillance data of newly diagnosed MSM between January 2011 and April 2013 (N=167) was utilized. Data included reported past-year sex partner meeting venues. We compared characteristics of those reporting internet-based, physical, or physical and internet-based venues and, in a sub-analysis, available viral load data (October 2012 to April 2013) by the three groups.
Results: Eighty-five percent of subjects were Black and 33% were <24 years-old; 46% reported meeting partners at physical venues (bar/club/park/street), 41% internet-based venues (website/mobile-app), and 13% both venue types. There were no significant differences by race or age among the groups; however those reporting both venue types (vs. one type) were significantly more likely to report >5 sex partners and more commonly (not significant) infected with syphilis (59% vs. 49% in the other two groups). Viral load data was available on 13%. Individuals reporting both venue types had a higher, not significant, median viral load at diagnosis (51,387), than those reporting internet-based (4,734) or physical (16,171) venues.
Conclusions: While demographically similar to individuals using one venue type, MSM meeting sex partners at both venue types may be at greater risk for HIV transmission based on greater sex partners, syphilis prevalence, and median viral load. Exploring this population may improve understanding of Baltimore's MSM epidemic and provide important targets for HIV control efforts.
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WP 23
HIGH PREVALENCE OF OROPHARYNGEAL *NEISSERIA GONORRHEA* INFECTIONS DETECTED BY NUCLEIC ACID AMPLIFICATION TESTING AMONG MEN WHO HAVE SEX WITH MEN ATTENDING NEW YORK CITY SEXUALLY TRANSMITTED DISEASE CLINICS, 2013

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Background: Nucleic Acid Amplification Testing (NAAT) is the most sensitive method of detecting *Neisseria gonorrhea* (GC) infections. Few laboratories are validated to perform GC NAAT on oropharyngeal (OP) specimens; however, evidence suggests a substantial burden of OP GC infections among men who have sex with men (MSM) contributing to ongoing transmission.
Methods: During April 2013, in addition to routinely collected urethral and anorectal specimens, OP specimens for GC NAAT and culture were collected from MSM reporting oral sex attending three sexually transmitted disease clinics in New York City (NYC). OP NAAT was performed by commercial assay at a validated laboratory; urethral and anorectal NAAT and all cultures were performed at the NYC DOHMH Public Health Laboratory.
Results: The prevalence of OP GC infection among MSM who reported performing oral sex was 12.4% (56/451). The vast majority (95%; 53/56) were asymptomatic. Prevalence was significantly higher among MSM <25 years compared to those ages 25 - 39 and >40 (25% vs 12% vs 3.8%, p<0.001), and MSM who reported sex with a GC infected partner (24% vs 11% among non-contacts, p=0.02). Although not statistically significant, HIV-positive MSM were less likely to have on OP GC infection than HIV-negative MSM (5.5% vs 13.8%). Among 233 MSM tested for GC at all three anatomic sites, 42 had GC infection at any site; 12/42 (29%) were positive only at the OP. No OP GC infections were detected by culture among the 451 MSM tested by NAAT.
Conclusions: Using NAAT to test OP specimens for GC detects a high number of infections that would otherwise go undiagnosed. The high prevalence among young MSM who report performing oral sex suggests that this group may benefit from regular screening.
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WP 24
HIV SERODISCORDANT PARTNERSHIPS AMONG MSM DIAGNOSED WITH EARLY SYPHILIS IN PHILADELPHIA

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Background: Serosorting is a strategy some men who have sex with men (MSM) use in an effort to reduce HIV risk or transmission. MSM who have early syphilis likely have engaged in unprotected sex in the past year, and may be employing serosorting as a risk reduction method. PDPH Partner Services (PS) interview records for syphilis cases were reviewed to determine HIV concordant partnerships.
Methods: Syphilis patient interviews and STD clinic medical records are maintained in an electronic data base and partner records are linked to the original record. All information on individuals reported with early syphilis and named as a contact to early syphilis in 2012 available was reviewed to determine the HIV status of syphilis patients and their contacts.
Results: Of the 535 males reported with early syphilis in 2012, 371 (69%) were identified as MSM. Most (353, 95.1%) reported cases received PS interviews. Many patients named anonymous partners who were not located. PS identified 361 contacts, accounting for 332 unique individuals (as some contacts were named by more than one case). Of the 295/361 partnerships where HIV status was known for both partners, 66% were among seroconcordant partners (150 HIV positive and 45 HIV negative) and 34% were among serodiscordant partners.
Conclusions: The high percentage of concordant partnerships may indicate that high risk positives are using serosorting as a means of risk reduction; however, this practice may also lead to increased risk of other STDs. Concordant partnerships may also be a chance result of an overall high rate of HIV in MSM infected with syphilis. The number of serodiscordant partnerships is more alarming. All 100 of the HIV negative partners are at high risk for new infection and may benefit from specific public health messaging, enhanced counseling and frequent testing.
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WP 25
PREVALENCE AND CORRELATES OF INTERNET SEX SEEKING BEHAVIOR AMONG YOUNG MEN WHO HAVE SEX WITH MEN IN THE SOUTHERN US: IS THERE MORE HIV/STI RISK?

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Background: The Internet has emerged as a place where men who have sex with men (MSM) meet other men for sex. Though research has examined the association between Internet sex seeking behavior (ISB) and risky sexual behavior, very little attention has been given to young MSM in the southern US, a population and region disproportionately impacted by HIV/AIDS. Thus, this study examined the relationship between ISB and risky sexual behavior (unprotected anal intercourse [UAI], casual sex, and previous STI) among young MSM in the southern US.
Methods: Two-hundred and sixty-three (263) men between 18 and 29 years, who reported sex with another man, and resided in the southern US were recruited online and offline. Bivariate analysis and sequential logistic regression were conducted to determine unadjusted and adjusted associations between ISB and risky sexual behavior. Covariates included race, age, age at first sexual intercourse, educational level, and annual income.
Results: Study sample was predominantly black (70%) self-identified as gay (77%), with a mean age of 21.9 years. Respondents reported UAI (75%), casual sex (88%), previous STI (20%), and ISB (61%). Significant bivariate correlates of ISB included white race (p<.05), self-identifying as gay (p<.01), UAI (p<.001), casual sex (p<.001), older age (p<.05), and a previous STI (p<.001). Multivariate analysis showed respondents who reported ISB were more likely to report UAI (p<.01), casual sex (p<.001), and a previous STI (p<.01).
Conclusions: Findings suggest a high prevalence of ISB, with MSM who engage in ISB more likely to report risky sexual behavior. Web-based and mobile-based HIV/AIDS interventions that mitigate sexual risk and vulnerability online, and that are tailored to young MSM are needed. These interventions should equip young MSM with skills to safely navigate online communities, negotiate consistent safe sex, and get tested for HIV regularly, while stressing the sexual risk associated with ISB.
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WP 26
PERCEPTIONS OF HIV PRE-EXPOSURE PROPHYLAXIS IN A HIGH-RISK POPULATION IN URBAN UNITED STATES

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Background: HIV pre-exposure prophylaxis (PrEP) has been studied in populations around the globe, including US communities. As we implement PrEP in the US, it is important that we understand how PrEP is perceived. We seek to determine perceptions of PrEP in a high-risk population undergoing HIV testing in an urban community center setting. The objective determination of risk estimate used here has been found in previous study to correlate closely with HIV prevalence.
Methods: In the health centers operated by the Philadelphia Health Department, individuals in walk-in clinics are offered rapid HIV testing. For each individual, an anonymous survey is administered. Included are questions about demographics, risk behavior, risk perception, risk estimate based on reported behaviors, acceptance of PrEP, and reasons for acceptance or refusal. Data are analyzed using SAS 9.2.
Results: Between July 2012 and May 2013, 1,973 individuals participated in the study, 1,073 of whom were determined to be at high risk for HIV. Almost half (47.2%) were women, and a majority (89.2%) were Black non-Hispanic. The overall acceptance rate of PrEP was 69.2%. Acceptance rates were higher for men than women (71.5% and 65.1%, p<0.01), and for African Americans compared with non-African Americans (69.2% and 62.1%, p=0.006). Rates were lower among those with zero perceived risk (50.3% compared with

92.3%, p<0.01). There was no correlation between acceptance rates and HIV test result, number of partners, condom use or risk estimate.
Conclusions: Among a largely Black non-Hispanic population in US community health centers at high risk for HIV infection, acceptance rates of PrEP were high. As we seek to implement PrEP in the US for this important target population, it is critical to make every effort to educate about the availability of PrEP, and to ensure access to it.
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WP 27
ACCESS TO AND WILLINGNESS TO USE SCHOOL-BASED HIV AND STD TESTING AND PREVENTION SERVICES AMONG TEEN YOUNG MEN WHO HAVE SEX WITH MEN

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Background: Evaluators collected formative data to inform development of a school-centered HIV prevention program for 13-to-19 year old black and Latino young men who have sex with men (YMSM).
Methods: Data were collected from a convenience sample of 13-19 year old black and Latino YMSM attending community-based organizations in New York, Philadelphia, and San Francisco using Web-based surveys (n=415). Surveys addressed HIV and STD prevention service use/preferences and related school experiences. Data analyses included descriptive statistics and chi-square tests.
Results: In the last year, 72.0% of participants had been tested for HIV (10.7% at school and 5.5% at a school clinic), and 65.8% had tested for STDs (13.2% at school and 8.7% at a school clinic). 30.0% of participants received free condoms at school, and 12.6% received them from a school clinic in the last year. If testing services were offered at school, 64.4% of participants said they would use HIV testing and 66.6% said they would use STD testing. 81.7% of participants said they would access free condoms at school, if available. When asked who at school they would talk to about HIV testing, 37.8% of participants said a school nurse, 31.3% said a school counselor, and 30.8% said they would not talk to any staff member. Percentages were similar for who participants would talk to about STD testing (37.1%, 29.8%, and 30.1%, respectively) and about condoms (37.3%, 32.3%, and 28.3%, respectively). Only 13.3% of participants reported being willing to talk to school nurses about being attracted to other guys; more participants (38.3%) were willing to talk to counselors about this.
Conclusions: Some YMSM access HIV and STD testing and prevention services at school; additional youth report willingness to use such services if available. Findings inform development of school-centered HIV and STD prevention programs, including key staff to involve.
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WP 28
BEHAVIOR DISCLOSURE, ACCESS TO HEALTHCARE, AND HIV/STI TESTING AMONG MALE SEX WORKERS AND OTHER MSM IN THE US: FINDINGS FROM A QUALITATIVE STUDY ON PREP ACCEPTABILITY

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Background: As evidence builds for biomedical HIV prevention, including pre-exposure prophylaxis (PrEP), at-risk communities depend on clinicians as gatekeepers. Men who have sex with men (MSM), especially those who sell sex, are a priority. But PrEP uptake may be limited if individuals lack access to care, opportunities to disclose risk, and HIV/STI testing. We investigated experiences of male sex workers (MSWs) and MSM regarding access to healthcare, testing, behavior disclosure to clinicians, and PrEP acceptability.
Methods: Qualitative interviews enrolled approximately 28 MSWs and 25 other MSM in Providence, RI. Participants were males of uninfected/unknown HIV status reporting recent unprotected anal sex with a male of infected/unknown status. Interviews explored access to healthcare, disclosure of risks to clinicians, HIV/STI testing, and PrEP acceptability.
Results: MSM were more likely than MSWs to have health insurance (80% vs. 32%) and a physician to whom they had disclosed MSM behavior (33% vs. 11%). Disclosure barriers included mistrust; confidentiality concerns; shame; past/anticipated discrimination due to sexual identity, drug use, or homelessness; reluctance to seek preventive care; and believing that sexual behavior is irrelevant. Approximately 50% across groups had recently tested for HIV. STI testing was rare among MSWs; barriers included cost, inconvenience, and lack of concern and/or perceived risk. PrEP knowledge was low, but acceptability was high across groups after interviewers provided PrEP information. To obtain PrEP, participants reported willingness to disclose selective risks to providers working in primary care, HIV care, HIV testing, substance use treatment, and mental health services.
Conclusions: MSM and MSWs may accept PrEP in various clinical settings. But nondisclosure of behavioral risks limits opportunities for provider-initiated discussion about PrEP. Behavioral interventions are needed to educate MSM/MSWs about PrEP, to empower disclosure, to promote STI testing, and to help clinical providers and staff create receptive environments for MSM self-disclosure and discussion.
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WP 29
HEALTH SYSTEM BARRIERS TO HUMAN PAPILLOMAVIRUS VACCINATION AMONG YOUNG MEN WHO HAVE SEX WITH MEN IN TWO U.S. CITIES

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Background: In 2011, the Advisory Committee on Immunization Practices recommended quadrivalent human papillomavirus (HPV) vaccine for routine immunization of males at age 11 or 12 years and through 26 years for men who have sex with men (MSM). Because little is known about factors affecting vaccination among young MSM (YMSM), we assessed potential barriers to HPV vaccination in this population.
Methods: The Young Men's HPV (YM-HPV) study is a cross-sectional study of rectal and oral HPV among YMSM aged 18–26 years enrolled from three STD clinics in Los Angeles and Chicago. A self-administered computerized questionnaire was completed by 541 YMSM during July 18, 2012 through July 17, 2013. Associations between HPV vaccination status, demographics, insurance status, and behaviors were assessed using chi-square and Fisher's exact tests.
Results: Participants were Latino or mixed Latino (38.7%), White (26.8%), or Black (18.4%); median age was 23 years, and about half reported health insurance (53%). Commonly reported barriers to HPV vaccination were cost (24.8%), insurance not covering vaccination (16.8%), doctor not recommending vaccination (11.6%), safety concerns (9.8%) and not knowing where to get vaccinated (8.9%). Among vaccinated YMSM, more had attended private clinics (43.2%) or multiple clinics (31.8%) in the past year than LGBT clinics (13.6%) or public clinics (11.4%); more YMSM were vaccinated who had visited private clinics than these other settings (22.1% vs. 14.0%, 13.9% or 5.7%, respectively, overall p=0.02). More with health insurance had received HPV vaccination than those without insurance (17.8% vs. 11.5%, p=0.07).
Conclusions: Cost and lack of insurance were the most commonly reported barriers to HPV vaccination among YMSM. Vaccine uptake might be improved by enhancing support for HPV vaccination in LGBT and public clinics, as few YMSM attending such clinics were vaccinated. Encouraging doctors to recommend HPV vaccine to all YMSM may also increase vaccination rates.
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WP 30
AN INTERACTIVE ONLINE MODULE FOR HEALTHCARE PROVIDERS TO IMPROVE LGBT HEALTH

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Background: Within the health care system, lesbian, gay, bisexual, and transgender (LGBT) persons face inequity that contributes to health disparities. A 2011 survey of 1,193 LGBT Coloradans found 21% of LGB and 53% of transgender individuals had been refused services by health care providers due to their sexual orientation or gender identity. 65% of LGB and 85% of transgender respondents felt there were insufficient adequately trained health care professionals to address their LGBT-specific needs. A 2013 follow-up survey of 378 Colorado medical providers underscored the need for provider education. Though 85% of providers stated they were comfortable when LGBT patients came out to them, only 47% felt comfortable asking about sexual orientation or gender identity. To address this need, we sought to improve providers' cultural responsiveness relative to sexual orientation and gender identity. *Learning Objectives:*

- To describe the health disparities LGBT individuals face
- To describe the specific healthcare needs of LGBT individuals
- To list the steps a practice or healthcare provider can take to create a welcoming and safe environment for LGBT individuals

Methods: Utilizing our local data, online and in-person curricula previously developed, and local expertise, we developed a CME-accredited, one-hour, interactive, online module targeting health care providers that addresses LGBT populations through the learning objectives listed above.
Results: Based on adult learning theory, the module is available to interested learners at their convenience (timely) and includes pre- and post-tests to document knowledge gains (goal-oriented), embedded videos showcasing LGBT experiences (relevant), links to online resources for additional learning (self-directed), and simple, explicit instructions on creating a more welcoming environment for their LGBT patients (practical).
Conclusions: The module is available at: http://somed.ucdenver.edu/cme/LGBTCME.html
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WP 31
HIV OPT-OUT TESTING PROGRAM AT AN LGBTQ COMMUNITY HEALTH CENTER

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Background: We implemented a routine, opt-out rapid HIV testing program at a large LGBT health center in Chicago. Medical Assistants conducted testing and were prompted by an electronic health records system (EHRS) that screened for testing eligibility (13-64 years old, HIV negative, and no documented test within 12 months).
Methods: We extracted demographic and clinical data from January-October 2013 to characterize new diagnoses of HIV infections. We also conducted a case review to assess linkage-to-care and clinical management.
Results: 1199/1326 (90.4%) consented to testing. There were ten new HIV diagnoses–yielding a 0.83% positivity rate. Patients testing positive were 30% Black, 20% Hispanic-Black, 30% Hispanic, and 20% White. Newly HIV-positive patients included four transwomen and six cisgender-men; all reported having sex with men as their primary HIV risk. Median age for patients was: 22 years (IQR=21-24) for newly diagnosed and 32 years (IQR=26-43) for the sample ($p<0.05$). Chief complaints at presentation included: hormone access (n=4), STI symptoms/concerns (n=3), and general health (n=3). Half of the newly diagnosed were established patients (at least four visits in last five years) and 4/5 had been tested within two years. At diagnosis, medical visits were completed and CD4/VL labs drawn. Engagement outcomes were six patients in care (two appointments; >two months apart), one lost to follow-up, one transfer, and two exclusions (<2 month follow-up period). Patients in-care (n=6) were virally suppressed three months post-diagnosis (median=130 copies/mL).
Conclusions: Initiation of a routine opt-out HIV testing program identified ten newly diagnosed patients. On-site linkage staff ensured new HIV patients had access to clinical interventions. Compared to those testing negative, newly diagnosed patients were more likely to be younger and racially/ethnically diverse. Since many of the newly HIV-positive were tested within two years, these data affirm the need for more frequent screening to identify recent HIV infections.
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WP 32
HSV-2 AND HIV AMONG MSM WHO USE COCAINE AND HEROIN IN NEW YORK CITY

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Background: Men who have sex with men (MSM) are at an increased risk for HIV and other sexually transmitted infections. We examined HIV infection among MSM in relationship to factors including race/ethnicity, HSV-2 infection, and variations in MSM behavior, including male with female sexual behavior, and route of drug administration (injecting vs. non-injecting) among males drug users.
Methods: Subjects were recruited from entrants into the Beth Israel Medical Center drug treatment programs in New York City. Qualitative questionnaires were administered along with blood testing for HIV and HSV-2. Bivariate and multivariable regression analyses was used to assess factors associated with being HIV seropositive.
Results: 3091 male subjects were recruited from 2005 to 2013; 8.4% reported MSM behavior; 37% reported injection drug use (IDUs) within the last six months. Subjects were predominantly African-American (48%) and Hispanic (35%). Cocaine and heroin were the most commonly used drugs; methamphetamine use was rare. MSM subjects had much higher HIV prevalence than the non-MSM males, 41% vs. 10% among NIDUs, and 21% vs. 10% among IDUs. HSV-2 infection was strongly related to HIV seropositivity among all subjects (NIDUs, IDUs, and MSM, AORs from 1.77 to 3.93). HIV and HSV-2 prevalence were higher among MSM only subjects compared to MSM subjects who also reported sex with women (MSMW). In multivariable analyses of NIDUs and IDUs, MSM behavior, race/ethnicity, HSV-2 and HCV infection were associated with HIV seropositivity. In multivariable analysis of MSM subjects, HSV-2, race/ethnicity, and not reporting sexual activity with women were associated with HIV seropositivity.
Conclusions: HIV prevalence was high among MSM subjects, particularly MSM NIDUs and MSM who did not have sex with women. Additional targeted outreach programs may be needed to provide prevention materials and promote testing and treatment for MSM who use heroin and cocaine, particularly for those infected with HSV-2.
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WP 33
SEXUAL IDENTITY DISCLOSURE AND RISK BEHAVIOR OF YOUNG BLACK MEN WHO HAVE SEX WITH MEN AND WOMEN IN JACKSON MISSISSIPPI

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Background: This study examined sexual risk behaviors of young Black men who have sex with men and women (YBMSMW), based on sexual identity disclosure or non-disclosure to their female partners.
Methods: Data were collected in an STI clinic of Jackson Mississippi. The men (N=207) were 15-29 years of age, identified as Black and engaged in sexual intercourse with a man in the past three months. Men who have sex with men and women were identified in the sample and dichotomized by disclosure and nondisclosure of sexual identity. Sexual risk outcomes were selected: 1) unprotected anal receptive sex (UARS), 2) unprotected anal insertive sex (UAIS), 3) unprotected vaginal sex (UVS) and 4) HIV status. Bivariate associations between these outcomes and disclosure status to their female partners were conducted.
Results: Mean age was 22.4 years (SD=2.96). YBMSMW accounted for (N=91) 37% of the sample. Majority of the men disclosed their sexual identity to their female partners (75%), compared to 25% who did not disclose their sexual identity. Men who disclosed their sexual identity to their female partners were more likely to HIV positive (P=.027). Although not reaching significance, those disclosed their sexual identity had higher rates of unprotected intercourse of all categories: UAIS (76% and 24%), UARS (65% and 35%), and UVS (75% and 25%).
Conclusions: There was a trend towards higher rates of unprotected intercourse reported by those who disclose their sexual identity to their female partner, underscoring the need for more education and counseling for women who have sex with gay or bisexual men. Many of these women may be unaware of their HIV risk and the risk of their sexual partners.
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WP 34
BARRIERS TO IMPLEMENTING A RISK-REDUCTION PLAN AMONG MSM PARTICIPATING IN A SINGLE-SESSION HIV PREVENTION INTERVENTION

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Background: The Centers for Disease Control and Prevention's High-Impact Prevention Approach focuses on maximizing the impact of HIV prevention strategies. Knowledge about participants' perceptions of the effectiveness of risk reduction interventions and participants' barriers to implementing risk-reduction strategies can help programs improve interventions.
Methods: MSM presenting for HIV testing at a community-based HIV testing site were recruited for a single-session risk-reduction intervention, RESPECT, which aims to increase participants' perception of HIV risk and help them develop an achievable risk-reduction plan. From December 2012 through August 2013, participant-level information was collected for 104 clients at baseline, and a risk reduction plan was created that could include topics such as condom use, STD testing, and communication with partners. 3- and 6-month post-intervention data included perception of success in achieving risk-reduction plans and descriptions of barriers participants faced.
Results: Of 41 participants returning for the 3-month follow-up (80% of those eligible for 3-month follow-up), 93% (n=38) reported attempting to implement their plan. Of those, 95% felt they were successful at achieving it. 61% reported having no difficulty with their plan. When asked about barriers to implementing their plan, the most frequently reported barriers were being concerned about their partner's(s') reactions (12%) and forgetting about their plan (12%). At 6-month follow-up (n=19, 95% of those eligible for 6-month follow-up), 90% said they tried their plan; 94% felt successful. At this time point, only 47% reported having no difficulty with their plan. Again, the most prevalent barriers were concern about partner's(s') reactions (21%) and forgetting about the plan (21%).
Conclusions: Single-session risk-reduction interventions targeting MSM can be successful at helping participants develop an achievable risk-reduction plan. To facilitate behavior change, counselors should reinforce the risk-reduction plan within the session and address the participant's concerns about their partner's(s') reactions.
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WP 35
DEVELOPING AND IMPLEMENTING AN IPAD-BASED SEXUAL HISTORY APPLICATION TO INCREASE EXTRA-GENITAL GONORRHEA (GC) AND CHLAMYDIA (CT) TESTING IN MEN WHO HAVE SEX WITH MEN (MSM)

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Background: Men who have sex with men (MSM) represent an important population for targeting STD prevention and control efforts. Asymptomatic carriage of *Neisseria gonorrhoeae* (GC) and *Chlamydia trachomatis* (CT) in extra-genital sites is common, and risk-based screening of rectal and pharyngeal sites is currently recommended. However, performance of extra-genital GC/CT testing among MSM is not routinely performed, particularly when ongoing risks are not adequately assessed by providers during screening examinations. We describe efforts to develop and implement an iPad-based sexual history application to enhance identification of ongoing extra-genital site exposures and to encourage providers to screen for extra-genital GC/CT based elicited risks.
Methods: Current sexual history / risk assessment questions from several high-volume MSM clinic locations, as well as from published sources, were reviewed for accuracy, completeness, and ease of use. Risk questions were consolidated to generate a comprehensive exposure-specific questionnaire, which was then programmed for patient self-administration using an iPad tablet device. Responses were designed to integrate directly into the patient's electronic health record (EHR). Self-reports of rectal or pharyngeal exposure were programmed to generate provider prompts to order extra-genital GC/CT tests. Pilot testing was performed to refine question wording and flow.
Results: Implementation of the iPad risk sexual history application is currently underway in three high-volume MSM clinic locations in Missouri, Illinois, and Wisconsin. System-level challenges include (1) successful interfacing with EHR systems, which vary across sites, and (2) generating user-friendly summary reports which direct clinicians to order site-appropriate GC/CT tests. Clinic locations will be evaluated at 3-months and 6-months to determine impact on appropriate site-specific extra-genital test utilization.
Conclusions: Use of an iPad-based sexual history application can contribute to STD prevention and control efforts by promoting appropriate use of site-specific extra-genital GC/CT testing, based on elicited exposures and provider prompts.
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WP 36
AUDIT OF HEPATITIS B VACCINATION IN MEN-WHO-HAVE-SEX-WITH-MEN AT A UK LEVEL 3 SEXUAL HEALTH SERVICE

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Background: Men-who-have-sex-with-men (MSM) are at increased risk of hepatitis B virus (HBV) infection, with a UK carriage rate of 1%. UK guidelines advise HBV screening for asymptomatic MSM, and vaccination in non-immune patients. Due to measures to ensure confidentiality, sexual health clinics do not have open access to results from other clinics. The aim of this audit was to ensure that MSM in a UK level 3 sexual health clinic were receiving hepatitis B screening, vaccination, and post vaccination monitoring in line with UK guidelines.
Methods: The patient records of a random sample of 50 MSM attending a UK level 3 sexual health clinic between 18/04/11 and 22/09/11 were reviewed.
Results: 100% of patients were either offered hepatitis B vaccination at their first attendance, or were recorded as being previously vaccinated, with no patients declining vaccination if required. 14.00% of patients were known to be HIV positive with 85.71% having a decrease in HBV surface antibody (anti-Hbs) post vaccination after reaching antibody titres of >100i.u./l. All HIV patients were monitored in line with guidelines, with annual anti-Hbs testing. 46.51% of HIV negative patients had repeated anti-Hbs testing following a post vaccination result of >100i.u./l, with a total of 48 unnecessary tests for a sample of 43 patients being conducted (1.1 inappropriate tests per patient). One patient received 7 repeat antibody tests.
Conclusions: MSM are being offered vaccination in line with current UK guidelines. However, repeated and unnecessary re-testing of anti-Hbs in fully vaccinated HIV-negative patients with demonstrated levels of HBV immunity carries financial costs to the UK National Health Service in laboratory expenses (estimated at over US$5000 annually for MSM in this clinic alone) and staff time for checking results. Clinics should ensure they are not needlessly retesting their HBV immune MSM at each attendance.
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WP 37
INTEGRATION OF SYPHILIS, HEPATITIS C, AND OTHER STD SCREENING WITH HIV TESTING IN A COMMUNITY BASED HIV PREVENTION PROGRAM IN MIAMI, FLORIDA

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Background: The burden of HIV and STD infection disproportionally impacts racial, ethnic and sexual minorities including men who have sex with men (MSM). Community-based testing is an efficient, culturally-competent and cost-effective approach to provide HIV screening to populations most at risk. We sought to describe the outcomes associated with integrating STD and hepatitis C screening with rapid HIV testing amongst populations served by the South Beach AIDS Project (SoBAP), the only gay minority HIV prevention agency in Florida.
Methods: We reviewed program data from January 2011-June 2012. Clients who wanted to utilize SoBAP resources were encouraged to make an appointment, but walk-in services were also provided.
Results: A total of 2988 tests were administered from January 2011 through June 2012 including rapid HIV (2260), syphilis (384), chlamydia and gonorrhea (18), and hepatitis C (326). The majority of clients were male (77%) and nearly half were MSM (48.7%), mean age of 35 years and predomi-

nantly Latino (56.7%). HIV and syphilis positivity were 3.3% and 3.4% respectively. Both MSM (2.8%) and MSMW (4.9%) had a higher HIV test positivity when compared to other sexual risk behavior groups. HIV rates among individuals who were Latino (2.5%) or Black (1.7%) were higher than among whites (1.2%). All individuals who tested positive for syphilis were male, with Latinos having double the positivity of non-Latino whites (4.3% vs. 2.2%). There were 4 cases of hepatitis C infection, and one positive case of gonorrhea.
Conclusions: Our findings suggest MSM of color are disproportionately affected by HIV and STDs in Miami. Future efforts to understand the trends in syphilis infection in the SoBAP testing program are warranted. Strengthening the capacity of community-based organizations to conduct their own monitoring and evaluation should be a public health priority.
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WP 38
INTEGRATING RAPID HEPATITIS C TESTING INTO A COMMUNITY-BASED HIV TESTING PROGRAM TARGETING MSM

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Background: Rapid hepatitis C (HCV) testing has recently become available, but little is known about HCV risk factors and rates of detecting new HCV infections among individuals presenting for HIV testing at community-based sites that target men who have sex with men (MSM). This information could help HIV testing programs determine whether to consider offering rapid HCV testing.
Methods: We piloted rapid HCV testing in a community-based HIV testing site that targets MSM. Counselors screened clients presenting for HIV testing for HCV risk and offered them a rapid HCV test along with an HIV test if HCV risk was identified.
Results: Over ten months, 64 people received both a rapid HCV and HIV test. 1 client tested reactive for HCV antibodies. The most frequently reported risks of the 64 clients included: MSM who reported unprotected anal sex (44%); received a tattoo or piercing somewhere other than a licensed practice (22%); born between 1945-1965 (20%); ever injected drugs (19%); healthcare, emergency medical, or public safety worker with known exposure to HCV-positive blood (19%); ever incarcerated for more than one month (16%); engaged in sexual practices that involved exposure to blood (11%); engaged in sexual practices that may have caused physical trauma (11%); history of liver disease or abnormal liver blood tests (11%); had a sex partner who was known HCV-positive (10%); and current injection drug use (8%). 31 clients (48%) reported having been tested for HCV previously.
Conclusions: It is feasible to incorporate rapid HCV testing into community-based HIV testing programs targeting MSM, and doing so may result in detection of new HCV cases and increased opportunities to educate clients about HCV. Screening for and education about HCV within the context of HIV screening and risk reduction counseling can enhance HCV prevention and detection efforts.
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WP 39
RELIGION AND SPIRITUALITY AS PREDICTORS OF HIGH RISK SEXUAL BEHAVIOR AMONG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN IN MISSISSIPPI

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Background: In 2010, nearly half of all estimated AIDS diagnoses in Mississippi were among men who have sex men (MSM) and Jackson, MS was ranked 3rd in the nation in its rate of AIDS cases. Many MSM's experience internalized homophobia, which has been associated with HIV, particularly in African American men who have sex with men (AAMSM). Therefore, AAMSM in Jackson, MS are at high risk for HIV/AIDS. The objective of this study is to understand how religion and spiritual factors are mediated by internalized homophobia we will 1) assess if religious practices are associated with high risk sexual behavior among AAMSM residing in the Jackson, MS metropolitan area and 2) assess if spirituality is associated with high risk sexual behavior among AAMSM residing in the Jackson, MS metropolitan area.
Methods: This study is a cross-sectional, self-administered, paper-based survey of 112 AAMSM 18 years or older recruited in the Jackson, MS metropolitan area.
Results: Among AAMSM (n = 112) ($r = .228$, $p < .05$) (variables Internalized Homophobia Score and Worship Attendance Frequency Past 12 Months); ($r = -.240$, $p < .05$) (variables Internalized Homophobia Score and Expectation to Resist Unsafe Sex Score). Spirituality Score and Internalized Homophobia Score significantly predict Expectation to Resist Unsafe Sex Score, $F(2, 109) = 7.521$, $p < .001$.
Conclusions: Internalized homophobia is associated with the frequency of worship attendance and the expectation to resist unsafe sex. Internalized homophobia strengthens the relationship between spirituality and the expectation to resist unsafe sex.
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WP 40
AN ONLINE STUDY OF THE HIV/AIDS TRANSMISSION PREVENTION STRATEGIES OF SEXUALLY ACTIVE YOUNG ADULTS: WHAT ARE ADAPTIVE COPING STRATEGIES IN THE ONGOING ERA OF HIV/AIDS?

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Background: This study analyzed the HIV risk reduction behaviors of a diverse online sample of young adults.
Methods: The Condom Use and Sexual Behavioral Empowerment Scale (Cronbach's Alpha .847) proved reliable in capturing empowerment profiles. This scale is grounded in four theories (self-efficacy, stages of change, social support, role models) and assesses four HIV risk reduction behaviors. The research diffused the innovation of an online survey associated with a website providing e-health, including an invitation to co-create website content with the researcher.
Results: The study sample (N = 201) of heterosexually active young adults (18-25 years) were mostly students (63.2%), white (40.8%), Asian (20.9%), Latino (18.4%), and Black (10.4%)—while using the Internet to access health information (53.2%). Most had steady sexual partners (71.6%), yet reported **main partner sexual concurrency** (30.3%); **other partner sexual concurrency** (28.4%); and **personal sexual concurrency** (24.4%)**.** Backward stepwise regression analysis found **not having a main sex partner** ($B = -.504$, $SE = .162$, $p < .01$), **having more access to devices for the Internet** ($B = .150$, $SE = .162$, $p < .05$), a **higher score for Empowerment Self-Efficacy** ($B = .425$, $SE = .071$, $p < .001$), a **higher score for Empowerment Social Support** ($B = .360$, $SE = .130$, $p < .01$), and a **higher score for Empowerment Role Models** ($B = .221$, $SE = .084$, $p < .01$) predicted *being in a higher stage of change for engaging in the four HIV risk reduction behaviors*. Qualitative data highlighted the **selection of steady partners** and **condom use** as ways of coping in the era of HIV, as noteworthy emergent themes.
Conclusions: Findings demonstrated that the ways of coping in the era of HIV and sexual behavior of diverse young adults are influenced by various contextual factors.
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WP 41
CAN WE TALK? ADOLESCENT PERCEPTION OF PRIVACY AND SELF-REPORTED SEXUAL RISK BEHAVIOR IN THE PHONE-BASED CALIFORNIA HEALTH INTERVIEW SURVEY

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Background: Population-based behavioral surveys of adolescent sexual risk behavior enable assessment of sexual activity, safe sex practices, and susceptibility to sexually transmitted diseases. The validity of adolescent self-reported sensitive behaviors may be compromised if parents listen during the interview. We compared the prevalence of self-reported sexual risk behaviors and less sensitive behaviors among adolescent behavioral survey respondents whose parents may or may not have been perceived as listening during phone-based behavioral surveys.
Methods: We analyzed the 2009 California Health Interview random-digit dialed household-based phone survey of adolescents aged 12-17 whose parents granted permission for interview. Questions included whether the adolescent ever had sex (oral and vaginal/penile) and whether a parent was listening on the phone or in the room during interview. The proportion of re-

spondents answering affirmatively to sexual risk behavior, ever smoking, and recent park use questions was compared by whether adolescents perceived parents listening to the interview, and stratified by gender, age (12-14, 15-17 years), and race. All proportions were weighted to 2009 California Department of Finance population projections.
Results: Among 3379 adolescent respondents surveyed, 10% reported parents listening during the interview (males 11% versus females 9%). A higher proportion of younger adolescents (15%) reported parents listening compared with older adolescents (6%). Adolescents whose parents listened reported sexual activity less frequently than those whose parents did not listen: oral sex: males 11% versus 17%, females 3% versus 13%; vaginal/penile sex: males 8% versus 16%, females 4% versus 12%. Lower proportions of adolescents reported ever smoking when parents listened (5 %) versus when parents did not listen (15%). There was no difference in reporting recent use of parks by parent listening.
Conclusions: Perceived parental eavesdropping regarding sexual risk behavior disclosure dramatically impacts the reporting of sensitive behaviors and may lead to inaccurate assessment of risk behaviors requiring intervention.
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WP 42
TRACKING TRICHOMONAS IN ROUTINE PEDIATRIC PRIMARY CARE

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Background: Currently there are no screening guidelines for sexually active adolescent *Trichomonas vaginalis* (TV) testing, TV nucleic acid amplification tests (NAATs) allow testing with non-invasive specimen collection. Understanding TV prevalence and epidemiologic profile among adolescents can be used to develop screening recommendations.
Methods: Setting: Urban general pediatric primary care clinic in Erie County, New York. Population: 11-18 year old sexually active male and female patients with a urine specimen sent for a TV NAAT (APTIMA *Trichomonas vaginalis* Assay, GenProbe, San Diego, CA) as standard care during routine health maintenance visits where screening *Neisseria gonorrhoeae* (GC) or *Chlamydia trachomatis* (CT) NAATs (APTIMA COMBO 2 Assay, GenProbe, San Diego, CA) were sent. Time period: 1/2012-5/2013 Methods: A retrospective chart review was performed. Data on TV test result, pregnancy status, presence of genitourinary or abdominal symptoms, age, race, ethnicity, zip code, and presence of GC or CT co-infection were extracted via chart review.
Results: Among the 199 (65%) female and 107 (35%) males tested, 40 (20%) and 4 (4%), respectively, tested TV positive at least once. Among the 145 adolescents TV tested more than once, 13 (9%) had a repeat positive test. All 44 adolescents testing TV positive were asymptomatic. Peak age of positivity was 14-15 years (19/94; 20%). Among 22 adolescents testing GC positive and 65 testing CT positive, 8 (36%) and 21 (32%), respectively, were TV coinfected. There were no significant differences in age, race, ethnicity, or zip code. Patients who tested TV positive were more likely to be co-infected with GC ($p = 0.002$) and CT ($p = 0.001$) at time of testing.
Conclusions: In an urban pediatric primary care clinic, providers should consider TV testing females when screening for GC and CT during routine health maintenance visits regardless of reported symptoms.
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WP 43
DOES STD AND STI MEAN THE SAME THING?: PERSPECTIVES OF YOUNG ADULTS

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Background: Recently, there has been an increase in the use of the term sexually transmitted infection (STI) instead of disease (STD). Although many clinicians use these terms interchangeably, some use the terms to differentiate between illnesses based on illness characteristics (e.g., curability). Little is known about how the patient population interprets these terms. Effective communication between patient and provider is vital to quality sexual health care delivery. The aim of our study was to describe young adults understanding of the terms STD and STI.
Methods: In this cross-sectional study, we randomly selected young adults from a Midwestern University. Participants completed an online survey anonymously. They indicated whether the terms STD and STI were interchangeable and justified their response in their own words. Descriptive statistics and chi-squared tests assessed whether responses differed by screening history, gender, and age. Content analysis was conducted on the open-ended responses.
Results: Of the 187 participants (67% female), 43% (n=81) believed that the terms STD and STI were interchangeable, 17% (n = 32) differentiated between the terms and 40% (n=74) were unsure of whether the terms were interchangeable. All chi-squared tests were non-significant. Those who believed the terms were interchangeable believed that the term STI is used to reduce stigma. Those who differentiated between the terms believed that STDs were more serious, chronic and differed in terms of transmission and symptomatology from STIs.
Conclusions: Many young adults are unsure about the use and meaning of the terms STD and STI. For some, the term STI is viewed as less stigmatizing, and references illnesses that are less serious and more manageable. Clinicians should clarify their use of this terminology with their patients. Future research should examine the effects of clinicians' use of the term STI (vs. STD) on patients' perceived stigma and manageability of an STD diagnosis.
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WP 44
IMPACT OF AN ADAPTED CAMPAIGN TO REACH STREET-ORIENTED SEXUAL & GENDER MINORITY YOUTH IN NEW YORK CITY WITH STI TESTING MESSAGES

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Background: Sexual and gender minority youth who are homeless, unstably housed, or street-oriented (runaways, sex workers, squatters) are at increased risk of HIV and STDs. To reach this high-risk population, a local *GYT: Get Yourself Tested* campaign was adapted (based on formative research with intended audiences), implemented and evaluated.
Methods: A three-month campaign, including materials dissemination and mobile STD testing, was conducted in four venues in New York City to reach sexual and gender minority youth, ages 25 and younger. After the campaign, street-intercept surveys were conducted using iPads at the venues to assess the campaign's impact on testing knowledge, attitudes, and behaviors.
Results: Respondents (N=152) were predominantly African-American (48%) and Latino (36%). Overall, 36% identified as gay or lesbian, 27% straight, 21% bisexual or bi-curious, 5% pansexual, and 4% queer. Gender identities were 42% male, 33% female, 13% transfemale, 6% transmale, and 6% gender nonconforming. Almost one-fourth (23%) were homeless or in transitional housing. In the last year, 30% reported having 4+ sexual partners. One-quarter were ever diagnosed with an STD. Recent testing prevalence was high: 63% were tested for STIs or HIV in the last 3 months. Twenty-six percent of respondents reported seeing GYT. Among them, 97% reported talking about STDs/testing with someone and 74% reported STD testing during the campaign period, compared to 87% and 58% (respectively) of youth who had not seen GYT. Differences were not statistically significant for talking ($p=0.072$) or testing ($p=0.087$). No differences in knowledge or attitudes were observed between those who had and had not seen the campaign.
Conclusions: These findings, though limited by small sample size, suggest promising evidence that a campaign, adapted with community input to be culturally appropriate for sexual- and gender-minority youth, may be positively associated with testing behaviors, even despite already-high levels of testing in the community.
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WP 45
USING FORMATIVE RESEARCH TO ADAPT THE GYT CAMPAIGN FOR SEXUAL AND GENDER MINORITY YOUTH OF COLOR IN NEW YORK CITY

