HHS Public Access

Author manuscript

Women Health. Author manuscript; available in PMC 2019 December 04.

Published in final edited form as:

Women Health. 2014 ; 54(8): 712–725. doi:10.1080/03630242.2014.932890.

Chlamydia Screening and Positivity in Juvenile Detention Centers, United States, 2009–2011

CATHERINE LINDSEY SATTERWHITE, PhD, MSPH, MPH

Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; and Department of Preventive Medicine and Public Health, University of Kansas School of Medicine, Kansas City, Kansas, USA

DANIEL NEWMAN, MA, **DAYNE COLLINS, BS**, **ELIZABETH TORRONE, PhD, MSPH**

Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

Abstract

An estimated 2.9 million new chlamydia infections occur in the United States each year. Among women, chlamydia can lead to serious adverse outcomes, including pelvic inflammatory disease and infertility. Chlamydia prevalence is highest among females aged 15–19 years. Despite long-standing recommendations directed at young, sexually active females, screening remains suboptimal. Juvenile detention centers (JDCs) are uniquely situated to screen and treat high-risk adolescents. From 2009–2011, performance measure data on chlamydia screening coverage (proportion of eligible females screened) and positivity (proportion of females tested who were positive) were available from 126 geographically-dispersed JDCs in the United States. These facilities reported screening 55.2% of females entering the facilities (149,923), with a facility-specific median of 66.4% (range: 0–100%). Almost half (44.4%) of facilities had screening coverage levels of 75–100%. This screening resulted in the detection of 12,305 chlamydial infections, for an overall positivity of 14.7% (facility-specific median = 14.9%, range: 0–36.9%). In linear regression analysis, chlamydia positivity was inversely associated with screening coverage: as coverage increased, positivity decreased. The burden of chlamydia in JDCs is substantial; facilities should continue to deliver recommended chlamydia screening and treatment to females and identify mechanisms to increase coverage.

Keywords

chlamydia; screening; positivity; juvenile detention centers; prevention

INTRODUCTION

Chlamydia is the most frequently occurring bacterial sexually transmitted infection (STI) in the United States (Satterwhite et al., 2013). Of the 2.9 million incident infections estimated

Address correspondence to Catherine Lindsey Satterwhite, PhD, MSPH, MPH, Department of Preventive Medicine and Public Health, University of Kansas School of Medicine, 3901 Rainbow Blvd., MS: 1008, Kansas City, KS 66160. csatterwhite@kumc.edu.

to occur annually, about 62% are among young males and females aged <26 years. An estimated 1 million infections occur in young females among whom chlamydia can lead to pelvic inflammatory disease, ectopic pregnancy, or infertility. Chlamydia prevalence is highest among sexually active females aged 15–19 years (6.8%) (CDC, 2011). In this age group, prevalence among young black females is almost four times the prevalence among young white females (16.2% versus 4.4%, respectively).

As the majority of chlamydial infections are asymptomatic, screening is necessary to identify infections (Farley et al., 2003). Due to the risk of sequelae and the high burden of infection, annual screening and treatment of sexually active women aged <26 years has been recommended for two decades (CDC, 1993, 2010). However, despite these strong recommendations, the proportion of females who are actually screened for chlamydia remains suboptimal (NCQA, 2012). Only 58% of sexually active young females seeking healthcare were screened in 2012 in Medicaid health maintenance organization (HMO) settings; only 45% were screened in commercial HMO settings. Screening coverage was lower among females aged 16–20 years compared to females aged 21–24 years (Medicaid HMO, 54.9% versus 63.4%).

Juvenile correctional settings represent an optimal, unique setting to deliver health care, particularly screening services, to an adolescent population generally at risk for adverse health events. Overall, adolescents do not frequently attend recommended well-care visits where routine preventive services, such as STI screening and treatment, would be delivered. Over a two-year period examining the Medicaid population, only 51% of adolescents aged 14–16 years and 46% of those aged 17–20 years received a well-child exam (U.S. GAO, 2009). In addition to a general lack of well-care visits among adolescents, young females in correctional settings are at high risk for chlamydia; in 2011, the overall chlamydia prevalence among females aged 12–18 years entering a select group of juvenile corrections facilities in the United States was 15.7% (CDC, 2012). Currently the Centers for Disease Control and Prevention (CDC) recommends universal screening of females at intake to juvenile correctional facilities (CDC, 2010).

The CDC implemented national performance measures in 2005 to improve the performance of sexually transmitted disease (STD) prevention programs. Priority interventions, such as chlamydia screening and treatment, in venues targeting priority populations (e.g., adolescents) were a key factor in developing and implementing these performance measures (Peterman et al., 2011). From 2005–2008, CDC performance measure data on chlamydia screening in juvenile detention centers showed that the proportion of females entering select juvenile detention centers who were screened for chlamydia increased from 55% to 58%. In 2009, the CDC began collecting additional performance measure data on the proportion of females testing positive for chlamydia in juvenile detention centers, complimenting the screening coverage measure assessing the proportion of females screened for chlamydia in juvenile detention centers. To describe chlamydia screening coverage and chlamydia positivity and determine the yield of and rationale for continued universal chlamydia screening of young women in these settings, we analyzed these two performance measures across juvenile detention centers in the United States.