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Background: Sexual and gender minority youth of color are at increased risk of STDs and HIV, but few testing interventions have been specifically designed to reach this population. Formative research was conducted to adapt existing *Get Yourself Tested* (GYT) campaign messages and materials to reach this high-risk population.
Methods: In partnership with community-based organizations serving sexual and gender minority populations, 3 focus groups were conducted with youth age 15-25 in New York City to discuss barriers to STD and HIV testing. Groups also reviewed existing and adapted GYT messages to promote testing and link youth with testing services. Qualitative data collection was guided by a semi-structured discussion guide. Grounded theory was used to identify themes.
Results: The 40 participants (age 15-25) were racially and ethnically diverse (63% African-American, 35% Latino). Half of participants were male; 38% transfemale, and 12% female. Two central barriers to STD testing uptake were cited: concerns about confidentiality in the clinical setting and a lack of privacy in community-based testing venues. Drawbacks of existing STD testing messages cited by participants included a lack of appreciation of heterogeneity (conflating sexual orientation identity and gender identity) and the stigmatizing effect of messaging about increased risk of HIV /STDs among sexual minority populations. Three central approaches were identified to make testing promotion efforts more effective: increasing cultural competency of clinicians; expanding the availability of testing (e.g. self-collection); and developing non-sexualized inclusive messaging about testing. The messaging and images on GYT materials were adapted according to this feedback. Over 3,400 youth were reached with adapted materials through direct outreach; another 7,000 were reached through organizations.
Conclusions: Messages to promote the availability of testing should be inclusive of gender and sexual minority populations. To increase STD testing uptake in this population, programs must increase access while minimizing stigma and maintaining privacy/confidentiality.
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WP 46
PREDICTORS OF PARENTAL PERCEPTION OF ADOLESCENT SEXUAL EXPERIENCE

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Background: Parental guidance during adolescence is critical and may reduce high risk behaviors. Parents' perceptions of their adolescents' sexual behaviors may influence the guidance they provide. Thus, we evaluated factors which may impact these perceptions.
Methods: As part of a larger study, parents and their adolescents aged 14-17 years reported on parenting and sexual behaviors. We evaluated the relationship of demographics (adolescent age and gender, Spanish parental interview); adolescent self-report of sexual experience; parent and adolescent report of parental monitoring; and parent-adolescent conversation topics to parents' perceptions of their adolescents' sexual experience. Within these categories, multivariate logistic regression was performed, with significant variables placed into a common model. Parental perceptions were dichotomized into no experience beyond kissing, or any sexual contact.
Results: Of the 180 parent-adolescent dyads, 92% of parents and 63% of adolescents were female and 50% of parents completed the interview in Spanish. Fifty-nine percent of parents believed that their adolescents had engaged in sexual contact. Parents were more likely to think that younger adolescents were less sexually experienced ($p < .0001$). Parents' perceptions were related to their adolescents' self-report ($p < .0001$). Those parents who provided greater indirect monitoring ($p <. 01$) and whose adolescents perceived them to provide greater monitoring when with peers ($p < .01$) believed their adolescents to be less experienced. There were no significant associations for conversations. In the common model, age, adolescent self-report, and greater parental indirect monitoring were related to perceptions of adolescent sexual experience.
Conclusions: Parental perception of adolescent behavior is in part driven by actual behavior; however, younger adolescents and those adolescents whose parents monitor them were perceived as less likely to be engaging in sexual behaviors. Future research should examine how perceptions change over time and how perceptions influence parental behaviors, such as provision of anticipatory guidance.
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WP 47
EXAMINING SEXUAL RISK BEHAVIOR AMONG YOUNG FEMALE BAR DRINKERS

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Background: Young people aged 15-24 comprise 27% of sexually active individuals, yet account for approximately half of new STDs. Because condom use is an effective way to prevent STD transmission, it is important to understand factors that influence sex without condoms (i.e., unprotected sex), including the roles of childhood sexual abuse (CSA), psychological distress, alcohol use, and current sexual practices.
Methods: Using data from a study of female bar drinkers (N = 286; 76.6% Caucasian; mean age 22.1), we examined two separate hierarchical multiple regression models predicting unprotected sex based on partner type (new, regular). Ethnicity and CSA were entered at step 1, psychological distress (Global Severity Index of the Brief Symptom Inventory) was entered at step 2, alcohol (usual number of drinks at a bar) was entered at step 3, and sexual practices (oral contraceptive use, past-year one night stands, current sexual relationship) were entered at step 4.
Results: In the model predicting unprotected sex with new partners, CSA, one night stands, and not being in a current sexual relationship were significantly associated with unprotected sex. The final model accounted for 28% of the variance in unprotected sex with new partners [$F (7, 278) = 15.43$, $p<.001$.] In the model predicting unprotected sex with regular partners, psychological distress, oral contraceptive use, and current sexual relationship were significantly associated with unprotected sex. The final model accounted for 33% of the variance in unprotected sex with regular partners [$F (7, 278) = 5.00$, $p<.001$.]
Conclusions: STD prevention strategies for young women should consider partner type. Prevention efforts may be more effective to the extent that they specifically address CSA history and increase perceptions of sexual risk associated with new or casual partners. Programs also should address psychological distress and emphasize the benefits of condom use for both pregnancy and STD prevention with regular partners.
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WP 48
DEVELOPING RELATIONSHIPS AND IMPLEMENTING COMMUNITY ENGAGEMENT PROJECTS WITH COLLEGES IN RICHMOND CITY

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Background: Richmond is home to four colleges. Current surveillance collected by the Richmond City Health District (RCHD) supports the need for strengthened relationships and targeted prevention activities within the city's college student population. Data from 2012 reveal that approximately 85% of reported chlamydia and gonorrhea cases occurred in people aged 15 to 29 years. According to the College Board, the average age for students at each of Richmond's college institutions falls within this range. This indicates that a considerable number of people in the highest risk groups for STI contraction in Richmond are also members of Richmond's college student population.
Methods: We conducted a needs assessment with faculty and staff involved with health and student related activities at each institution. This assessment was designed to aid and guide the planning, implementation, and evaluation of innovative and targeted projects to promote sexual health, increase student engagement in peer education, and promote behavioral changes with the college communities. We utilized a mixed-methods approach. We conducted group and individual interviews with faculty, staff, to include student peer educators, as well as abstracted qualitative data from meeting minutes. From surveys, we also collected qualitative and quantitative data on selected indicators. Data were collected, analyzed, and interpreted using standard procedures.
Results: Successful community engagement strategies implemented included: the identification and implementation of group and community-level behavioral interventions, the development and distribution of a University/College Resource Guide, as well as new capacity for STI screenings and educational activities both on campuses and in surrounding communities.
Conclusions: The development of relationships with area colleges, local health districts and key stakeholders could provide desired and necessary STI prevention and community engagement strategies in an effort to address high rates of STI and promote healthier sexual behaviors among college student populations.
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WP 49
IDENTIFYING COMMUNITY-LEVEL CORRELATES OF ADOLESCENT PREGNANCY AND CHLAMYDIA RATES IN RURAL AND URBAN COUNTIES

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Background: Rates of teenage pregnancy and chlamydia infection vary considerably across rural and urban communities. While individual-level behavior is the most commonly-assessed determinant of pregnancy and STI risk, identifying community-level features associated with high rates may provide insight into the social, economic, and systemic factors that may be important for addressing rural/urban sexual health disparities.
Methods: Our objective was to describe county-level predictors of pregnancy and chlamydia among Minnesota adolescents based on rural-urban designations. We created a merged dataset of behavioral (proximal) measures reported by adolescents in the 2010 Minnesota Student Survey and other publicly-available, county-level information on community (distal) measures. The associations between these measures and state-reported county teen pregnancy rates (among females 15-19, 2009-2011) and chlamydia rates (among adolescents 15-19, 2012) were analyzed through bivariate and multivariate regression over Minnesota's 87 counties.
Results: County rates of teen pregnancy and chlamydia varied widely, ranging from 7 to 101 pregnancies per 1,000 females ages 15-19 and from 343 to 2,446 chlamydia infections per 100,000 adolescents ages 15-19. Rates averaged over urban and rural counties were similar, though counties with the lowest and highest rates were all rural. Factors independently associated with increased rates of teen pregnancy include reported contraceptive use among 9th and 12th grade males, percent of uninsured residents, and the number of single-parent families; in rural counties, the only independent predictor was contraceptive use among 12th grade males. There were no consistent associations between county-level predictors and chlamydia infection rates across all counties; however, in rural counties, condom use by 12th grade males, the rate of excessive drinking among adults, and the number of single-parent families were factors associated with higher rates of adolescent chlamydia infections.
Conclusions: Programmatic approaches focusing on behavior change among male adolescents may be appropriate interventions to support teen sexual health in rural counties
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WP 50
PROJECT CONNECT BALTIMORE: HIV TESTING AT COMMUNITY-BASED YOUTH-SERVING AGENCIES SERVING YOUNG MINORITY MALES

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Background: Despite National HIV/AIDS Strategy and CDC recommendations to intensify community-based HIV testing and outreach, a 2008 study found approximately 10% of community-based agencies offered HIV testing. Because young urban minority males are at risk for HIV and are less likely to attend more traditional healthcare settings, we sought to 1) determine the proportion of youth-serving community-based agencies offering HIV testing; and 2) characterize agencies offering (vs. not offering) HIV testing including whether they serve young minority males.
Methods: GIS mapping of census and STD surveillance data was used to select areas of residence and STD/HIV needs of target population (e.g., minority males aged 15-24).Of 141 potential agencies in select areas, 106 agencies (75%) were found to work with target population to complete a phone survey. Of these, 60% (62) were reached (20 closed; 24 pending). Among those reached, 90% (56) completed surveys (6 refused). Frequency of items was generated and non-parametric testing was conducted to compare agencies by HIV testing status.
Results: 83% (43) were community-based organizations and 15% (8) were recreation centers. 42% (22) reported offering HIV testing and 65%-70% (36) reported serving target population. Among agencies offering HIV tests, 23% (12) reported on-site testing, while 77% (40) reported testing by an external agency. Agencies offering (vs. not offering) HIV testing were more likely to be a community center; offer groups with target population; work with GLBT youth; offer other health services (e.g., provide condoms), greater perceptions of staff knowledge about young men's SRH and SRH care services and greater comfort talking about sex (all *p*'s<.05).
Conclusions: A substantial proportion of youth-serving agencies in areas with a high proportion of young minority males and STD/HIV needs reported offering HIV testing. However, providing and expanding HIV testing is a continued need and tools to support this expansion are needed.
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WP 51
THE ANALYSIS OF CONDOM USE COMPARED TO RISK FACTORS ASSOCIATED WITH DATING VIOLENCE AND BULLYING IN UNITED STATES HIGH SCHOOL STUDENTS

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Background: Condom use during sexual activity reduces risk of unintended births and STDs when used correctly and consistently. Condom use is imperative for sexually active high school students due to adolescents being at high risk for acquiring STDs. Experiences such as bullying and violence can cause submissiveness and lack of self-esteem, contributing to inconsistent condom use in adolescents.
Methods: Data were obtained from the Youth Risk Behavior Survey (2011). SAS software was used to evaluate self-reported student responses (N=15,425) to determine associations between condom use and gender, race, grade, abuse from partner, bullying on school property, and electronic bullying. Logistic regression was used to predict factors that increased condom use.
Results: Approximately 61% of the sample reported condom use during their last sexual encounter. Ninth and tenth graders were 37% more likely to use condoms than upperclassmen (OR-1.37; CI: 1.14-1.65). Blacks were 28% more likely to use condoms than 'other races' (OR-1.28; CI: 1.07-1.53), however, whites were not significantly more likely to use condoms compared to 'other races'. Students who did not experience dating violence were 56% more likely to use condoms than students who had (OR-1.56; CI: 1.30-1.86). Students who were not bullied at school were 13% more likely to use condoms than students who have been bullied on school property (OR-1.13; CI: 0.93-1.38). Students who were not electronically bullied were 28% more likely to use condoms than students who were electronically bullied (OR-1.28; CI: 1.06-1.55).
Conclusions: The current research illustrates that students exposed to dating violence and bullying are less likely to engage in condom use, meaning efforts to prevent and reduce violence with these students should expand. Research efforts should target the development of anti-violence programs to decrease bullying and partner violence significantly, and potentially increase condom use in this target population.
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WP 52
HIGHER DEPRESSIVE SYMPTOMS ARE ASSOCIATED WITH DECREASED CONDOM USE OVER 36 MONTHS AMONG AFRICAN AMERICAN FEMALE ADOLESCENTS

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Background: African American female adolescents experience elevated prevalence of both depressive disorders and sexually transmitted diseases (STDs). While cross-sectional studies point to an association between higher depressive symptoms and increased sexual risk engagement, there is a paucity of research longitudinally investigating this association. Thus, the current study investigated the relationship between depressive symptomatology and condom use over 36-months among African American female adolescents participating in an STD prevention intervention.
Methods: African American female adolescents (N=701; *M* age = 17.6) enrolled in an STD prevention intervention completed audio computer-assisted self-interview (ACASI) assessments conducted at baseline, and at 6-, 12-, 18-, 24-, 30-, and 36-months post-baseline. Depression symptom levels were measured as the total score on the CES-D-R. Linear and logistic generalized estimating equations (GEE) were used to examine the association between

depressive symptom levels and: (a) condom use at last sex; (b) proportion condom use in the past 90 days; and (c) consistent condom use in the past 90 days in both unadjusted and adjusted models.
Results: In adjusted GEE models accounting for intervention condition and baseline factors correlated with depressive symptoms (e.g., past abuse history, social support), higher depressive symptoms were associated with: decreased condom use at last sex (AOR = .90; 95% CI: .86, .94) and decreased consistent condom use in the past 90 days (AOR = .89, 95% CI: .85, .93). Additionally, for every one percent increase in depressive symptoms, there was a 7.2 percentage point decrease in the proportion condom use in the past 90 days ($p < .0001$).
Conclusions: Elevated depressive symptoms were common among African American female adolescents participating in an STD prevention intervention. Higher depressive symptoms were associated with decreased condom use, posing increased risk for STDs and unintended pregnancy. STD prevention interventions may benefit by incorporating content to address adolescents' depressive symptoms.
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WP 53
INCORPORATING HIV TESTING INTO A CITY-WIDE SCHOOL-BASED STD SCREENING PROGRAM

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Background: Washington, DC's School-based STD Screening Program (SBSP) was piloted in 2007/2008, expanded in 2008/2009, and fully implemented in 2009/2010. The 2013/2014 school year is the fifth consecutive year STD screening has been provided in all public and select charter and alternative high schools.
Methods: HIV testing of high-risk students (those infected with chlamydia, gonorrhea or both) during in-school treatment began during the 2010/2011 school year and was expanded the following year. Offering HIV testing to all participating students during in-school STD screening was piloted during the 2012/2013 school year and is being expanded this year. We analyzed SBSP data from 2010/2011 to 2012/2013 - focusing on HIV testing.
Results: During this time: 15,960 students participated in the SBSP; 10,262 (64%) were tested; 600 (6%) were found to be infected with chlamydia, gonorrhea or both; and 521 (87%) were treated. In 2010/2011, 30 high-risk students were tested for HIV during in-school treatment. No new infections were identified. During the subsequent 2 school years, 100 and 106 high-risk students were tested for HIV during in-school treatment, respectively. One new HIV infection was identified and linked to comprehensive care. During the 2012/2013 school year, HIV testing was offered in one high school to all students participating in the SBSP, 89 students were tested, and no new HIV infections were identified. The SBSP plans to offer HIV testing to all students during in-school STD screening in 9 high schools during the 2013/2014 school year with a goal of testing ~700 students.
Conclusions: To the best of our knowledge, we are the first and only program to routinely offer HIV testing to students participating in school-based STD screening. Since none of the high schools were amenable to HIV testing when the program began, we have had to leverage the success of STD screening to gradually incorporate HIV testing.
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WP 54
SOCIAL CAPITAL AND A CURRENT BACTERIAL SEXUALLY TRANSMITTED INFECTIONS AMONG URBAN ADOLESCENTS AND YOUNG ADULTS

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Background: This study explored the relationship between social and organizational characteristics of neighborhoods including social cohesion and informal social control and a current bacterial sexually transmitted infection (STI) among adolescents and young adults in one U.S. urban setting.
Methods: Data for the current study were collected from April 2004 to April 2007 in a cross-sectional household study. The target population included English-speaking, sexually-active persons between the ages of 15 and 24 years who resided in 486 neighborhoods. The study sample included 599 participants from 63 neighborhoods.
Results: In a series of weighted multilevel logistic regression models stratified by gender, informal social control was significantly associated with a decreased odds of a current bacterial STI among females (AOR 0.39, 95% CI 0.26, 0.59) after controlling for individual social support and other factors. The association while in a similar direction was not significant for males (AOR 0.78, 95% CI 0.37, 1.63). Social cohesion was not significantly associated with a current bacterial STI among females (OR 0.73, 95% CI 0.26, 2.07) and separately, males (OR 0.73, 95% CI 0.26, 2.07). Individual social support was associated with an almost four-fold increase in the odds of a bacterial STI among males (AOR 3.78, 95% CI 1.85, 7.71) after controlling for social cohesion and other individual and neighborhood factors, a finding which is in contrast to our hypotheses.
Conclusions: The findings warrant further study regarding the causal relationship between informal social control and STIs among U.S. urban youth.
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WP 55
CHARACTERISTICS ASSOCIATED WITH RECENT HIGH VIRAL LOAD AMONG HIV-POSITIVE INDIVIDUALS IN BALTIMORE CITY

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Background: Individuals with high HIV viral load (VL) are more likely to transmit HIV and are more likely to be recently infected. VL information at first diagnosis may help health departments better target outreach services by triaging high VL individuals and their partners more quickly and conducting screening in sex partner meeting places frequented by high VL individuals. The objective was to determine characteristics associated with high VL among confirmed HIV-infected individuals tested through the city health department.
Methods: The Baltimore City Health Department implemented a new VL testing protocol among all confirmed HIV-infected individuals tested from October 1, 2012 to July 15, 2013. High VL was defined as a VL greater than 1500 copies/mL. We assessed differences across VL levels using Pearson's chi-squared and Fisher's exact tests.
Results: VL testing was conducted on 334 HIV-infected individuals. The majority were male (73.4%), African-American (92.2%), and aged >25 years (83.2%). The mean VL was 10,030 copies/mL; nearly two fifths (37.4%) had a high VL. High VL (vs. low VL) individuals were more likely to be: younger (<25 years) (24.0% vs. 12.4% p=0.006), men who have sex with men (MSM) (36.8% vs. 19.1%, p=0.0004), newly diagnosed (48.0% vs. 15.3%, p< 0.0001), and co-infected with gonorrhea (4.0% vs. 0.5%, p=0.03). High VL (vs. low VL) individuals were more likely to be assigned for routine partner services interviews per standard protocols (newly diagnosed or HIV-positive with an incident bacterial sexually transmitted infections); however, among high VL individuals, half (48.8%) were not assigned to interview, and a third (32.8%) had no identified HIV risk exposure.
Conclusions: High VL individuals were more likely to be young, MSM, newly diagnosed with HIV, and co-infected with gonorrhea. Enhanced follow-up of high VL individuals may be an important targeted HIV control strategy for this urban setting.
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WP 56
DOSE-RESPONSE RELATIONSHIPS BETWEEN CIGARETTE SMOKING AND TRICHOMONAS VAGINALIS ACQUISITION OVER 18 MONTHS AMONG AFRICAN AMERICAN ADOLESCENT FEMALES

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Background: Studies have shown a dose-response relationship between cigarette smoking and bacterial vaginosis. Bacterial vaginosis is associated with increased *Trichomonas vaginalis* (TV) acquisition risk; however, few studies have examined dose-response relationships between cigarette smoking and TV. The objective was to examine dose-response relationships between cigarette smoking and TV acquisition among African American adolescent females.
Methods: At baseline, 6, 12 and 18 months, African American females 14-20 years (n=701) enrolled in an HIV prevention trial completed audio computer-assisted self-interviews and provided self-collected vaginal swab specimens assayed for TV. Participants were categorized as light (1-3), moderate (4-5) or heavy (≥6) smokers based on self-reported number of cigarettes smoked per day and as short- (<1 year), medium- (1-2 years) and long-term (≥3 years) smokers. Generalized estimating equations examined associations between TV acquisition, defined as a positive test result subsequent to a negative result or documented treatment, and amount and duration of cigarette smoking relative to non-smokers.
Results: Of 605 (86.3%) participants completing ≥1 follow-up assessment, 20.0% (n=121) acquired TV. Smoking prevalence during follow-up was 12.9-14.1%. The likelihood of TV acquisition was marginally increased among light (OR: 2.1, 95% CI: 1.0, 4.5) and significantly increased among moderate (OR: 3.0, 95% CI: 1.6, 5.5) and heavy (OR: 3.2, 95% CI: 1.8, 5.8) smokers (test for trend p<0.001). The likelihood of TV acquisition was also marginally increased among short-term (OR: 1.8, 95% CI: 0.9, 3.6) and significantly increased among medium- (OR: 3.2, 95% CI: 1.5, 6.7) and long- (OR: 3.7, 95% CI: 2.1, 6.5) term smokers (test for trend p<0.001). Tests for trend remained significant (p<0.05) after adjusting for known correlates of TV acquisition in this sample.
Conclusions: Dose-response relationships were observed between self-reported measures of cigarette smoking and TV acquisition. Future research should investigate mechanisms through which cigarette smoking may be associated with TV acquisition.
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WP 57
HIV RISK BEHAVIORS AND AVOIDANCE STRATEGIES AMONG LOW-INCOME AFRICAN AMERICAN FEMALE YOUTH IN ALABAMA

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Background: While sexual activity among adolescents is decreasing, condom use among African American high school teens has declined. This is especially the case in low-income communities of the Southeast. This lack of condom use puts African American females at greater risk of STDs – particularly HIV. The objective of this project is to discover cultural understandings of HIV risk and determine risky and protective behaviors in a low-income community as a way to inform future prevention programs in Alabama.
Methods: Ten African American adolescent females aged 14-18 participated in private in-depth interviews in order to gain an understanding of their perceptions of HIV risk behaviors and HIV avoidance behaviors in their low-income community. In addition, two focus groups were conducted for clarification of statements made during initial in-depth interviews. The researcher transcribed audio-recordings of interviews and focus groups, and analyzed qualitative data using thematic coding and grounded theory.
Results: HIV risk behaviors highlighted by participants included partner concurrency, transactional sex, and interaction with older men in the community. HIV avoidance behaviors included staying home, being escorted by an older male family member, limiting sexual partnerships to two or three individuals living in the same community, and avoiding prolonged conversation with older male community residents. Participants also noted that condom use was viewed as ineffective protection against STDS or pregnancy.
Conclusions: Girls interviewed are using strategies to avoid HIV risk behaviors. However, this risk is greater because of the ecological challenges that they are exposed to on a daily basis. HIV risk prevention messages must take into account these ecological challenges experienced by girls living in low-income communities. Grass roots HIV prevention messages are needed to further educate girls on how to protect themselves from the disease and what avoidance strategies are effective in this and similar low-income settings.
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WP 58
THE INFLUENCE OF PARTNERSHIP TYPE AND CHARACTERISTICS ON CONDOM USE AMONG YOUNG AFRICAN AMERICAN WOMEN

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Background: Main/casual classification is often used when discussing STI risk behavior, yet this classification may not be relevant for youth who tend to have dynamic/ephemeral partnerships. The purpose of this study was to examine the influence of partnership characteristics on condom use among young African American (AA) women using more detailed classifications.
Methods: AA women aged 18-19 living in New Orleans were recruited from the community for a pregnancy prevention program. Women were administered an ACASI survey to elicit detailed behavioral information and asked to classify their partners using 10 categories in a check all that apply manner. Urines were NAAT tested for *Chlamydia trachomatis* (CT) and *N. gonorrhoeae* (GC).
Results: Of 215 sexually active women included, 19.4% had multiple partners, 1.8% engaged in transactional sex, 9.1% had Ct and 2.1% had GC. In the 294 partnerships reported, 50.2% used condoms inconsistently, 31.4% were considered casual and 12.5% were a one-time sexual encounter. Among the 10 partner categories, 81% of partnerships fit one category, while 17.4% were classified in multiple categories. The most common category was boyfriend [BF] (44.9%), followed by ex-BF (15.6%), and friend with benefits [FWB] (17.7%). Women were more likely to report inconsistent condom use if the length of relationship was > 4 months [2.57 (1.50-4.40)] or if she was using non-barrier birth control [2.87 (1.67-4.91)]. Other factors considered but not found to be associated were: main/casual classification, if she thought her partner had concurrent sex partners, if she thought it was very likely/extremely likely that unprotected sex with the partner would lead to her getting an STD, or if she intended to have sex with the partner again.
Conclusions: Main/casual partnership category may not be relevant for young women. Prevention messages should emphasize ongoing risk assessment and reinforce the importance of dual methods for STI/pregnancy prevention.
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WP 59
DEVELOPMENT AND EVALUATION OF AN HIV/STD-FOCUSED MOTION COMIC FOR YOUNG PEOPLE AGES 15-24 YEARS IN THE US

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Background: Prevention interventions to reduce HIV/STDs disproportionate impact among youth need to be relevant, engaging and acceptable to youth. We developed and tested an innovative tool – a motion- and sound-enhanced comic (motion comic) – to improve prevention knowledge, stigma and intentions within this demographic.
Methods: We conducted three rounds of focus groups with youth ages 15 – 24 years. Qualitative data collected during rounds 1 (n = 34) and 2 (n = 40) were used to gauge HIV/STD knowledge, attitudes and behaviors and to develop the storylines and characters of a motion comic addressing condoms, stigma, myths, and HIV/STD testing and disclosure of status. The final 38-minute product was evaluated in round 3 (n = 144) using a pre-/post-test survey design; we used paired sample t-tests to assess changes between tests.
Results: Among 216 participants, 62% were male, 29% self-identified as gay, and 55% were African American. Qualitative analysis revealed gaps in knowledge, barriers to protective behaviors (e.g., testing, condom use), and HIV/STD stigma. Participants preferred comics in conventional settings with realistic art and a balance of humor, drama and suspense without overt health messages. Participants held favorable opinions of the story plot (90%), drama (73%), and humor (71%); 75% indicated they would share the content with friends. Exposure to the intervention was associated with statistically significant increases in HIV/STI knowledge; ($t = 3.295$, $p = 0.001$), in intentions to engage in HIV/ STI protective behaviors ($t = 5.743$, $p < 0.001$), and a decrease in HIV stigma; ($t = 3.237$, $p = 0.002$).
Conclusions: The motion comic was acceptable and engaging to minority youth, and improved knowledge and intentions regarding HIV/STI prevention. This novel approach may be useful for reaching youth about other important health issues such as teen pregnancy and alcohol/drug use.
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WP 60
FACTORS SURROUNDING LACK OF CONDOM USE AT FIRST INTERCOURSE AMONG COLLEGE-AGE MEN

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Background: Condom use at first coitus is associated with greater lifetime condom use. Little is known, however, about factors which influence non-use of condoms at first coitus.
Methods: Data were analyzed from a cross-sectional study on condom use behaviors among 98 heterosexual male students attending two Georgia universities. Men were asked to recall condom use during first and subsequent coitus. Multivariable logistic regression was conducted to evaluate non-use of condoms at first coitus and how this influenced future condom intentions and use.
Results: Participant averaged 22.4 years of age and 16.8 years at first intercourse (range:13-23).Overall, 47(48%) reported not using condoms at first coitus; use was not initiated until 13 acts after sexual debut(med=5;range:1-100). Reasons for eventual condom initiation included infection/pregnancy concern (53%), partner insistence(32%), and being prepared for intercourse(15%). Compared with men who used condoms at first intercourse, men initiating use afterwards were significantly more likely to report their first condom experience was "negative" (62% vs.35%, aOR=3.2, 95% CI=1.3,7.8) and less inclined to use condoms subsequently(32% vs 10%, aOR=5.3 95% CI=1.62,1.5). While condom use during most recent coitus did not differ, men initiating use after first coitus were more likely than their counterparts to report putting on condoms after starting intercourse (68% vs. 45%, aOR=2.6, 95% CI=1.1,6.4).
Conclusions: Public health efforts should emphasize the importance of condom use starting at first intercourse. Counseling should be provided to help prepare men for a positive first experience with condoms, given that this experience could affect short-term, though not long term use, and how correctly condoms are used.
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WP 61
IMPLEMENTING AN EVIDENCE-BASED SEXUAL HEALTH EDUCATION CURRICULUM IN MIDDLE SCHOOLS: IMPLEMENTATION FIDELITY AND TEACHER REPORTING OVER TWO IMPLEMENTATION YEARS

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Background: Although many public schools offer sex education, few provide evidence-based interventions (EBIs). We introduced a sexual health education EBI in Los Angeles County (LAC) public middle schools in areas with high teenage birth and STD rates, assessed teachers' implementation fidelity, and identified logistical challenges and solutions.
Methods: Health, science and physical education teachers from 24 LAC schools agreed to implement "It's Your Game, Keep It Real," a 24-lesson curriculum for 7th and 8th grades that was effective at delaying onset of sexual activity among minority adolescents in Houston, Texas. Teachers received training, supporting materials, and technical assistance. To document fidelity including lesson completion, teachers were incentivized to complete curriculum logs (CL) for each lesson and were observed once. In year 1 (Y1), only 7th grade lessons were implemented; both grades received lessons in year 2 (Y2). Based on Y1 CL submission rates (72%), we revised the incentive structure and CL system to encourage complete and timely CL entry.
Results: In Y1, 66 teachers implemented in 298 classrooms (7,628 students). Of 5,022 lessons prescribed, teachers submitted 3,591 logs (72% of prescribed lessons completed) and verbally confirmed another 1,208 lessons (24%), totaling 95% of prescribed lessons delivered. Project staff observed 65 lessons which averaged 4.2 in quality (scale 1=low to 5=high quality). In Y2, 120 teachers implemented in 634 classrooms (14,969 students). Of 7,962 lessons prescribed, teachers completed 7,021 logs (88% of lessons delivered), and verbally confirmed another 245 (3%), totaling 91% of prescribed. The 145 observations averaged 4.4 in quality rating.
Conclusions: Teachers delivered 90% of prescribed lessons each year, although the Y1 estimate may be less reliable because many did not submit CLs. Despite consensus on the importance of using EBIs, documenting and maintaining program fidelity is burdensome for teachers and requires robust funding and systems that facilitate reporting.
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WP 62
"SPRING INTO LOVE:" IMPACT OF A YOUTH-LED SUMMIT ON SEXUAL HEALTH AND HEALTHY RELATIONSHIPS FOR HIGH SCHOOL STUDENTS IN A HIGH-RISK COMMUNITY IN SOUTH LOS ANGELES

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Background: The highest rates of Chlamydia (CT) and gonorrhea (GC) are among African American (AA) and Latino/a adolescents in South Los Angeles (LA). In 2012, South LA had nearly double the CT and more than four times the GC cases among women ages 15-24 than the next-highest region. To address this issue, community stakeholders developed a peer-led "Spring into Love" summit on sexual and relationship health.
Methods: Four youth groups from South LA organized a one-day youth summit with workshops on: 1)healthy relationships, 2)consent and coercion, 3) STDs and birth control, 4)access to services, and 5)an outreach/art session where youth were provided STD test kits and information and could create a large health-themed mural. Also at this event, youth were recruited to form a Youth Advisory Council (YAC) to conduct outreach and plan events for their peers. A matched pre- and post-test was conducted to evaluate changes in knowledge, intentional behavior and attitudes, empowerment, and awareness of available teen resources. Changes were assessed using paired t-tests. The perceived usefulness of the summit was also assessed. A 6 month follow-up evaluation is planned.
Results: 150 high school students participated in the workshop; 67% were female; 100% AA or Latino/a; and, 66% completed a pre-, post- event survey. Results showed increases in knowledge, intentional behavior and attitudes, empowerment, and most significantly, awareness of available teen health resources. Fifteen were recruited and have remained actively engaged in a YAC planning peer led interventions. The 6 month follow up is in progress.
Conclusions: Youth led-events are effective at increasing knowledge and assessing attitudes about sexual and relationship health, improving intended behavior change, increasing awareness of youth-friendly sexual health resources, and engaging youth to create community change and is an effective means to identify and recruit peer leadership for a YAC to plan future STI interventions.
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WP 63
SEROLOGICAL EVIDENCE OF INFECTION WITH CHLAMYDIA TRACHOMATIS, HERPES SIMPLEX VIRUS TYPE 2, SYPHILIS, AND HIV AMONG WOMEN WHO HAVE SEX WITH WOMEN

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Background: There is controversy regarding the risk for acquisition of STIs among women who have sex exclusively with other women (WSW). In an ongoing study of African American WSW, we compared women who reported no lifetime sexual history with men (exclusive WSW) to women reporting sex with both women and men (WSWM) for serological evidence of *Chlamydia trachomatis* (CT), herpes simplex virus (HSV) type 2, syphilis, and HIV.
Methods: Serum was collected from exclusive WSW and WSWM attending the Jefferson County Department of Health STD clinic in Birmingham, AL. CT, HSV-2, syphilis, and HIV seropositivity were measured using a CT elementary body–based enzyme-linked immunosorbent assay (ELISA), the HerpeSelect® HSV-2 ELISA, the ZeusIFA fluorescent treponemal antibody-adsorption (FTA-ABS) test, and an HIV ELISA.
Results: 20 exclusive WSW were identified and age-matched to 20 WSWM. The mean age of all participants was 23.4. Considering all STIs tested (i.e. CT, HSV-2, syphilis, and HIV), WSWM had significantly higher STI rates than exclusive WSW (15/20 [75%] vs. 6/20 [30%]; p=.004), however no

participant was seropositive for syphilis or HIV. Exclusive WSW were significantly less likely to be CT seropositive than WSWM (6/20 [30%] vs. 13/20 [65%]; p=0.03). Among women who were seropositive for CT, exclusive WSW had an older mean age at sexual debut compared to WSWM (17.8 vs. 14.4; p=<0.01). None of the exclusive WSW were HSV-2 seropositive while 9/20 [45%] of the WSWM were HSV-2 seropositive (p=<0.001). The mean age at sexual debut for WSWM with HSV-2 was 13.4.
Conclusions: Serological evidence of CT and HSV-2 infection was significantly less common in exclusive WSW compared to WSWM. Nevertheless, this study provides evidence that CT is transmitted between women. There was no evidence of infection with syphilis or HIV. Additional data is needed to further evaluate behavioral differences between these groups of women.
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WP 64
MISSED OPPORTUNITIES FOR PREVENTION AND TREATMENT OF CONGENITAL SYPHILIS INFECTION IN LOUISIANA

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Background: In 2011, Louisiana had the third highest case rate for congenital syphilis (27.6 cases per 100,000 live births), and cases continue to occur among women with prenatal care, despite opportunities for prevention. This study describes missed opportunities for prevention and treatment of congenital syphilis in Louisiana between the years 2007 and 2012.
Methods: Data were collected from CDC's Congenital Syphilis Investigation and Report form, which is completed for every congenital syphilis case in Louisiana. A 'Missed Opportunity' for prevention occurred when a woman started prenatal care at least 60 days before delivery and was not adequately tested or treated for syphilis. These missed opportunities include the following: 1) lack of syphilis testing during pregnancy, 2) lack of syphilis treatment, 3) late syphilis treatment (less than 30 days before delivery), 4) inappropriate syphilis treatment (non-penicillin), and 5) lack of third trimester screening.
Results: There were 150 congenital syphilis cases from unique pregnancies between 2007 and 2012 in Louisiana. 71 of these women had prenatal care at least 60 days before delivery, and 60 of the women with prenatal care had a missed opportunity for prevention. 28 of these women did not have syphilis testing during pregnancy. 11 received late treatment, one received inappropriate treatment, and six received no treatment. 14 had a negative syphilis test early in pregnancy but were infected with syphilis by the time of delivery. None of these women had syphilis testing during the third trimester. 18 of the congenital syphilis cases received no treatment at the time of delivery.
Conclusions: These results show that most congenital syphilis cases among mothers who had prenatal care could have been prevented with timely testing and treatment. As a result legislation to support third trimester syphilis testing is being considered in Louisiana.
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WP 65
CAN STD CLINICS REACH WOMEN IN NEED OF CERVICAL CANCER SCREENING? IF THEY CAN, DOES IT MATTER?

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Background: Reducing cervical cancer disparities in the U.S. requires venues that can reach underscreened women who are often uninsured or members of racial and ethnic minority groups. This study evaluated the degree to which an urban STD clinic can reach women in need of cervical cancer screening and navigation to follow-up care.
Methods: Cervical cancer screening (cytology and co-testing for HPV DNA) was offered to 103 women >30 years old attending an urban, Midwestern STD clinic between June 2012-October 2013. Variables of interest were related to sociodemographics (age, race/ethnicity) and health system access (being insured, having a regular doctor, and time of last Pap smear). Navigation to colposcopy was based on high-risk HPV (hrHPV) and Pap testing outcomes. Participants who were hrHPV+ with a Pap result of ≥ASCUS were referred to colposcopy.
Results: Among the sample, 71.8% reported not having a regular doctor, and 76.2% did not have insurance. Over one third (35.9%) of the sample had not received a Pap in the last 3 years, and 22.3% reported not receiving a Pap in at least 5 years. 11.7% of participants had high-risk outcomes (hrHPV+ and Pap result of ≥ASCUS); 5.8% of participants were extremely high-risk (hrHPV+ and Pap result of ≥LSIL). 7% of African American women had extremely high-risk outcomes compared to 2.6% of white women.
Conclusions: Findings suggest that STD clinics may be good venues to offer cervical cancer screening and follow-up navigation because women served in these venues have high need for cervical cancer screening and navigation to follow-up care. This is likely due to the safety-net nature of STD clinics.
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WP 66
TECHNOLOGY AFFORDANCE – MAYBE NOT: THE CASE OF HIV STIGMA AND BLACK WOMEN

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Background: Although a growing body of research delineates the obstacles to Blacks' engagement in preventive health services, relatively little is known about the barriers that adversely affect Black women's ability to find health information.
Methods: Focus groups to appraise current African-American female college students' attitudes and perceptions of messages presented on HIV/AIDS prevention and awareness websites were used from 2011-2013. Data were coded by independent coders from two locations - one predominately white institute located in the Southeast and another in the Northeast.
Results: We term these bright side affordance which enables social and political movements, social justice, removal of time and spatial dimensions, and empowerment. Technology affordance, like social capital, can create social structure. Structure is communicated when users can navigate the "artifact or tool" when context and social capital "benefits" exist.
Conclusions: Conflict exists between the IT artifact bright side affordance (human-to-human interaction, empowerment, knowledge sharing, social justice, etc.) and the connection to a stigmatized condition particularly in the digital space. While much of our data disclosed "bright side" affordances by the study's participants, there were "dark side" affordances that emerged from the participants in both locations. Primarily, the "dark side, "yet, unanticipated affordance that emerged as a result of personal reputation management in social media space, particularly in the context of stigmatized health conditions, such as HIV.
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WP 67
EXPLORING HUMAN PAPILLOMAVIRUS (HPV) ON SEX TOYS DESIGNED FOR VULVOVAGINAL USE: A FEASIBILITY AND PROOF OF CONCEPT STUDY WITH BEHAVIORALLY BISEXUAL WOMEN

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Background: HPV has been documented among women who only engage in sexual behavior with other women. One potential mode of HPV transmission between women partners is shared sex toys. Sex toys (i.e. vibrators) are commonly used, with over 65% of these women reporting partnered use. However, the potential for HPV transmission by sex toys is not well documented, nor the effectiveness of cleaning strategies.
Methods: 12 participants were recruited from a larger study of behaviorally bisexual women. Participants were provided with two vibrators composed of different materials designed for intra-vaginal use, and a commercially available cleaning product. Participants used each vibrator separately and provided self-collected vaginal and three sets of vibrator samples: immediately after self-use; immediately after cleaning; and 24 hours after cleaning. Additionally, participants completed daily diaries reporting sexual behaviors, sex toy usage, and cleaning practices. All samples were tested for HPV DNA using the Roche Linear Array Genotyping Test.
Results: HPV was detected in the vaginal samples of 9/12 (75%) women. Vibrator samples were tested from the HPV positive women. All participants

used the provided cleaning product. Vibrator 1 shaft swabs were HPV positive before cleaning in 89% (8/9), immediately after cleaning in 56% (5/9), and 24 hours after cleaning in 40% (2/5). Vibrator 2 shaft swabs were HPV positive prior to cleaning in 67% (6/9), immediately after cleaning in 44% (4/9), and 24 hour after cleaning in none.
Conclusions: All women with vaginal HPV had HPV detected on their vibrators immediately after use. This substantiates the HPV transmission potential of sex toys. Additional corroboration includes HPV detection after cleaning. Sex toy material and shape may play a role in post-cleaning HPV detection. These data suggest the importance of development of evidence-based recommendations for sex toy cleaning to reduce transmission of HPV and other STI.
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WP 68
CUMULATIVE RISK OF REPORTED CHLAMYDIAL INFECTION AMONG WOMEN IN FLORIDA, 2000–2011

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Background: Although *Chlamydia trachomatis* infection is known to be common among young women in the United States, information on cumulative risk of infection is limited.
Methods: We determined the cumulative risk of being reported as having chlamydia for all women living in Florida by analyzing surveillance records of 14–34 year-old women in Florida who were reported as having chlamydia between 2000 and 2011 and census estimates on the number of women in Florida. We first calculated reported infections per woman. Next, we limited analysis to first-infections and accumulated the risk of first-infection over the 11-year period to get cumulative risk. Finally, we looked at cumulative risk of repeat infection by age, over the 11-year period.
Results: During 2000–2011, there were 457,595 infections reported among 15–34-year-old women, with annual infection totals increasing every year from 25,390 to 51,536. 19-year-olds were at highest risk (5.1 infections diagnosed per 100 women in 2011). 341,671 different women were infected. Among women ages 14–17 in 2000, over 20% had at least one infection reported within 12 years, and among non-Hispanic blacks, this risk was over 36% even though 18% of reports were missing race/ethnicity information. Repeat infections were common. Among the 53,109 women reported with chlamydia at ages 15–20 during 2000–2003, 36.7% were reported with one or more additional infections by 2011.
Conclusions: The risk of chlamydia was high for young women in Florida. We found 36% of young black women in Florida had at least one reported infection between 2000 and 2011. Considering undiagnosed infections and reported infections where race was missing, probably over 50% of young black women in Florida acquired chlamydia at some point. Women who get chlamydia once, are likely to get it again. More information is needed on how to prevent chlamydial infection.
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WP 69
TACKLING CERVICAL CANCER DISPARITIES VIA COMMUNITY-BASED HEALTH EDUCATION: AFRICAN AMERICAN BEAUTY SALONS

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Background: Salon-based health education programs are becoming increasingly popular for reaching African-American women because they deliver messages in a setting that is credible and easily accessible; they also engage trusted members of the community in a dialogue that reflects the tradition of oral-based communication.
Methods: We partnered with ten Philadelphia hair salons to promote dialogue about HPV and its link to cervical cancer. Goals were to increase knowledge about HPV, as well as intentions to vaccinate, among salon customers. Study inclusion criteria: African-American women, ages 18 to 26, or the caregivers of girls ages 9 to 17. Stylists briefly discussed HPV with customers, then made referrals for in-depth, in-salon sessions offered by health educators. Survey data (knowledge and attitudes about HPV and HPV vaccination) were collected from customers immediately before and after the sessions, and 30 days later. Means, frequencies and percentages were used to determine background characteristics of the sample, while paired t-tests were used to compare baseline and endpoint mean scores for knowledge, perception and intention items.
Results: 240 women were enrolled in the study. Knowledge about cervical cancer and HPV infection increased significantly in both groups from baseline to endpoint and remained high at the one-month follow-up assessment. At follow-up, 68% of participants said that they had shared what they learned with a friend or family member, and 57% planned to talk to their doctor or their daughter's doctor about HPV vaccination. After the sessions, 62% of caregivers reported that it was important that their daughter be vaccinated against HPV in the future.
Conclusions: Results of the study indicate that community-based health education interventions in beauty salons are both feasible and effective in reaching populations not traditionally included in mainstream messaging strategies.
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WP 70
A REVIEW OF HIV/STD BEHAVIORAL PREVENTION INTERVENTIONS FOR FEMALE SEX WORKERS IN THE UNITED STATES

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Background: The lives of female sex workers (FSW) in the US are typically marked by violence and instability, traumatic life events, victimization, substance abuse, mental illness, and poverty. FSW are at high risk for acquiring and transmitting HIV and other STDs via inconsistent condom usage, sex with partners of unknown serostatus or concurrent partnerships with risky sexual partners, and injection drug or crack use. Little is known about estimates of HIV/STD among FSW in the US, but estimates of HIV range from 10.9% among 700 FSW in NYC jails to 22.4% among 536 drug-using FSW.
Methods: The purpose of this systematic review was to examine HIV/STD behavioral interventions conducted in the US and published between 1988 and 2012 that aimed to reduce sexual or drug-related risk behavior among US-based FSW in order to summarize important factors that have been addressed and highlight gaps for future research. Nineteen unique interventions met our selection criteria and were eligible for review: 5 interventions that exclusively targeted FSW, 2 interventions that stratified data by FSW, and 12 interventions that included at least 50% FSW.
Results: Our review indicated that 15 interventions provided HIV/STD prevention information and 13 provided substance abuse prevention information, but few tailored this content for issues facing FSW. Only four interventions addressed mental health, 1 addressed homelessness, and 2 addressed job training. The majority of included interventions were published over 10 years ago and only 2 have been identified by CDC as Evidence-Based Interventions.
Conclusions: These findings suggest that current HIV prevention efforts do not adequately address the needs of FSW in the US. Interventions may include a greater emphasis on structural and psychosocial factors, including mental health, recovery from victimization, and economic resources. An expansion of the definition of FSW is also considered.
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WP 71
"MY VIRUS, MY HEALTHCARE": PERSPECTIVES OF SUB-SAHARAN AFRICAN MIGRANT WOMEN WITH HIV/AIDS ON TREATMENT AND CARE IN BELGIUM

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Background: Sub-Saharan African (SSA) migrant women with HIV/AIDS receiving treatment and care in Western European countries associate their resilience to HIV/AIDS to the availability, accessibility and quality of healthcare. The main aim of this study was to explore the perspectives of SSA migrant women with HIV/AIDS on the healthcare provided in Belgium.

Methods: Qualitative in-depth face-to-face interviews were done with English and French speaking SSA migrant women with HIV/AIDS receiving healthcare in Belgium. Eligible participants were purposively recruited and informed about the objective of the study by healthcare professionals in a Brussels AIDS Reference Centre. Thematic content analysis was conducted to identify themes based on grounded theory.
Results: Twenty-two SSA migrant women participated in the qualitative study. Most participants reported not having to pay for the HIV treatment and care. HIV healthcare cost is significantly covered by contributions of the national health insurance. The patients receive individualised care depending on their specific health conditions. Overall, participants believe that the tailored treatment and care they receive contributes in restoring their self-dignity, as they are better able to take care of their health and other basic needs. The environment where they are now living fosters HIV/AIDS prevention through available and accessible modern healthcare services.
Conclusions: SSA migrant women believe that available and accessible treatment and care makes living with HIV/AIDS in Belgium tolerable despite the chronicity and seriousness of the disease. Dispensed HIV treatment and care improves quality of health and restores self-esteem of HIV/AIDS patients. Providing free treatment and prevention services to SSA migrant women and other vulnerable groups with HIV/AIDS is imperative for achieving better health outcomes for patients and reduce new HIV cases.
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WP 72
INFERTILITY AND QUALITY OF LIFE: FINDINGS FROM A LITERATURE REVIEW

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Background: Pelvic inflammatory disease (PID) has been associated with chlamydia and other STDs in women. PID can have serious sequelae, including tubal-factor infertility. Quality of life (QoL) measures, such as quality-adjusted life years (QALYs) lost, are typically required for cost-effectiveness analyses and have been estimated for infertility. These measures have typically only been assessed for women seeking treatment during their fertile lifespan. Determining the QoL impact of infertility throughout women's lifespans could improve estimates of the burden of STDs and their sequelae.
Methods: A structured literature search was carried out in PubMed and Web of Science. Articles were identified using the following key words: HRQL, QoL, HALex, EuroQol, OLHQ, HUI, QALY, depression, loneliness, older women, and institutionalization AND/OR infertility and childlessness. Initial identification of articles was based on review of the title and abstract; reference lists were also scanned for additional sources. Relevant articles were retained for detailed evaluation.
Results: The search identified 86 eligible articles. Of these, 34 articles were excluded and 52 articles were retained. Retained articles revealed decrease in QoL throughout the lifespan in emotional, mental health, and social domains that was associated with infertility. Limited quantitative studies showed that women with a PID history (0.53 vs. 0.66) and adolescents (0.59 vs. 0.68) assessed significantly lower QoL for infertility compared to fertile women and parents, respectively. Other studies showed that infertile older women were more depressed, lonely and socially isolated; these effects were confounded by marital status.
Conclusions: Literature not specific to STD-caused infertility suggested that infertility was associated with decreased QoL. More research is needed to examine this phenomenon. Few studies have assessed QoL values to infertility health states and none to older women specifically. Further research will help in understanding the long-term impact of STD infections and the cost-effectiveness of STD prevention programs.
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WP 73
SUCCESSFUL STRATEGIES TO RECRUIT AND RETAIN YOUNG WOMEN OF COLOR IN A 12 MONTH HOME-BASED STD CLINICAL TRIAL IN SAN FRANCISCO

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Background: Young women of color bear a disproportionate burden of STDs, yet can be a challenging population to recruit and retain in long-term STD clinical trials. The San Francisco Department of Public Health (SFDPH) had relatively little experience performing STD studies with this population in 2008 when it began participating in the BRAVO multisite randomized clinical trial of treatment of asymptomatic bacterial vaginosis.
Methods: Sexually active women ages 18-25 were recruited from six U.S. cities for the BRAVO clinical trial. The SF study team conducted focus groups with young women to get feedback on recruitment locations and their view about participating in a STD clinical trial. Recruitment methods included conducting health education workshops in the community, partnering with the public housing authority to send study fliers to 8,000 residences, and hiring employees with experience working with young women of color. To retain participants, staff sent reminder, thank you and birthday cards, increased the incentive after completing the 4-month follow-up visit, and linked participants to community services. The Retention Rate (rr) was defined as the number of active and completed participants divided by the total number of participants as of October 2013. The statistical analysis used was the two-sample test of proportion, z-test.
Results: As of October 2013, 1351 women enrolled at all six study sites. Of these, 490 (36%) women enrolled at SFDPH (rr = 83%), which was above the average site enrollment (225) and overall rr (74%). Of the SF participants, 298 (60.8%) were African American with no difference in rr between African American and White women (83% vs. 85%, p = 0.69).
Conclusions: In San Francisco, a combination of culturally tailored recruitment and retention methods contributed to successful recruitment and retention of young women of color in an STD clinical trial. Future analysis of the relative importance of each strategy is warranted.
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WP 74
EDUCATION, POWER, AND SEX: A QUALITATIVE STUDY ON THE INTERRELATIONSHIP OF FACTORS THAT INFLUENCE THE SEXUAL BEHAVIOR OF AFRICAN AMERICAN WOMEN ATTENDING A HISTORICALLY BLACK COLLEGE

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Background: This qualitative study explored the impact of educational or professional achievement on perceived power in relationships and sexual encounters. Specifically, this study considered how differences in partner educational or professional achievement influenced protective sexual behaviors including condom negotiation and patterns of condom use. African American emerging adult women aged 18 to 25 are disproportionately affected by sexual health risks such as STIs including HIV/AIDS and unintended pregnancies. Furthermore, when controlling for condom use rates, African American women in this age range continue to have more deleterious health outcomes when compared to their White counterparts. Thus, it is important to understand the contextual social and behavioral factors contributing to sexual decision-making in this population.
Methods: This study consisted of 19 semi-structured, in-depth interviews of African American women attending a Historically Black College in the Southeastern United States. The theory of gender and power and social cognitive theory were used as a framework for thematic analysis of the relationship between perceived power and protective behaviors in a cultural context.
Results: Results revealed that college women desired partners who were or would become financially stable so that, in the case of unintended pregnancy, they would have adequate support. Women also described education as a self-efficacy booster for partner communication increasing the perceived power they felt in their relationships and sexual encounters. Additionally, women used future orientation as a point of negotiation for protective sexual behaviors such as HIV/STD testing, condom use, or birth control.
Conclusions: Interventions expressing the importance of sexual protective behaviors in achieving future goals, focusing on pregnancy prevention, and/or teaching young women in long-term relationships how to negotiate alternative protective behaviors such as frequent testing and use of birth control may be effective in reducing sexual risk as these are all factors that seem to be a common theme among study participants.
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WP 75
SEXUAL BEHAVIORS DURING PREGNANCY AND PERCEIVED IMPACT OF TOPICAL MICROBICIDE USE FOR BACTERIAL VAGINOSIS

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Background: Topical microbicides (TMs) could be an option for the prevention of STIs and bacterial vaginosis (BV) among pregnant women since motivation for condom use is poor. Little is known about how TM use might affect sexual behaviors during pregnancy.
Methods: 26 women in their third trimester (mean age=24.9), recruited from a clinic serving inner-city minorities, participated in a qualitative study on TM acceptability and use for prevention and treatment of BV. Via individual interviews, participants discussed general changes in their sexual behaviors throughout pregnancy as well as their views on the potential impact of TM use on sex during the third trimester. Interviews were coded for relevant themes around sexual behavior.
Results: Most women described a decrease in sex frequency (n = 19) during pregnancy for reasons including decreased desire, fatigue, discomfort, and partner's concerns about harming the baby. There was discussion of non-penetrative intimacy. Participants reported partners as being understanding about decreased frequency of sex, but some perceived that partners were no longer attracted to them. When asked how using TMs for prevention during the last trimester would affect sex, responses were variable and included decreased sex (due to messiness/leakage, interference with medication, concern for effects on partner), no impact, increase, and attempting to use the TM without decreasing sex. Regarding use for treatment, most respondents said they would decrease sex and indicated prioritization of treating an active infection.
Conclusions: The women in this study report an overall decrease in frequency of sex during pregnancy as well as a projected further decrease if treating an infection with TMs. As TM products are developed and studied, it is important to include pregnant women in these studies and to be able to understand and counsel around effects of TM use on sexual behavior.
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WP 76
PREVALENCE OF TRICHOMONAS VAGINALIS AMONG MALES AND FEMALES AS DETERMINED BY THE APTIMA TRICHOMONAS VAGINALIS NUCLEIC ACID AMPLIFICATION ASSAY IN ALABAMA

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Background: Trichomoniasis, a common sexually transmitted infection caused by the protozoan *Trichomonas vaginalis* (TV), affects both men and women. Untreated TV infections may lead to easier acquisition of other STIs including HIV, and have been associated with long-term sequelae such as pelvic inflammatory disease and preterm births. Previous studies report widely differing prevalence rates in women, probably due to differences in population as well as the testing methods used. Very few studies have reported TV prevalence in men. Estimating the prevalence of TV in both men and women is important because most patients are asymptomatic and TV is easily transmitted. The objective of this study is to determine TV prevalence in men and women undergoing screening for *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC).
Methods: Endocervical samples and male urine samples were collected from patients attending Family Planning and STD clinics across Alabama and tested with the Aptima Combo 2 assay for CT/GC detection and the Aptima TV assay (Hologic/Gen-Probe, Inc.).
Results: Samples were collected from 77,740 women and 12,604 men; 60.1% of the subjects were African American and most patients (52.9%) were 20-29 years old. TV prevalence was 10.6% overall, 11.3% for women, 6.1% for men, and was highest for African Americans (14.6%). In women, TV prevalence gradually increased with age by 2-3% in each decade until age 40. In men, TV prevalence increased with age in a bimodal fashion (peak at 8.3% for men 30-39; peak at 11.5% for men ≥50 years).
Conclusions: The high prevalence of TV in men and women undergoing GC and CT screening suggests that both males and females at high risk for STIs such as CT and GC should also be screened for TV, even in patients >40 years old.
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WP 77
PREVALENCE OF M GENITALIUM, T VAGINALIS, C TRACHOMATIS AND N GONORRHOEAE IN WOMEN ENROLLED IN A PROSPECTIVE MULTI-CENTER US CLINICAL STUDY

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Background: This study evaluated the prevalence of *M genitalium* (MG), *C trachomatis* (CT), *N gonorrhoeae* (NG) and *T vaginalis* (TV) in urogenital samples from female subjects enrolled in a prospective multi-center US clinical trial.
Methods: Residual specimens [physician-collected vaginal swab (VS), endocervical swab (ES), ThinPrep liquid Pap (TP), and self-collected urine (FU)] obtained from among 800 asymptomatic or symptomatic (urethritis, vaginitis, or cervicitis) women, consented and enrolled from 7 diverse US clinical sites, were tested using a research-use only molecular assay for MG, and FDA-cleared molecular assays for TV, CT, and NG.
Results: Prevalence of TV and MG infections was high (23.3%, 21.6%) in endocervical swabs and in vaginal swabs (21.7%, 21.7%). CT and NG prevalence rates ranged from 3% to 9.4% in these sample types. TV and MG also showed higher prevalence in TP samples (13%, 11.2%) than CT and NG (8.4%, 1.4%). FU sample prevalence rates for TV, CT, MG and NG were 11.5%, 8.1%, 7.2%, and 1.5%, respectively. Among women with any STI, TV had the highest proportion of single infections (range 32-39% for all sample types), followed by MG (range 20%-31%), and CT (range 9%-20%). MG/TV co-infections ranged from 5%-13%, followed by MG/CT co-infections (4% for all sample types). Among symptomatic women with single infections, NG and MG had slightly higher prevalence for all sample types, compared to women diagnosed with TV or CT. Women with CT/MG, TV/MG, and CT/NG co-infections reported symptoms at higher rates than women with CT/TV co-infection.
Conclusions: TV and MG had higher prevalence than CT and NG, both as single infections and as co-infections with other sexually-transmitted organisms. Women with single MG infections reported similar rates of urogenital symptoms compared to women with single NG infections.
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WP 78
THE DEVELOPMENT OF A DROP-IN CENTER FOR SEX WORKERS IN INDIANAPOLIS

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Background: Sex workers have little organizational infrastructure to facilitate outreach or disease intervention but are a critical sentinel surveillance population for STD control. We developed a drop-in center for sex workers, the Agape Alliance, to promote self-efficacy and health.
Methods: An ongoing project, the Sex Worker Project and a university based investigator (Alexis Roth, PhD), identified desired services and hours of operation best for sex workers. In February 2013, a church agreed to provide space for drop -in services for female and transgender (M-F) sex workers. Information on the center, the Agape Alliance, was disseminated through flyers in areas with high prevalence of sex work, organizations with overlapping target populations, the Sex Worker Project and word of mouth. Services offered include hot meals, showers, condoms, hygiene products, and clothing to meet their immediate physical needs. A peer run support group allows for women to share their experiences. Clients are linked with housing, education, employment, STD/HIV testing, HIV care referrals, and medical resources through partnerships.
Results: Agape Alliance has served more than 40 sex workers. This population is 56% black and 44% white. None are Hispanic. Ages ranged from 19 to 52, average 32 + 10 years. In 6 months, 16 women were tested at the drop-in center of which 2 tested positive for chlamydia. Additional women

have been directed to STD services through which they can obtain incentives. The center has also linked 2 women with detox services.
Conclusions: Involving clients in the development of a drop in center through the Sex Worker Project has increased buy-in from the community. Through empowerment, Agape Alliance may provide an early form of infrastructure to improve not only outreach and testing but also self-efficacy and safety so that these women may change their own lives and those of their peers.
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WP 79
THE CONNECTION BETWEEN MDMA (ECSTASY/MOLLY) USE AND SEXUAL RISK TAKING: IMPLICATIONS FOR HIV PREVENTION

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Background: MDMA (ecstasy/molly) users may be a population at risk for the acquisition of HIV. Research examining the effect of MDMA use on sexual risk taking, however, has yielded mixed results. Some data, for example, suggest that MDMA may influence persons to engage in risky sex, while other studies show that MDMA may affect users in ways that would likely decrease sexual risk taking.
Methods: To help clarify this relationship, the current study systematically reviewed the literature on MDMA use and HIV sexual risk behaviors to answer the following research questions: 1) Does the preponderance of research evidence on MDMA support its use as a sexual risk factor for HIV acquisition, 2) Which sexual risk behaviors are most associated with MDMA, and 3) What are the mechanisms through which MDMA influences sexual risk taking? PsychINFO and MEDLINE, two online databases in the social/behavioral and health sciences were searched for English language articles in academic journals since 1981, the year the HIV epidemic began.
Results: The preponderance of research evidence suggests that using MDMA increases ones risk of engaging in risky sex, particularly unprotected sex and sex with strangers. Qualitative data suggest that MDMA use may influence sexual risk taking through the "competing desires" phenomenon (desire to be intimate/experience touch vs. desire to be safe/wear condom).
Conclusions: These findings directly inform HIV prevention efforts and help to tailor public health initiatives to this emerging population of drug users. Based on these results, MDMA users appear to be a population at risk for acquiring and transmitting HIV and other STI on their engagement in riskier sex behaviors. More research is needed to determine the extent to which MDMA use contributes to the disparate rates of HIV among various groups of MDMA users, such as African-Americans.
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WP 80
THE EFFECT OF A TREATMENT PROTOCOL ON CORRECT STD PROPHYLAXIS FOR COMPLAINANTS OF ACUTE SEXUAL ASSAULT

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Background: Over 250,000 women are sexually assaulted in the United States each year. Over 26% of these women will develop a sexually transmitted disease (STD) if untreated. Previous research has shown that these women rarely receive the complete recommended prophylaxis. In order to improve the quality of healthcare provided, our forensic department implemented a treatment protocol and set of orders in February 2012. We reviewed the effect of implementing a protocol in a regional medical center's emergency department.
Methods: A comparison was made before and after the implementation of a prophylaxis protocol using a retrospective chart review. The Fisher Exact test was applied to analyze the number of patients given correct prophylaxis before and after the start of the protocol.
Results: From January 2009 through August 2013, 153 patient charts were compared. We found a significant increase in the number of patients receiving appropriate treatment. Prior to the use of a protocol, only 34.3% (34/99) were receiving the overall recommended prophylaxis compared to 85.2% (46/54) after the protocol began (p<0.001). *Neisseria gonorrhoeae* prophylaxis showed a significant increase from 80.8% (80/99) pre-protocol to 96.3% (52/ 54) post-protocol (p<0.005). *Trichomonas vaginalis* prophylaxis significantly increased from 42.4% (42/99) pre-protocol to 87.0% (47/54) post-protocol (p<0.001). An increase in *Chlamydia trachomatis*prophylaxis was not statistically significant.
Conclusions: There was a significant increase in overall prophylactic treatment and individually for *N. gonorrhoeae* and *T. vaginalis* after the implementation of the protocol. Condensing published recommendations and expediting care with standing orders are responsible for a rise in prophylaxis. We conclude that the presence of such a protocol is a highly effective tool and may be beneficial in other emergency departments.
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WP 81
IMPLEMENTING, MONITORING AND EVALUATING AN EXPEDITED PARTNER THERAPY PROGRAM IN ALASKA'S SECTION OF PUBLIC HEALTH NURSING

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Background: Alaska has consistently had one of the highest rates of chlamydia (CT) infection in the country and in 2010 had the 2nd highest rate of gonococcal (GC) infections. With a public health system that includes 24 health centers, covering an area of over 650,000 sq. miles, the task of reducing morbidity associated with these two STI's is one of the State's top priorities. In March of 2012 the Section of Public Health Nursing undertook measures to implement and monitor a Patient Delivered Partner Therapy program (PDPT).
Methods: A workgroup followed a formal results and performance accountability decision making process to develop a PDPT program. The program design was driven by answering interlocking questions: How much did we do? How well did we do it? Is anyone better off? In October of 2012 the program was piloted at 4 health centers and implemented at the remaining 20 public health centers in March of 2013. Staff members were trained via online modules that included a pre and post test in addition to a satisfaction survey. Standardized charting was developed to track utilization by health center and by provider, reinfection rates, medication delivery to partner(s) and client satisfaction.
Results: Online training was provided to 100 nurses with 64% reporting they were competent in delivering PDPT immediately after the training. Preliminary performance measures indicate that 55 of the 67 eligible clients were given medication, 21 delivered the partner doses all stating they received adequate instruction and would use the method again.
Conclusions: An effective system was created that will allow continual monitoring and evaluation of the PDPT program in order to support an ecological approach to decrease the rates of CT/GC in Alaska. Monitoring reveals a need for additional staff training and education as we continue to move through the cycle of change.
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WP 82
THE EXPERIENCE OF INTIMATE PARTNER VIOLENCE AMONGST THE HIV-POSITIVE POPULATION

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Background: A US study reported lifetime intimate partner violence (IPV) in 73% of their HIV positive patients with 20% reporting current abuse. Rates were highest among African-Americans and in men-who-have-sex-with-men (MSM). A recent UK study found higher IPV rates amongst HIV positive women compared with the general population. Numerous African studies report similar findings. The UK study found associations between IVP and younger age, black individuals born outside of Africa and mental health problems. There is limited data about the experience of IPV in HIV positive men and HIV positive MSM, in addition to patients of non-black ethnicities.
Methods: 500 patients attending HIV clinics between November 2013 and April 2014 in two large UK level 3 sexual health services completed a questionnaire designed using a validated tool for assessing current experience of IPV (emotional, physical, sexual). The rate of IPV with confidence intervals was calculated. Multivariate analysis was used to identify known risk factors helping to predict IPV in this population. In addition, data for women and men was analysed separately.

Results: Preliminary results suggest that IPV was most prevalent in HIV positive young women who were in a heterosexual relationship. HIV positive MSM were at higher risk of IPV than HIV positive heterosexual men. Risk factors for IPV were having a low income household, increased number of children, unemployment and young age of HIV diagnosis. Full results will be available by the conference.
Conclusions: HIV-positive patients regardless of their sexual orientation and/or ethnicity are at risk of IPV. Rates of IPV in HIV positive patients were higher than published rates in HIV negative people. Healthcare professionals working with patients with HIV should screen for IPV and direct patients to organizations concerned with assisting people at risk of IPV.
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WP 83
IMPLEMENTATION OF PROJECT RESPECT IN A BUSY PRIMARY AND HIV SPECIALTY CARE CLINIC

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Background: The University of Pittsburgh HIV/AIDS program provides care to over 1,500 HIV-infected persons. MSM and MSM who use injection drugs (MSM-IDU) represent 58% of the clinic population. Since 2010, there has been a steady increase in new syphilis diagnoses from 1.5% to 4% with the majority of cases representing re-infection. The CDC RESPECT protocol was adapted for implementation with HIV-positive MSM to reduce high-risk sexual behaviors through client-centered discussions.
Methods: This is a longitudinal descriptive research project intended to inform on: (1) the feasibility of implementing RESPECT using a peer counselor; (2) the compendium of client-identified risk reduction strategies, and; (3) the effectiveness of risk reduction strategies.
Results: Between 9/29/2010 through 7/9/2012, 161 non-duplicated clients were referred to RESPECT. Unsafe oral sex was the predominant sexual risk category (73.1%) followed by unsafe sex involving friends with benefits, group sex, or sex with a non-primary sexual partner. Approximately 11% of clients reported unprotected anal sex. Ninety-four (58.4%) clients participated in at least two RESPECT sessions. Nearly 39% of clients agreed to try the female condom for anal sex, 19.2% agreed to maintain their current level of safer behaviors and 11.4% expressed interest in other strategies. Approximately 63% of clients achieved their risk reduction goals, but in nearly 15%, progress toward risk reduction could not be determined.
Conclusions: The findings suggest that it is feasible to implement RESPECT in the HIV primary care clinical setting. Challenges encountered included limited availability of the counselor, lack of buy-in by other providers, follow-up sessions coinciding with regularly scheduled clinic visits where other issues may take precedence and adapting RESPECT for HIV-infected MSM in the context of the continuum of sexual risk taking behaviors. The changing nature of sexual risk-taking behaviors reported by clients over the course of their involvement suggests the need to identify mediators of risk behaviors.
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WP 84
INCIDENCE OF SEXUALLY TRANSMITTED DISEASES AMONG TRANSGENDER PERSONS WITH HIV, NEW YORK CITY, 2000-2010

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Background: Transgender women (TGW: born male, express female gender identity) are at high risk for HIV, but have been less well studied than other biologically-born men-who-have-sex-with-men (MSM). Sexually transmitted diseases (STD) among HIV-infected persons signal ongoing risk behavior and potential for secondary HIV transmission. We present population-level estimates of STD incidence among HIV-positive TGW.
Methods: Retrospective cohort analysis of STD incidence among TGW using data from a match of NYC's HIV and STD surveillance registries (232,295 HIV/AIDS cases reported through 3/31/2011; 618,597 STD cases from 1/1/2000-6/30/2010). Our analytic cohort comprised all 345 TGW diagnosed with HIV during 1/1/2000-6/30/2009. TGW were followed until first incident STD (chlamydia, gonorrhea, early syphilis), death, or end of follow-up (6/30/2010). STD were considered incident if diagnosed ≥14 days after HIV diagnosis, plus a disease-specific incubation period. TGW STD incidence was compared to that of non-transgender MSM.
Results: Of TGW, 90% were black or Hispanic. Cohort participants contributed 1,821 person-years of observation (median: 5.15 years). Forty-nine (14.2%) had an incident STD; overall STD incidence was 2.7/100 PY. Median time to STD was 2.3 years; 14.3% of STD were diagnosed <6 months after HIV diagnosis. Incidence did not vary by race/ethnicity but was higher among TGW diagnosed with HIV before age 19 (5.3/100 PY, versus 1.2/100 PY in those >30 years) and those HIV-positive for <5 years (8.0/100 PY versus 0.68/100 PY in TGW with HIV >5 years). STD incidence did not differ by whether TGW were in HIV care within 3 months of HIV diagnosis (3.48/100 PY, versus 2.26/100 PY among those not in care by 3 months). Incidence among non-transgender MSM was 4.1/100 PY.
Conclusions: We documented substantial risk of incident STD following HIV diagnosis in a large cohort of TGW. Findings underscore the need for frequent STD screening and prevention counseling in this population.
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WP 85
RECENT FEDERAL GUIDANCE ABOUT SERVICES FOR PERSONS WITH HIV: IMPLICATIONS FOR ACCESS TO STD PREVENTION AND CARE

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Background: Improving STD services for persons with HIV is important because HIV-STD co-infection is common, STDs have serious health consequences, and some STDs facilitate HIV transmission.
Methods: We analyzed the content of recent federal government guidance on HIV testing, care, and reporting that might influence access to STD services for persons with HIV.
Results: Updated guidance on "prevention with HIV-positives" recommends prompt linkage to HIV care where providers can screen for STDs that facilitate HIV transmission; offer risk-reduction interventions (RR) that can reduce STD exposure; and offer partner services (PS) that can address both HIV and STDs. Recent guidance also recommends linking persons with initial positive HIV tests to HIV care before supplemental test results are available and allows reporting of initial-positive HIV tests to surveillance programs before diagnosis is confirmed. This can speed clinician or health department support for linking persons with positive tests to HIV services that, in turn, may provide opportunities for STD services even if HIV infection is ruled out. New guidance also addresses the benefits of routine diagnosis and reporting of acute HIV infection cases that are frequently identified in STD clinics. Acute HIV infection is the most infectious stage and commonly occurs among MSM co-infected with STDs. Routine notification and reporting of acutely infected case-patients can help clinicians and health departments quickly identify individuals who urgently need services for HIV and recently acquired, highly infectious STDs. Implementing this recent guidance can reduce gaps in HIV and STD care: currently, about 20% of HIV-infected persons do not receive outpatient care within three months of diagnosis and less than half receive RR, PS, or gonorrhea or chlamydia screening shortly after diagnosis.
Conclusions: Implementing this recent HIV guidance may improve access to several STD services and improve synergies between HIV and STD control programs.
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WP 86
RACIAL/ETHNIC DIFFERENCES IN HPV PREVALENCE, RISK FACTORS, AND KNOWLEDGE AMONG PATIENTS IN FEDERALLY QUALIFIED HEALTH CENTERS (FQHCS)

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Background: Little is known about differences in human papillomavirus (HPV) positivity by race/ethnicity. Nearly all cervical cancers are causally related to infection with HPV. Risk factors for acquisition and persistence of HPV infection include early age at first sexual intercourse, number of lifetime sexual partners, history of sexually transmitted diseases (STDs), and smoking. This study assessed racial/ethnic differences in the prevalence of HPV infection, risk factors, and HPV knowledge among underserved women in Federally Qualified Health Centers (FQHCs).

Methods: Data were collected from 984 low income women aged 30 - 60 years across Illinois from 2009 to 2011. Participants completed a baseline survey assessing demographics, risk factors, and HPV knowledge. HPV test results were also collected after routine screening. Age-adjusted logistic regression and linear regression were used to examine the association of race/ethnicity with HPV prevalence, risk factors, and HPV knowledge.
Results: The sample consisted of 384 (39.0%) white, 312 (31.7%) Hispanic, and 254 (25.8%) black women. Hispanic women had a significantly lower prevalence of HPV infection (4.2%) than white (9.1%) or black women (8.7%) ($p<0.05$). Hispanic women were also less likely to report risky behaviors (first sexual intercourse before age 15, multiple sexual partners in lifetime, history of STDs, and smoking cigarettes) than white and black women. White and black women were more likely to report three or more risk factors for contracting HPV compared to Hispanic women; however, Hispanic women had lower levels of HPV knowledge than white and black women.
Conclusions: As compared to white and black women, Hispanic women had the lowest levels of HPV prevalence, risk factors, and knowledge in this underserved population in Illinois. In this population of women with similar socioeconomic characteristics, there is still variability across subgroups suggesting that a more personalized approach to education and clinical care may be warranted.
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WP 87
EXPLORING THE CONTRIBUTION OF "INCLUSIVE PRACTICE" AND "INTERSECTIONALITY" TO HEALTH EQUITY APPROACHES FOR THE PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS AMONG ETHNORACIAL MINORITIES

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Background: Evidence of differences in rates of sexually transmitted infections (STIs) among ethnoracial minorities is indicated in public health surveillance data from North America. One of the most promising developments in health policy has been the global "health equity" movement concerned with addressing social determinants of health to reduce disparities in disease and illness. In order to address health disparities in STIs, those working in public health must first understand key barriers to access to health services and the specific needs of underserved populations. This presentation explores the application of "inclusive practice" and "intersectionality" to health equity and their potential contribution to the prevention of STIs among ethnoracial minorities. Practice points are offered that translate these concepts into concrete action to reduce vulnerability to and resilience against STIs among ethnoracial minorities.
Methods: This presentation draws on findings from a systematic review of the literature and evaluated programmatic responses related to key determinants of STBBI vulnerability among ethnoracial minorities.
Results: Racism and discrimination, socioeconomic status, gender, substance use, mental health, housing, and access to health services are key determinants of vulnerability to STIs among ethnoracial minorities. Reflective of "inclusive practice" and "intersectionality" approaches, the findings suggest that: a) facilitating points of connection between members of the ethnoracial community and practitioners; b) incorporating culturally-based approaches to health and healing; c) acknowledging the social, cultural, historical and political contexts of people's lives; d) inter-sectoral collaboration; e) establishing multiple points of service access; and f) fostering inclusion of ethnoracial communities in program development and delivery, have the potential to increase health equity and prevent STIs among ethnoracial minorities.
Conclusions: The concepts of "inclusive practice" and "intersectionality" have the potential to help practitioners frame interventions and initiatives to address barriers to equitable access to health services and to better serve the needs of underserved populations.
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WP 88
SCOPE OF PRACTICE FOR REPRODUCTIVE HEALTH: ASSURING A TRAINED MEDICAL WORKFORCE IN THE ERA OF THE AFFORDABLE CARE ACT

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Background: In 2010, the Male Training Center for Family Planning and Reproductive Health, a partnership between the Family Planning Council and the Johns Hopkins University conducted a survey of licensing boards to determine limitations to offering reproductive health services to males by providers (physicians [MD/DO], physician assistants [PA] and advance practice nurses [APRN]) offering specialty care to females. With the advent of the Affordable Care Act (ACA), that goal has expanded to determine if delivery of reproductive health overall is limited by practice. Our goal and the National Council of State Boards of Nursing (NCSBN) efforts to standardize APRN licensure intersect as both address practice.
Methods: From 2010 through 2013, the survey team contacted: 1) licensing boards for medicine, nursing and physician assistant in each of the fifty states and five federal territories; 2) specialty boards and certification bodies; and 3) professional agencies. Information was collected and collated by state and territory. In 2013, the data were reanalysed to determine limitations to offering reproductive health services overall.
Results: Physician practice is not limited by any state or territorial licensing board. For PAs, all fifty states and the three territories which recognize PA practice, limitations include supervision by and an agreement with a licensed physician. Limitations by nursing boards, however, are not consistent. As of September 2013, only seven states and one territory allow APRNs to practice as independent providers. One territory does not recognize the professional status of either APRNs or PAs.
Conclusions: In order to meet ACA requirements, all clinicians must practice at full scope of practice, which means APRNs must be able to practice as independent providers within their specialty. Unfortunately, the goal of the NCSBN to implement the Robert Wood Johnson/Institute of Medicine Report, ***"The Future of Nursing: Leading Change, Advancing Health"*** which promotes this scope has not been met.
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WP 89
HISTORY OF GROUP SEX EVENT PARTICIPATION AND SEXUALLY TRANSMITTED INFECTION RISK AMONG AFRICAN AMERICAN HETEROSEXUAL MEN INCARCERATED IN NORTH CAROLINA

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Background: Group sex events (GSE) may facilitate transmission of sexually transmitted infections (STIs) by contributing to rapid partner exchange, risk disinhibition, and links to high-risk partners. Research on GSE is limited, particularly in heterosexual populations.
Methods: Data were collected during the baseline (in-prison) assessment of Project DISRUPT (N=169), an ongoing cohort study among African American men being released from prison who were in primary committed heterosexual partnerships at time of incarceration. Using audio computer-assisted self-interview survey methods, we assessed participation (attendance and sexual activity) in a GSE, other sexual risk behaviors, sex with high-risk partners, and drug use in the six months before incarceration. GSE was defined as "events, gatherings, or parties where people go to have sex together" and indicated "people at these parties may have sex with their usual partners… or with other people." Participants were tested for STIs (chlamydia, gonorrhea, and trichomoniasis) using urine-based nucleic acid amplification assays.
Results: Fourteen percent (N= 23) participated in a GSE. Seven percent had an STI. GSE participation was not associated with multiple partnerships, concurrent partnerships, sex trade, weekly binge drinking, marijuana use, or crack/cocaine use. GSE participants appeared to be more likely than non-participants to have sex while drunk (87% *versus* 67%, p=0.052) and sex with a partner who ever sold sex (13% *versus*5%, p=0.16) though differences were not significant. GSE participation was strongly associated with STI (odds ratio (OR) 7.58, 95% confidence interval (CI): 2.20, 26.21). After adjusting for age, concern about paying bills, and substance use the association remained strong (OR: 6.96, 95% CI: 1.97, 24.67).
Conclusions: GSE were not uncommon in this population of heterosexual men. Findings that GSE were not associated with multiple/concurrent partnerships suggest some participate with primary partners. GSE should be prioritized for STI prevention given high infection levels among participants.
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WP 90
TRANSFORMATION FROM UNETHICAL STD RESEARCH TO ETHICAL COMMUNITY ENGAGEMENT

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Background: The U.S. Public Health Service Syphilis Study at Tuskegee (1932-72) is the longest nontherapeutic "study" in U.S. history. A settlement was reached, but few were satisfied. Consequently, trust between the Black community and the public health community was further aggravated. In 1997, a White House Presidential Apology was given, which included the mandated establishment of the National Center for Bioethics in Research and Health Care. After ten years and $20M, much work was done, yet trust had not been established. What variables were needed for a bidirectional community engagement partnership between, a federal agency, an HBCU, descendants' families and the Black community?
Methods: Reframing the issue from a bioethics dilemma to a public health ethics problematic required an assessment of the original study which was epidemiologic more than biomedical. Environmental scans, interviews, focus groups, and healing sessions were conducted with all stakeholders to determine an evidence-based action plan and a ten year strategic plan was written.
Results: A measurable shift occurred from dependency to interdependency; from outreach to ethical community engagement; including evaluating all university ethics education, enhancing an undergraduate Bioethics Honors Program, establishing an MPH Program, inaugurating a Public Health Ethics Course, acquiring a well-established peer reviewed journal, strategically reengaging three generations of descendants' family members and collaborating with local, state, regional, national and global partners in ethics activities.
Conclusions: A shift from non-competitive, mandated federal funding to competitive, compassionate funding from several DHHS agencies has occurred. Also, staff reductions from 21 to 10, yet 10+ peer reviewed articles have been published every year; ethics educated faculty has increased from 1 to 5; there is a Bioethics minor requirement for all the Bioethics Honors Program students; summer public health ethics graduate fellowships and undergraduate internships have been established; and Public Health Ethics is being actualized in Tuskegee.
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WP 91
EVALUATING LINKAGE TO CARE FOR INDIVIDUALS WITH NEWLY DIAGNOSED HIV IN THE PHILADELPHIA DEPT. OF PUBLIC HEALTH STD CLINIC

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Background: Linkage to care is a crucial aspect of the HIV treatment cascade. Setting of HIV diagnosis is associated with variation in linkage to care rates with medical sites having the highest rates and jails having the lowest. In Philadelphia, the health department STD clinic refers individuals with positive HIV results to care. However, the STD clinic does not provide ongoing HIV-specific care on site, thus there could be failures in linkage to care.
Methods: Philadelphia residents newly diagnosed with HIV from 2009 to 2012 at the PDPH STD clinic were compared to Philadelphia residents newly diagnosed in all other settings. Demographics and linkage to care were compared between the two groups. Linkage to care is defined as having at least 1 viral load or CD4 test at least 90 within HIV diagnosis
Results: From 2009 to 2012, 239 Philadelphia residents were newly diagnosed with HIV in the STD clinic and 2,828 residents were newly diagnosed in all other settings. HIV cases diagnosed in the STD clinic were slightly younger, more male (90%), and more likely men who have sex with men (MSM) (67%) than the non-clinic group .Linkage to care for STD clinic patients was significantly lower than that of other sites (59% vs. 70%, $p<0.0003$). Linkage to care improved over time with over 85% of patients linked to care regardless of diagnosis setting since 2012, meeting the goal set by the National HIV/AIDS Strategy.
Conclusions: With 8% of new HIV diagnoses, the STD clinic is a major HIV testing site in Philadelphia. Improvement in linkage has been seen over time citywide and in the STD clinic. Assuring that HIV infected STD clinic patients are adequately linked to care is a high priority for the clinic. Additional assessments will be conducted to identify opportunities for further improvements.
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WP 92
PREVALENCE OF SELECTED SEXUALLY TRANSMITTED INFECTIONS IN GEORGIA MILITARY PERSONNEL

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Background: There is minimal epidemiological and clinical information about the causes of sexually transmitted diseases (STDs) in the country of Georgia. In general, the prevalence of STDs among military personnel has been estimated to be higher than their civilian counterparts. We undertook a study of the epidemiology of urethritis in the Georgian military in order to describe the distribution of common pathogens, identify risk factors for infection, and assess for gonococcal antimicrobial resistance.
Methods: The study site was the Military Hospital of the Ministry of Defense of Georgia. Male patients referring to the outpatient department with signs and symptoms consistent with urethritis were offered participation in the study. After consent, a standard clinical and epidemiological questionnaire was conducted, and urine and urethral swabs were collected for molecular analysis and culture. Study data was analyzed using Epi Info.
Results: 30 patients were enrolled from August to September 2013. The mean age of participants was 26 years, 19 (66%) patients had higher education, 27 (90%) reported alcohol drinking before sexual contact, and 29 (97%) reported taking measures to protect themselves from infections. Over 43% of participants were previously treated for any STD. No patient received antibiotics or other self-treatment before presenting to clinic. The clinical diagnosis of 19 (63%) patients was bacterial urethritis. Five of them were suspected to having gonorrheal urethritis. However, all urethral swab cultures were negative.
Conclusions: This study is the first attempt to characterize the spectrum of STDs in Georgian military personnel. We are reporting preliminary data of this recently initiated study. The low rate of self-treatment before presentation provides a good opportunity to identify *N. gonorrhoeae* by culture analysis and define antibiotic resistance. Findings from this study will be useful not only for Georgian military personnel but also for the public health system of Georgia.
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WP 93
MEASURING A NOVEL STI RISK ENVIRONMENT: THE EXOTIC DANCE CLUB

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Background: Exotic dancers have received little research attention although there is evidence of high rates of sexual and drug risk while dancing. We hypothesize that the environment of exotic dance clubs (EDCs) creates and/or supports STI/HIV risk for dancers. The first step in testing this hypothesis is the development of a risk environment index comprised of four domains (social, economic, drug, and policy). This study aims to develop and assess the reliability of a risk environment score.
Methods: Index items were developed from our previous experience researching the study population as well as the literature. In the summer of 2013, anonymous surveys were administered via A-CASI in EDCs (N=26) in Baltimore City and County among exotic dancers, bartenders, managers, and other staff (N=298). Surveys consisted of a brief demographic section followed by 65 statements with 4-point, Likert-scale responses (strongly agree to strongly disagree) for the four domains. Item examples for each domain are the following: "the management pressures dancers to sell sex" (social); "there are set prices for sexual services in this club" (economic); "Heroin snorting is common among the dancers in this club" (drug); and "Dancers can easily get condoms inside the club" (policy).
Results: We interviewed 106 dancers and 292 other staff. The median age of dancers was 25 years old (range: 18-47) and the median length of time working in EDCs was 2 years (range: 6 months-23 years). The domains had the following alphas: social (alpha=0.87), economic (alpha=0.92), drug (al-

pha=0.89), and policy (alpha=0.66). No significant differences were found between groups for any indicator.
Conclusions: We found high levels of internal consistency among four novel measures of the EDC risk environment. The results indicate a high level of STI risk for dancers in these environments and underscore the need for interventions that specifically target these high-risk environments.
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WP 94
SYPHILIS HAS EMERGED AS A COMMON CO-INFECTION AT HIV DIAGNOSIS

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Background: Genital ulcerative diseases, including syphilis, increase the risk of transmitting and acquiring HIV. Since 2000, syphilis has emerged as a significant public health problem. However, there is limited contemporaneous information on the rates and risk factors for syphilis co-infection in those newly diagnosed with HIV.
Methods: We used results of serially collected data to examine rates, trends, and risk factors for syphilis co-infection at HIV diagnosis in the Natural History Study (NHS), a cohort comprised of Department of Defense beneficiaries. Eligible subjects enrolled in the NHS between the calendar years 2000-2012. We defined subjects as having syphilis co-infection if they had a confirmed positive non-treponemal (NTr) test within 6 months of their HIV diagnosis. Baseline risk factors (age, gender, ethnicity, sexual orientation, year of HIV diagnosis) were assessed using a logistic regression model.
Results: Between 2000 and 2012, 1262 [median age 28 years (IQR 23-35), 38% Caucasian, 42% African-American (AA) and 20% Hispanic/Other] subjects had NTr testing performed at HIV diagnosis. The overall prevalence of syphilis co-infection was 8.3% (n=105). In an unadjusted analysis, the prevalence of syphilis at HIV diagnosis increased on average by 2.1% per year (p=0.005). AA ethnicity [Referent {Ref} Caucasian; AA, Odds Ratio {OR} 1.92 (1.18-3.17); Hispanic/Other, OR 1.0 (0.52-1.86)], calendar year of HIV diagnosis [Ref 2000-2004; 2005-2008, OR 2.72 (1.57-4.85); 2009-2012, OR 2.82 (1.57-5.20], and MSM behavior [Ref heterosexual; MSM, OR 2.17 (1.04-5.12); other/unknown, OR 1.31 (0.62-3.13)], were associated with concomitant syphilis.
Conclusions: About one in ten NHS subjects had concomitant syphilis at HIV diagnosis. Universal screening for syphilis was discontinued by the US military in the 90s. Our observations suggest the utility of periodic syphilis screening should be re-assessed, especially for at risk military members (AA men and MSM). Such screening programs may reduce incident HIV infections.
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WP 95
"SYPHILIS IS UP" - THE EFFECTIVENESS OF A SHORT-TERM, INTEGRATED PUBLIC INFORMATION CAMPAIGN

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Background: Between 2007 and 2012, reported cases of syphilis increased 350% in the City and County of Denver. In 2012, 88% of early syphilis cases were identified among men who have sex with men (MSM). To address the increase in syphilis cases, a short-term, multi-faceted public awareness campaign targeting MSM was developed. We sought to assess the reach and effectiveness of the campaign by surveying clients tested for HIV, syphilis, and other STIs through our outreach testing program.
Methods: The "Syphilis is Up" campaign was deployed between January and March 2013. The campaign included a website, social media, mobile applications, print advertising, and client outreach. Between January 23 and May 31, MSM tested through our outreach program were surveyed about the campaign, In addition, website analytics were collected.
Results: Website analytics indicated that the "syphilis page" was the most visited page on the Denver Public Health website, averaging 131 hits per day. Visitors spent an average of 6:60 minutes as compared to an average 0:53 minutes for other pages. The survey of 597 MSM outreach clients indicated that awareness of the syphilis campaign increased from 28% initially to 42% during the campaign. Syphilis Testing in outreach venues during January – June 2013 increased 22% over the same time period in 2012, from 719 tests to 879. During this same time period, the number of syphilis diagnoses increased from 23 to 41 or 78% when compared to 2012.
Conclusions: Public information campaigns, even for limited duration, can be effective when they are multi-faceted, integrated (including print advertising, website and on-line resources, social media, and mobile apps), and focused on a targeted population.
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WP 96
THE PARTNER SERVICES CONTINUUM FOR GONORRHEA AND SYPHILIS IN LOS ANGELES COUNTY, 2012

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Background: Partner services(PS) is a core public health activity designed to control the transmission of STDs including gonorrhea(GC) and syphilis(SY). An evaluation of the continuum for PS activities for GC and SY can help identify areas in need of improvement.
Methods: Using STD surveillance data, we present the PS activities continuum for all GC and SY cases reported in Los Angeles County(LAC) in 2012. Specific PS activities examined include the proportion of total reported cases that were evaluated, treated, assigned for field investigation, interviewed and reported at least 1 sexual partner for contact tracing. A second PS activities continuum was created to examine the proportion of total identified contacts that were located, notified, examined and treated.
Results: Among the 11,454 GC cases, 97% (11,153) were evaluated, 88% (10,068) were treated, 74% (8,497) were assigned for field investigation, 45% (5,209) were interviewed and 15% (1,694) identified at least one sexual contact. Of the 2,095 partners identified by the GC cases, 87% (1,819) were located, 80% (1,684) were notified of exposure to GC, 30% (635) were examined, and 26% (553) were treated. Similarly, among the 3,105 total SY cases, 99% (3,091) were evaluated, 97% (3,006) were assigned for field investigation, 93% (2,886) were treated, 77% (2,381) were interviewed and 30% (946) identified at least one sexual contact. Among the 1,559 partners identified by the SY cases, 91% (1,422) were located, 80%(1,245) were notified, 41%(632) were examined and 32%(497) were treated.
Conclusions: For both GC and SY index cases, the largest gaps in PS occurred during efforts to complete field interviews and elicit sexual contacts. Similarly, once partners were identified, the biggest challenge was the completion of follow-up. Improvements in the proportion of completed field interviews and the number of sexual contacts elicited would improve efforts to control GC and SY in LAC.
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WP 97
HEPATITIS B VACCINATION AMONG HIGH-RISK ADULTS: RESULTS FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES), 2003-2010

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Background: Hepatitis B virus (HBV) infection can be prevented through vaccination, but only an estimated 24%-50% of high-risk adults in the United States have been vaccinated against HBV infection.
Methods: Data were analyzed from the National Health and Nutrition Examination Survey (NHANES) for two time periods, 2003-2006 (n=6459 adults) and 2007-2010 (n=6652 adults) to: (1) assess the self-reported prevalence of hepatitis B vaccination uptake and the intrapersonal, interpersonal, and organizational level factors associated with receiving hepatitis B vaccination among US adults; and (2) assess whether any changes occurred in the prevalence of and factors associated with hepatitis B vaccination uptake among high-risk adults from 2003-2006 to 2007-2010. A high-risk adult was defined as any adult reporting at least one of the following: a sexually transmitted infection in the past 12 months (e.g., herpes, chlamydia, gonorrhea, or genital warts), sex with another man if male, infection with HIV, or past or current injection drug use. All other adults were classified as non-high-risk.
Results: In 2003-2006, five variables were independently associated with hepatitis B vaccination uptake: younger age; female sex; non-Hispanic Black

or "other" race/ethnicity; having greater than a high school education; and having health insurance. In 2007-2010, six variables were independently associated with hepatitis B vaccination uptake which included again: younger age; female sex, non-Hispanic Black race/ethnicity; having greater than a high school education; having health insurance; but now also being a high-risk adult. Among high risk adults (n=427), the prevalence of hepatitis B vaccination uptake increased from 37.6% in 2003-2006 to 47.0% in 2007-2010.
Conclusions: Still less than one-half of high-risk adults in the U.S have been vaccinated against HBV infection. Urgent strategies that that facilitate vaccination are needed to improve uptake among high-risk adults to reach the national goal of eliminating HBV infection in the United States.
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WP 98
RISKS FOR SEXUALLY-TRANSMITTED DISEASES: RACIAL-GENDER HEALTH INEQUITIES & SOCIO-ECONOMIC FACTORS

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Background: Studies have consistently suggested that the disproportionately higher rates of STDs among African Americans are due to their higher levels of risks behaviors in comparison to those of Whites. More recent studies, however, have suggested that this may not be accurate. The aim of this study was to test the hypothesis that major factors influencing STD risks were more related to socio-economic status (SES) such as income levels, housing stability, educational attainment, and incarceration rates rather than race.
Methods: This study investigated the risks for sexually transmitted diseases (STDs) among a sample of 100 African American and White self-identified heterosexuals equally stratified by race and gender living in a racially diverse section of Philadelphia, Pennsylvania.
Results: Study results supported the hypothesis that lower SES was statistically significant to higher levels of risks based on the participants' individual display of dissortative partner selection patterns in relationship to their self-reported STD risks ($r = -.25$, $p<.05$). Findings more clearly illustrate this phenomenon by study data that show that the self-report of higher risk scores by Whites (M=6.50) compared to those of African American (M=4.96) was statistically significant, $t(98)=-2.80$, $p<.01$.
Conclusions: Findings support the association that individuals with lower levels of SES, regardless of race, demonstrated a distinctive sexual partner selection pattern of behaviors that increased their risks for STDs; *dissortative* versus *assortative*sexual partner selection pattern was more indicative of STD risks. Furthermore, participants with lower SES demonstrated a dissortative pattern compared to those with moderate or higher SES levels who demonstrated an assortative partner selection pattern. STD interventions, treatment strategies, and related services must focus more on addressing the socio-economic inequities that tend to put more African Americans and other minorities at higher risks for STDs than White Americans.
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WP 99
TAKING IT TO THE STREETS – RECRUITING HIGH-RISK PERSONS FOR STD SCREENING

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Background: In 2012, the recruitment model used by Louisiana's merged STD/HIV Program (SHP) was modified to mirror the National HIV/AIDS Strategy. The HIV outreach program and the STD testing program combined recruitment using targeted methods to refer people for STD testing. Requiring a minimum of 10% of all recruitment encounters resulting in referrals, which expand targeted prevention efforts in identified communities, establishes a seamless system to link people to continuous/coordinated care, and enhances community level approaches to reduce STDs; Thus increasing STD referrals and stronger relationships with service providers/clinics to increase communities accessing and receiving treatment.
Methods: The resulting holistic approach to recruitment, integrating HIV with STDs, places more emphasis on the interrelatedness of them. Surveillance data identified high prevalence zip codes and the CBOs identified outreach areas within the high prevalence zip codes. Recruitment teams were trained, observed, and conducted the intervention by having 'encounters,' or lengthy dialog regarding health and wellness, with target population members in specific, mapped neighborhoods. Recruitment daily logs reported the results of the recruitment, including numbers of referrals for HIV/STD testing made and accessed.
Results: In 2012-2013, a total of 283 referrals were made from recruitment encounters: 14% were made to STD screening and treatment. Evaluation data show that most STD referrals made from face-to-face recruitment encounters are among men who have sex with men (MSM) and African Americans.
Conclusions: These data collection methods are able to evaluate and determine effectiveness of recruitment for STD testing. Annual STD specific trainings to providers and clinics and reinforcing referrals for HIV/STD testing during recruitment are part of ongoing technical assistance.
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WP 100
EXPEDITED PARTNER THERAPY RECEIPT REPORTED BY INDIVIDUALS WITH GONORRHEA- LOUISIANA, 2009-2013

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Background: Louisiana had the highest rate of gonorrhea in the U.S in 2011 with 202.3 cases per 100,000 population and the New Orleans area having a high concentration of the state's morbidity with 499.7 cases per 100,000. In 2008, a Louisiana law was passed authorizing Expedited Partner Therapy (EPT) and in February 2009 procedures were finalized allowing prescriptions to be provided to patients with gonorrhea and/or chlamydia to give to their sexual partners. Enhanced case-based surveillance occurred in the New Orleans area from 2009-2013 as part of the STD Surveillance Network (SSuN). We sought to look at patient-reported EPT receipt stratified by provider type.
Methods: As a SSuN site, Louisiana conducted interviews with individuals with gonorrhea in the New Orleans area, collecting standardized data elements. From 2009-2013, 1,000 interviews were conducted. We analyzed data elements regarding EPT and partner treatment, stratified by provider type.
Results: Out of the 1,000 interviewed patients, only 93 (9.3%) reported that they had received a prescription from their provider to give to their partner. The majority of EPT prescriptions were provided by STD clinics (63%) followed by public/non-STD clinics (16%), private physicians (12%), school-based clinics (3%), hospitals (3%), and family planning/OBGYN clinics (2%). No EPT was reported to be given at HIV care clinics, emergency rooms/urgent cares, or military clinics. When asked about treatment of sexual partners, 37% of patients reported that they were unsure if their partner had been treated.
Conclusions: While EPT has been a legal health-care practice in Louisiana since 2009, it remains under-utilized according to patients in the New Orleans area with gonorrhea. In response to STD AAPPS, the Louisiana STD/HIV Program is planning greater provider engagement that includes educating providers about services and policies, such as EPT, in order to prevent gonorrhea infections.
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WP 101
MARYLAND'S INITIATIVES TO ASSURE SUSTAINABLE LHD STI CLINICAL SERVICES FOR VULNERABLE POPULATIONS

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Background: Gradual erosion of public health resources at the national, state and local levels, along with recent changes from the ACA, has lead the Maryland Department of Health and Mental Hygiene (DHMH) to take steps to support sustainability of STI clinical services provided by the Local Health Departments, considered essential safety net providers for Maryland's vulnerable populations.
Methods: Since before passage of the ACA, DHMH and other state health reform commissions began conducting systematic and ongoing assessments of macro-level structural factors affecting delivery of public health care services. Factors include statutory, regulatory, administrative and programmatic

policies that may impact LHDs' capacity in the future. The DHMH Center for STI Prevention gathered and shared information on these processes to inform LHD decision making re future provision of STI public health clinical services.
Results: Assessments indicated that in order for LHDs to maintain their capacity to provide critical safety net services, the state must: officially recognize LHDs as Safety Net Providers and Essential Community Providers; enable LHDs to generate and keep revenue, credential their clinicians, and establish contracts with third party payers; facilitate coordination between LHDs and other safety net providers via formal or informal linkages to care for clients; support and assist LHD efforts to contract with other providers that cannot or do not want to provide STI and HIV screening, testing and treatment; support LHD alternative formats such as integration with Family Planning, contracting out, or closing services; support LHD efforts to retain a home base for DIS.
Conclusions: State-level recognition of numerous changes needed to support sustainability efforts for LHDs led to significant statutory, regulatory, administrative and programmatic initiatives currently underway in Maryland. Ongoing assessment and support will be needed to address current and future barriers to care as the health care delivery system continues to evolve in Maryland.
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WP 102
PROVIDING STD SERVICES WITH DIMINISHING FUNDS…A TALE OF THREE STATES

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Background: State and local STD programs were severely impacted in 2008 by the recession and continue to feel its effects. In 2009, a survey by the National Coalition of STD Directors reported that 69% of states have cut STD program funds, and therefore services.
Methods: Case studies demonstrate programs adapting to changes in the STD funding landscape.
Results: STD programs are adapting to funding changes by promoting adherence to chlamydia/gonorrhea (CT/GC) screening criteria and by implementing third-party billing.
In 2009, the Arizona Department of Health Services (AZDHS) could no longer send CT/GC specimens to the state laboratory. AZDHS contracted with a private laboratory and incurred higher costs as a result. Given restricted funding, AZDHS reviewed screening criteria, strengthened targeted testing, and reserved public funds for testing those at highest risk. The percentage of CT test in women aged ≤25 increased from 76% (2008) to 95% (2010) while tests in women aged ≥26 decreased from 24% (2008) to 3% (2011).[2]
The Nevada Division of Public and Behavioral Health (DPBH) did not bill for STD services before 2012. As funds diminished, DPBH leadership advocated for third-party billing and developed the necessary systems and capacity. DPBH currently contracts with Medicaid and seven other third-party payers.
The Oregon State Public Health Laboratory (OSPHL) implemented Medicaid billing for CT/GC testing and captured $150,000 over two years. OSPHL is currently working to adapt its systems to support billing of Coordinated Care Organizations by collaborating with state programs and key staff members.
Conclusions: As sites adapt to diminishing funds, common barriers remain. Continued knowledge and resource sharing is needed at the national, state, and local levels in order to help sustain STD and other programs.
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WP 103
RESULTS OF STI\HIV COUNSELING AND TESTING PROGRAM FOR COMMERCIAL SEX WORKERS , DRUG USERS, MEN HAVE SEX WITH MEN AND FORMER PRISONERS DURING 2012-2013 IN LVIV REGION (UKRAINE)

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Background: STIHIV voluntary counselling and testing is key element for behavior change, entry to treatment, care, and support for vulnerable group population. Aim of the project was to increase STIHIV prevention, diagnostic and treatment among commercial sex workers (CSW) ,drug users (DU), men have sex with men(MSM) and former prisoners (FP) in Lviv region. Project was financed by International HIVAIDS Alliance in Ukraine and implemented by Charitable Salus Foundation and Lviv Regional AIDS Center.
Methods: STI/HIV counselling, testing for HIV , Chlamydia, Syphilis using immunoassay, and Gonorrhea testing using bacteriological culture method were used for the intervention. DU, CSW, MSM,FP had an opportunity to pass all tests and counselling in three cities of Lviv region (Lviv, Drogobych and Struy) in governmental medical institutions free of charge.
Results: During 1 July 2012 till 30 September 2013 8920 risky behavior representatives passed HIVSTI councelling and HIV test (208 positive results), 163 tests for Syphilis were made(12 positive results), 128 Chlamidia tests(46 positive results), 1212 Gonorrhea tests (139 positive results)
Conclusions: Target oriented programs for vulnerable toward STIHIV population are very important. Multisectoral services consisting of social medical and psychological parts, cost effective, specially developed for the target groups are needed and should be implemented in Lviv region for decreasing the STI rate among CSW, DU, MSM and FP in future.
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WP 104
STD CLINICS ARE AN IMPORTANT PART OF THE U.S. HEALTH-CARE SAFETY NET

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Background: STD clinics have been an important component of the U.S. healthcare safety net, providing quality care for persons regardless of ability to pay. Recent changes in the U.S. healthcare system offer opportunities to increase health insurance coverage, and expand access to clinical services. To define the role of STD clinics in a changing healthcare environment, it is important to understand healthcare access and utilization patterns of persons who seek health services in STD clinics.
Methods: We conducted a survey of 4,400 persons who utilized publically funded, categorical STD clinics in 22 U.S. cities with the largest number of reported cases of chlamydia, gonorrhea, and syphilis during 2007-2011. Using a brief self-administered survey, we assessed patient sociodemographic characteristics, reasons for selecting the STD clinic for care, access to other healthcare venues, insurance status, and willingness to use insurance to pay for care at the STD clinic.
Results: In a preliminary analysis of surveys from 100 women and 100 men, we found a mean age of 32 years (range 16-70 years); that 62% were non-white; and 54% were uninsured. The most common reasons for visiting the clinic were STD symptoms (32%), STD screening (33%), and HIV testing (12%). Among STD clinic patients, 59% had access to another type of healthcare venue for sick care, and 54% for preventive care. Among those with health insurance, 60% would be willing to use it to pay for care at the STD clinic. Persons chose the STD clinic because of availability of walk-in/same-day appointments (56%), low-cost care (17%), or expert care (8%).
Conclusions: STD clinics were utilized for convenient, low-cost, expert care, even by patients with access to other types of healthcare venues. These findings underscore the importance of the STD clinic as part of the U.S. healthcare system to assure the sexual health of men and women.
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WP 105
PERCEPTIONS OF HIV PRE-EXPOSURE PROPHYLAXIS IN AFRICAN AND CARIBBEAN COMMUNITIES IN URBAN UNITED STATES

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Background: HIV pre-exposure prophylaxis (PrEP) has emerged as an important tool in the prevention of HIV globally. As we implement PrEP, it is critical to understand perceptions among key target populations, including populations in and from areas with the highest prevalence of HIV such as Africa and the Caribbean. We seek to determine perceptions of PrEP among African and Caribbean immigrants in Philadelphia.

Methods: The African Diaspora Health Initiative is a community-based participatory HIV screening program in Philadelphia. African and Caribbean immigrants in community settings such as churches and mosques are screened for HIV in a series of Clinics Without Walls. An anonymous survey is administered to each participant. Included in this survey are questions about demographics, risk behaviors, HIV risk perception, acceptance of PrEP, and reasons for acceptance or refusal. Correlates of acceptance were determined by SAS 9.2 (Cary, NC).
Results: Between July 2012 and May 2013, 1,324 individuals participated in HIV screening and completed the survey in 56 Clinics Without Walls. Approximately half of participants (49%) were female, and 56% were African. Median length of time in the US was 9 years. The overall acceptance rate of PrEP was 38.2%. Acceptance was lowest among Caribbean women (20.4%), and highest for African men (46.1%). Correlates of acceptance included intermittent condom use, same sex activity, having a partner in one's home country, and high HIV risk perception. The main reason for acceptance was fear of HIV, and for rejection was the lack of recognition of risk.
Conclusions: Among Philadelphia's African and Caribbean immigrants, acceptance rates of PrEP are low, differing by gender and by world region of origin. Addressing reasons for rejection is essential for successful implementation of PrEP in this community. Further study is necessary to determine the impact of perceptions of PrEP on reported and actual adherence.
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WP 106
ABSENCE OF AN ASSOCIATION BETWEEN AZITHROMYCIN AND CARDIOVASCULAR DEATH AMONG PERSONS WITH GONORRHEA AND CHLAMYDIA

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Background: Azithromycin is one of two CDC-recommended therapies for the treatment of chlamydia (CT) and is recommended as part of the gonorrhea (GC) treatment regimen. In one study, azithromycin was associated with sudden cardiac death but this was not confirmed in another study. This has not been examined among typically healthy persons with GC and CT.
Methods: We identified all cases of GC and CT reported in Oregon from 1996-2012 and in King County, Washington State from 1993-2010. Among cases who received treatment, we matched case report data to location-specific death record data in the same time period to enumerate cases that died within 10 days of treatment. We report the risk of cardiovascular and all-cause mortality among cases treated with azithromycin compared to another drug.
Results: There were 269,179 reported cases of GC and CT in Oregon and King County during the study period. Of these, 260,048 (97%) had complete treatment information and were included in the analysis. The mean age of included cases was 24 (SD=8), 65% were female, and 84% had CT. Sixty-two percent (n=162,238) were treated with azithromycin; among the 97,663 not treated with azithromycin, the majority (77%) received a tetracycline. We identified no cardiovascular deaths among cases treated with azithromycin (risk=0.0 deaths, 95% CI=0.0-18.5 per 1 million doses), and none among cases treated with another therapy (risk=0.0 deaths, 95% CI=0.0-30.7 per 1 million doses). There were 3 non-cardiovascular deaths (risk=18.5 deaths per 1 million doses) among azithromycin-treated cases and 2 (risk=20.5 deaths per 1 million doses) among cases treated with another therapy (RR=0.90, 95% CI=0.15-5.40). These 5 deaths were attributed to suicide (n=2), homicide (n=1), drug overdose (n=1) and rectal cancer (n=1).
Conclusions: These results suggest that azithromycin is not associated with an increased risk of cardiovascular death among treated persons with GC and CT.
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WP 107
ESTIMATING CHLAMYDIA SCREENING COVERAGE: A COMPARISON OF SELF-REPORT AND HEDIS (HEALTH EFFECTIVENESS DATA AND INFORMATION SET)

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Background: Both population-based surveys and health insurance claims data are used to estimate chlamydia screening coverage in the U.S. Estimates from these methods differ, and data directly comparing these two indices in the same population are limited.
Methods: In 2010, we surveyed a random sample of women aged 18-25 years enrolled in a Washington State health maintenance organization. Respondents were asked if they had been sexually active in the past 12 months and if they had been tested for chlamydia in that time. We linked survey responses to administrative records of chlamydia tests performed and reproductive services used, which comprise the HEDIS definition of the screened population and the sexually active population, respectively. We compared self-report and HEDIS using three outcomes: (1) sexual activity, among women with at least one healthcare visit (gold standard = self-report); (2) any chlamydia screening, among sexually active women (no gold standard); and (3) within-health plan chlamydia screening, among sexually active women (gold standard = HEDIS).
Results: Of 954 eligible respondents, 465 (49%) completed the survey; 377 (81%) of these consented to administrative medical record linkage. The mean age of these 377 women was 22 (SD=4.2) and 269 (71%) reported being sexually active. The sensitivity of HEDIS to identify sexually active women was 85% (95% CI=80%-89%) and the specificity was 64% (95% CI=52%-74%). Of 269 sexually active women, 108 (40%) had a chlamydia test in their administrative record but 142 (53%) self-reported being tested for chlamydia (kappa=0.35); 51 (19%) reported out-of-plan chlamydia testing. The sensitivity of self-reported within-plan chlamydia testing was 71% (95% CI=61%-80%) and the specificity was 81% (95% CI=73%-87%).
Conclusions: HEDIS may not accurately identify sexually active women. Self-reported chlamydia testing appears less sensitive than HEDIS for estimating screening coverage, but HEDIS underestimates screening coverage by excluding women who are tested out-of-plan.
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WP 108
EXCHANGING DATA BETWEEN AN ESTABLISHED HIV REGISTRY AND A NEW HEPATITIS C REGISTRY TO ENHANCE DATA QUALITY AND COMPLETENESS — ARKANSAS, 2013

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Background: The Enhanced HIV/AIDS Reporting System (eHARS) serves as Arkansas' HIV/AIDS registry. In January 2013, the Arkansas Department of Health (ADH) began surveillance for hepatitis C virus (HCV) infection using CDC's NEDSS (National Electronic Disease Surveillance System) Base System (NBS) and prioritized surveillance of suspected acute cases and chronic cases aged <30 years or incarcerated when reported. Prior to 2013, ADH's HIV and HCV registries were not matched to identify coinfected individuals.
Methods: In September 2013, individuals living in Arkansas and documented in the HIV/AIDS and HCV registries were matched by first and last names and date of birth using SAS and confirmed manually. Risk factor and demographic information on coinfected individuals was reviewed to assess the usefulness of matching registries.
Results: Matching of 2,018 HCV-infected and 5,984 HIV-infected individuals resulted in the identification of 34 coinfected individuals. Twenty-five had documented male-to-male sexual contact or injection drug use in eHARS; 4 had no risk factor information. Only four cases had any risk factors documented in NBS. Of 12 individuals documented as HIV-infected in NBS prior to the registry match, 2 did not match to an eHARS record. One was reported without a confirmatory test result and the second was an individual who had recently moved to Arkansas from another state.
Conclusions: Because ADH does not have long-standing experience with a hepatitis C registry and cannot thoroughly investigate each case due to resource limitations, using alternate data sources to enhance information on HCV-infected individuals is valuable. Case follow up procedures among individuals reported with HCV resulted in the identification of two potentially HIV-infected individuals who had previously been undocumented in eHARS. Matching registries that document related conditions is mutually beneficial in enhancing data quality and case detection. Due to the success of this effort, the HIV and HCV registries will be matched at least annually.
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WP 109
POTENTIAL BIASES WHEN MEASURING REPEAT CHLAMYDIA TRACHOMATIS INFECTION RATES TO ASSESS THE REAL-WORLD EFFECTIVENESS OF EXPEDITED PARTNER THERAPY, NEW YORK CITY, 2011-2013

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Background: Efficacy of expedited partner therapy (EPT) for preventing repeat *Chlamydia trachomatis* (Ct) infection was established by randomized trials. EPT has been implemented in many jurisdictions, however, it is not clear how best to assess its real-world effectiveness.
Methods: In New York City's (NYC) public STD clinic system, heterosexual patients with laboratory-confirmed Ct, without concurrent gonorrhea or syphilis are eligible for EPT. For EPT-eligible patients who did, and did not receive EPT during 2011-2013, we compared: follow-up Ct testing rates 3-6 months after Ct treatment; repeat laboratory-confirmed Ct infection; select characteristics.
Results: There were 8258 EPT-eligible patients; the majority (60%, 4975/8258) did not receive EPT, mostly (84%, 4187/4975) because they were presumptively treated. Among 3283 patients offered EPT, 58% (1909/3283) received EPT; the main reason patients declined EPT was partner(s) were already treated (31%; 432/1374). Retesting rates were low after treatment, especially for those who did not receive EPT (11% (691/6349) versus 17% (333/1909) of those who received EPT, p<0.0001). Repeat infection rates were higher among patients who did not receive EPT (9%, (59/691) versus 3% (6/333) of those who received EPT, p<.0001). Patients who did not receive EPT were significantly more likely to be: male (60% (3783/6349) versus 28% (527/1909), p<0.0001); presumptively treated (70% (4446/6349) versus 17% (324/1909), p<0.0001); report >2 sex partners (38% (2415/6349) versus 29% (540/1909), p<0.0001); and a contact to Ct (41% (2586/6349) versus 5% (101/1909), p<0.0001). Restricting analysis to persons offered EPT gave different results, but groups were still dissimilar, suggesting selection bias.
Conclusions: Repeat infection rates were lower among persons who received EPT. However, patients who received EPT were substantially different from those who did not, and both groups had very low rates of follow-up testing. Misclassification and selection bias could easily mask the actual effects of EPT in observational studies of non-randomized populations.
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WP 110
EVALUATION AND MANAGEMENT OF GENITAL ULCER DISEASE: NON-ADHERENCE TO CDC GUIDELINES

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Background: CDC sexually transmitted disease (STD) treatment guidelines recommend that all persons presenting with a genital, anal or perianal ulcer (GUD) be tested for herpes simplex virus (HSV), syphilis, and HIV and receive empiric treatment while awaiting diagnostic tests. It is unknown what proportion of patients with GUD are appropriately managed according to these guidelines.
Methods: We analyzed administrative claims data from the 2011 MarketScan database. The database included enrollment and claims data for inpatient and outpatient encounters and prescription services for approximately 15 million privately insured persons in the United States. We included all initial encounters with an ICD-9 code for genital herpes, primary or secondary syphilis, or unspecified genital, anal, or perianal ulcer. We used CPT and NDC codes to identify laboratory testing and prescribed pharmacotherapy, respectively. We defined appropriate management as testing for syphilis and HIV, and testing for HSV or provision of antivirals, within 30 days of initial presentation. Either testing or provision of antivirals was considered appropriate management for HSV because it can recur.
Results: Among initial encounters by 84,919 patients with GUD, 78.3% were for HSV, 20.8% for unspecified ulcers, and 0.9% for syphilis; 0.1% were for both HSV and syphilis. Among all GUD patients, only 5.3% (n=4520) were tested for syphilis and managed for HSV, and only 0.2% (n=174) were also tested for HIV. The percentage of patients receiving appropriate management for HSV and syphilis was not significantly different by sex (both 5.3%, p=0.89). When considering HIV testing, men were significantly more likely to be managed appropriately than women (0.32% v. 0.16%, respectively, p≤0.0001).
Conclusions: Despite CDC GUD management guidelines, few patients with GUD received appropriate care. Patients with GUD have an increased risk of HIV transmission and acquisition. Interventions are needed to assure high quality healthcare services for patients with GUD.
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WP 111
THE EFFECTIVENESS OF A POINT OF CARE TEST FOR SYPHILIS IN LOCAL HEALTH CLINICS

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Background: Local health departments sometimes rely on outside laboratories to process syphilis confirmation tests which can cause a breakdown in services, ranging from deferred treatment, over-treatment and delayed public health investigations. This pilot measured the effectiveness of using a point of care syphilis test in a clinical setting for the diagnosis of potential syphilis infection.
Methods: Four independent Sexually Transmitted Disease (STD) clinic labs were selected to participate. These labs met the following criteria: associated with an STD clinic, performed stat Rapid Plasma Reagin (RPR) tests, experienced at least a one day delay in receiving treponemal test results from a non-clinic lab, CLIA-approved to run moderately complex lab tests, and interested in participating. All sites continued their standard practices of submitting specimens for traditional treponemal testing.
Results: The four clinic labs conducted 313 tests and the results were evaluated by an independent laboratory consultant. The ability to identify biologic false positives (BFPs) saves staff time and program resources. Waiting for confirmatory tests may cause a delay in treatment and additional resources to locate the persons to ensure s/he receives treatment and partner services, and some persons are lost to follow up. Differences in the amount of time between confirmation labs received, treatment and partner services were noted.
Conclusions: The data suggest that Syphilis Health Check (SHC) **would not** be suitable to replace the RPR test or the combination of the RPR and *Treponema pallidum* Particle Agglutination Test (TPPA). The data suggested SHC **would be** a suitable substitute to replace the TPPA. This test could replace the TPPA using the current syphilis screening algorithm. The product met the intended use in conjunction with a non-treponemal test (RPR).
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WP 112
SHARING HIV AND STD DATA TO INFORM AND TARGET PREVENTION

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Background: Sharing data between HIV and STD programs can inform patient management and partner services, increasing intervention opportunities and minimizing redundant services. However, jurisdictions may face barriers to routinely sharing and using data. We investigated data sharing practices by HIV and STD programs in the United States.
Methods: We conducted a web-based survey of the 65 CDC directly-funded jurisdictions (50 states + 15 cities/territories) in January 2013. HIV and STD managers were asked to complete the survey separately unless there was only one HIV/STD manager. The survey included questions on data access between HIV and STD programs, how shared data are used, and barriers to sharing and using data.
Results: There were 88 respondents to the survey representing 91% (59/65) of program areas. Over half (56%) of jurisdictions had a respondent from both HIV and STD programs and/or a respondent in a joint HIV/STD position. Among jurisdictions with concordant responses by participants, STD staff have access to HIV data in 92% (47/51) of jurisdictions; however, in 47% the access is indirect (e.g., STD staff must contact HIV staff). In 84% (42/50) of jurisdictions with concordant responses, HIV staff have access to STD data; in 72% the access is direct (e.g., HIV staff can access STD database). Barriers to sharing data included restrictive data policies, incompatible

databases, and lack of resources. In 56% of jurisdictions sharing data, HIV status of persons diagnosed with an STD is used to guide partner services. In 54% of jurisdictions sharing data, HIV-infected persons reported with a subsequent STD are targeted for HIV prevention.
Conclusions: Most jurisdictions routinely share data across HIV and STD programs; however, a few jurisdictions reported barriers to sharing and many are not using shared data to target prevention efforts. Identification and dissemination of approaches to sharing data for prevention are needed.
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WP 113
AN ASSESSMENT OF THE CHARACTERISTICS OF STATE LAWS CONCERNING DISEASE INTERVENTION ACTIVITIES

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Background: State laws regarding disease intervention activities have not been described systematically. The purpose of this study was to examine state disease intervention laws, overall and by US census region and state syphilis morbidity.
Methods: State laws authorizing and requiring disease intervention activities were compiled and coded; a disease intervention activity legal "cascade" was developed to classify the scope of these laws. Additionally, states were categorized by US census region (West, Midwest, South, Northeast) and being above or at/below the overall US primary and secondary (P&S) syphilis rate (4.5 per 100,000) in 2011. The legal cascade was analyzed by census region and P&S syphilis rate using chi-squares.
Results: Based on the disease intervention activity legal cascade, we found: 1) all 50 states have laws addressing communicable disease intervention, 2) 76% of states (n=38) have disease intervention laws that reference sexually transmitted diseases (STDs), 3) 64% of states (n=32) require disease intervention for STDs (e.g., DIS activities), 4) 10% of states (n=5) require DIS notification of sexual contacts for STDs, and 5) 6% of states (n=3) require DIS notification, testing, and treatment of sexual contacts for STDs. Cascade levels did not vary significantly by region (p values ranged from 0.65 to 0.98) or by syphilis rate (p-values ranged from 0.27 to 0.80). States that required notification, testing and treatment of sexual contacts for STDs (cascade level 5) were in all regions except the West, and had P&S syphilis rates at/below the US rate.
Conclusions: All states have laws concerning communicable disease intervention; significant legal variation exists across jurisdictions in how these laws relate to STDs. Jurisdictions with the highest P&S syphilis rates did not have legal environments that require disease intervention activity for STDs. Future research should examine the relationships between the legal cascade, DIS practice, and STD burden.
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WP 114
THE DISTRIBUTION OF SEX PARTNERS IN THE UNITED STATES BY SEXUAL IDENTITY, 2002 AND 2006-2010

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Background: Heterogeneity in sexual behavior is a key factor in sustaining STD transmission. Among those with opposite-sex partners, sexual behaviors are highly concentrated within sub-populations that are often at the highest risk for STDs. However, little is known about the distribution of behaviors by sexual identity.
Methods: We used combined data from the 2002 to 2006-2010 National Survey of Family Growth. We examined sexual identity by demographics (age, race/ethnicity, income-poverty ratio, metropolitan residence, and education). We also analyzed the number of recent opposite-sex and same-sex partners (past 12 months) by sexual identity (heterosexual or /straight; homosexual, gay, or lesbian; bisexual) for females and males, separately. Data analyses included means tests and measures of distribution (e.g., Gini coefficients, which range from 0 [equality] to 1 [inequality]); 95% confidence intervals were used to examine significant differences.
Results: Sexual identity significantly varied by every demographic analyzed for females and males, except age for males. Among females, bisexual women reported a higher mean number of recent opposite-sex partners (1.58; 95%CI: 1.45, 1.71) than heterosexual women (1.07; 95%CI: 1.05, 1.10) but fewer same-sex partners (0.66; 95%CI: 0.56, 0.76) than homosexual women (1.19; 95%CI: 1.00, 1.38). Among males, homosexual men reported a higher mean number of recent partners (same-sex: 1.99; 95%CI: 1.65, 2.32) than heterosexual men (opposite-sex: 1.26; 95%CI: 1.23, 1.29) and bisexual men (opposite-sex: 0.99; 95%CI: 0.83, 1.14; same-sex: 0.66; 95%CI: 0.46, 0.87). Partnerships were more concentrated among homosexual and bisexual females (Gini = 0.46 for both) and males (Gini = 0.55 and 0.60, respectively) as compared to heterosexuals (Gini = 0.33 for females and 0.41 for males).
Conclusions: Sexual minorities report higher numbers of recent sex partners; however, fewer group members account for more of the partnerships. Therefore, interventions that target the most at-risk within a sub-population could have greater impact.
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WP 115
WHOLE GENOME SEQUENCING AS A TOOL FOR MULTILOCUS SEQUENCE TYPING OF *NEISSERIA GONORRHOEAE* ISOLATES

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Background: Multi-locus sequence typing (MLST) of the pathogen *Neisseria gonorrhoeae* typically includes amplifying gene sequence fragments of housekeeping genes obtained by PCR followed by DNA sequence analysis. However, whole genome sequencing (WGS) of organisms is becoming increasingly common when working with prokaryotes. This study compares the results of using sequence information from WGS assembly for MLST versus a previous analysis using the traditional PCR approach.
Methods: The genomes of 25 isolates of *N. gonorrhoeae* were sequenced by Illumina Hi-Seq and contigs were assembled using the CLC Genomics Workbench. MLST analysis *for fumC, gdh, glnA, gnd, pilA, pyrD* and *serC* was conducted using contigs obtained for three predominant clones, comprising 23 gonococcal isolates from Saskatchewan, as well as two other strains from different geographic areas and collected several decades previously. The strains were analyzed for population structure and the evolution of antibiotic resistance using the START2 software. Visualization and analysis of clonal complexes from allelic profile data was performed using eBURST.
Results: The distribution of strain types using WGS data was generally similar to that of the original study, though clonal expansion of a ciprofloxacin resistant strain type was evident in the new results. The two unrelated strains were not distinguished as outliers, suggesting possible lineage of the Saskatchewan strains from these older strains. Use of WGS data presented various unique problems, but also showed the potential for enhancing MLST analysis. For example, additional variable regions can be utilized for inferring evolutionary relationships when WGS data is used. The study also identifies pitfalls to be avoided when assembling WGS reads destined for MLST analysis.
Conclusions: This study is timely given the continued improvements to sequencing technology and assembly software, and the prospect of WGS data becoming the standard for MLST analysis.
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WP 116
COST-EFFECTIVENESS ANALYSIS OF SCREENING FOR CHLAMYDIA, GONORRHEA, AND M. GENITALIUM: MONOVALENT VERSUS MULTIVALENT TESTING

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Background: Screening and treating *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (GC), and *Mycoplasma genitalium*(MG) infections can prevent pelvic inflammatory disease (PID) in women. Multivalent testing may result in an economy of scale —i.e., multivalent tests may be cheaper than the sum of the costs of performing multiple, separate tests. However, individual payers may pay per-test prices that do not reflect this economy.
Methods: We constructed a fixed incidence Markovian model of CT, GC, and MG (with incidences of 5%, 2%, and 7%, respectively) to estimate the annual PID incidence, and total cost associated with screening 35% of high-prevalence women annually. We included direct medical costs for clinic visits, testing, and treatment. We calculated incremental cost effectiveness ratios (ICERs) for the following scenarios: three monovalent, three bivalent, and one trivalent test. Our study outcome was quality-adjusted life years (QALYs) lost due to PID and its sequelae. We assumed monovalent, bivalent and

trivalent tests respectively cost $20, $25, and $30 with an economy of scale, and $20, $40, and $60 without any economy of scale. Medicaid test pricing was $48 per organism.
Results: The ICER of CT-GC-MG screening versus CT-GC screening was ~$17,000/QALY gained (economy of scale), ~$48,000 per QALY gained (no economy of scale), or >$150,000/QALY gained (Medicaid pricing). These results are sensitive to the underlying infection risk in the population screened and PID incidence rates associated with each infection—lower risk, lower PID incidence, and higher testing costs all increase the cost per QALY gained.
Conclusions: In high-prevalence populations, the addition of MG to ongoing CT-GC testing is likely to be an efficient use of resources , but this result is contingent on having economy of scale. This efficiency diminishes when no economy of scale exists, which may better reflect prices paid by some payers (such as Medicaid).
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WP 117
EVALUATION OF AN INNOVATIVE ALTERNATIVE SYPHILIS DIAGNOSTIC ALGORITHM IN A HIGH PREVALENCE SETTING

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Background: Traditionally, nontreponemal tests that detect serological evidence of *T. pallidum* infection are used for syphilis screening. Reactive tests are confirmed with treponemal tests that detect antibodies to *T. pallidum* We examined the feasibility and performance of a reverse sequence diagnostic algorithm, screening with a treponemal test (e.g. IA) followed by a nontreponemal test for confirmation, in a high prevalence setting.
Methods: 2,350 serum specimens were prospectively collected from STD clinics serving at-risk clients. The traditional algorithm of VDRL followed by TPPA was performed on all specimens. Specimens were then blinded and tested by the TrepSure EIA and TPPA. Results of all three testing methodologies were analyzed to evaluate the performance of both algorithms.
Results: 198 (8.4%) out of 2,350 specimens were VDRL-reactive, of which 189 were reactive on TPPA thus resulting in the detection of 189 infections. When the same specimens were screened by EIA, 478 (20.3%) were reactive, 186 (38.9%) of which confirmed reactive by VDRL. Of the 292 (61.1%) discordant EIA-reactive and VDRL non-reactive specimens, only 249 (85.3%) were reactive by TPPA. Signal-to-cutoff values of all EIA results revealed very strong correlation with the probability of reactivity on a TPPA.
Conclusions: Screening with an EIA for syphilis infection in a high prevalence setting resulted in the detection of more seropositive individuals than screening with VDRL, but did not result in the detection of more syphilis cases. An algorithm that begins with an EIA screen may require additional tests for the resolution of discordant cases. When EIA-reactive, VDRL nonreactive specimens are detected, the use of TPPA as a reflex test may not provide clear guidance regarding treatment. The signal-to-cutoff ratio on the initial EIA could potentially be used to predict TPPA reactivity as in many cases, it could eliminate, the need to perform the TPPA test.
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WP 118
PCSI IN PRACTICE: FULLY INTEGRATED SCREENING FOR HEPATITIS C VIRUS IN AN STD CLINIC

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Background: Hepatitis C virus (HCV) is the most prevalent chronic bloodborne infection in the United States. Despite its frequency and complications, HCV infection is often neglected. To increase the proportion of persons aware of their infection status and provide counseling and linkage to care for infected clients, we integrated rapid HCV testing and linkage into standard STD clinic operations.
Methods: All clients presenting to the Denver Metro Health Clinic are screened for HCV risk at triage. Clients reporting at least one risk factor or those who fall in the 1945-1965 birth cohort are tested for HCV antibody using a rapid test (reactive specimens are confirmed with quantitative RNA). All men who have sex with men (MSM) are also offered an HCV test. Clients with a reactive rapid result are offered counseling and referral services from an HIV/HCV Linkage to Care (LTC) counselor.
Results: Between January and September 2013, a total of 1,645 clients (median age 31, IQR: 25-45; 80% male; 50% white, 16% black, 27% Hispanic) were screened for HCV antibody. Approximately 6% (102) reported ever injecting drugs, 4% (59) reported having an HCV+ sex partner, 25% (407) received a tattoo in an unprofessional setting, and 32% (518) shared equipment to snort drugs. A total of 270 (16%) clients reported birth cohort as their only risk factor (5 had confirmed virus). Additionally, 408 clients who identified as MSM reported no other risk factors (none were HCV infected). Of all clients screened for HCV, 40 (2.4%) were antibody positive. Of the 36 specimens with a valid HCV RNA result, 25 (69.4%) had confirmed virus. All but 2 clients with a reactive rapid result met with an LTC counselor.
Conclusions: Despite the lower than expected positivity, fully integrating HCV screening into the STD clinic provides the opportunity for preventive counseling and education around HCV.
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WP 119
WHY ARE ANOGENITAL WARTS DIAGNOSES DECREASING IN THE UK – BIVALENT HPV VACCINE CROSS PROTECTION OR FAILURE TO EXAMINE?

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Background: Rates of first episode anogenital warts diagnoses in the UK have fallen from a peak prevalence of 151.9/100,000 population in 2008 to 139.1/100,000 in 2012, an 8% reduction. In Australia, the quadrivalent human papilloma virus (HPV) vaccination strategy has led to an unexpected reduction in warts diagnoses in unvaccinated males and older people, resulting in speculation that the UK decrease may be due to cross protection from the bivalent HPV vaccination programme for teenage girls introduced in 2008. However over a similar time period many sexual health clinics have introduced asymptomatic screening pathways which exclude examination.
Methods: Records of all patients with a diagnosis of first episode warts attending a level 3 UK sexual health clinic between 01/01/10 and 11/02/10 (when no asymptomatic screening pathway was in place and all patients were examined) were interrogated. A random sample of consultants attending a national UK sexual health meeting were interviewed about asymptomatic screening pathways at their clinic.
Results: Of 106 patients with a diagnosis of first episode warts, 81.13% were symptomatic, 6.60% were asymptomatic for warts but symptomatic for other conditions, and 12.26% were asymptomatic. 28 consultants were interviewed of whom 71.43% had asymptomatic screening pathways at their clinic introduced over a time period from 6 years to 6 months previously and, at these clinics, 24.09% patients were screened on an asymptomatic pathway.
Conclusions: Failure to examine asymptomatic patients may lead to up to 12.26% of warts diagnoses being missed, and therefore the introduction of asymptomatic screening pathways across the UK may account for a considerable proportion of the reduction in warts diagnoses seen. This may decrease further in future as more clinics introduce asymptomatic screening pathways, and may make interpretation of the effect of the quadrivalent HPV vaccine in the UK (introduced in 2012) difficult to assess.
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WP 120
BUSINESS INTELLIGENCE (BI): A SYSTEM TO IMPROVE HIV SURVEILLANCE AND CARE

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Background: More than half of all HIV-infected individuals in Colorado live in Denver. Approximately 45% of all new HIV-infected cases are diagnosed in Denver. Over 90% of these are successfully linked to care through a dedicated linkage program. Despite this, hundreds of Denverites are poorly retained in care. To target programing across the continuum of care, Denver Public Health (DPH) recognized a business need for a robust IT solution to successfully manage multiple complex data sources to support comprehensive HIV surveillance and treatment, starting with diagnosis and following through to receipt of care and the achievement of an undetectable viral load.

Methods: A series of HIV requirements gathering sessions were conducted with stakeholders in order to gain a better understanding of current and future HIV surveillance data needs. The requirements document allowed users to define priorities and served as the basis for developers who created an online web portal.
Results: The resulting BI solution integrated multiple data sources including eHARS, expanded CD4 and viral load laboratory result data, HIV positive registry data, and EMR data from one healthcare provider. Users have real-time access to data and information in the form of charts, graphs, and GIS mapping tools to monitor disease burden and linkage and retention in care. A user-designed dashboard aggregates and then allows viewers to filter and drill into specific reports.
Conclusions: A BI tool has been implemented to monitor the epidemic and direct targeted public health interventions. While substantial planning and investment is required, the resulting HIV BI solution allows assessment and monitoring across the spectrum of HIV disease, creating opportunities for prevention practitioners and policy makers to better understand current and future needs, and better direct local resources.
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WP 121
A PILOT OF SEXUAL HEALTH GAP ANALYSIS TOOL AND METHODS

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Background: Identifying service gaps that compromise community health is essential for STD prevention programs. We piloted a tool designed to assess gaps in STD prevention services for adolescents and MSM, two priority populations for U.S. STD prevention efforts. The tool is a checklist of essential and desirable services pertinent to adolescent and MSM sexual health, along with a means to capture who provides the services and the organizations with which they partner.
Methods: STD program staff identified providers serving MSM or adolescents in a city of 969,000 people in North Carolina; rates of HIV 33.7/100,000 and P&S Syphilis 9.3/100,000 in 2012. Providers were interviewed regarding available services, perceived service gaps and partnerships. Data were analyzed using field-based and qualitative techniques.
Results: The pilot tool was given to providers (N=18) representing 8 of the 12 facilities identified by regional staff (N=12). Locations of interviewed providers were juxtaposed with case report data. Most were located in the top 5 zip codes for syphilis and HIV cases. Seven facilities offered HIV screening, 6 offered clinical services, 3 had patient navigators, 3 offered support groups for HIV-affected clients, and all used client referrals to augment services. The tool was useful for capturing STD prevention services and partnerships, but less so for services relevant to sexual health for HIV-infected clients. Gaps named by facility representatives included: transportation, lack of STD services, case management, women's and adolescents services, mental health services, and working with youth in schools. STD program staff and providers often identified the same service gaps.
Conclusions: An STD prevention services gap analysis tool is useful in identifying gaps in services for MSM & adolescents. Modifications are needed to improve its utility, including assessing the needs of HIV-affected STD clients. Relevant lessons learned were garnered for conducting gap assessments by State and local areas.
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WP 122
ESTIMATING THE BURDEN OF CHLAMYDIA TRACHOMATIS IN THE US ARMY – USE OF THREE PASSIVE SURVEILLANCE SYSTEMS AND CAPTURE-RECAPTURE METHODS TO IDENTIFY INCIDENT CASES

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Background: Incidence of *Chlamydia trachomatis* in US Army soldiers is typically estimated through case reports of notifiable conditions. The degree to which under-reporting affects approximations is unknown. This study was conducted to assess the burden of chlamydia infections and compare case capture across multiple data systems.
Methods: Incident infections among non-deployed Army soldiers for calendar years 2008-2012 were identified from three sources: Health Level 7 laboratory records, Military Health System Data Repository direct care medical records, and reports of notifiable conditions from the Disease Reporting System-internet and its predecessor the Reportable Medical Event System. A thirty day gap in care rule was used to define incident cases in the consolidated database (related records within 30 days of a prior entry were considered part of the same incident). Capture-recapture (CR) methods were applied to estimate undocumented infections.
Results: A total of 52,813 incident chlamydia infections were identified over the 5 years; 9,494 infections occurred in 2012, reflecting an incidence rate (IR) of 19.3 infections per 1000 person-years. A steady decline in incidence was observed, from a high of 26.0 infections per 1000 person-years in 2008. Case capture by source during the 5-year study was 79% for notifiable case reports, 70% for lab records, and 33% for medical records. A marked decrease in laboratory identified infections occurred in 2011 and continued into 2012 when case capture dropped to 62%. CR analysis revealed an additional 1,706 probable infections during 2012, totaling 11,200 infections (IR: 22.8 per 1000 person-years).
Conclusions: Declines in chlamydia incidence were observed, attributable in part to decreased case detection through laboratory records. Declines in lab case detection require further investigation. Assessment of multiple databases and incorporation of advanced statistical modeling may provide a better approximation of disease burden. Estimates generated likely remain conservative given the asymptomatic nature of infection.
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WP 123
TRENDS AND PATTERNS OF SEXUAL PRACTICES AMONG ADOLESCENTS AND ADULTS AGED 14 – 59, UNITED STATES

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Background: To examine sexual behaviors among people aged 14–59 years in the United States.
Methods: Using data from the National Health and Nutrition Examination Surveys from 1999-2010, we analyzed: 1)trends in age at sexual initiation, number of sex partners, and same-sex partner report by 10-year birth cohorts among adults >30 years; and 2)patterns of sexual practices among participants ≤30 years. Estimates were adjusted for demographic factors prior to significance testing. Sex was defined as vaginal, oral, or anal.
Results: Adults born in more recent birth cohorts were younger at sexual debut than those born in previous periods (P_{trend}<0.001); this trend was more pronounced among women. Among women born in 1940-49 and 1970-79, 6.6% and 15.1% reported sex before age 15. Among men born in 1940–49 and 1970-79, 14.9% and 18.6% reported sex before age 15. The percentage of adults reporting >10 lifetime partners increased in later birth cohorts, from 16.9% of women born in 1940–49 to 32.3% of in 1970–79; and from 41.2% of men born in 1940-49 to 48.7% in 1970-79. The percentage of women reporting ever having same-sex partners increased with successive cohorts, from 5.2% in 1940-49 to 9.4% in 1970-79 (P_{trend}<0.001); this trend was not seen in men. Among participants aged 14, 16, and 20 years, 13.7%, 40.9%, and 84.1% reported ever having sex; with no difference between genders. There was no change by 2-year survey intervals from 1999-2010. Among sexually active 14 year-olds, 46.0% of males and 22.3% of females had ≥3 lifetime partners.
Conclusions: Among participants aged >30 years, age at sexual initiation decreased while number of sex partners increased in more recent birth cohorts, especially among females. Over the past decade, the percentage of participants aged ≤30 years reporting sexual activity by ages 14, 16, and 20 remained stable.
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WP 124
STD CASE SURVEILLANCE DATA QUALITY – UNITED STATES, 2012

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Background: Complete data on reported cases of STDs are necessary to describe the populations most impacted by morbidity and guide program activities. Many jurisdictions have begun using non-CDC data systems to input, manage and transmit data to CDC, which may impact data quality. We describe completeness of chlamydia, gonorrhea, and primary & secondary (P&S) syphilis 2012 case report data from 57 state and local jurisdictions.
Methods: Chlamydia, gonorrhea, and P&S syphilis case report data for 2012 were analyzed for completeness, calculated as the proportion of cases with valid, non-missing values for selected variables (race/ethnicity, sex, and age). We examined potential differences in completeness by STD surveillance reporting system.
Results: Complete sex and age data were available for more than 99% of records for all three diseases. Race/ethnicity was available for 74.2% of chlamydia cases (range by jurisdiction: 43.0–100%), 80.8% of gonorrhea cases (range: 56.7-100%), and 97.4% of P&S cases (range: 75.0–100%). 32 of 57 areas used non-CDC surveillance data systems; 21 custom-built surveillance systems; 4 Maven; and, 7 PRISM. For chlamydia, the median completeness of race/ethnicity by project area was higher for Maven (79.9%), PRISM (78.6%), and custom systems (77.7%) than for CDC systems (71.8%). Similar patterns were seen for gonorrhea, though not for P&S syphilis, which had higher overall completeness. No association was seen between case volume and completeness. Differences by system type were not statistically significant.
Conclusions: The range of completeness of race/ethnicity in reported case data varied among jurisdictions. While we did not observe statistically significant differences in completeness by data system, efforts to develop generalized data quality solutions may be complicated by factors including local policies, resource levels, and diverse data systems.
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WP 125
COMPARISON OF SECOND GENERATION MOLECULAR ASSAYS FOR CHLAMYDIA TRACHOMATIS IN FEMALE URINES AND SELF-COLLECTED VAGINAL SWABS

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Background: Less invasive screening samples such as self-collected vaginal swabs (SCVS) and first catch urine (FCU) are suitable for *C. trachomatis* testing in second generation molecular assays on automated instruments. The objectives were to test FCU and four SCVS from women.
Methods: From July 2012 to August 2013, 575 women self-collected FCU and four SCVS using collection kits from Abbott Molecular RealTi*me* CT/NG, Becton Dickinson BD ProbeTec ET CT/GC Q^X, Roche Diagnostics cobas 4800 CT/NG and Hologic/GenProbe Aptima Combo 2 (AC2). A proportion of each sample was spiked with known concentrations of *C. trachomatis* to detect inhibitors. A patient infected status of two positive tests for a sample type or two different samples positive in a single test were used for comparisons.
Results: The analytical sensitivity of AC2 assay was 10-100 fold more sensitive than the other tests. There was no inhibition in either specimen type for all assays. The clinical sensitivities for SCVS were 96.3% for AC2 on both TIGRIS and PANTHER, 96.2% for m2000, 88.9% for ProbeTec ET Q^X on a Viper instrument and 83.0% for cobas 4800. For FVU testing, clinical sensitivity of AC2 was 95.9% on TIGRIS and 95.8% on PANTHER, 79.6% for m2000, 80.0% for ProbeTec Q^Xon Viper and 86.0% for cobas 4800. All assays demonstrated specificities above 99%.
Conclusions: Inhibitors of amplification did not impact on the sensitivity of the second generation assays in SCVS and FCU. AC2 and RealTi*me* assays were more sensitive than ProbeTec ET Q^X and cobas 4800 tests on SCVS whereas the AC2 assay which detects *C. trachomatis* rRNA was considerably more sensitive than the three DNA tests on FCU. The clinical sensitivities observed in this head to head study are likely determined by analytical sensitivity and the concentration of target analytes in clinical samples.
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WP 126
BARRIERS TO STD SURVEILLANCE IN URGENT CARE AND FEDERALLY QUALIFIED HEALTH CENTERS IN BALTIMORE CITY

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Background: Surveillance data, though largely limited to confirmed diagnoses, are critical to understanding the impact of gonorrhea and chlamydia. Syndromic treatment (based on symptoms, without diagnostic test results) of these infections could compromise the accuracy of surveillance. To assess the extent of syndromic treatment, a chart review project of all federally qualified health and urgent care centers in an urban area was initiated. The purpose of this presentation is to present the barriers encountered when attempting to collect data on patient symptoms, exam findings, diagnostic tests, diagnosis and treatment.
Methods: Two urgent care centers and 25 federally qualified health centers (FQHCs) were sent letters from the Baltimore City Health Department (BCHD) notifying them of the need to review clinic records to obtain deidentified data on the frequency of screening and types of treatments prescribed for gonorrhea and chlamydia. Patients were included if they were aged 15 years and older, visited the clinic between December 1, 2012 and May 31, 2013, and received a diagnosis of: gonorrhea, chlamydia, cervicitis, lymphogranuloma venereum, pelvic inflammatory disease, prostatitis, urethritis, or vaginitis. Records (N=504) were reviewed by BCHD nurses and entered into an electronic database on a portable tablet.
Results: All of the FQHCs gave BCHD staff access to review records; both urgent centers refused. Electronic medical records (EMRs) were used at all sites. Incomplete documentation related to assessment, diagnosis, and treatment was evident in multiple clinic sites. Patient symptoms and risk behaviors were not clearly documented. In multiple charts there was no evidence of a complete genitourinary physical assessment. Diagnostic testing methods and specimen site were often unclear. Type of medication and dose used to treat was frequently missing from the chart.
Conclusions: Obtaining accurate patient information on STI incidence and treatment from EMRs at urgent care centers and FQHCs proved to be difficult.
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WP 127
CHANGING COMMUNITIES: UPDATING THE SOCIAL AREA ANALYSIS MAP FOR THE CITY AND COUNTY OF SAN FRANCISCO

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Background: Maps of STD rates produced by the San Francisco Department of Public Health have used neighborhood definitions that were based on an analysis of socioeconomic data from the US Census. This has allowed us to account for similarities and differences in neighborhood composition when comparing STD rates across the City. This analysis was done more than thirty years ago, however, and many neighborhoods have changed substantially since then. Our objective was to recreate the original analysis to examine how neighborhoods have changed, to create a more current set of neighborhood definitions, and to see if those updated definitions better explained differences in STD rates.
Methods: Census tract data from the American Community Survey Five-Year Estimate data was used to define neighborhoods, including 65 variables relating to socio-economic status, racial/ethnic background, employment, housing, and families. A Principal Component Analysis was run to consolidate the variables into independent, hypothetical factors. These factors were used to refine the existing neighborhood definitions. ANOVA methods were used to examine whether these new definitions better explained geographical STD trends.
Results: Differences in variables available prevented us from testing the fit of the original model from the 1980 census data. Eight factors emerged from the Principal Component Analysis of the ACS data; together these explained 76.7% of the variation between the census tracts. Thirteen (13) neighborhood definitions were added or altered, bringing the new neighborhood count to 45. Results from ANOVA indicated that these neighborhood definitions explained geographical trends better than the existing map.
Conclusions: Our empirical examination of socioeconomic data on census tracts confirmed that there have been major demographic shifts in the city

neighborhoods over the past thirty years. Our new map will present a better picture of geographic trends in STDs.
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WP 128
1-2 GRAMS OF AZITHROMYCIN AND CARDIOVASCULAR DEATH AMONG COMMERCIALLY INSURED PERSONS AGED 15-44 YEARS

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Background: Azithromycin has been associated with an increased risk of cardiovascular death. Patients with baseline cardiovascular disease have been reported to have higher rates of cardiovascular death with azithromycin. However, the risk of cardiovascular death among younger persons prescribed 1 or 2 grams of azithromycin has not been reported.
Methods: We analyzed data in the 2011 MarketScan administrative claims database to estimate rates of cardiovascular death among persons aged 15-44 years who were prescribed 250-500 milligrams of azithromycin, 1-2 grams of azithromycin, or 100 milligrams of doxycycline. We identified cardiovascular deaths using MarketScan codes for discharge status and ICD9 codes for cardiovascular diagnoses. We required that each course of treatment be separated by at least 30 days, and estimated the number of deaths occurring within 5, 10, and 30 days of the prescription date.
Results: Our preliminary findings among 3.0 million persons aged 15-44 years who were prescribed azithromycin or doxycycline were that 14,681 prescriptions (0.5%) were for 1-2 grams azithromycin; 2,359,460 (79.3%) for 250-500 milligrams azithromycin; and 602,205 (19. 6%) for doxycycline. Persons who were prescribed 1-2 grams azithromycin were younger (mean of 27 years) than those prescribed 250-500 milligrams azithromycin (30 years) or doxycycline (29 years) ($p<0.001$). About 63% of prescriptions were for women. No deaths were identified among persons prescribed 1-2 grams azithromycin. Among persons prescribed 250-500 milligrams azithromycin, one person (0.00004%) died within 5 days, 2 (0.00009%) within 10 days, and 5 (0.0002%) within 30 days of the prescription. Among those prescribed doxycycline, there were no deaths within 5 days or 10 days, and 3 deaths (0.0005%) within 30 days.
Conclusions: 1-2 grams of azithromycin were not associated with cardiovascular death in persons aged 15-44 years. These results might provide some reassurance for providers who prescribe 1-2 gram azithromycin, such as for patients diagnosed with STDs.
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WP 129
ANALYSIS OF CAPACITY TO BILL FOR STD-RELATED SERVICES IN STD CLINICS THAT RECEIVE 340-B PRICING IN NJ AND NYS USING A PUBLIC HEALTH SYSTEMS APPROACH

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Background: STD clinics must employ systems to bill and be reimbursed for providing STD-related services to ensure access to safety-net services. Clinic-level barriers and facilitators to billing can be understood through theories associated with the organization of health care put forward by Avedis Donabedian – structure, process, outcomes, coupled with emerging concepts associated leadership, organizational culture, and change.
Methods: CAI conducted an assessment of 134 clinics that received 340B discounts to provide STD screening and testing services in NJ and NYS to examine their capacity to bill and be reimbursed for STD-related services via survey monkey. To identify themes and support the design and delivery of TTA, CAI categorized assessment responses into 4 main domains in accordance with public health systems change theory - Policy, Leadership, Resources and Processes. Assessment questions were coded by domains which were used in creating the SPSS syntax to facilitate analysis of assessment.
Results: A 60% (81 clinics) response rate was achieved. No state-level policy barriers for STD-related billing were reported in NYS and NJ. However, 50% of NJ and 42% of NYS STD clinics reported local regulation preventing billing for STD services. As it relates to the domain of leadership, 74% of STD clinics in NJ, and 28% in NYS, reported no steps underway to begin billing for STD-related services. As it relates to resources and processes, 11% of STD clinics in NJ and 65% of STD clinics in NYS currently bill 3rd party insurance for Immunization or HIV services.
Conclusions: Clustering assessment responses by domain, drawing on prevailing public health systems and change theory, facilitated the identification of key themes from which to design TTA support. Responses indicate planned TTA should support key stakeholders in leveraging existing systems to bill for Immunization and HIV services; and address regulatory barriers at the county-level by building local leadership to mobilize change.
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WP 130
UTILIZING QUALITY ASSURANCE PROCESSES TO PREPARE FOR STI/HIV PARTNER SERVICES DATA SYSTEM TRANSITION

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Background: Data systems are crucial in the implementation and evaluation of STI/HIV Partner Services (PS) activities. The Center for STI Prevention (CSTIP) within the Maryland Department of Health and Mental Hygiene is transitioning from STD*MIS to PRISM for management of PS and STI surveillance data. Migrating complex data and preparing field staff and other end users for major procedural changes is an enormous task.
Methods: To prepare for PRISM's rigorous data quality checks, CSTIP staff enacted a variety of quality assurance (QA) activities to ensure proper implementation and documentation of PS activities. CSTIP staff review and provide Monthly Open Field Record and Open Interview Record reports to local health departments (LHDs) to ensure timely closure of investigations and cases. LHDs complete and submit Monthly Monitoring Reports to CSTIP summarizing PS outcomes by jurisdiction or region. CSTIP staff transitioned from year-end review of staging, morbidity reporting and data completeness, to detailed case review closer to case closure.
Results: More robust QA activities have improved communication and teamwork between CSTIP and LHD staff, fostering discussions that have lead to more consistent adherence to PS guidelines. These QA activities have transitioned staff away from processes that will be restricted in PRISM, ensured protocols that will be required in PRISM are understood and integrated into staff workflow, and increased timeliness of investigations which will be more closely monitored in PRISM. Furthermore, overall data quality has improved significantly, which will improve both data migration from STD*MIS into PRISM and patient outcomes.
Conclusions: Transitioning to more modern data systems requires critical review of data quality and procedures. Although this change can greatly improve PS efforts, it can also be a frustrating and arduous transition for LHD staff. Using regular QA activities in a specific and thoughtful manner can greatly improve the efficiency of such a transition.
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WP 131
TRICHOMONAS VAGINALIS NUCLEIC ACID CLEARANCE FOLLOWING TREATMENT OF HIV NEGATIVE WOMEN

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Background: Rescreening women for *Trichomonas vaginalis* (TV) infections is important as repeat infections are common, ranging from 5%-31%. Nucleic acid amplification testing (NAAT) too soon after treatment may result in false positives as a result of detection of remnant TV nucleic acids. The goal of this study was to determine the rate of false positive NAAT results at weeks 1-4 post treatment completion using culture as the gold standard.
Methods: Women attending an STI clinic in New Orleans who were InPouch culture positive and treated with metronidazole (MTZ) were included. Participants were scheduled for 4 weeks of follow up visits starting one week post-treatment completion; they provided self-obtained vaginal swabs (SOVS) and information regarding sexual exposure. SOVS were tested using InPouch culture and Gen-Probe Aptima TV (GPATV) assay which targets ribosomal RNA. Women who were culture positive at follow-up were considered re-infected/treatment failure and were not followed further. Incentives were $20 at baseline and $50 at each follow up visit.
Results: To date, 39 women were InPouch+ at baseline and were followed. Of these, 3 (7.7%) were InPouch TV+ at follow-up (1 at 1 week and 2 at 2

weeks) and reported no sexual exposure. Thus, these women were considered likely treatment failures and were no longer followed. Of the remaining cases, 5/29 (17.2%) were GPATV+ at 1 week, and 1/34 (2.9%) was GPATV+ at 2 weeks. All of these women (n=6) were simultaneously InPouch TV-, reported no vaginal sexual exposure, and were InPouch TV-/GPATV- at subsequent visits. No woman was GPATV+ at 3 or 4 weeks.
Conclusions: These data suggest that TV ribosomal RNA has been cleared from the vagina by 3 weeks post completion of successful MTZ treatment and that the GPATV assay can be relied on as a test-of-cure at this point and beyond.
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WP 132
SUPPORTING THIRD PARTY BILLING IN PUBLIC HEALTH LABORATORIES

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Background: Public health laboratories (PHLs) have been severely impacted by the 2008 recession and subsequent budget reductions at the state and local levels. With the impact of health reform, PHLs are looking to Medicaid and other third-party billing to sustain services. Based on a coordinated national needs assessment conducted by the STD-related Reproductive Health Training and Technical Assistance Centers (STDRHTTACs), 38% of PHL respondents reported that they do not bill for STD services, in spite of the fact that 62% reported billing for other services. More than one-quarter of respondents indicated that they think they need to bill for STD services, but do not know where to start; more than half indicated that they had initiated billing or had limited billing capacity, but need technical assistance (TA).
Methods: Cardea/STDRHTTAC in Regions VI, IX and X and JSI Research & Training Institute (JSI)/STDRHTTAC in Regions VII and VIII are developing TA resources to support state and local PHLs in building capacity to bill.
Results: Cardea hosted a webinar featuring the Oregon State Public Health Laboratory's (OSPHL's) experience with billing Medicaid and subsequently developed a case study to provide more detail on OSPHL's billing implementation process, improvements and challenges, and lessons learned. JSI is developing an online decision tool to support PHLs who are at various stages in the billing and reimbursement practice continuum. The tool provides an introduction to, step by-step instructions, and resources for billing, coding, and reimbursement for PHLs that are either not currently billing or not billing proficiently.
Conclusions: In some areas, STD programs have moved away from partnerships with PHLs because of lack of capacity to bill for STD services. PHLs need TA at the national, regional, state and local levels to build capacity to bill Medicaid and other third party payers and remain a vital partner to public health programs.
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WP 133
THE VALIDATOR: A "MUST SEE" PREQUEL TO ELECTRONIC LABORATORY REPORTING

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Background: Electronic Laboratory Reporting (ELR) is the future for efficient and standardized receipt of communicable disease laboratory data. But, numerous challenges must be met, including staffing expertise and information technology infrastructure. Receipt and importation of ELR is typically the primary focus for STD/HIV programs; however, structural and content validation are critical, interdependent components that must be addressed to ensure adequate ELR data quality management.
Methods: The Division of Disease Prevention (DDP) collaborated with laboratories to establish mechanisms for HL7 ELR transport. Once established, test message structural validation and issue resolution occurred using two validators contracted via HIV surveillance funding. Messages were subsequently validated for content, comparing ELR to corresponding paper reports. A customized application, with minor provider-specific modifications, was used to assign values to each ELR field for deterministic data matching. Content validation results were summarized via Facility ELR Assessment Reports (FEAR) for programmatic review/approval.
Results: Structural and content validation has been completed for >9,000 ELRs from five laboratories. DDP has also performed HL7 structure validation for >120 different messages from 14 private laboratories, and identified and resolved >500 unique message errors. Staff worked with laboratories to reduce data inaccuracies and incompleteness to <4%. To date, the average ELR record is received 48 hours faster than traditional mail or facsimile.
Conclusions: Validation of STD/HIV ELRs provides meaningful data for programmatic data quality acceptance standards. Virginia's STD/HIV validation framework has been incorporated as a core component for on-boarding all future ELR providers, including use by the general communicable disease program. Results illustrate that receipt of ELR data compared to traditional paper reporting is more accurate, complete and faster, and that validation is critical for any new provider ELR messaging. The use of FEAR reports allows STD/HIV programs to quantify and fix data quality issues prior to incorporation into surveillance systems.
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WP 134
CLINICAL EFFICACY OF MYCOPLASMA TESTING IN TREATMENT RESISTANT NON-GONOCOCCAL URETHRITIS

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Background: Mycoplasma genitalium (MG) is the causative organism in 20-40% of recurrent/persistent non-gonococcal urethritis (NGU) cases in Europe. The 2009 European NGU guideline recommends the use of moxifloxacin in the event of first line treatment failure. Despite its high efficacy in MG eradication, this drug has undesirable side effects and is costly. Thus, many sexual health clinics choose to avoid the unnecessary use of moxifloxacin by testing for MG. However, this requires specialist labroatory input and is also expensive. This study aims to determine whether mycoplasma testing is cost effective and a clinically relevant tool for NGU patients that are subject to the second line treatment regimens.
Methods: The patient records and laboratory results of all patients who received Mycoplasma testing for treatment resistant NGU at a UK level 3 sexual health clinic were reviewed.
Results: Pilot results indicate that very few tests for MG were requested of which none were positive. In those patients moxifloxacin treatment was avoided. However, a number of patients and their partners were treated with moxifloxacin without being tested for MG which makes cost-effectiveness assessment difficult. A full data set will be available by the conference.
Conclusions: MG testing can avoid unnecessary treatment with moxifloxacin for recurrent/persistent NGU, thus avoiding potentially serious cardiac side effects and the expense of the drug. Clinics should develop treatment and investigation pathways for recurrent/persistent NGU to ensure best use of resources and to avoid unnecessary treatment with moxifloxacin.
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WP 135
OPPORTUNITY KNOCKS: DELAYED HIV DIAGNOSES AND MISSED SCREENING OPPORTUNITIES

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Background: Thirty percent of Virginia's newly diagnosed cases of HIV are subsequently reported with an AIDS-defining condition within one year of the initial positivity, often referred to as late HIV diagnoses. Previous research indicates that adults are likely to have been HIV positive for a median of ten years prior to the development of AIDS. Visits with healthcare providers for sexual health screening represent an opportunity for diagnosis that may be missed if HIV screening is not conducted routinely in tandem with other STD-related screening.
Methods: Surveillance data on late HIV diagnoses between 2007-2011 were merged with STD test and health department clinic visit history for five years prior to the initial HIV diagnosis. Characteristics of the medical setting where the missed opportunity for diagnosis occurred as well as population characteristics were examined using binary logistic regression.
Results: There were 1,535 late HIV diagnoses between 2007-2011. Of these, 139 (9.0%) had evidence of a previous healthcare visit (without an HIV test) as indicated by at least one STD laboratory test six months to five years prior

to their HIV diagnosis. Approximately 37% were seen in a health department STD clinic, and 56% were seen by private providers. Males and females were equally likely to have had a prior visit (OR=0.9), black patients were more likely to have had a visit than either white or Hispanic patients (OR=1.7 and 2.5, respectively). Men who have sex with men were twice as likely to have had a visit without being screened for HIV as compared to injection drug users (OR=2.6) or high-risk heterosexuals (OR=2.4).
Conclusions: Only a small proportion of late HIV diagnoses had a potentially missed screening opportunity in the five years prior to their HIV diagnosis. However, this group can be targeted for improved HIV screening during healthcare visits for STD-related testing.
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WP 136
VISUAL CASE ANALYSIS: DEVELOPMENT AND IMPLEMENTATION OF A FUNCTIONAL COMPUTER-BASED VISUAL CASE ANALYSIS TOOL

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Background: Used correctly, Visual Case Analysis (VCA) is a valuable disease intervention case management tool. VCA utilizes a unique plotting sheet along with a specific set of symbols to graphically illustrate related cases of early syphilis. A completed VCA chart is analyzed and case-specific questions developed to guide case management activities. For over a decade, case managers have recognized that a computer-based VCA program could increase consistency and precision of case plotting resulting in more accurate analysis and improved syphilis partner services.
Methods: After participating in a 2012 CDC training for VCA, New Mexico Department of Health (NMDOH) STD Program staff began investigating options for developing a computer-based program to accurately construct a VCA sheet. A rudimentary program was initially designed and shared with CDC's STD Training Unit. With STD Training Unit staff serving as the VCA subject matter experts, the NMDOH engaged technical experts to write complex Excel formulas, incorporate Visual Basic and link the VCA plotting tool to existing databases.
Results: Two versions of a VCA plotting tool (VCAMON) have been developed. One is a stand-alone program that utilizes data entered directly or imported from a specific data set. The other version is integrated into the STD surveillance data system PRISM. Each version plots:

- Primary and secondary syphilis symptoms
- Treatment
- Partners
- Dynamically adjusting critical period
- Exposure dates
- Inoculation point
- Other medical information
- Multiple syphilis generations
- "Ghosted" symptoms for source and spread termination.
- List of "Forget Me Not" Questions to consider during intervention activities.

Conclusions: Utilization of VCAMON can improve the overall consistency and accuracy of VCA plotting enabling individual disease intervention specialists (DIS) to focus on the most relevant analysis and case management activities, ultimately making activities such as re-interviewing and clustering more productive.
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WP 137
EPIDEMIOLOGIC CHARACTERIZATION OF REPEAT GONORRHEA INFECTIONS IN MISSISSIPPI 2005-2012

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Background: Gonorrhea is the second most commonly reported notifiable disease in the United States. Epidemiologic and biologic studies provide strong evidence that gonococcal infections facilitate the transmission of HIV infection. For over a decade, Mississippi reported among the highest rate of gonorrhea. The purpose of this study is to describe the epidemiology of gonorrhea infections and identify risk factors associated with multiple infections.
Methods: Demographic data was reviewed from gonorrhea cases reported to the Mississippi State Department of Health's STD Management Information System from January 1, 2005, through December 31, 2012. Characteristics of individuals with one chlamydia infection were compared to individuals with repeat infections. Further analyses were performed to assess risk factors associated with recent repeat gonorrhea infections (more than one infection between 1 and 6 months).
Results: During 2005-2012, Mississippi reported 56,463 gonorrhea episodes (40,108 single cases and 6,990 repeat infections). Among repeat infections, 2,471 (35.4%) were recent repeat infections. The mean age of individuals with chlamydia was 24 ± 7.8 years, with 68% of cases among individuals under 25 years. The number of repeat infections reported ranged from 2-10 per individual (mean = 2.3 + 0.8 cases). The mean time between first and second repeat infection was 18 months ± 18 months. In the multivariate analysis, factors associated with recent repeat infections included younger age, African American race, and urban residence.
Conclusions: In Mississippi recent cases reported with repeat gonococcal infections are more likely to be younger, be African American, and reside in urban areas. STD control programs may use this information to educate and re-enforce compliance with existing re-screening guidelines for patients treated with a gonococcal infection to health providers taking care of populations most at risk residing in urban areas.
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WP 138
OPPORTUNITIES FOR EXPANDED HIV AND STD MANAGEMENT IN FEDERALLY QUALIFIED HEALTH CENTERS (FQHCS) – NORTH CAROLINA'S EXPERIENCE

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Background: FQHCs will play an increasing role in HIV and STD management following Medicaid expansion. We describe the HIV and STD screening and treatment practices at four FQHCs in North Carolina (NC).
Methods: Computer-assisted personal interview software was used during in-person interviews with physicians, clinic supervisors, and administrative executives. Questions included services provided in 2011; additional data was collected from electronic health records and annual reports.
Results: In 2011, 74,878 (mean= 18,720/ center) patients were seen at four FQHCs representing 17% of patients receiving care at 31 FQHCs in NC. Of these, 45% were male, 28% were Caucasian, 41% were African America, and 28% were Hispanic. Furthermore, 53% were uninsured, 28% used Medicaid, 11% used Medicare, and 7% had private insurance. All four FQHC's offered testing for HIV (ELISA), gonorrhea and chlamydia (NAATs), syphilis (non-treponemal and confirmatory treponemal tests), and serologic tests for herpes simplex virus (type 2), Hepatitis B and Hepatitis C. Most (3 of 4) centers had protocols in place for HIV screening, but only 1 of 4 had STD screening protocols. In 2011, 3,619 (mean=904.8/ center) HIV tests were performed and 22 new HIV diagnoses made. Three of 4 centers offered management of HIV infection, and all 4 provided treatment for gonorrhea, chlamydia, and syphilis using CDC recommended regimens. Of 3 centers offering HIV care, one was new and had not enrolled patients, one managed 50 HIV+ patients, and one was an HIV referral center, providing care for 625 HIV+ patients. None of the facilities had stand alone or walk in STD clinic services.
Conclusions: FQHCs are important HIV testing and treatment sites in NC, and will become more critical following healthcare reform. The coverage and quality of STD-related care can be improved through protocols and structural interventions which routinize STD screening in asymptomatic individuals.
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WP 139
USING 4TH GENERATION HIV TESTING TO DIAGNOSE ACUTE HIV INFECTIONS AND LINKING PATIENTS TO CARE

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Background: The 4th generation HIV assay looks for both antibody and p24 antigen which allows detection of HIV infections earlier than previous test methodologies. Acute infection is defined as the time from HIV acquisition until seroconversion, when antibodies have formed. Subjects with acute HIV are extremely contagious immediately after acquiring infection and transmission is very likely. Early diagnosis represents a tremendous opportunity for treatment and prevention interventions.
Methods: In November 2012, the Illinois Department of Public Health (IDPH) laboratory began a new algorithm using the 4th generation Abbot ARCHETECT *Chemiluminescence Microparticle Immuno Assay (CMIA)* as the screening test. All 4th generation reactive tests are followed by the HIV type 1 and HIV type 2 differential test. All differential non-reactive tests reflex to Real-Time Reverse Transcriptase Polymerase Chain Reaction (PCR) testing. Any results CMIA reactive, differential non-reactive, PCR reactive are considered acute HIV cases because this testing pattern indicates detection of antigen not antibody.
Results: Between November 1, 2012 and August 31, 2013 IDPH laboratories performed 26,621 CMIA tests. 395 (1.5%) were CMIA reactive specimens. From these 10 (0.04%) were differential non-reactive, PCR reactive. Of these 10 acute cases, 8 of the 10 (80%) were linked to primary care.
Conclusions: The 4th generation assay provides improved HIV diagnostic capabilities. The 10 acute cases would have appeared as negative with our previous 3rd generation testing. Detecting HIV infections sooner will allow for medical care to begin at an earlier stage. Being able to detect new HIV infections earlier may also play a significant role in reducing community viral load and prevent further HIV transmissions.
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WP 140
STD PREVENTION IN THE TWITTERSPHERE: FOUNDATIONAL ELEMENTS AND PRACTICAL APPLICATIONS

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Background: Since its launch in 2006, Twitter has become a dynamic public health communication tool used to disseminate messages and engage audiences with measurable results. Approximately 87% of state health departments and 13% of local health departments have a Twitter account. However, best practices for use of Twitter in public health have yet to be established.
Methods: A framework for STD and HIV prevention-focused Twitter usage will be presented. This framework provides new and intermediate Twitter users with an explanation of the foundational elements necessary for a successful Twitter presence, including audience, message, perspective, strategy, engagement, and evaluation. Specific applications of this framework from the Division of STD Prevention (DSTDP) at the Centers for Disease Control and Prevention will be discussed in detail.
Results: This session will showcase how two DSTDP initiatives- an STD treatment mobile application and STD-focused syndicated web content- were promoted utilizing the aforementioned strategic framework. After attending this session, attendees will be able to: 1) define the individual components of a framework for structuring STD and HIV prevention efforts on Twitter; and 2) describe a practical application of the strategic framework.
Conclusions: Using a strategic framework to shape STD prevention initiatives on Twitter can be beneficial for a broad array of public health entities. This session will present an adaptable framework for using Twitter for STD and HIV primary prevention.
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WP 141
SYPHILIS PARTNER SERVICES – CASE FINDING FOR HIV AND OTHER STDS

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Background: Partner services (PS) have historically been regarded as an important control measure for syphilis. More recently, the utility of PS for syphilis cases has been called into question. Currently, PDPH offers PS for all early syphilis cases. Many contacts are referred to the STD clinics for evaluation and treatment. Clinic and interview data were reviewed to determine number of HIV, syphilis, gonorrhea and chlamydia infections identified through PS.
Methods: Individuals named as a sexual contact on a 2012 early syphilis case were extracted from the local database. Information collected about the patient and contact was systematically reviewed to ascertain the number of new infections detected from syphilis contact tracing. Summary data statistics were calculated.
Results: In 2012, 492/597 (82%) early syphilis cases received PS. Half of the original patients were HIV co-infected. 725 sexual contacts were elicited; of these, 456 were unique individuals with additional information including test results available in the database. 90% of contacts were male and among these were 81% MSM. Among the 456 individuals named and evaluated, 45 (9%) were new syphilis cases. In addition, 51 (10%) GC infections (23 rectal) and 32 (6%) Chlamydia infections were detected. Among the contacts 177, (36%) were previously diagnosed with HIV. Of the 316 not previously diagnosed with HIV, 8 (2.5%) new infections were detected. Finally, 30 (6%) contacts to syphilis had multiple new infections diagnosed upon exam for their syphilis exposure.
Conclusions: While the utility of contact tracing for syphilis has been called into question, in 2012 PS for syphilis in Philadelphia led to the identification of 23 rectal GC and 8 new HIV infections. As these patients are contacts of early syphilis, they are clearly in a high risk sexual network, and early identification may lead to decrease in subsequent HIV and syphilis transmission.
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WP 142
VALIDATION OF AUTOMATED URINE WHITE CELL MICROSCOPY AS A PREDICTOR OF CHLAMYDIA TRACHOMATIS AND MYCOPLASMA GENITALIUM INFECTION

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Background: Gram stained male urethral smear (GSUS), the standard method for diagnosing non-gonococcal urethritis (NGU) is highly operator dependent and a poor predictor of infection. Rapid automated urine flow cytometry (AUFC) of first void urinary white cells (UWC) may offer point-of-care performance improvements over GSUS. The performance of AUFC for predicting Mycoplasma genitalium and Chlamydia trachomatis urethral infection was evaluated and the relationship between UWC and bacterial load assessed.
Methods: UWC were enumerated using the bench-top Sysmex UF-100 Analyser on First void urines (FVU) from male patients. Receiver operator curve (ROC) analysis was performed on an initial "Training set" of 208 samples from symptomatic men, all undergoing GSUS, to determine optimum UWC for predicting either *M. genitalium* or *C. trachomatis* infection. This threshold was subsequently validated using a fresh "Validation set" of 229 FVUs from both symptomatic and asymptomatic patients. Pathogen load, expressed as target DNA copies/mL of urine, was determined by Droplet Digital PCR.
Results: ROC analysis gave an optimal threshold of >29 UWC/μL for either *C. trachomatis* or *M. genitalium* infection, giving sensitivities and specificities of 81.5% and 85.8% respectively compared with 86.8% and 64.7% respectively for GSUS, (≥5 polymorphonuclear leukocytes/HPF). For the validation set, the UWC threshold gave sensitivities and specificities of 70.3% and 92% overall, 70.5% and 87% in symptomatic (n=71), and 70% and 93.9% in asymptomatic (n=158) patients respectively. A stronger correlation of UWC with urinary pathogen loads was observed for *M. genitalium* (τ =0.426, p=<0.001) compared to *C. trachomatis* (τ =0.315, p=0.016).
Conclusions: AUFC offers significantly improved specificity over microscopy in the clinic for the prediction of urethral *C. trachomatis* and *M. genitalium* infection, and could provide an alternative to microscopy for asymptomatic patients. The degree of urethral inflammation exhibits a stronger associated with pathogen load for *M. genitalium* compared to *C. trachomatis*.
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WP 143
STATE STD POLICY TRENDS AND THE ROLE OF HEALTH DEPARTMENT PUBLIC EMPLOYEES IN EDUCATING POLICYMAKERS

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Background: Many individuals who work in public health department STD programs report that they are unfamiliar with policies and legislation that can

be enacted at the state-level to help prevent and reduce the spread of STDs. Moreover, these public health professionals also indicate that they are unfamiliar with how to safely engage in the legislative process and help educate decision makers about proven STD prevention policies. This presentation aims to address both of these issues.
Methods: This presentation will survey several STD policy issues that have potential for significant public health impact. Policy issues to be covered will include, but are not limited to, expedited partner therapy, distribution of HPV vaccination information and HIV/STD prevention in correctional settings. The presentation will also highlight several strategies utilized by health department public employees across the U.S. to educate about similar policies. Presenters will also highlight resources for health department personnel who wish to learn more about how to maximize STD prevention efforts through policy work.
Results: Public health department employees in Idaho, Hawaii, and Michigan, respectively, have developed educational outreach strategies about the effective STD-reducing policy expedited partner therapy. While these three states are at different stages of implementing their education outreach strategies, they have been highly successful from both process and outcome perspectives. Their work can be used as a template for other states seeking to engage in STD policy work.
Conclusions: Public employees in health departments can work to educate policymakers on sexual health policy in their states. Public employee participation in the legislative process is both feasible and highly successful. A wealth of model language and case studies exist regarding potential STD legislation.
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WP 144
QUALITY IMPROVEMENT: A SYSTEMS APPROACH TO REDUCING HEALTH DISPARITIES

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Background: Implementing national screening recommendations are important in early detection and treatment of chlamydia (CT) and HIV. A yearlong Quality Improvement Project (QIP) (September 2012 – September 2013) brought together four geographically dispersed facilities to focus on improving CT and HIV screening and systems outcomes among American Indian/Alaska Native (AI/AN) serving organizations.
Methods: Projects assessed local administrative, staffing, clinical, and data strengths and weaknesses that influence screening. Sites implemented processes to effectively engage community and leadership; develop and sustain a successful and healthy workforce; improve standard delivery of evidence-based quality care; and optimize clinical information systems to drive improvement.
Results: Preliminary data demonstrated improvement in screening at all participating facilities. The rate of change varied across sites. Among eligible clients, screening for HIV ever increased between 8 to 381%; screening for HIV in the past year increased 47 to 270%; and screening for chlamydia improved between 9 to 467%. Factors influencing screening outcomes at individual sites included historical screening practices (% screened in the past), the size of the health system and the level of care (primary - tertiary care).
Conclusions: Improvement cannot rely entirely on knowing you need to improve, other factors that predict improvement are ensuring a mechanism for feedback, developing tests of change, and making change part of the system. This project demonstrates how improvement can be facilitated by focusing on the *experience of engagement and adoption*. An environment of improvement, increased knowledge and awareness, practice- and systems-based change, and patient-centered care helped to advance local improvement efforts. Sites engaged in development of change concepts and owned their respective successes (or failures). By emphasizing the importance of clinical measures, the use of clinical reminders and local data feedback sites were able to inform, evaluate, and drive quality improvement in service delivery and care.
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WP 145
WORKFLOW AND MAINTENANCE CHARACTERISTICS OF FIVE AUTOMATED LABORATORY INSTRUMENTS FOR MOLECULAR ASSAYS THAT DETECT SEXUALLY TRANSMITTED INFECTIONS

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Background: Automated platforms are available for the detection of sexually transmitted infections using molecular assays. The choice of a suitable system for diagnostic laboratories depends on a number of factors. Comparative workflow studies of automated instruments provide quantifiable and objective metrics for hands-on time during specimen handling and processing, reagent preparation, return visits, maintenance, allowing calculation of test turnaround time and throughput.
Methods: Using objective time study techniques, we measured workflow and maintenance characteristics of four automated batching instruments, TIGRIS (Hologic/Gen-Probe), m2000 RealTime (Abbott), cobas 4800 (Roche) and Viper XTR (Becton Dickinson), and the PANTHER instrument (Hologic/Gen-Probe), which is a continuous random access system. Comparisons were made for 96 and 192 tests using respective second generation Chlamydia trachomatis molecular assays on first catch urine and self-collected vaginal swabs.
Results: PANTHER showed the least overall hands-on time and Viper XTR the most for testing and maintenance. Both PANTHER and TIGRIS showed greater efficiency than the rest when processing 192 tests. Viper XTR and PANTHER had the shortest times to results and m2000 RealTime the longest. Cobas 4800 had the longest sample preparation and loading time. Mandatory return visits were required only for m2000 RealTime and cobas 4800 when processing 96 tests. All instruments required return visits when processing 192 tests, with both m2000 RealTime and cobas 4800 requiring more return visits and substantially more hands-on time than the rest.
Conclusions: There were substantial differences in the amount of labor required to operate and maintain automated diagnostic laboratory instruments which are influenced by batching versus continuous random accessing and the number of specimens that can be batched. In addition to assay performance and testing capacity, laboratories should also consider workflow and maintenance characteristics of automated systems.
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WP 146
COINFECTION WITH *TRICHOMONAS VAGINALIS* AND *CHLAMYDIA TRACHOMATIS* WIDENS THE SUSCEPTIBILITY WINDOW FOR SIMIAN-HUMAN IMMUNODEFICIENCY VIRUS (SHIV) ACQUISITION IN PIGTAIL MACAQUES

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Background: The menstrual cycle may influence susceptibility to cervicovaginal infections by regulating vaginal epithelial thickness, mucosal immune factors, and concentrations of infection target cells. Previous HIV susceptibility studies in pigtail macaques without sexually transmitted diseases (STDs) report enhanced SHIV susceptibility in the late-luteal menstrual cycle phase when progesterone levels are high. We seek to understand the mixed effect of STDs and menstrual cycle-related on susceptibility to HIV infection.
Methods: A pigtail macaque model of *Trichomonas vaginalis* (TV) – *Chlamydia trachomatis* (CT; serovar D) coinfection was used to study STD and menstrual cycle effects on SHIV susceptibility. Menstrual cycle phases in sixteen pigtail macaques were monitored with plasma progesterone levels and observing perineal tumescence (hormonally regulated sex swelling) and menses onset. Nine macaques were coinfected with TV-CT, confirmed by InPouch culture and Gen-Probe APTIMA testing (TV and CT, respectively). Seven macaques received sham inoculations. All macaques were repeatedly challenged intravaginally with low-dose $SHIV_{SF162p3}$. Time point of first SHIV detection was confirmed by real-time PCR detection of plasma viral RNA.
Results: For TV-CT-coinfected animals (all 9 became SHIV-infected), SHIV RNA was first detected later in the menstrual cycle (median day 17), compared to controls (only 4 of 7 became SHIV-infected; median day 4) (p=0.02, Wilcoxon rank sum). Accounting for a 7-10 day viral eclipse period, TV-CT-coinfected macaques were then SHIV-infected earlier in the menstrual cycle, compared to controls.
Conclusions: Relative to the menstrual cycle, TV-CT-coinfected macaques exhibited different SHIV infection timelines, compared to controls. Control animals had similar infection timelines as macaques in previously reported studies in which increased SHIV susceptibility was observed in the late-luteal phase. TV-CT coinfection may negate innate defenses present earlier in the

menstrual cycle, creating an immune or tissue milieu that is naturally more permissive to (S)HIV, and possibly other STDs, throughout the menstrual cycle.
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WP 147
ULTRA RAPID AND SENSITIVE DETECTION OF NEISSERIA GONORRHEA AND ANTIMICROBIAL RESISTANCE SUSCEPTIBILITY

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Background: *Neisseria gonorrhoeae* (GC) is the second most commonly reported notifiable disease in the United States. Rapid and accurate identification of GC clinical isolates is critical for control of gonorrhea. Rapid detection of resistance markers is crucial to guide therapeutic options. While nucleic acid amplification tests (NAATs) are effective, there is still an urgent need for rapid and sensitive molecular methods which could be easily employed in the field as point-of-care (POC) tests.
Methods: A microwave-accelerated metal-enhanced fluorescence (MAMEF) assay targeting the *Por A* gene of GC has been designed for the rapid and sensitive detection of GC DNA. Detection is mediated by a two-step process involving the release of GC DNA from bacterial cells through a rapid and low-cost microwave-based approach followed by detection of DNA with an ultra-sensitive and rapid MAMEF assay. Two independent approaches to detect ciprofloxacin-sensitive GC strains have been developed.
Results: Using a microwave-accelerated, microfluidic-based lying approach we have successfully lysed GC cells and fragmented the DNA. Detection of GC DNA is mediated after a 3 minutes microwave-enhanced fluorescence reaction. Overall, lysing and detection of GC DNA can be achieved in less than 10 minutes using this microwave-enhanced approach. Detection of mutations associated with ciprofloxacin resistance has been mediated through a "loss of wildtype" approach by targeting GC GyrA and ParC wildtype sequences; a process which can be carried out in less than 1 minute following DNA extraction.
Conclusions: We have successfully detected NG DNA in less than 10 minute using an ultra rapid lysing and detection method based on metal-enhanced fluorescence. The rapid nature of this platform coupled with rapid detection of mutations associated with antimicrobial resistance could be used for rapid detection of antimicrobial-resistant GC in the clinical setting. Additional studies are ongoing towards the development of this platform as a POC test.
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WP 148
ASSESSMENT OF GENTAMICIN AND ERTAPENEM SUSCEPTIBILITIES OF CANADIAN NEISSERIA GONORRHOEAE ISOLATES

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Background: The emergence of isolates with decreased susceptibilities to the cephalosporins and reports of treatment failures in Canada and around the world has made the concept of untreatable gonorrhea infections a future possibility. Alternative therapies such as gentamicin and ertapenem need to be evaluated for future therapeutic use.
Methods: *Neisseria gonorrhoeae* were collected by Canadian provincial public health laboratories in 2012 and submitted to the National Microbiology Laboratory for testing. *Neisseria gonorrhoeae* multi-antigen sequence types (NG-MAST or STs) and minimum inhibitory concentrations (MICs) were determined using the Etest for gentamicin (n=334) and ertapenem (n=378). Five reference cultures were also tested and their results were compared to established MICs. Currently there are no ertapenem or gentamicin interpretation criteria for *N. gonorrhoeae*.
Results: The MICs of gentamicin ranged from 1 mg/L to 6 mg/L with a modal MIC of 4 mg/L. The MICs of ertapenem ranged from <0.002 mg/L to 0.064 mg/L with a modal MIC of 0.008 mg/L. Isolates with decreased susceptibilities to ceftriaxone and cefixime had a modal MIC for ertapenem of 0.047 mg/L. The gentamicin modal MIC for these isolates remained the same. There were 139 different STs identified among the 378 isolates tested. ST-1407 was found to have the highest prevalence [10.% (n=39)] with ST-3158, ST-3307, ST-4709 and ST-7986 following at 5.3% (n=18) each. The modal MICs for the ST-1407 isolates were 0.032 mg/L for ertapenem and 3 mg/L for gentamicin.
Conclusions: Modal MICs to gentamicin and ertapenem in a collection of diverse Canadian *N. gonorrhoeae* isolates are similar to that reported in other countries. Gentamicin is already used for gonorrhea treatment in other countries and may be a future option for treatment in combination with azithromycin in Canada. Ertapenem MICs remained low but are slightly elevated in the isolates with decreased susceptibilities to ceftriaxone and cefixime.
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WP 149
EVALUATION OF TREPONEMAL TESTS FOR IMPROVED DIAGNOSIS OF NEUROSYPHILIS

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Background: The diagnosis of neurosyphilis remains a challenge. The VDRL-CSF test which has been the mainstay for laboratory diagnosis is very specific but lacks sensitivity. Treponemal-specific serum tests used for cerebrospinal fluid (CSF) testing could aid in the diagnosis.
Methods: A total of 32 patients including 18 controls who were seen at Emory Healthcare in Atlanta were enrolled in the study. Thirty patients had a variety of neurologic signs and symptoms while two patients had positive VDRL-CSF (one was asymptomatic, the second was a referred sample with no history). CSF samples were tested with the Trep-Sure and Maxi-Syph EIAs, INNO-LIA, and TP-PA serological tests. PCR testing targeted the *polA* gene of *T. pallidum*. There was insufficient CSF for all samples to be tested with all tests. To calculate sensitivity and specificity of the tests, neurosyphilis was defined as patients whose CSF tested positive by at least 2 treponemal tests even if the VDRL-CSF was non-reactive.
Results: Fourteen patients were diagnosed with neurosyphilis based on having at least 2 tests positive; 12 were symptomatic, one was asymptomatic, and one had no history. The 18 patients in the control group had neurologic symptoms. VDRL-CSF had a sensitivity of 85.7% (12/14) and a specificity of 100%. 13 of the 14 patients tested positive by Trep-Sure EIA (sensitivity 92.3%, specificity 100%). TP-PA had a sensitivity of 83.3% (10/12) and a specificity of 100% and INNO-LIA had a sensitivity of 92.3% and specificity of 100% (12/13). Maxi-Syph EIA had a sensitivity and specificity of 100% (10/10). PCR for *T. pallidum* was positive in 3 CSF specimens from patients classified as having neurosyphilis.
Conclusions: The Trep-Sure EIA, Maxi-Syph EIA and INNO-LIA were useful in identifying two symptomatic patients with non-reactive VDRL-CSF and to confirm those with reactive VDRL-CSF test.
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WP 150
OPPORTUNITIES FOR SYPHILIS TESTING DURING ROUTINE HIV-MONITORING VISITS IN LOUISIANA

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Background: In Louisiana, the incidence of primary and secondary syphilis diagnosis in persons living with HIV (PLWH) is approximately 15 times that of HIV-negative persons. Recent studies show the inclusion of syphilis testing during all HIV-monitoring visits, where CD4 T-cell count and viral load are monitored 2-4 times per year, may increase detection of syphilis cases and may be just as cost-effective as annual syphilis testing. The goal of this study was to explore the potential value of including syphilis testing during all HIV-monitoring visits for PLWH in Louisiana. To this end, HIV and STD surveillance data were used to characterize HIV-monitoring and syphilis testing patterns of PLWH with syphilis coinfection in Louisiana.
Methods: Data from Louisiana's STD and HIV surveillance databases were linked to determine PLWH who had a syphilis coinfection. The study population includes PLWH diagnosed with late latent or tertiary syphilis (LL/T)

between January 1, 2010 and December 31, 2012 to ensure persons had at least one year of undiagnosed syphilis. Descriptive statistics were used to assess the frequency of syphilis diagnoses and HIV-monitoring visits that occurred concurrently and the frequency of HIV-monitoring visits occurring during the year prior to an LL/T syphilis diagnosis where LL/T syphilis infections remained undiagnosed (missed syphilis testing opportunities).
Results: 295 PLWH were included in the study. 22% were diagnosed with HIV and LL/T syphilis concurrently. Of those remaining, 78% were diagnosed with LL/T syphilis at an HIV-monitoring visit. There were 334 missed syphilis testing opportunities, which was an average of 2 missed opportunities per person. 61% had one or more missed syphilis testing opportunities (excluding concurrent diagnoses).
Conclusions: Syphilis is relatively common among PLWH in Louisiana and there are numerous opportunities to diagnose syphilis at an earlier stage and prevent further syphilis transmission if testing occurs during all HIV-monitoring visits.
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WP 151
ELECTRONIC DECISION SUPPORT IMPROVES HIV TEST OFFERS AMONG AT-RISK YOUTHS PRESENTING TO A PEDIATRIC EMERGENCY DEPARTMENT

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Background: The CDC recommends HIV screening for adolescents and young adults, especially those at high risk. In order to increase HIV testing in our pediatric emergency department (PED) we developed a quality improvement project that resulted in modest increases in HIV test offers, but the process was unreliable. In order to increase the reliability of testing, we sought to measure the effect of an electronic decision support tool (DST) on HIV testing among at-risk youth presenting to our ED.
Methods: We conducted a prospective study in a pediatric tertiary care hospital ED focusing on patients that received testing for STIs. A DST was implemented into our EMR in Oct 2012. It is triggered when a provider orders any STI test (including gonorrhea, chlamydia, trichomonas, syphilis), but does not order HIV testing. It prompts the provider to order appropriate HIV testing or to document the reason for not ordering a test. The DST also displays results of HIV tests in our system in the last 12 months. We then measured the number of documented offers pre and post DST in those that were eligible.
Results: Data were analyzed six months pre (April – September 2012) and post DST implementation (October 2012 – March 2013). Pre- DST, patients tested for STIs had a documented offer of an HIV test 73% (528/721) of the time. Post-DST, a documented offer of an HIV test increased to 84% (549/651), $p < 0.001$.
Conclusions: The implementation of a DST has significantly increased the number of HIV tests being offered to our patient population thus increasing the number of high risk patients being screened.
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WP 152
FIRST YEAR OF USAGE OF SO THEY CAN KNOW, AN STD PARTNER NOTIFICATION WEBSITE

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Background: So They Can Know (STCK) is a free partner notification (PN) website developed from extensive formative research conducted with the target population (15-25 year-olds) and health care providers. STCK allows patients in the United States to send informative anonymous notification emails for curable STIs to their partners. We describe the use and misuse of STCK over the first year of the website's existence (9/27/12-9/26/13).
Methods: STCK automatically collected data on website usage. Browser cookies were used to distinguish unique users from repeat website visitors. In order to better evaluate STCK's impact, PN email senders were asked for their reasons for sending emails and email recipients could easily report suspected misuse using a link in the body of the notification email.
Results: STCK had 15,204 unique visitors in its first year. Of website visitors, 1,229 (8.1%) navigated to content about how to notify their partners themselves. 215 users (1.4%) sent anonymous emails to a total of 393 recipients. Many emails (37.9% of emails) were sent for unknown reasons, 31.8% to partners, 9.8% were sent by users to themselves, 5.3% to a friend who was thought to be at risk for STIs, and 5.1% as misuse. Many emails (44.3%) were sent for more than one STI, 23.2% for chlamydia alone, 11.5% for gonorrhea alone, and 4.3% for trichomoniasis alone. Five (1.3%) email recipients reported suspected misuse.
Conclusions: While STCK appears to be helping some users notify their partners, only a minority of visitors to STCK have used the website for anonymous PN. Few notification email senders or recipients reported misuse of the system. Anonymous PN websites should not assume that all emails sent through their service are for PN purposes. The impact of active promotion in clinics on the uptake of STCK will be studied in the future.
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WP 153
THE URETHRAL MICROBIOTA ASSOCIATED WITH IDIOPATHIC NON-GONOCOCCAL URETHRITIS (NGU) IN HETEROSEXUAL MEN

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Background: Up to half of NGU cases have no known etiology and no published studies have used molecular methods to identify novel microbes or microbial communities associated with idiopathic NGU.
Methods: Urine specimens from 18 heterosexual men with negative nucleic acid amplification tests for *Chlamydia trachomatis, Mycoplasma genitalium, Trichomonas vaginalis, and Ureaplasma urealyticum*-2 underwent broad-range 16S rRNA gene PCR and pyrosequencing (Roche 454) to identify urethral bacteria. Cases of NGU (n=12) had urethral discharge or >=5 PMNs/HPF; controls (n=6) had no discharge and <5 PMNs/HPF. Sequence reads were classified using a phylogenetic placement tool, *pplacer,* and a curated urogenital reference set. Rank abundance plots of detected species were created for each subject and aggregated by NGU status. Log-transformed sequence reads of detected bacteria were compared between cases and controls using the Student's t-test. Shannon-Weiner diversity indices were compared using the Mann-Whitney-Wilcoxon (MWW) test.
Results: The microbiota of cases was dominated by *Lactobacillus iners* and significantly less diverse than that of controls (median diversity index 1.145 vs. 2.229, MWW p=0.03). *Peptoniphilus harei* was significantly less abundant in cases than controls (log-transformed mean 16S rRNA gene copies 1.84 vs. 5.15, p=0.05). *Streptococcus mitis/oralis* (3.53 vs. 6.09 log gene copies, p=0.07) and *Finegoldia magna* (2.68 vs. 4.96 log gene copies, p=0.16) were also less abundant in men with NGU than in controls. In contrast, *L. iners* was more abundant in cases than controls, although not statistically significant (7.24 vs. 6.22, p=0.36).
Conclusions: Surges in abundance of *L. iners* and decreased diversity of bacterial species in the urethral microbiota were associated with idiopathic urethritis. Many bacteria detected in these heterosexual men are frequently found in the vaginal microbiota, suggesting they are shared with or acquired from their female sex partners. Longitudinal studies are warranted to investigate the temporal relationships between bacterial acquisition and NGU.
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WP 154
MULTIPURPOSE PREVENTION TECHNOLOGIES: A GAME-CHANGER FOR STI PREVENTION

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Background: Women at risk for sexually transmitted infections (STIs), including HSV-2, HIV, and others are often simultaneously at risk for unplanned pregnancy. Multipurpose prevention technologies (MPTs) that simultaneously prevent STIs and unplanned pregnancies provide women and girls with comprehensive prevention in a single product, efficiently addressing these critical unmet medical needs. The CAPRISA 004 and VOICE trials suggested that 1.0% tenofovir (TFV) could be effective at preventing sexual transmission of HSV and HIV to women. However, low product adherence likely prevented adequate demonstration of such protection. Poor acceptabil-

ity, lack of perceived risk, or indication related stigma may have resulted in low levels of adherence.
Methods: The Initiative for Multipurpose Prevention Technologies (IMPT) is an international coalition working to advance MPT product development and access through a broad scope strategy. As part of this effort, we hypothesized that increasing the STI prevention prospects for antiretroviral agents—particularly available TFV products--may be possible by incorporating this drug into an alternative product that is also contraceptive, thereby addressing possible drivers behind low adherence.
Results: Multiple TFV-contraceptive products are now in development and designed to test the above hypothesis. A TFV-Levonogestrel vaginal ring designed to prevent HSV, STI and pregnancy is approaching clinical evaluation by CONRAD. Other innovative MPT vaginal ring strategies with TFV and hormonal contraceptives (HC) are also in earlier stage product development, as are non-ring based MPT products with TFV and HC or barrier methods. Effective development and delivery strategies for such products are crucial to achieving desired public health impact.
Conclusions: MPTs are a potential game-changer for STI prevention. Specific products designed to capitalize on target population willingness to use contraceptives that also prevent STIs are in development and provide a meaningful opportunity to address adherence issues and address important unmet need among at risk women.
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WP 155
USING SOCIAL MEDIA TO ADVANCE SEXUAL HEALTH—THE PLANNED PARENTHOOD APPROACH

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Background: Social media sites, such as Facebook, Twitter, and Tumblr, offer great potential to reach large populations to promote sexual health. Almost three out of four online U.S. adults and eight out of 10 U.S. teens use social networking sites, and these proportions are growing.
Methods: Planned Parenthood Federation of America (PPFA) currently has six health-related social media sites: two Twitter feeds for adolescents and young adults, two Facebook pages for adolescents and young adults, Tumblr, and Instagram. Each of these platforms reaches different audiences, and each one has different optimal methods for disseminating health promotion messaging. Theory-based, in-person sexuality education has been shown to be effective in increasing protective behaviors such as delaying initiation of sexual intercourse, and using condoms and contraception. Our approach with our social media sites is to translate what has been found to work in-person into social media content that is engaging, age-appropriate, and ultimately improves sexual health.
Results: This presentation will provide an overview of the audiences for and goals of the PPFA health-related social media platforms, discuss our internal processes for content creation, including the approach we take in integrating public health and behavior change theories in our messaging, as well as examine some challenges we have faced promoting sexual health on our social media sites.
Conclusions: Young people turn to social media sites to get information about and discuss sexual health.
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WP 156
STUDY ON THE VULNERABILITIES OF BLACK WOMEN'S MAROON COMMUNITY OF TIJUAÇU, SENHOR DO BONFIM, BAHIA, BRAZIL

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Background: Vulnerability refers to the way an individual behaves in the social environment, considering the degree of awareness and attitudes towards prevention and sexual health care. The aim was to identify the implications of race in vulnerabilities Black Women maroon community of Tijuaçu.
Methods: Descriptive study with quantitative analysis, sample of 72 women from the community, held on March 7 and May 6, 2013. Offered pre-test counseling collective (videos), then applied questionnaire (individual) and all signed an informed consent form. Analyzed variables: race/color (self-reported), age, marital status, education, type and quantity of sexual partners in the last 12 months, sources of exposure, use of condom, STD submitted in the last 12 months and testing for HIV. Rapid Diagnostic Test performed TRD-HIV I / II, and delivery of results, condoms. Was used to analyze Epi info 3.5.2.
Results: In race/color 58 % reported black, 31 % brown and 11 % white; Mean age 38 years, ranging from 15-90 years, low education (6 % illiterate, 19 % 1-3 years of study and 25 % 4-7 years), 69% married/stable and 19 % were single, 100 % heterosexual, 10 % of these did not own sex life in the past 12 months, 83 % possessed a single sexual partner and 6 % had two. Display Type: 86% reported unprotected intercourse, 58% never used condom and 21% sometimes. DST in the last 12 months 8%, 43% drink or have drunk often and 1% have used other types of drugs, 53% were examined for the first time with 100% result nonreactive.
Conclusions: A high rate of women who did not use condom, sexually active and frequent use of alcohol, make them vulnerable to HIV and other STDs. Given the above, it is necessary to deploy/implement education initiatives combating sexual beliefs and misconceptions and therefore subsidizing combat the epidemic.
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WP 157
CONGENITAL SYPHILIS PREVENTION IN HONDURAS

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Background: Honduras is a Central American country whose priority is the elimination of congenital syphilis in 2015. Objective: To prevent transplacental transmission of syphilis from mother to daughter / son during the gestational period.
Methods: Descriptive retrospective analysis from January 2008 to December 2012 in 117 health units without a laboratory from the Preventive Program transmission of syphilis from mother to daughter / son that detects syphilis during pregnancy in attending antenatal women, using rapid tests for free and voluntary screening.
Results: Year 2008 4.950 pregnant women were screened, 10 of them were reactive, with a prevalence of 0.2%, in 2009 7.285 pregnant women were screened of which 17 were reactive with a prevalence of 0.2%, in the year 2010 5.310 pregnant women were screened of which 5 were reactive with a prevalence of 0.09%, in 2011 8.343 pregnant women were screened of which 20 were reactive with prevalence of 0.2% and 2012 9.320 women were screened of which 14 were reactive with a prevalence of 0.1%.
Conclusions: During the five years 66 pregnant women were screened with syphilis, all received treatment with their partners and were followed until delivery, of which 57 (86%) of the children born were free of congenital syphilis, 7 pregnant women have not yet reached the time birth and 1 pregnant woman did not return for follow-up service. Screening for syphilis during pregnancy is key to preventing transplacental transmission of syphilis from mother daughter/son. The free screening with rapid tests for syphilis in pregnant women in places that do not have clinical laboratories improved the access and permitted the early capture of syphilis, also they were provided with timely treatment with their sexual partner. A rapid test for syphilis is an essential tool for early diagnosis of congenital syphilis prevention.
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WP 158
WHAT IS THE KNOWLEDGE AND RISK PERCEPTION ON SEXUALLY TRANSMITTED INFECTIONS (STIS) IN ADOLESCENTS IN LATIN AMERICA?

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Background: Adolescents are a high risk population for STIs, and little is known about behavior in Latin American populations. Objectives:
- To compare and contrast knowledge about STIs among adolescents of six Latin American countries.
- To determine risk perception of STIs transmission on behalf of care observed in sexual behavior

Methods: We conducted a prospective cross-sectional study in 6000 schooled adolescents aged 14 to 21, from Argentina, Colombia, Ecuador, Mexico, Peru and Venezuela,(1000 by country), using self-answered surveys. The poll was approved by the Bioethics Committee of Universidad del Rosario de Bogota. Confidentiality was guaranteed. Data were processed using SPSS V.12. Analysis of frequencies and percentages were used for the description of qualita-

tive variables; central tendency and dispersion measures were calculated for quantitative variables. We used, Independence Tests, Student´s test, Variance Analysis and Scheffe´s tests. Population: Average age is 16.76. Distribution by sex: 44% males, 56% females.
Results: 47.5% had had sexual intercourse; average age was 15.5, with differences among countries. Contraceptive use varied by country, being condoms the most frequent (consistent and correct use of condom was found in 20% of sexually active adolescents). 73.9 % were concerned about the contagion of STIs. 63,1% were concerned about pregnancy. Knowledge about STIs was near 90% for HIV and below 50% for others. School was the main source of information. No mention about after morning pill or mother to child transmission of STIs as part of the knowledge on the items investigated
Conclusions: Statistical analyses let us conclude that there is high perception of knowledge on STIs in relation to the evidence of care used in sexual activity (Occasional use of condom),concern about pregnancy or STIs transmission is not reflected on the sexual care observed. Adolescents remain at high risk for STIs in the population of the six countries analyzed.
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WP 159
TEMPORAL DISTRIBUTION OF DEMAND AND POSITIVE ANTI-HIV TESTS IN CENTRAL LABORATORY OF PUBLIC HEALTH MIGUELOTE VIANA (CLPHMV): NO INCREASE AFTER CARNIVAL

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Background: According to the data of the 2012 HIV epidemiological bulletin, since 1980 to 2010, occurred 241,662 deaths caused by HIV in Brazil. We found no studies about the seasonal demand or diagnostic tests for HIV's infection in Niterói population, which are very important to the public health policies organization in Brazil. On the other hand, Brazilian Healthy Ministery makes a great campaign at Carnival time, as part of the popular imaginary that there is a global promiscuity in carnival.
Methods: It is a transversal analytical study time series. It has been analyzed data demand of positivity anti-HIV tests and the days worked by CLPHMV, collected from a database relative to the period of 2005 to 2010, represent a sample space 64.505 exams. Hereafter, were been statistically analyzed by a temporal serie and hypothesis tests for trend and sazonality, the classic series decomposition, by Morettin/Toloi.
Results: demand of anti-HIV exams: 2005 (11.252); 2006 (10.557); 2007 (11.494); 2008 (11.046); 2009 (10.452) and 2010 (9.704). Positivity: 2005 (42,6); 2006 (44,0); 2007 (38,3); 2008 (32,8); 2009 (24,25) and 2010 (25,25).Annual work days2005 (218); 2006 (235); 2007 (238); 2008 (236); 2009 (237) and 2010 (211).
Conclusions: There wasn't a seasonal relationship between the demand and the positivity of anti-HIV tests, performed in CLPHMV. There was a decrease, statistically important, on demand and positivity of the anti-HIV tests, over the years studied between. We found no list of increasing demand and neither positive that may be related to the carnival.
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WP 160
ACCEPTABILITY OF SYPHILIS AND HIV HOME-BASED TESTING ASSOCIATED WITH EXTERNAL QUALITY ASSURANCE IN A REMOTE URBAN AREA OF THE AMAZONAS STATE, BRAZIL

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Background: Home-based, voluntary counselling and testing (HBCT) offers an opportunity to scale up early diagnosis. We aim to evaluate the acceptance of HBCT with POC testing for syphilis and HIV, to estimate the prevalence among individuals tested at home, and to assess the performance of POC testing by health staff using dried tube specimens (DTS) in a remote municipality of the interior of the Amazon region.
Methods: Community health teams from the Family Health Program already in place conducted door-to-door outreach in the urban area of São Gabriel da Cachoeira/Amazonas. Participating households were selected randomly from the catchment area of each community health team. HBCT for syphilis and HIV were offered to all residents aged ≥15 years. For both infections, DTS panels that included samples with negative and positive results were reconstituted and performed by health care workers (HCW).
Results: HBCT was offered to 1752 household individuals and accepted by 1501 (85.6%). Overall median age was 32.0 years, 64.4% were female, 85.1% were indigenous, and none had ever been tested for HIV or syphilis using a rapid test. The respective prevalence in men and women were HIV (0:37% and 0.0%) and syphilis (1.12% and 2.69%). Syphilis prevalence among pregnant women was 2.94%. Eleven HCW tested 43 DTS samples for HIV and 43 for syphilis. The results reported by HCW showed a concordance rate of 55.8% for HIV and 90.7% for syphilis with the reference laboratory.
Conclusions: HBCT was highly acceptable and successful in reaching untested individuals. Although only two cases of HIV were detected, HBCT identified previously undiagnosed syphilis cases, especially among pregnant women. However, efforts should be made to ensure the quality of test performance by non-laboratory personnel. As Brazil moves to scale-up HIV testing, our findings highlight how HBCT can maximize coverage in remote areas with similar characteristics.
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WP 161
SYPHILIS IN THE ADULT POPULATION IN VIT"RIA, BRAZIL: PREVALENCE, ASSOCIATED FACTORS AND DIAGNOSTIC APPROACH

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Background: Thus, knowing the prevalence of syphilis will help inform public health policies, both in the planning and implementation of programs and in providing appropriate prevention, control and assistance. There are few population-sampling studies on the prevalence of syphilis in Brazil. Our goal was to determine the seroprevalence of syphilis, identify factors associated and diagnostic approach for the infection in patients attending Family Health Program (FHP) in the municipality of Vitória, Espírito Santo, Brazil.
Methods: A cross-sectional study conducted among adult population attending FHP in 2011. Venereal Disease Research Laboratory (VDRL) test and two treponemal tests (immunochromatographic and IgG ELISA tests) were performed. Demographic data, history of sexually transmitted diseases (STDs) and behavioral data were collected. Cases were considered positive for syphilis when VDRL titers were equal to or greater than 1:8 and confirmed by one treponemal test.
Results: Of the 1502 individuals included in the study, 47% were men and 53% were women. The mean age was 41.63±14.57 years. The prevalence of syphilis was 0.9% (95% CI: 0.4% - 1.3%). Multivariate analysis showed a significant association between syphilis and homosexual or bisexual behavior [OR 6.80, 95% CI: 1.00-46.20], a prior history of STDs [OR 16.30, 95% CI: 3.61-73.41], the presence of a tattoo [OR 6.21, 95% CI: 1.49-25.84] and cocaine use [OR 6.80, 95% CI1.15-40.30]. The prevalence of positive treponemal test was 10.4% (95% CI: 8.9%-11.9%). Of those 156 individuals, 27 were VDRL-positive with titers below 1:8.
Conclusions: The seroprevalence of syphilis in this population was low, which is similar to that observed in other populations studied in Brazil. The high prevalence of positive treponemal tests may be due to the positive serological memory of a cured infection, but they may also be due to cases of primary or late syphilis that were not detected by the VDRL test.
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WP 162
STRUCTURAL AND SOCIAL FACTORS ASSOCIATED WITH UNPROTECTED ANAL INTERCOURSE AMONG MSM AND MALE-TO-FEMALE TRANSWOMEN IN LIMA, PERU

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Background: MSM and male-to-female transwomen are an important target population for HIV/STI prevention due to high prevalence of HIV and syphilis infection, frequent asymptomatic disease, and the life-threatening consequences of untreated infection. This analysis explored the association of structural and social factors with unprotected anal intercourse (UAI) in a high-risk cohort of MSM/transwomen.
Methods:
We recruited a clinic-based sample of self-identified MSM and transwomen, 18 years old or older, living in Lima, who were at high-risk for syphilis. Participants completed an interview-administered survey of socio-demographics and recent sexual risk behavior. We calculated the prevalence of UAI and used Poisson regression, adjusted for age and sexual identity, to calculate prevalence ratios (PRs) of the relationship between structural and social factors with an outcome of reported UAI in the past 3 months.
Results: Among the 133 high-risk MSM and 38 transwomen, 91 (52.0%) reported any recent UAI. Of participants, 13 (7.6%) were unemployed, 92 (52.6%) and reported that they were unable to cover their basic needs for > 1 month in the last year. Unemployment (PR 1.72; 95% CI: 1.28, 2.32) and > 1 month of unmet basic needs over the past year (PR 1.34; 95% CI: 1.00, 1.79) were associated with UAI. Additionally, reporting sex with a sex worker in the past 3 months (PR 1.80; 95% CI: 1.25, 2.59) was associated with UAI. Among participants who reported sex work, sex with clients was moderately associated with UAI (PR 1.33; 95% CI: 0.98, 1.82).
Conclusions: Structural and social factors including being unemployed and reporting unmet basic needs were associated with UAI in the past three months. The relationship between HIV and structural factors such as financial hardship should be better understood, and appropriate strategies should be integrated as part of comprehensive HIV and syphilis prevention efforts for high-risk MSM and transwomen.
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WP 163
RISK FACTORS FOR HIV INFECTION AT A GAY MEN'S COMMUNITY HEALTH CENTER IN LIMA, PERU

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Background: In Peru, the Human Immunodeficiency Virus (HIV) epidemic is highly concentrated among men who have sex with men (MSM) and transgender women (TGW), with 56% of new infections occurring in this population. In spite of this, there is a lack of prevention services tailored to these groups. Epicentro is the first and only gay men's community health center in Lima and provides HIV/STI testing to MSM/TGW, and this is the first report of HIV testing results at the institution.
Methods: HIV testing services at Epicentro were paired with a simple survey including demographics and sexual behaviors. A statistical analysis using bi-directional stepwise logistic regression was conducted to determine risk factors associated with HIV prevalence.
Results: Of 466 participants who received an HIV test result, 97 were positive (20.9%). Compared to participants who reported an "activo" (insertive) role in sexual partnerships, those who reported a "pasivo" (receptive) or "moderno" (versatile) role were significantly more likely to test positive (OR=6.3 and 6.5, respectively, p=0.003). Those who reported their last partner was a casual partner were also more likely to test positive compared to a stable partner (OR=2.2, p=0.021). Subjects reporting genital warts were significantly more likely to receive a positive test result compared to those without warts (OR=2.8, p=0.021).
Conclusions: HIV prevalence in this sample is higher than the national population estimate (0.04%) and estimates from other studies with MSM in Peru (ranging from 11-23%). Sexual role, partner type during last sex act, and report of genital warts in the past 6 months were significantly associated with a positive test result. The high HIV prevalence at Epicentro suggests the need to utilize community centers to reach individuals at highest risk who face stigma in standard health facilities and may otherwise remain unaware of their HIV status.
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WP 164
INFORMING POLICY AND PROGRAM DECISIONS FOR SCALING UP SYPHILIS AND HIV TESTING IN BOLIVIA THROUGH A JOINT TECHNICAL MISSION

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Background: In Bolivia, prevalence of maternal syphilis has been estimated to range from 3-7% in various settings. In 2009, PAHO/UNICEF launched the Regional Initiative for Elimination of Mother-to-Child Transmission of HIV and Congenital Syphilis. Achieving the outcome targets of the initiative requires increased testing of all pregnant women for both syphilis/HIV in ANC facilities. We conducted a Joint Technical Mission to identify strategies and formulate recommendations to expand access to syphilis/HIV testing in Bolivia
Methods: A national steering committee, led by the Bolivian Ministry of Health and composed of in-country and international partners, was established. Desk reviews (reports, program indicators, policies), orientation meetings, site visits to health facilities, thematic discussions of priority areas, and final de-briefing of national policy makers and in-country partners were undertaken. Health facility visits included assessment of syphilis/HIV testing algorithms and laboratory quality assurance procedures at 5 clinical sites and 4 reference laboratories in La Paz, Cochabamba, and Santa Cruz. Strengths and challenges were identified in provision of syphilis/HIV testing and treatment services. A national consensus meeting was convened.
Results: Two syphilis testing algorithms were approved by consensus, one for laboratory use and one for point-of-care use, which will facilitate same-day testing and treatment. A simplified HIV testing algorithm using rapid tests was also approved by consensus. A set of joint recommendations for policy and programmatic action were agreed upon that included: a procurement and training strategy; piloting and scale-up of approved algorithms; implementing policies to assure testing/treatment of partners; strengthening of monitoring systems; and scale-up of quality-control programs.
Conclusions: A Joint Technical Mission created a platform for common action, and contributed to national scale-up of syphilis/HIV testing through coordination of mechanisms for programs and support for development of national scale-up plans. Continued support and targeted technical assistance are essential to achieve outcome targets of the PAHO/UNICEF initiative.
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WP 165
HPV INFECTION IN AT TERM PREGANCY

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Background: Human Papillomavirus (HPV) is the most frequent sexually transmitted virus. Its prevalence in third trimester and at term pregnancy differs worldwide. Gestation may favor HPV infection as cervical transformation zone is more exposed during pregnancy, and the high level of hormones have been shown to increase viral replication. HPV detection in pregnancy is important to study, as it represents a special immunological state.
Methods: Women with pregnancies at term, who attended for delivery to 3 social security hospitals from Merida, Mexico were included in this research. All participants signed informed consent. HPV PCR detection was performed in cervicovaginal samples; specific primers for HPV16, 18, 58 and 6/11 types were used for genotyping HPV positive samples. Follow-up HPV testing, cytology and colposcopy were performed 5-12 months after delivery.
Results: 794 pregnant women at term were tested for HPV, 83 resulted positive (10.7%). From these, 81 samples were genotyped resulting: 16% HPV58; 11% HPV16; 5% HPV18; 6% HPV6/11. Follow-up testing was performed to 41 out of 83 originally positive women; from these 60.7% resulted negative and therefore cleared the infection. From the remaining follow-up positive samples 11/15 were included in genotyping, which allowed to determine persistence of the same HPV type in four, and reinfection with a different type in three. Other genotypes not directly tested may have persisted in five

HPV positive non-typifiable samples. From the 25 women who attended for colposcopy and cytology, two had CINII lesions.
Conclusions: This is the largest report of HPV in pregnant women from Mexico. The prevalence observed is lower than in other reports, and referred risky behaviors were low. HPV58 was the most frequently found; this genotype is also of importance in Asia. High-risk genotypes generally cleared spontaneously after the postpartum. Reinfection and persistence, although infrequent, should not be disregarded.
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WP 166
CERVICAL CELL CHANGES IN WOMEN LIVING WITH HIV IN THE NORTHEAST OF BRAZIL - IDENTIFYING THE TARGET GROUP FOR HPV

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Background: Human Papillomavirus is the most common sexually transmitted infection among young adult women and acts as main cause of cervical dysplasia and invasive cancer. HIV-infected women are at increased risk of developing HPV-associated dysplasia, aggressive cancer and have more abnormal Pap tests compared with the general population. The objective of the study is to evaluate the frequency of dysplasia and other cervical conditions in a HIV-infected population and compare demographic characteristics of the women with normal and abnormal cytology.
Methods: This is a cross-sectional study. Records of HIV-infected women attended in a reference outpatient clinic for gynecology and prenatal care were evoluated between January and December 2012. Samples for cervical cytology were collected at the moment of the gynecological evaluation, regardless of signs or symptoms. Sociodemographic data and cytology results were obtained from the patients records. Statistical analyses were done using the SPSS 20.0 with IC95%.
Results: In this study, 729 HIV-infected women records were enrolled, the mean age was 38.1 years (SD=10.5). We had 1.4% of unsatisfactory cervical cytology samples. It was founded an overall cellular alterations prevalence of 8.9%, including 3.4% of ASCUS, 0.4% of AGUS, 0,1% of ASC-H, 4.1% LSIL and 0,8% of HSIL. We had no patients with HPV-associate cancer. Association between mean age and the presence of any cellular alteration (p=0,002) and age under 30 years with presence of LSIL (p=0,007) were found.
Conclusions: Prevalence showed to be 6.1 times greater for ASCUS (3.4% versus 0.56%), 2.9 for AGUS (0.4% versus 0.14%), 8.7 for LSIL (4,1% versus 0,47%) and 2.9 for HSIL (0.8% versus 0.28%), when compared with the general population of the state of Bahia (DATASUS,2012). ASC-H prevalence was slightly lower on our group (0.14% versus 0.18%). Knowledge about local characteristics of the HIV-HPV co-infection is important to encourage the promotion of preventive actions and provide early treatment.
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WP 167
NEW BRAZILIAN STRATEGIES FOR PREVENTION, DIAGNOSTIC AND TREATMENT OF THE STD

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Background: In Brazil, congenital syphilis and syphilis in pregnancy are in the list of compulsory disease notification. STDs in general joined the list of priorities of the National Department of STD / AIDS and Viral Hepatitis, especially syphilis and HPV. It was necessary to update the Brazilian Guidelines.
Methods: During 2012 and 2013 meetings were held with national experts in order to discuss new guidelines for the prevention, diagnosis and treatment of STDs and submitted to the STD committee for approval.
Results: The advances made in the last two years were: the quadrivalent vaccine against HPV incorporated into the country immunization schedule, and to be administered to girls of 11-13 years, in 2014; the hepatitis B vaccine is offered to people up to 49 years old and for the most vulnerable populations. For the screening and diagnosis, rapid tests for HIV, syphilis and hepatitis B and C are available in the primary health care in the country. Finally, as for the treatment, the recommendations for STD treatment were revised, the recommendation of ciprofloxacin to treat gonorrhea was withdrawn, and the new Manual of STDs of 2013 was finalized to be used by health professionals and will be ill be shown in the presentation in this meeting.
Conclusions: These developments are considered to reflect the improvement of health conditions of the people affected by these diseases, in breaking the chain of transmission and especially as complementary strategy for HIV prevention.
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WP 168
SOCIAL COHESION IS SIGNIFICANTLY ASSOCIATED WITH CONSISTENT CONDOM USE AMONG FEMALE SEX WORKERS LIVING WITH HIV IN SANTO DOMINGO, DOMINICAN REPUBLIC

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Background: Previous studies indicate positive effects of social cohesion among female sex workers (FSW) on HIV/STI prevention. These studies have not, however, explored the relationship between social cohesion and STI prevention behaviors among FSW living with HIV.
Methods: We conducted bivariate and multivariate logistic regression to explore the relationship between social cohesion and consistent condom use (CCU) among a group of 143 FSW who answered the social cohesion scale in the baseline survey for the *Abriendo Puertas* (Opening Doors) intervention currently being implemented in Santo Domingo. We adjusted for socio demographic variables (age, education, and marital status), stigma and discrimination variables (HIV stigma, sex work stigma, and HIV discrimination), sexual and drug behaviors (alcohol use, drug use, and number of partners), and community mobilization. We also conducted linear regression to explore the association between social cohesion and HIV stigma, adjusting for socio demographic variables. Scales were adapted from validated measures and had good reliability: social cohesion (α=0.77), HIV stigma (α=0.88), sex work stigma (α=0.90), HIV discrimination (α=0.75), and community mobilization (α=0.91).
Results: CCU in the previous 30 days between FSW and all sexual partners was 64.3%. There was a low level of cohesion (median 15, possible range 0-40) and high level of internalized HIV stigma (median 18, possible range 0-32). In multivariate analyses, social cohesion was significantly associated with CCU (Adjusted Odds Ratio [AOR] 1.08, 95% Confidence Interval [CI] 1.0-1.18). HIV stigma was significantly associated with CCU (AOR 0.88, CI 0.79-0.98) and with social cohesion (B -0.21, CI -0.48--0.01).
Conclusions: Findings indicate that social cohesion is positively associated with CCU and that HIV stigma is inversely associated with social cohesion and CCU. Interventions that facilitate social cohesion and reduce stigma among FSW living with HIV could contribute to reducing risk for ongoing STI and onward HIV transmission through CCU.
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WP 169
RAPID SYPHILIS TESTING: TRAINING FOR ITS IMPLEMENTATION IN PERU

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Background: Syphilis is still one of the main causes of maternal and child morbidity. The CISNE project (Spanish acronym for "Immediate Cure for Neonatal Syphilis") in Peru induced a change in the national policies for screening for this disease using rapid tests (specifically the Syphilis 3.0 Bio-Line®). The aim of this work is to present findings of the training of health personnel for the implementation of Rapid Syphilis Testing nationwide in Peru.
Methods: Training modules were developed and workshops were offered to physicians, professional midwives, nurses, and laboratory personnel throughout the country. Training included presentations and hands-on workshops on sample collection, reading of test results, counseling and treatment of seropositive women. Knowledge was evaluated through written tests. Checklists were used to evaluate their performance in the different skills required to

carry out the test. To evaluate test result reading skills, a set of 15 test cassettes (including positives, negatives and invalids) was read by the participants. Participant satisfaction was also evaluated.
Results: From 302 persons trained, the top 221 (77%) with the best scores became trainers of trainers. Of them 34 were laboratory personnel, 187 physicians, midwives or nurses. Grades for participants in a vigesimal scale rose from 15 prior to the training to 18 after the training, with an overall 93% accuracy in readings of the test. The course was found useful by 99% of the participants, 97% considered they had and active participation in the course, and 100% graded the course as good or very good.
Conclusions: The training course is well accepted and improves the skills and knowledge of health workers in the use of rapid tests for syphilis.
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WP 170
GARDNERELLA VAGINALIS INFECTION IN WOMEN INFECTED WITH HIV OR AIDS IN SPECIALIZED ASSISTANCE SERVICES - STD/AIDS, AMAZON, BRAZIL

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Background: The *Gardnerella vaginalis* infection in HIV-infected women may increase their infectiousness and susceptibility genital. We sought to determine the prevalence of infection by G. vaginalis in HIV/AIDS women and associated factors.
Methods: Sectional study (2009-2011) of women infected with HIV/AIDS in AIDS clinic, Amazonas, Brazil. A questionnaire was composing for demographic, behavioral and clinical variables. Exudate collected from the bottom of vaginal fornix for diagnosing G. vaginalis by Gram stain and cervical samples for HPV/Capture Híbrida2v2 and cytology test. Analysis included frequency distribution, median and interquartile range/IQR. Prevalence of infection was estimated by the presence of positive test (95%CI). Associations test, Chi-square. The study was approved by the Ethics in Research Committee (1962-2009/FMT-HVD).
Results: 333 (89.03%) of 374 women were included in the study. G. vaginalis was detected in 121 (36.3%) cases. Of this total, 75 (67.0%) were coinfected with HPV, 14 (12.5%) had cervical intraepithelial neoplasia grade I (CIN) and 1 (0.9%) CIN-II/III, 66 (56.4%) had viral load HIV-1 >1,000 copies/ml (p-value = 0.005). The most frequent age group 30-39 years (51/42.1%), median: 32 (IQR-38/27), 62(51.2%) had more than 9 years of education, 60 (49.6%) were married, 67 (55.4%) had income of 1 BMI, 108 (89.3%) were non-smokers, 62 (51.7%) had their first sexual intercourse with age >16 years, 82 (81.2%) used condoms with their partners and 81 (66.9%) as a contraceptive method, 20 (16.7%) were sex workers, 79 (67.0%) had anal sex practices and 4 (3.4%) homosexuals, 73 (60.6%) had vaginal discharge, 62 (51.2%) vaginal itching and 68 (56.2%) pelvic pain, 34 (28.3%) had CD4+ counts between 201-349 cells/mm^3, 61 (50.8%) had AIDS.
Conclusions: Infection with G. vaginalis in HIV/AIDS women shows their susceptibility to genital infections through sexual transmission. Co-infection by HPV, and presence of CIN, reinforces the urgent need for specific prevention of STD in this population.
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WP 171
ASSESSING FACTORS TO INCREASE UPTAKE OF TESTING FOR SYPHILIS AND HIV IN MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN IN LIMA, PERU. 2013

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Background: Syphilis, HIV, and co-infection risk is high in men who have sex with men (MSM) and transgender women in Peru. Enhanced control and prevention can be accomplished through increased testing. Conjoint analysis is an innovative method for systematically estimating consumer preferences across discrete attributes and has recently been utilized in academic research. We aimed to identify factors associated with testing preferences for HIV and syphilis infection among MSM and transgender women in Peru.
Methods: We created 8 hypothetical test profiles varying across six dichotomous attributes: cost (free vs. $4), accuracy (no false positive vs. false positive), time-to-result (20 minutes vs. 1 week), blood draw method (finger prick vs. venipuncture), number of draws (1 vs. 2), and test type (rapid vs. laboratory). After informed consent, participants were asked to rate each hypothetical test using Likert preference scales. Ratings were converted to 100-point preference scores; higher scores suggest increased preference. An impact score was generated for each attribute by taking the difference between the preference scores for the preferred and non-preferred level of each attribute.
Results: We recruited 107 MSM and transgender women over 18 years of age from two STD clinics in Lima, Peru in 2013. Scores ranged from 49.07 (SD=33.63) to 82.48 (SD=23.09). Accuracy (no false positives) had the highest impact on testing preference (impact score=19.33, SD=26.51, p<.0001), followed by cost (free) (impact score=10.92, SD=19.50, p<.0001), and time-to-result (20 minutes), impact score=9.05, SD=17.83 SD=, p<.0001). Impacts of other testing attributes were not significant.
Conclusions: HIV and syphilis testing preferences for a high-risk group in Peru prioritized accuracy, cost and timeliness. Implementing an accurate and low cost rapid testing strategy for HIV and syphilis could improve screening uptake and accessibility of testing to accelerate time to treatment.
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WP 172
TEACHING MORE OR TEACHING WHAT MATTERS? WHAT IS IMPORTANT IN SCHOOL-BASED SEXUALITY EDUCATION IN PERU?

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Background: Comprehensive high quality school-based sexuality education is a powerful tool for young people to understand the physical, social, and emotional changes of adolescence, know their political rights, learn to be active citizens, make healthy choices, and prevent sexually transmitted infections (STIs) and unwanted pregnancies. Peru's Ministry of Health agreed to a regional mandate for school-based sexuality education in 2008.
Methods: Quantitative data from a representative sample of 2,053 high school students aged 11-19 years-old [mean 14.2 years], from 8 geographically diverse cities in Peru was collected in 2007. Students completed self-administered surveys regarding their opinions of sexuality education and a knowledge quiz on essential sexuality topics. The knowledge quiz score was dichotomized into high (≥70%) and low knowledge (<70%). Chi-square tests were done to examine the relationship between student opinions regarding sexuality education and their knowledge. Multivariate logistic regression was done to adjust for confounding variables.
Results: In the bivariate analysis, student report that sexuality education was important was associated with high knowledge, compared to those who did not think it was important (42% vs. 32%, p<0.001). In the multivariate analysis, perceiving that sexuality education was important continued to be significantly associated with high knowledge (OR=1.37, p=0.002). Other significant variables were older age (OR=1.18, p<0.001), having been taught more essential sexuality education topics (OR=1.04, p=0.003) and reporting more sexuality education class exposure (OR=1.08, p=0.03). Sex and city were not significant.
Conclusions: Perceiving that sexuality education is important was strongly associated with improved knowledge. Involving young people as key stakeholders in the development of sexuality education curriculum may result in greater perception of importance. These are valuable considerations as Peru reexamines its school-based national sexuality education program.
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WP 173
ASSOCIATION BETWEEN PERCEIVED PEER SEXUAL ACTIVITY AND PRECOITAL BEHAVIORS AMONG ADOLESCENTS IN LIMA, PERU

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Background: Knowing the profile of adolescents who have precoital behaviors and the influence of the perception of peer sexual activity will help interventions to postpone sexual initiation and prevent pregnancy and STIs. We hypothesize that the perception of peer sexual activity is associated with precoital behaviors in adolescents 15-17 years old living in a low-income area of Lima.
Methods: This is a cross-sectional study with 300 adolescents. The dependent and independent variables are precoital activity and perceptions of sexual activity in peers, respectively. Confounding variables are: age, sex, and educational level. We performed descriptive, bivariate analyses and multivariate log binomial regression.
Results: We included 240 participants, 130 females and 110 males aged 15 (36.3%), 16 (32.9%) and 17 (30.8%). 61.7% (n=148) had engaged in precoital behaviors. From this group, 85.9% perceived that at least some of their peers were sexually initiated. The perception that most peers had previously had sex was greater in adolescents reporting precoital activities (15.2% vs 12.2%). The perception of peer sexual activity was associated with precoital activities (about half of peers: OR=3.9, 95% CI=1.9-7.7, p< 0.001; most peers: OR=3.4, 95% CI=1.3-8.5, p= 0.009). This association was still present after adjusting for sex (about half of peers: OR=3.6, 95% CI=1.8-7.5, p= 0.01; most peers: OR=3.5, 95% CI=1.3-9.3, p= 0.001). Age and educational level were not associated with precoital activities.
Conclusions: Perception of an active sexual life in peers is associated with practicing precoital activities in adolescents aged 15-17 years living in low-income Lima, Peru.
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WP 174
HEPATITIS B VACCINATION AMONG FEMALE SEX WORKERS IN IN TWO LARGE CITIES IN CENTRAL BRAZIL

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Background: Female sex workers (FSWs) are at high risk for infection with hepatitis B virus (HBV) despite infection being vaccine preventable. In Brazil, this vaccine has been available free of cost for female sex workers (FSWs) since the 1990s. However, there is no data on HBV vaccination in this population to subsidize health professionals to plan a vaccination strategy to this target population. The aims of this study were to evaluate the immunization status and compliance with full hepatitis B vaccine scheme among FSWs in Central Brazil.
Methods: Between June 2009 and june 2010, a total of 721 FSWs were interviewed face-to-face and screened for HBV markers (anti-HBc total and anti-HBs) by ELISA. Hepatitis B vaccine was offered to all women susceptible to HBV in their workplace using outreach strategies. Anti-HBs antibodies were detected after the third vaccine dose.
Results: Of 721 FSWs, 27.6% had serological evidence of previous hepatitis B vaccination. The majority of them were aged 18–25 years. 434 FSWs were susceptible to HBV infection, and 389/434 accepted the first vaccine dose. The second and third vaccine dose was administered in 249/389 (64%) and 146/389 (37.5%) women, respectively. In 105 women, blood samples were available for quantitative detection of anti-HBs antibodies, and 92.4% responded to hepatitis B vaccine. Changes of workplace and moving to another city were the main reasons for no compliance with full scheme.
Conclusions: Despite of availability of hepatitis B vaccine for at-risk population, vaccine coverage remains suboptimal. The low frequency of FSWs who received full vaccine scheme despite of high compliance with the first dose, highlights the need of a HBV vaccination program coordinated among venues frequented by sex workers in order to guarantee they receive the full vaccine scheme.
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WP 175
PREVALENCE OF *CHLAMYDIA TRACHOMATIS* INFECTION IN WOMEN AGED 14-25 YEARS: A SIMULATION BASED SCREENING PROGRAM IN THE BRAZILIAN AMAZON REGION

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Background: According to the World Health Organization (WHO), *Chlamydia trachomatis*(CT) is the most prevalent bacterial sexually transmitted infection (STI). It is usually asymptomatic and it can lead to pelvic inflammatory disease and infertility in women with untreated CT infection. Although chlamydia screening programs undertaken in a range of countries since 2005, and CT test by hybrid capture is available by Brazilian Health System, there is no screening program or a simple screening strategy for sexually active youngers women in Brazil. The present abstract aims to estimate the prevalence of CT infection in female users of primary health service without STI symptoms in Manaus.
Methods: A based screening program was simulated in 22 health clinics of primary public health service in women aged 14-25 years, from an urban area of Manaus in the Amazonas state. After women were given informed consent, they were interviewed about demographic and sexual behavior characteristics. A pelvic examination was performed using Papanicolau test and endocervical swabs specimens were collected for use in the CT test by health workers. Testing for CT was carried out by hybrid capture/DIGENE (HC2 CT-ID DNA Test, Version 2.0, Qiagen) at Fundação Alfredo da Matta.
Results: From October 2012 to October 2013, 1196 women were tested for current Ct infection. The prevalence of Ct infection was 12.4% (145/1165).
Conclusions: The results presented here are preliminary but until the moment the prevalence of Ct infection was superior to those found in the same area in 2005 which the prevalence for pregnant women (asymptomatic control group) and women with sexually transmitted disease (STD) were 11.9% and 10%, respectively. Active detection of infection and early treatment are crucial strategies to detect people with an asymptomatic infection and to reduce the transmission, the sequels in terms of reproductive morbidity and the cost for tertiary care service.
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WP 176
MISSED OPPORTUNITIES FOR HIV DIAGNOSIS WHEN USING 3RD GENERATION RAPID POINT-OF-CARE HIV ANTIBODY TESTING

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Background: Rapid point of care testing (R-POC) has been widely implemented and accepted by healthcare workers and populations at high risk for HIV infection. Most screening programs are based on 3rd generation R-POC technology, with an unknown amount of false negatives
Methods: We conducted an observational study to understand the syphilis and HIV epidemic among men who have sex with men (MSM) in Lima, Peru. Blood samples were collected and tested for HIV infection using an algorithm that included an initial 3rd generation HIV antibody R-POC (Determine, Alere Medical Co, Japan). Subsequently, all samples were re-screened using a 4th generation Ag/Ab HIV EIA serum test (Genscreen ULTRA HIV Ag-Ab, Bio Rad, Redmond, WA). All positive results were confirmed using Western Blot (WB) (Genetic Systems HIV-1 Western Blot, BioRad, Redmond, WA). R-POC results were provided to participants along with post-test counseling and referral the same day of testing, and Enzyme-immunoassay screening and Western Blot confirmatory results were delivered two weeks later

Results: Of 172 participants tested for HIV, 40 (23.3%) were positive using the 3rd generation R-POC HIV test and 45 were positive using the 4th generation EIA test (27.3%). Four of those 7 3rd generation R-POC negative/4th generation EIA positive participants had negative HIV WB tests; 1 was indeterminate on WB. HIV EIA testing increases HIV case detection by 10% when used as a second screening test
Conclusions: In high-risk populations samples tested for HIV antibody based on 3rd generation R-POC should be screened using a 4th generation assay, to avoid false negatives due to the window period. New confirmatory algorithms are needed
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WP 177
ASSESSMENT OF UNPROTECTED SEXUAL PRACTICE AND ASSOCIATED FACTORS AMONG PEOPLE LIVING WITH HIV AT ART CLINICS OF PUBLIC HEALTH FACILITIES OF DEBRE ZEIT TOWN, EAST SHEWA, ETHIOPIA

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Background: Magnitude of unprotected sexual practice among PLWHA is generally high in African countries. It can have a serious public health impact which is a potential of transmitting HIV to another individuals thereby increasing new HIV infections and exposing those people living with HIV/AIDS (PLWHA) practicing it to new variant of HIV which can result in super infection and treatment failure. Understanding the practice in Ethiopia will have public health significance.
Methods: Institution based cross sectional study design with internal comparison was used and data was collected using a structured questionnaire. 667 PLWHA were included in this study. Systematic random sampling technique was used. Analysis was done using SPSS for windows version 15. Univariate, bivariate and multivariate analysis were performed to see association between different factors and unprotected sex.
Results: Magnitude of unprotected sexual practice among PLWHA in the study area was found to be 22.2% with 95% CI: (19%, 25.4%). For this unprotected sexual practice four independently associated factors were identified. These are being female with AOR=2.103 (1.135, 3.895), being divorced/widowed/separated with AOR=4.892 (2.071, 11.558), length of stay with the current partner for ≥ 49 months with AOR=3.255 (1.855, 5.714) and not discussing or partly discussing about safe sex and condom use with sexual partner with AOR= 17.105 (8.918, 32.808)
Conclusions: Still high proportions of people living with HIV/AIDS were found to engage in unprotected sex. Hence continuous counseling and health education by health professionals and counselors on how to avoid unprotected sex and on how to enhance discussion about safe sex and condom use with their sexual partner should be given for PLWHA during their follow up care. Different health education materials should be prepared and distributed to PLWHA in the study area to make them aware of problem of unprotected sex and way of preventing it.
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WP 178
STUDIES ON PREVALENCE, CO-INFECTION AND ASSOCIATED RISK FACTORS OF HEPATITIS B VIRUS (HBV) AND HUMAN IMMUNODEFICIENCY VIRUS (HIV) IN BENUE STATE, NIGERIA

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Background: Benue State in Nigeria is facing growing adult morbidity and mortality from HIV/AIDS and other sexually transmitted diseases**.** Prevalence of HBV and HIV singly and concomitantly as well as the influence of some risk factors on the spread of HBV and HIV in some study groups was determine in Benue State.
Methods: A total of 1535 serum samples was drawn randomly from consented volunteered participants and analyzed by ELISA (Kits- Diagnostic Automation/cortez Diagnostic, USA) for HBsAg. Antibodies to HIV 1 and 2 were detected in sera using Determine(Inverness Medical, Japan) and HIV1/2 Stat Pak test strips. Data were analysed in SPSS version 20.0 and Chi square test was used to compare relationships.
Results: One hundred and eighty four (12.0%) had HBV current infection, 244 (15.9%) had HIV but 42 (2.7%) had both HBV and HIV infections. The two infections were strongly associated with each other (P=0.006) and each infection had a significant relationship with the groups studied (P=0.001 and P=0.000 for HBV and HIV respectively). Our study identifies the drivers of HIV infection in Benue State to include, being a divorcee/having a separated marriage (P=0.000), Alcoholism (P=0.007), smoking (P=0.000), blood transfusion (P=0.000) or surgery (P=0.001). Awareness of the occurrence of HIV infection was inversely associated (P=0.000) with the prevalence of HIV infection in the study area.
Conclusions: Programmes targeting behavioural change should not be restricted to major towns but should reach the hinterlands.
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WP 179
CHLAMYDIA TRACHOMATIS INFECTION IN ASYMPTOMTIC PREGNANT WOMEN IN NORTH INDIA AND UTILITY OF POOLED URINE SAMPLES FOR SCREENING

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Background: Urogenital infections by *C. trachomatis* (CT) are the most prevalent STD. In women, infections are mostly asymptomatic (70-80%) and thus remain undiagnosed but have potential long-term complications. The aim of this study was to screen asymptomatic pregnant women for *C. trachomatis* infection and whether pooling of non invasive urine is effective for screening this infection.
Methods: First catch urine samples were collected from 1000 asymptomatic pregnant women having gestational age less than 24 weeks attending the Antenatal Clinic at PGIMER, Chandigarh from July 2010 to June 2012. The pooled urine samples (5x 200 pooled specimen) were tested for presence of CT by Amplicor CT PCR kit (Roche Diagnostic System) and positive results were further tested separately on each urine sample. Direct fluroscent antibody test (DFA) assay was used on those urine specimen which were positive by PCR to confirm the results.
Results: Overall *C. trachomatis* infection tested by both PCR and DFA was present in 1.6% (16/1000) women and the mean age was 25.8 years. A total of 200 pools of urine samples were tested and 20 pools were positive for CT. When these pools were tested individually, atleast 20 (10%) samples were positive for CT by PCR but 4 samples were negative by DFA. Pooling saved 72% of reagent costs in our study. The sensitivity and specificity of diagnosis were not much affected by pooling strategy.
Conclusions: *C. trachomatis* infection appears to be relatively low in women delivering in this tertiary care hospital in India as compared to other international studies including pregnant women. In this resource-limited setting, the use of pooling to detect *C. trachomatis* by PCR proved to be a simple, accurate, and cost-effective procedure compared to individual testing.
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WP 180
PREDICTORS OF CONDOM USE AMONG HIV POSITIVE INDIVIDUALS RECEIVING ANTIRETROVIRAL THERAPHY AT A TERTIARY HEALTH FACILITY IN SOUTH WEST NIGERIA

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Background: Unsafe sex among people who know they are infected with HIV has been shown to fuel the spread of HIV through sexual transmission. Knowing the predictors of condom use among HIV positive individual will help to identify areas where intervention is needed to promote safe sex. This study aimed to identify the predictors of condom use among HIV positive individuals receiving care in a tertiary health facility in south west Nigeria.
Methods: A cross-sectional study of 578 patients enrolled at the facility comprehensive care and treatment programme was conducted. Data was collected using a semi-structured interviewer administered questionnaire. Associations were explored with the chi square test and predictors of condom use were determined using logistic regression analysis at 5% level of significance.
Results: The mean age of patients was 38.6+9.6 years, more than half (66.6%) were females, only 7.1% had no formal education, 58.7% were currently married, 22% were unemployed. In all, 427(73.9%) were sexually active out of which 324(75.9%) used condom. Spouse refusal accounted for non-condom use among13.6% of sexually active respondents. A slightly higher proportion of males 141(84.4%) used condom (p=0.01). Use of condom was by 81% of those with tertiary education (p=0.002), 84.5% of singles utilized condom (p<0.001), and 90% of patients with more than one sexual partner (p=0.001).The significant factors predicting condom use were: male sex [OR:

2 (1.1- 3.3)], primary education [OR: 2.6(1.02-6.4)], secondary education [OR: 3.7(1.5-9.2)], tertiary education [OR: 4.8(1.8-12.4)] and being single [OR: 2.8(1.02-7.9)].
Conclusions: Our findings support the evidence of unprotected intercourse among HIV positive individuals especially those without formal education and females. Inconsistent use of condom was also identified. These suggest aggressive intervention to promote condom use.
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WP 181
BEHAVIORAL AND SOCIOECONOMIC RISK FACTORS ASSOCIATED WITH REDUCED SUSCEPTIBILITY TO CEFTRIAXONE AND RESISTANCE TO PENICILLIN AND TETRACYCLINE IN *NEISSERIA GONORRHOEAE* IN SHANGHAI

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Background: *Neisseria gonorrhoeae*infection is the most prevalent bacterial sexually transmitted infection globally. Resistance to the last line of single dose recommended treatment has ushered in a new era of potentially untreatable gonorrhea. The goal of this research was to identify risk factors for antibiotic resistant gonorrhea infection in a highly resistant population in Shanghai, China
Methods: Epidemiologic data and biological samples were collected from symptomatic male patients and their presenting partners with laboratory confirmed gonorrhea at the Shanghai Skin Disease and STD Hospital during two periods – 2004-2005 and 2008-2011. Multi-level regression models were built to identify socioeconomic and behavioral risk factors associated with reduced susceptibility to ceftriaxone and resistance to penicillin and tetracycline, and mechanisms of resistance to penicillin and tetracycline.
Results: There was a decrease in overall (P<0.001), chromosomal (P<0.001), and plasmid-mediated (P=0.01) penicillin resistance from the first to second study period. There was a decrease in chromosomal resistance (P=0.01) and an increase (P<0.001) in plasmid-mediated resistance to tetracycline between the first and second periods of study. Male gender (P=0.03) and older age (P=0.01) were associated with reduced susceptibility to ceftriaxone. Male gender (P=0.03) and alcohol use (P=0.02) were associated with increased odds of overall tetracycline resistance. Male gender (P=0.04) was associated with increased odds of chromosomally-mediated tetracycline resistance and alcohol use (P=0.02) was associated with increased odds of plasmid-mediated tetracycline resistance. Men with incomes from 2200-5500 Yuan in the last 3 months had decreased odds (P<0.001-0.02) of plasmid-mediated resistance to tetracycline.
Conclusions: This study is one of the first to use rigorous statistical modeling to identify socioeconomic and behavioral correlates of reduced susceptibility, resistance, and mechanisms of resistance of *N. gonorrhoeae* to several specific drugs. The associations identified may contribute important information for gonorrhea prevention efforts in Shanghai, where levels of AMR are high.
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WP 182
PREVALENCE AND COINFECTION OF HUMAN IMMUNODEFICIENCY VIRUS, HEPATITIS B VIRUS AND HEPATITIS C VIRUS IN MABUDI RURAL COMMUNITY OF PLATEAU, STATE, NIGERIA

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Background: 33.3m people were estimated to be infected with HIV globally. Out of which 22.5m were in sub-Saharan Africa and about 3m in Nigeria. In Plateau state, there was a continuous decline in HIV prevalence rates from 11.3%-3.35% (2001 to 2008) recorded and a sharp rise to 7.7% in 2010. Hepatitis B/C virus infection with a prevalence of 15.1% and 6.0% are endemic in Nigeria which could lead to chronic liver cirrhosis and cancer with high mortality and morbidity rates.
Methods: After counselling and obtaining consent from 250 participants, they were screened for HIV, HBsAg and Anti-HCV respectively.The use of WHO/CDC national algorithm of serial testing was employed for HIV antibody.Determination of HBsAg and Anti-HCV were done using rapid test kits and results recorded.
Results: Of the 250 screened specimens,6(2.4%) were positive for HIV, 55(22.0%) for HBsAg and 31(12.4%) for Anti-HCV respectively. Coinfection rates of HIV/HBsAg/Anti-HCV was 1(0.4%),HIV/HBsAg was 2(0.8%) and HBsAg/Anti-HCV was 6(2.4%).For HIV, both sexes were equally affected with prevalence of 1.2% each, while for HBsAg the males showed higher prevalence of 34(13.6%) than the females 21 (8.4%).However, the prevalence of Anti-HCV was higher in the females with 18(7.2%) than in the males 13(5.2%).The highest prevalence rates of HIV/HBsAg/Anti-HCV were observed in the age group of 20-39(2.0%);10-39(17.6%);30-59(8.4%). Significant P. values of 0.07, 0.9 (1.0 appx) and 0.02 for HIV, HBsAg and Anti-HCV were observed in this study.
Conclusions: From this study, the Langtang South HIV prevalence rate has dropped from 9.7% reported in 2008 to 2.4% which is lower than the National HIV prevalence rate reported for rural settings in North Central Zone of Nigeria. This may be attributed to numerous interventions, policies, actions towards universal access to HIV prevention, treatment and care. However, the high rates of Hepatitis B/C virus may warrant focusing on adequate care and treatment of infected individuals.
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WP 183
CAN A FREE, OPEN ACCESS SEXUALLY TRANSMITTED DISEASE (STD) SERVICE MEET THE NEEDS OF PATIENTS? A NATIONAL SERVICE EVALUATION OF ACCESS TO CLINICS IN THE UK

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Background: Any person who suspects they have a sexually transmitted disease (STD) can attend any of a nationwide network of STD clinics for free, obtain confidential diagnosis and treatment in the UK. Monitoring access to clinics is problematic as it is uncertain whether people attempt to obtain an appointment yet cannot be accommodated, which has implications for onward transmission of STDs. In 2001 a service evaluation of access to clinics demonstrated that only 78% of clinics were able to see patients with 'urgent' symptoms within 48 hours. Following this, Government resources and performance targets were put in place resulting in improvements such that by 2010 100% of 'urgent' cases were offered appointments within 48 hours. Since then, these targets have been removed creating doubt that services can now meet patient demand.
Methods: By using a 'mystery shopping' technique, this service evaluation assessed access for patients to STD clinics in the UK compared to the expectations of the lead clinicians of those clinics. Trained researchers contacted all GUM clinics in the UK, posing as patients with urgent clinical problems and requested an appointment to be seen as soon as possible. Data collected was compared with data from the postal questionnaire to lead clinicians. Data was made anonymous and analyzed using SPSS.
Results: Preliminary data suggests that 90% of clinics offered patients a time to be seen within 48 hours although fewer were able to offer a specific appointment time. This demonstrates a shift towards 'walk-in' rather than 'booked appointment' services and may mask an extended actual waiting times within clinics once a patient actually attends. Full data will be presented at the conference.
Conclusions: Monitoring access to STD services by 'mystery shopping' is a valid tool and has led to improvements in service for patients.
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WP 184
UPTAKE OF STI SERVICES IN LAGOS STATE

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Background: Literature confirms that health-seeking behaviour in developing countries indicate that many with symptomatic STI seek treatment

in the informal/private sectorand will only receive formal public healthcare whenthese fail. Study objectivewas to determine STI patients patronage of healthcare services in Lagos state with a view to improving practice of the most patronized source.
Methods: Survey of casefiles in hospitals (secondary and tertiary) was carried out using a modified WHO/INRUD prescribing indicator form to determine level of patronage and mode of treatment. From community pharmacies list, a sample size of 179 pharmacies was determined from 10 zones which were randomly selected. Pharmacists were administered a validated questionnaire to obtain information on level of patronage and knowledge/practice of STI management. An educational intervention, preceded by a pre-test,by means of face-to-face seminarwascarried out for pharmacists usingWHO standardized syndromic management training pack. Data was collected four(4) and twelve(12) weeks post training using the original pre-test questionnaire and analyzed. P<0.5 was taken as significant.
Results: One tertiary and 8 secondary hospitals, and 156 pharmacies (87% recovery) were involved in study.The result shows that in the hospitals, STI syndromic approach is the mode of treatment used. About 91 patients use the STI clinic in the tertiary hospital while374 patients use secondary hospitals per year. About 572clients present in pharmacies with complaints of STIs per year and statistically significant difference exists in pharmacists' knowledge/practice rating and intervention status. Post-hoc determinations showed that significant difference were between pre-test and both post intervention times. Respondents' definition, knowledge about, use of and possession of the charts improved significantly post intervention.
Conclusions: It can be concluded that the level of patronage of hospitals by STI patients is low. Community pharmacists can provide appropriate STI management to patients using the syndromic approach if trained & monitored. It is recommended that relevant regulatory bodies should provide an enabling framework for this.
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WP 185
KNOWLEDGE OF SEXUALLY TRANSMITTED DISEASE RISK AMONG MEN WHO HAVE SEX WITH MEN IN ELDORET TOWNSHIP, KENYA

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Background: Sexually transmitted diseases (STD's) are ones off the most frequent among infectious diseases. In Pathogenesis of the disease that can be transmitted during the anal Sex practices among MSM. The task of the studies was to show risk awareness and STD's Knowledge among MSM
Methods: To describe the problem the studies were done on a Cohort of 100 Men, of which 60% are homosexual, and 28% are bisexual. The survey was carried out by the use of MSM Website. The research was based on personal Interviews and questionnaires with questions about knowledge of STD's
Results: Almost half of the men participating in the studies considered the level of their knowledge of STDs infection prevention is Very Good. About 85% reported that they have neve suffered with STD's before.55% of the Men had problems to define infection risk in different sexual practices correctly. The biggest problem for them was to connect the typical symptoms with particular disease. However, almost all participants assumed any STDs symptoms appearance as an indication for immediate medical consultation.
Conclusions: Although the prevailing part of the participants were convinced to be well-informed about STD's, their Knowledge was not very deep on infection risk
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WP 186
SEX PARTNER PRESENTATION AND SEXUAL HEALTH BEHAVIORS AMONG SHANGHAI STD CLINIC CLIENTS

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Background: Because infection with bacterial STIs can facilitate transmission of HIV, and given the high incidence of *Neisseria gonorrhoeae* infection in China, together with high levels of antibiotic resistance, prevention and control of STIs in China is of particular importance. Along with primary prevention practices, partner notification is an important strategy for controlling the spread of gonorrhea. We aimed to identify predictors of partner presentation and condom use among a sample of individuals with laboratory diagnosed gonorrhea infections.
Methods: During two periods—from 2004-2005 and 2008-2011—epidemiologic and demographic data were collected from a cross-sectional sample of symptomatic male patients who tested positive for gonorrhea at the Shanghai Skin Disease and STD Hospital. Partners who subsequently presented and consented to participate were also included. Logistic regression models with a generalized estimating equation link were used to identify predictors of partner presentation and condom use among this population.
Results: 567 index male clients were interviewed and provided information on 765 female partners. Of these, 107 female partners were subsequently brought to treatment, resulting in a brought-to-treatment index of 0.19. Men who had non-temporary partnerships (P<0.001), engaged in intercourse with the partner in the preceding week (P<0.001), and had experienced symptoms for more than three days (P=0.01) were more likely to bring their partner to treatment. Characterizing the relationship as non-temporary (P<0.001), being under 35 (P<0.001), and age at sexual debut (p=0.04) were positively associated with "ever" using condoms as compared to never.
Conclusions: Relationship type, recentness of sexual contact, and duration of symptoms were strongly predictive of bringing a partner to treatment in a Shanghai STI hospital. Further, identification of the apparent association of condom use with stable versus temporary relationships, and among younger versus older age groups, can help tailor education campaigns to the audiences most in need among this population.
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WP 187
SEXUAL AND REPRODUCTIVE HEALTH ISSUES IN PERSONS WITH DISABILITIES: A SITUATIONAL ANALYSIS FROM THE INDIAN SUBCONTINENT

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Background: Disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. About 80% of disabled persons live in developing countries, and constitute the most stigmatized sections of society with deprived sexual and reproductive health services. Sexual health is fundamental to the physical and emotional well-being of individuals, but sadly, is excluded from outreach efforts, in persons with disabilities. The huge paucity of data in this field, prompted this study, which is a situational analysis of the sexual and reproductive health issues of people with disabilities.
Methods: A cross-sectional survey was made on people with disabilities, attending various out/in patient facilities of a large tertiary care hospital in New Delhi, India. A structured, pre-tested questionnaire, was used on 100 subjects, to assess their knowledge, attitude and practices towards sexual and reproductive health issues. Samples were collected from consenting individuals for diagnosis of various STIs, when relevant. Statistical analysis was done to elicit association between various variables.
Results: Most subjects were 15-30 years, and unmarried (57%). Disabilities included- sensory and motor (52), purely motor (29), purely sensory (9) and cognitive (10). Among the subjects, 64% were unsure of the sexual impact of their disability, while 9% affirmed that it did affect their sexual health. Contraceptive usage was 33%, with condoms being the commonest, followed by intra-uterine devices. There was a statistically significant relationship between educational status and use of contraception, knowledge of HIV prevention and mode of spread of HIV.
Conclusions: This is a pioneer study on a grossly neglected issue in India. The major hurdles to quality sexual health identified were in contraceptive usage, negligence by partner following disability and fertility problems. There is a dire need to address the sexual and reproductive health issues of persons with disabilities, to achieve the universal WHO goal of "Health for All."
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WP 188
PREVALENCE OF STIS AMONG FEMALE SEX WORKERS IN AGADIR IN THE SOUTH OF MOROCCO

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Background: In 2011, the MOH in Morocco conducted a study to determine the prevalence of STIs and HIV among FSW in Agadir. Interest in STIs began in the 90s. In fact, Morocco has implemented the syndromic approach for the management of STIs since 1998. Morocco has areas with concentrated and low level epidemic. Some data exist on STI and HIV prevalence among FSW and they show that in Agadir these prevalences are Higher than some other cities.
Methods: A sample of 372 FSW was recruited in Agadir using the Respondent-Driven Sampling (RDS). For each recruit, a questionnary was administred and genital and blood samples were collected. Culture was performed for identification of *Neisseiria gonorrhoeae* (GC) and *Trichomonas vaginalis* (TV). The genital samples were also analysed by PCR to detect *Neisseiria gonorrhoeae* and *Chlamydia trachomatis* (CT). The HIV and Syphilis status were screened by rapid tests and TPHA-VDRL using WHO algorithms.
Results: The findings shows that 11.6% of women have a vaginal infection due to TV. Cervical infection was found in 26.2% of FSW with 11.7% due to GC and 22.4 % due to CT. The serology tests shows that 5.1% of FSW were tested positive for HIV and 21.4% were tested positive for Syphilis.
Conclusions: The prevalence of STIs among FSW in Agadir has increased significantly compared to the results obtained in another study conducted in 2007, among FSW attending basic health centers for vaginal discharge and/or abdominal pain and which has showed that 7,1% of cervical infections were caused by GC, 19,1% by CT , 1.5% of FSW were infected with HIV and 13.8% infected with Syphilis. These findings have confirmed the need for the establishment and expansion of programs targeting FSW in Agadir and helped the National AIDS Program (NAP) to strengthen the strategy of prevention and control of STIs in this region.
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WP 189
VIOLENCE: A MAJOR PROBLEM AMONG FEMALE SEX WORKERS IN NIGERIA

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Background: Female sex workers (FSWs) continue to harbor disproportionately the HIV burden in Nigeria. Yet knowledge about one of the major contributors to transmission of the virus among them – violence and abuse – and the actions they take when exposed to such is not adequately known.
Methods: A cross sectional study among 305 brothel based female sex workers in Abuja, Nigeria was conducted to assess their knowledge on violence against women and the actions they took whenever they were involved in such violence. FSWs were recruited into the study using a snowball approach. Univariate and Bivariate analysis was done using the Statistical Package for the Social Sciences (SPSS).
Results: Significant proportion (62% - 78%) of FSWs identified rape, verbal abuses, and taking women as sex objects as VAW actions. Fewer (< 50%) identified female circumcision as well as early marriage as forms of VAW. Over 50% of the FSWs interviewed have experienced some form of violence in the 6 months preceding the survey. They identified their clients (65%), co-sex workers (9%) and strangers (8%) as the main perpetrators of the violence. Sexual (44%) and Physical violence (39%) were most prominent violence experienced by the FSWs though other forms of violence (economic (16%) and psychological (15%)) were also recorded. Clients' refusing to use condoms (55%) was the most common form of sexual violence recorded by the FSWs. Most (68%) FSWs did nothing whenever they encountered a violent action.
Conclusions: Violence is a major problem among FSWs in Nigeria and the high proportion of men refusing to use condoms during sexual intercourse violates the rights of the sex workers and may also be a propagator of HIV among them. FSWs were likely to do nothing whenever they encountered violence at their work and would rather report to their brothel proprietor than report to the police.
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WP 190
HIV TESTING RESULTS FOR ADULTS IN LVIV, UKRAINE 2005 TO 2011: WHERE IS THE EPIDEMIC?

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Background: Ukraine, with a population of 45 million, ranks among the highest prevalence of HIV of any European country. Much of the epidemic has been described in higher-incidence areas of Eastern Ukraine, but less is known about Western Ukraine. We present here an analysis of epidemiological data collected on HIV testing categories from the L'viv Oblast over a period of 7 years.
Methods: HIV testing data was collected by epidemiologists at the L'viv Regional AIDS Center (LRAC) from 2005 to 2011. Numbers were broken down into categories and include total number tested within each category as well as number testing positive.
Results: Between 2005 and 2011, the results of 718,953 HIV tests were recorded at LRAC. Of these, 384,675 (53.5%) were conducted on pregnant women and 176,622 (24.6%) on individuals donating blood. In this seven-year period, a total of 4,419 positive tests were recorded for all categories. The largest proportions of positive tests were in the following groups: prisoners (1,083 out of 4,419; 24.5%), people tested for clinical indication (963; 21.8%), IDUs (651; 14.7%), and people tested anonymously (532; 12.0%). During this period, there has been more than a 32-fold increase overall in testing rates for "individuals screened for HIV prevention." Only 46 individuals identified as having had homosexual contact with an HIV-infected person, and 4 of these tested positive.
Conclusions: This study suggests that efforts at preventive screening for HIV have increased in this region, but that further research is needed to understand and expand the testing options for most at-risk populations. In particular, the incarcerated population is a high priority for targeted testing, and MSM are likely an underrepresented risk category.
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WP 191
DRIVERS OF HIV/AIDS AMONG CAMEROONIAN YOUTH: A REVIEW

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Background: HIV/AIDS remains a major global health concern and in sub-Saharan Africa the disease is a major cause of death for people between 15 and 49 years. Cameroon has a generalized HIV/AIDS epidemic with a prevalence of 4.5% among the population. About 600.000 people are living with HIV/AIDS as of 2011. Young people with HIV/AIDS become ill and dysfunctional, weakening family and community dynamics. The HIV/AIDS pandemic is particularly devastating in resource-poor environments where people focus more on their daily survival than on health and preventive measures. Understanding the intertwining factors driving HIV/AIDS among Cameroonian youth is essential for planning HIV/AIDS prevention and health promotion interventions. The aim of the article was to review the important factors driving HIV/AIDS among Cameroonian youth**.**
Methods: A literature review was conducted using Medline, Sociological Abstracts and Google Scholar to screen studies related to factors driving HIV prevalence among Cameroonian youth. Bibliographies of retrieved articles were hand-searched and included to highlight important points. Websites of major International organizations and non-governmental organizations were also accessed for inclusion of gray literature.
Results: There is consensus in the literature that socioeconomic inequalities and deprivation, cultural beliefs, health inequities, migratory tendencies, lack of awareness of HIV status propagate HIV/AIDS among youth in Cameroon. The severity and prolonged duration of HIV/AIDS disease in patients increase school drop-out rates among youth, increase job loss and decrease income, increase healthcare cost, stigma and discrimination.
Conclusions: HIV/AIDS prevention inequalities still persist. The involvement of youth in the generation of appropriate preventive messages and programs that create environments conducive to driving down HIV/AIDS prevalence should be prioritized. Socio-economic and cultural realities that influence sexual health should be addressed in changing and improving prevention efforts in the course of the epidemic. Resources should be effectively focused in areas with high disease prevalence and likelihood of new infections.
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WP 192
BARRIERS TO APPROPRIATE GONORRHEA TREATMENT IN CALIFORNIA: A PROVIDER SURVEY

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Background: In August 2012, given concerns about decreasing susceptibility of gonorrhea to antibiotics, CDC changed its guidelines to recommend dual

antibiotic therapy with intramuscular ceftriaxone plus either azithromycin or doxycycline for treatment of gonorrhea. We sought to identify the range of barriers to adhering to current gonorrhea treatment guidelines among California healthcare providers.
Methods: California Project Area (CPA, excludes San Francisco and Los Angeles) surveillance data were analyzed to identify gonorrhea cases with treatment and provider name between October 1, 2012 and March 31, 2013. Non-adherent providers were identified based on reporting ≥2 gonorrhea cases treated with oral cephalosporins or ≥1 case treated with an oral cephalosporin and ≥1 treated with IM ceftriaxone without dual therapy. We conducted a telephone survey to assess barriers to recommended treatment among these providers.
Results: Between October 2012 and March 2013, there were 10,625 gonorrhea cases reported in CPA; 5,220 cases (49.1%) had treatment and provider name available. Among these cases, 3,690 (70.7%) received CDC-recommended regimen, 108 (2.1%) received oral cephalosporins, 765 (14.7%) received ceftriaxone without dual therapy, 136 (2.6%) received azithromycin 2g, and 521 (10%) received other treatment. We identified 27 non-adherent providers and successfully surveyed 17 (63%). The most common barriers reported included concerns about allergic reaction, patient refusal, unaware of updated guidelines, presumptive treatment for chlamydia without repeat dosing for dual treatment, IM ceftriaxone not-in-stock, patient must obtain medication off-site, and reimbursement challenges.
Conclusions: Because of incompleteness of gonorrhea treatment data in the state surveillance system, overall estimates of treatment adherence should be interpreted with caution. However, the barriers to guideline-adherent treatment identified in this survey remain useful in considering potential interventions, such as provider education about treatment when patients are allergic or after presumptive treatment for chlamydia, enhanced communication regarding updated guidelines, and technical assistance with dispensing IM ceftriaxone onsite.
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WP 193
COLLEGE MALES' HPV RISKS, VACCINATION RATES, AND VACCINE PERCEPTIONS

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Background: Limited studies have examined male HPV vaccine rates, including initiation and completion of the series, and there is a gap in understanding factors associated with male vaccination. The purpose of this study was to examine HPV vaccination patterns, and uncover factors associated with vaccination as well as barriers to vaccination in a sample of male college students approximately 3 years post vaccine availability.
Methods: Mixed methods, utilizing a cross sectional electronic survey with open ended questions was distributed to enrolled college males at a large public university in the fall of 2012. Quantitative data included demographics, vaccination rates, and sexual health behaviors. Qualitative data sought to describe the males' perspective for those who had not obtained the HPV vaccination.
Results: Complete data was reported on 735 sexually active males, ages 18-25. Greater than 50% of the sample reported inconsistent or absent condom use and the mean number of lifetime sexual partners was 5.2. Despite this, 93% reported a belief that they were not at risk for sexually transmitted infections. Only 14% of the sample had completed the HPV vaccine series, and 74% had not obtained any dose. Age was significantly associated ($p<.001$) with vaccination, for every year older there was a 35% lower odds of having obtained the vaccine. Condom use was also significantly associated ($p<.008$) and those reporting "always" had a 54% higher odds of obtaining the vaccine as compared to those who report "never" or "sometimes". Four themes emerged in the qualitative data (N=336): lack of awareness and knowledge, barriers for vaccination, belief not at risk, and belief vaccine not for men.
Conclusions: There is a clear disconnect between actual and perceived risks for acquiring HPV, and barriers to HPV vaccination among male college students exist and are persistent 3 years post vaccine availability for men.
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WP 194
CROWDSOURCED ANALYSIS OF GBS PERINATAL DISEASE AS A SEXUALLY TRANSMISSIBLE INFECTION (STI) UNDERSCORES NEED FOR GBS VACCINE AND PATIENT EDUCATION REGARDING GBS AS AN STI TO BE ABLE TO MAKE WELL-INFORMED SEXUAL PRACTICE CHOICES

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Background: Information available to prospective parents states that GBS is not a sexually transmitted disease (STD). Both clarification regarding terminology and patient education that GBS is sexually transmissible are necessary for pregnant patients to make well-informed choices regarding their sexual practices in order to possibly reduce risks of GBS infection in both mother and baby.
Methods: Since 1998 we employed crowdsourcing methods by maintaining an internet-based interest/advocacy sounding board which responded to parents who shared apparent instances of GBS-linked reproductive infections along with "lay" observations/comments and often well-reasoned, documented suggestions regarding GBS disease policies and prevention.
Results: 1) Before their GBS disease experience, even parents who were aware of GBS assumed that GBS was not shared via sexual contact because GBS is not considered an STD. 2) Upon further research after their GBS disease experience, parents learned that GBS can be shared between the GI and GU tracts of couples during sexual contact. 3) Contributors note that a) intrapartum antibiotic prophylaxis (IAP) strategies frequently fail (greater than 60% of early-onset GBS infections occur after GBS NEG maternal screening), and b) a Cochrane Database Analysis calculated a borderline significant benefit ONLY for early-onset GBS disease (CI 0.04-.74, NNT=25).
Conclusions: Contributors offered observations and reasoned suggestions that in practice a) recommended IAP approaches require improvement, b) pregnant patients need to be educated that GBS is sexually transmissible to be able to make well-informed choices regarding their sexual practices to possibly help reduce the risk of GBS disease in both mother and baby, c) pregnant patients need to be educated that intercourse (vaginal, anal, or with new partner) may inoculate the vagina after being screened GBS NEG and that condom usage may reduce any new vaginal colonization, and d) GBS vaccination is much-needed to close the gaps in GBS disease prevention.
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WP 195
TESTING SEXUAL HEALTH MESSAGES THAT PROMOTE BENEFITS AND ACTION STEPS: RESULTS FROM END-USERS

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Background: Existing messages relating to sexual health (SH) are aimed primarily at professional audiences and often disease-focused. To encourage the public to take action around SH and to promote open dialogue, a positive and holistic message framework was needed. The National Coalition for Sexual Health (NCSH) created draft messages, which were tested with the general public to determine clarity, relevance, appeal, and importance.
Methods: Draft messages in the following domains of SH were developed after review of extant literature and interviews with sexual health experts: benefits, core action steps, and a consumer-friendly definition. Fifty draft messages were refined by NCSH members via a Delphi-like process and tested in group discussions (N=33) segmented by sex, age and sexual orientation, and through an online survey (N=268) with individuals representing a regional cross-section of the adult U.S. population drawn from a national consumer panel database of over three million individuals.
Results: Key benefits of good SH identified by respondents included having positive relationships, feeling good about one's self and having peace of mind, and having a healthy body. Key action steps, which were verified and ranked, included valuing who you are and deciding what's right for you, building positive relationships, and choosing partners who treat you well. Key challenges to achieving good SH included building positive relationships, choosing partners who treat you well, and valuing one's self. Overall, tested messages were received positively by men and women, and across different demographic segments. Differences occurred primarily between men and women. Younger participants were more likely to include concerns about STDs and fertility as priority SH issues.
Conclusions: The NCSH has developed a set of practical, actionable messages that are appealing and effective across multiple segments of the general public.
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WP 196
CHARACTERISTICS OF MEN WITH REPEAT GONORRHEA AND EARLY SYPHILIS CASE REPORTS

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Background: Since 2010, early syphilis (ES) and gonorrhea rates among men have increased in New York State, excluding NY City (NYS). Characteristics of men with repeat STD infections have not been well defined in NYS.
Methods: A retrospective cohort of men with a gonorrhea or ES case reported between January 1, 2006 and December 31, 2012 was identified using NYS surveillance data. Gonorrhea re-infection was defined as an additional infection, reported >14 days after an initial infection. Syphilis re-infection was defined as an additional infection that met the ES surveillance case definition. Surveillance information on sexual orientation is required for ES but not gonorrhea and was excluded from this analysis given the high proportion of gonorrhea cases with unknown status (67%). Descriptive analysis, relative risks (RR) and 95% confidence intervals (CI) were calculated using SAS v9.3.
Results: A total of 21,709 gonorrhea and 1,853 ES cases were reported among 19,440 men during the study period. Among these men, 15,125 (78%) were mono-infected with gonorrhea, 1,434 (7%) were mono-infected with ES; 2,579 (13%) had at least one gonorrhea re-infection (range 2- 17); 220 (1%) had at least one gonorrhea and ES infection; and, 82 (<1%) had at least one ES re-infection only (range 2-5). Compared to men mono-infected with gonorrhea, the risk of gonorrhea re-infection only was greatest among men 10-19 (RR=1.9, CI: 1.7, 2.2) and 20-29 years old (RR=1.4, CI: 1.2, 1.6) and black non-Hispanics (RR=1.9, CI: 1.7, 2.1). Men with at least one gonorrhea and ES infection were less likely to be 10-19 years old (RR=0.6, CI: 0.3, 0.9) or black non-Hispanic (RR=0.3, CI: 0.2, 0.4).
Conclusions: The characteristics of gonorrhea-infected men in NYS differed based on disease of diagnosis at re-infection. Recent statutory changes permitting HIV-STD data sharing will strengthen surveillance assessment of men with syndemic infections.
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WP 197
SEXUAL HEALTH TRAINING AND PRIMARY CARE PROVIDERS: A NEW FRONTIER FOR AN OLD AUDIENCE

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Background: Primary care providers (PCPs) provide sexual health care for high risk populations, including adolescents. With US Health Care Reform, an increase in health insurance enrollment is expected, with more people accessing primary care. Thus, PCPs should be a priority audience for sexual health training. Lack of existing health department (HD) relationships with PCPs; HD inexperience with PCP office operations; PCPs' established sources for medical education and clinical guidelines; and PCPs competing clinical and educational priorities all serve as challenges to HDs and PCPs developing new partnerships for educational initiatives.
Methods: The New York City (NYC) STD/HIV Prevention Training Center (PTC) is a CDC-funded regional training center that addresses clinical providers' STD/HIV educational needs. To expand the NYC PTC's training audience reach to New York State (NYS) PCPs caring for adolescents, the PTC identified a NYS pediatrician "champion" to forge partnerships with the NYS American Academy of Pediatrics (AAP) chapter and Physicians for Reproductive Health (*Physicians*). The AAP NYS chapter and the NYC PTC collaboratively developed an adolescent sexual health webinar series, with five webinars on topics such as creating an adolescent medical home, STD Guidelines, working with LGBTQ-youth and contraception. AAP developed the content and provided pediatrician speakers while NYC PTC supported content development, coordinated registration, and provided CME and CNE credits. *Physicians* hosted the webinar and documented participation. All organizations advertised webinars.
Results: For the 5 live webinars occurring between 11/2/2012 to 4/5/2013, 1,454 registered and 570 (39%) participated. Among the live webinar participants, 196 (34%) self-identified from NYS and 247 (43%) from other states. As of 10/1/13, 423 viewed archived sessions; 136 (32%) self-identified from NYS and 142 (34%) from other states.
Conclusions: Working with a national professional medical organization state chapter is an efficient and effective strategy to reach PCPs for sexual health training and has applications for other locales.
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WP 198
UNDERSTANDING AFRICAN AMERICANS' PERCEPTIONS OF SEXUAL HEALTH: FINDINGS FROM AN ONLINE NATIONAL SURVEY AND IMPLICATIONS FOR HEALTH COMMUNICATION INTERVENTIONS

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Background: Communication interventions have the potential to promote safer-sex behaviors; reduce STD-associated stigma; and confront the glaring racial disparities in the United States. Reframing STD messaging into a broader sexual health context may help achieve these goals, if understandable, acceptable and relevant to affected communities. This research sought to explore African American's understandings of sexual health and perceived sexual-health information needs.
Methods: A national online survey was conducted with 551 African Americans using a nonprobability-based quota sample of eligible individuals. Survey items assessed sexual health definitions (open-ended, qualitative response), perceived importance of 15 predetermined sexual health items, and communication preferences (STD or sexual health messages). Frequencies, means, and standard deviations were calculated for quantitative responses. Qualitative data was analyzed by two researchers using a grounded theory approach.
Results: Among the 535 qualitative responses received, sexual health was most often defined as protection of the physical body, including safe sex, having/not having an STD, or physical health/well-being. Fewer responses mentioned partner communication, testing/treatment, being faithful, or choosing celibacy. Regarding the close-ended responses, most said that HIV testing (90%), STD testing (89%), condom use (89%), thoughtful sexual decisions (86%), avoiding abusive relationships (85%) and partner/provider communication (85%) were very important for staying in good sexual health. Over 80% felt their communities would benefit from information about STDs (86%), HIV (85%), taking responsibility for prevention (87%), partner communication (87%) and respect (87%), getting tested (88%), using condoms (89%), and avoiding unplanned pregnancies (83%). Significant differences emerged by segment. A majority (60%) said they would be more interested in reading about sexual health than STDs.
Conclusions: Findings suggest variations in conceptualizations of sexual health, which may provide an opportunity for prevention efforts. Most respondents agreed that their communities would benefit from sexual health information and preferred a sexual-health (to STD) framing.
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WP 199
OVERCOMING RESISTANCE TO BILLING FOR STD-RELATED SERVICES

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Background: The Knox County Health Department (KCHD) had systems and infrastructure in place to begin billing for STD services. Resistance to initiating billing for STD services persisted among some health department leadership and frontline staff, concerned that charging clients would negatively impact access to care, equity, and clinic volume. To address this, the Region IV STD-related Reproductive Health Training and Technical Assistance Center (CAI) provided technical assistance (TA) to facilitate implementation of billing and fee collection for STD-related services.
Methods: CAI engaged senior clinical leadership to clarify challenges and develop the TA approach. Three 2-hour sessions were delivered: 1) didactic session with KCHD leadership and frontline staff from STD, HIV and FP clinics intended to build a rationale for billing, and share examples of other health departments' experience implementing billing; 2) skills-building session with front-line clinic staff (including scripting and role-playing) on how to discuss billing for services with clients, assess need for confidential services, and obtain insurance information or utilize a sliding fee scale, 3) interactive training with leadership to support development of strategies for leading and

managing changes associated with billing implementation. Next steps were identified and carried out by KCHD's clinical leadership team.
Results: CAI's TA supported the KCHD clinical leadership team in initiating billing. Billing roll out activities included dissemination of communications plans providing information about STD billing processes to staff, clients and community referral partners. Messaging addressed patient confidentiality and ensured provision of services despite clients' ability to pay. Billing for STD services was successfully implemented on October 1.
Conclusions: When implementing billing and reimbursement systems and policies amid concerns about reduced client volume, confidentiality and access to services, targeted TA, including skill building, case examples, and implementation of internal and external communication plans, can facilitate the transition to billing for STD-related services in public health settings.
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WP 200
SEROREVERSION OF NONTREPONEMAL ANTIBODY TITERS AMONG HIV-NEGATIVE PATIENTS WITH AN APPROPRIATE SEROLOGICAL RESPONSE AFTER TREATMENT OF EARLY SYPHILIS

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Background: Following syphilis treatment, nontreponemal antibody test titers usually decline and may become nonreactive over time. However, some proportion of patients will fail to achieve nonreactive titers despite an appropriate serological treatment response. We analyzed data from HIV-negative patients with early syphilis to determine seroreversion rates at 12 months after therapy.
Methods: Data were analyzed from a randomized controlled trial of syphilis treatment among HIV-negative patients age >/= 18 with primary, secondary or early latent syphilis conducted in the United States and Madagascar. Rapid plasma reagin (RPR) titers were obtained at 6, 9, and 12 months after treatment. Seroreversion was defined as a negative RPR after therapy. Seroreversions were determined for patients who exhibited >/= four-fold decline in RPR titers at 6 months after therapy. Bivariable analyses were conducted to assess characteristics associated with seroreversion at 12 months after treatment using odds ratios (OR) and 95% confidence intervals (CI).
Results: Of 333 HIV-negative patients with early syphilis who demonstrated an initial serological response, only 17.1% had seroreversion at 12 months after therapy. The proportion of seroreversion was highest at 37.2% (32/86) among those with primary syphilis, and lowest among patients with secondary syphilis at 10.0% (17/170). In bivariable analyses, males had a higher odds for seroreversion (OR 4.4; 95% CI: 2.0-9.6). Primary syphilis patients had a five-fold higher odds for seroreversion (OR 5.1; 95% CI: 2.3-12.7) compared to those with early latent syphilis. Patients with baseline RPR titers </= 1:32 had a high odds for seroreversion (OR of 13.3; 95% CI: 6.5-27.1) compared to those with titers > 1:32.
Conclusions: Despite an appropriate serological response, only 17.1% of HIV-negative patients treated for early syphilis demonstrated RPR seroreversion at 12 months after therapy. Male gender, primary syphilis stage and lower baseline RPR titers were associated with higher odds of seroreversion.
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WP 201
PATTERNS OF HIV DISCLOSURE IN INFECTED PERSONS PRESENTING TO ESTABLISH CARE

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Background: While disclosure may be an important aspect of coping with a difficult diagnosis, persons newly diagnosed with HIV must balance the need for social support with the possibility that disclosure may negatively impact relationships. Failure to disclose HIV status has also been associated with increased sexual risk taking behaviors. In this study, we evaluate characteristics associated with nondisclosure in persons presenting to establish HIV care.
Methods: This was a secondary analysis of data from new patients entering care at a university-based HIV clinic between 4/2008 - 6/2012. We compared persons who disclosed HIV status to family and friends to persons who disclosed HIV status to non one. Data was analyzed with univariate modeling and, adjusting for variables with statistical significance, logistic regression with multivariable modeling was done to identify correlates of non-disclosure.
Results: Of 238 participants, 107 (45%) had not disclosed to anyone and 131 (55%) had disclosed to friends and family. In multivariable analysis, groups less likely to disclose included African Americans when compared to Caucasians (OR 3.23 [95% CI 1.74, 6.00]), persons with CD4 counts < 200 cells/μL when compared to persons with CD4 counts > 350 cells/μL (OR 2.59 [95% CI 1.30, 5.14]), and persons living with a spouse or significant other when compared to persons living alone (OR 2.60 [95% CI 1.23, 5.49]).
Conclusions: Non-disclosure was common among persons presenting to establish HIV care. African Americans, persons living with significant others and persons with low CD4 counts were more likely to not disclose their HIV status. This population may fear that disclosure of HIV status could result in a negative impact on, or loss of, relationships. Without the support afforded by disclosure, these populations may suffer worse HIV related outcomes.
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WP 202
SEXUAL HEALTH HONEY-DO LIST: KNOWLEDGE OF PARTNER TREATMENT STATUS

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Background: Effective intervention for STDs involves not only treating diagnosed individuals, but also ensuring that all recent, potentially exposed sexual partners are also successfully treated. Identifying characteristics associated with untreated partners may help identify methods to reduce additional disease transmission and prevent repeat infections.
Methods: Participating localities in Virginia conduct phone interviews with individuals recently diagnosed with gonorrhea, as part of the STD Surveillance Network (SSuN) activities. These interview data were used to assess gonorrhea patients' knowledge of their partners' treatment status. Correlations between such knowledge and patient characteristics, risk behaviors, and subsequent repeat infections were examined. Data collected from 2010-2013 included approximately 1,700 patient interviews. Preliminary bivariate analyses were followed by binary and ordinal logistic regression modeling to identify risk factors for patient knowledge and for re-infection.
Results: Women were more likely than men to be unsure of their partner's treatment status (45% vs. 41%), and women were also more than twice as likely to report that their partners had not been treated (9.2% vs. 4.3%). Patient race, age, and education were not associated with being unaware of partner's treatment status. Patients who were unsure of their partner's treatment status were significantly less likely to report having sex with that partner since their own diagnosis (OR = 5.8, 95% CI: 4.4-7.8). Among men, multiple recent sex partners, a previous gonorrhea diagnosis in the past year, and chlamydia co-infection were all associated with being unsure of their partner's treatment status. Over one-fifth of interviewed patients had repeat gonorrhea infections, but re-infection was not associated with knowledge of partner's treatment.
Conclusions: Patient knowledge of their partner's treatment status varied only slightly by most demographic characteristics and risk factors, but it did influence subsequent sexual encounters. Other characteristics of gonorrhea repeaters may be better suited to inform targeted prevention efforts to reduce re-infection rates.
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WP 203
CONTINUING CROSS-SECTOR PARTNERSHIPS TO IMPROVE STD ASSESSMENT, ASSURANCE, POLICY DEVELOPMENT AND PREVENTION STRATEGIES (AAPPS) AFTER THE INFERTILITY PREVENTION PROJECT (IPP) – OPPORTUNITIES AND CHALLENGES

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Background: The National IPP created and supported opportunities for cross-sector cooperation, coordination, and collaboration between state and local STD programs, family planning programs, public health laboratories, and other key stakeholders. The initiative increased cost-effectiveness and efficiency of chlamydia/gonorrhea (CT/GC) screening in key sites; improved the quality of client services and partner management; amplified understanding of CT/GC prevention, screening and treatment; and worked effectively with national and regional partners. In 2012, a network of STD-related Reproductive Health Training and Technical Assistance Centers (STDRHTTACs) was established to support STD programs, family planning programs, and public health laboratories to continue delivering high quality STD services.
Methods: A national scan of STDRHTTACs was conducted to identify strategies for continuing collaborations to strengthen the quality and delivery of STD services.
Results: Nationally, STDRHTTACs have communicated with former IPP partners to discuss the project's new role. Various activities include a coordinated national needs assessment and training and technical assistance to support programs in billing for STD services, a prevalence monitoring toolkit to support programs in monitoring and evaluating CT/GC screening efforts, and a toolkit to guide STD and family planning clinics through the process of building onsite CT/GC treatment dispensing capacity, and an evaluation project to inform various aspects of the chlamydia research agenda.
Conclusions: While significant work on public health program sustainability continues through the STDRHTTACs, more opportunities are needed for the STDRHTTACs to continue leveraging long-standing relationships with STD, family planning, public health laboratory and other key stakeholders to support broader STD AAPPS work across the country.
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WP 204
COMPLICATED SYPHILIS MAY BE MORE COMMON THAN PREVIOUS ESTIMATES SUGGEST

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Background: Symptomatic neurosyphilis is considered to be a rare complication of syphilis, (1.2-1.7% of cases), but to our knowledge, no contemporary studies have sought to actively identify symptoms of neurologic, otologic or ocular complications in a population-based sample.
Methods: Our program has asked all persons with syphilis about symptoms of complicated infections (changes in vision, hearing or tinnitus) as part of routine case investigations since 2/2012. Disease intervention specialists (DIS) query patients about symptoms using a standardized protocol and interview form. To determine the prevalence of symptoms, we reviewed cases reported from 3/1/2012 - 9/30/2013 that met one of the following criteria (mutually exclusive and hierarchical as listed): 1) neurosyphilis reported by the diagnosing provider, 2) partner services record indicating neurologic symptoms, 3) treatment with a regimen effective for neurosyphilis, or 4) a record of cerebrospinal fluid (CSF) testing. We assumed that remaining cases had no symptoms of complicated syphilis. We separately analyzed a strict definition of symptomatic neurosyphilis, including only symptomatic cases with documented abnormal CSF results.
Results: A total of 573 syphilis cases were reported; 68 (11.9%) met review criteria [by criterion listed in Methods as follows: 1) N=33; 2) N=20; 3) N=4; 4) N=11]. We excluded from the symptom prevalence calculation 1 case of congenital syphilis and 3 cases for which we could not obtain symptom data. Of the 569 remaining cases, 46 (8.1%) were associated with symptoms suggesting complicated syphilis. Most commonly reported were vision changes (5.1%), followed by hearing changes (3.9%), tinnitus (2.7%), and other symptoms (0.7%). The distribution of symptoms was similar when we restricted the analysis to symptoms ascertained by diagnosing providers. Using the strict definition, 18 of 573 (3.1%) had symptomatic neurosyphilis.
Conclusions: Our results suggest that symptomatic neurosyphilis and symptoms suggestive of complicated syphilis are more common than previously estimated.
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WP 205
A NATIONAL TRAINING PROGRAM TO IMPROVE HIV/STD PREVENTION INTO THE CARE OF PERSONS LIVING WITH HIV

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Background: Persons living with HIV (PLWH) are living longer, remaining sexually active, and may engage in risky sexual behaviors. As such, it is crucial for providers to ask all HIV-positive patients about behaviors related to HIV transmission and STD acquisition. The Ask, Screen, Intervene (ASI) curriculum was developed to increase provider knowledge, skills, and motivation to incorporate risk assessment and prevention services into the care of PLWH. Our objective was to determine if a national training could increase the uptake and implementation of federally recommended practice guidelines.
Methods: The National Network of STD/HIV Prevention Training Centers (NNPTC) recruited HIV-care providers in geographic areas with high incidence and prevalence of HIV among racial and ethnic minorities through emails, at conferences, and through direct outreach to HIV clinics. ASI participants completed post-course evaluations and were contacted three to six months post-training for further evaluation. Descriptive statistics summarized demographic, occupational, and satisfaction data. Likert scale confidence levels demonstrate ASI learning objectives; means were calculated to measure pre to post course changes and pre to 3-6 month follow-up; and paired two-tailed Student's t-test was used to test significance
Results: The ASI curriculum was delivered to 2,558 HIV-care providers at 137 sites between September 30, 2007 and December 31, 2010. Immediately post-training, participants self-reported significant gains in perceived confidence to demonstrate ASI knowledge and skills ($p<.001$), and 89% agreed they would update practices as a result of this training. Three to six months post-training, 320 participants who serve PLWH self-reported more frequently performing ASI skills ($p<.001$), and 71% self-reported greater perceived confidence than before training to perform those skills ($p<.001$).
Conclusions: Our findings suggest that a well-coordinated training program can reach a national audience of HIV-care providers, significantly increase self-reported capacity to incorporate HIV/STD prevention into the care of PLWH, and increase implementation of federally recommended practice guidelines.
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WP 206
NATURAL HISTORY OF SYPHILIS IN HIV-POSITIVE PATIENTS IN THE HAART ERA

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Background: Syphilis is common in HIV-infected patients and early progression to neurosyphilis may occur. Studies suggest CD4 count may affect this, but most were done prior to use of modern HAART therapy for HIV. We reviewed our experience of syphilis in HIV-positive patients seen in the Denver Health HIV/AIDS clinics from 2002 to the present to characterize the natural history of syphilis in the HAART era.
Methods: Syphilis diagnoses in HIV-positive patients from 2002-2013 were identified from an electronic database, with hand chart review done to find syphilis serologies. When lumbar puncture (LP) was done to rule out neurosyphilis, symptoms, CD4 count, viral load, and HAART use were also extracted. Statistical significance was analyzed using Fisher's exact test, 2-tailed.
Results: 187 episodes of syphilis were identified and fully reviewed. Titers ranged from 1:8 to >= 1:4096, with a median of 1:128. No prozone phenomenon was seen. Regardless of titer, 86% had a >= 4-fold drop in titer by 6 months after treatment. 32 cases were identified where LP was done to rule out neurosyphilis; 15 had neurosyphilis while 17 had normal CSF results. No HAART use, CD4 <350, and detectable viral load were significantly more common in the neurosyphilis cases ($p < .05$ for all). The RPR titer was not predictive. Symptoms in the neurosyphilis cases included fever/rash (1), gait/balance disturbance (2), hearing loss (1), headache (3), and visual changes (7). Of 9 asymptomatic patients with high RPR titers, only 1 had neurosyphilis.
Conclusions: Denver Health has seen early progression to neurosyphilis in HIV-positive patients, with CD4 < 350, no HAART use, and detectable viral load all associated with neurosyphilis in patients where LP was done to rule it out. The RPR reagent in use by our lab did not require serum dilution to detect even extremely high titers.
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WP 207

BREAKING THE SOUND BARRIER OF INFECTIOUS DISEASE DISCUSSIONS: A CASE STUDY OF THE CAMEROONIAN IMMIGRANT COMMUNITY IN MARYLAND AND THE HEPATITIS B VIRUS

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Background: Numerous research studies have been done to create awareness on the hepatitis B virus. The majority being science-based programs to which socio-cultural behaviors and approaches to help reduce such incidences have been absent.
Methods: This research was based on a socio-cultural approach. In order for the participants to express themselves freely, men had a separate focus group session from the women in respect to cultural norms. Random surveys were done, to find out the general knowledge that the Cameroonian immigrant population in the state of Maryland has on the Hepatitis B virus. Four interviews, two with men, one of whom was a pastor and two with women. Two focus groups made of six women and six men.
Results: Given the cultural essence of this research, it was broken down into: understanding the disease, women's perception of the disease and the problem, men's perception of the disease and the problem and why it is not discussed in the community. Fifty percent were aware that there are diseases such as the Hepatitis B Virus; women expressed concern about polygamous marriages. Though very few men were not for the idea of polygamous marriages, they emphasized educating the youth about the virus and other diseases- HIV/AIDS. Both the men and women said that it was not discussed in the community because of lack of education, discrimination, stigma and traditional practices.
Conclusions: Having this awareness session with the Cameroonian immigrant community in Maryland did not only open up forums for discussion it also saw the birth of a new community with suggestions for further education of other communities.
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