METHODS

Participants

Performance measure data on screening coverage and chlamydia positivity among females entering juvenile detention centers have been reported by grantees funded through the Comprehensive STD Prevention Systems (CSPS) grant (http://www.cdc.gov/od/pgo/funding/PS09-902.htm) since 2009. Grantees include the 50 states, Puerto Rico, the U.S. Virgin Islands, and large cities (Los Angeles, CA; San Francisco, CA; Chicago, IL; New York, NY; Philadelphia, PA; Baltimore, MD, and Washington, DC). All grantees were required to report performance measure data on chlamydia screening coverage and positivity for at least one juvenile detention center in their jurisdiction. Grantees were required to report data for each juvenile detention center that booked 500 or more females annually. If a grantee had no juvenile detention centers with this census, grantees were required to report on at least one juvenile detention facility of their choice in their jurisdiction.

Data Collection

Performance measure data on chlamydia screening and chlamydia positivity were required to be reported to CDC twice yearly (http://www.cdc.gov/std/program/performance-measures.htm). Both chlamydia measures have been reported since 2009. Because required reporting of performance measures was discontinued in 2012, the analysis time frame is 2009–2011, consisting of six half-year reporting periods. Measures were self-reported in aggregate format for each juvenile detention center, and data were not stratified by age or race/ethnicity. Data were entered into a standardized database designed to capture performance measure data and maintained at CDC.

For reporting purposes, the screening coverage performance measure was defined as the proportion of females admitted to the center who were tested for chlamydia (all ages). Testing could include tests specifically administered as screening tests (i.e., to asymptomatic individuals) and tests administered in a diagnostic capacity (i.e., to symptomatic individuals or individuals reporting risk factors suggestive of an infection, such as an infected partner). The numerator consisted of the number of females who were admitted and tested for chlamydia in the specified half-year time frame. The denominator was the total number of female admittees or bookings, including all females entering the juvenile detention center. Data may be duplicated; if a female entered a juvenile detention center more than one time during the reporting period or during multiple reporting periods, she was included in the denominator each time and may also be included in the numerator multiple times (if screening was performed multiple times).

Chlamydia positivity was defined as the number of females testing positive for chlamydia (numerator) divided by the number of females tested for chlamydia (denominator). Positivity performance measure data were reported for each juvenile detention center where screening coverage was reported. Theoretically, the denominator of the positivity performance measure should match the numerator of the screening coverage performance measure (number of females tested for chlamydia). However, no internal consistency checks were built into the performance measures collection tool and database. Grantees entered data directly for each

measure; therefore, it is possible that the positivity denominator did not perfectly match the screening coverage numerator. Other possible reasons that the denominators may not match include lost specimens, contaminated specimens, or inadequate specimens.

Aggregate data were collected as part of routine public health surveil-lance under the direction of the federal CSPS grant and were thus exempt from institutional review board (IRB) review.

Data Analysis

Data were analyzed using individual juvenile detention centers as the primary unit of analysis. To compare chlamydia screening coverage and positivity performance measures, aggregate reported data were combined for each juvenile detention facility. Numerators and denominators for each required half-year reporting period were summed by facility for the time frame from 2009 to 2011; up to six possible data points were included in the facility-specific totals. Then, the overall proportion of females screened for chlamydia (screening coverage) and the overall proportion of females who tested positive for chlamydia (positivity) were calculated. Only facilities reporting at least one female eligible for screening, total screening coverage of >0%, and with data on both screening coverage and positivity were included in analyses. Screening coverage was split into two logical analysis categorizations to describe the proportion of females screened for chlamydia: 0–49% and 50–100%; and, 0–24%, 25–49%, 50–74%, and 75–100%. Likewise, positivity was split using the mean value (<15%, ≥15%) and the quartile values (0–10%, 11–14%, 15–17%, >17%).

Screening coverage and positivity were analyzed at the facility level, as well as the regional levels. Differences in proportions were evaluated using chi-square tests. Continuous values were compared using *t*-tests (unequal variance). To assess the relationship between screening coverage and positivity, two analyses were conducted. First, a Pearson correlation coefficient was generated (*r*) comparing the proportion of women screened for chlamydia and the chlamydia positivity within each facility. Next, in a more granular approach, linear regression was conducted evaluating the relation of screening on positivity. Screening coverage was included in the model using an event/trials approach, in which the numerator was the number of women who tested positive for chlamydia and the denominator was the number of women who were tested for chlamydia. Modeling was conducted for the overall group of juvenile detention centers. Separate models were run for each of the four regions to examine potential geographical differences. Due to the nature of data collection, no additional covariates (other than region) were available for consideration in the modeling process. All analyses were performed using SAS (Version 9.1.3, Cary, NC).

RESULTS

From 2009–2011, a total of 166 juvenile detention centers reported performance measure data on chlamydia screening coverage or positivity among females. Of these, 126 facilities reported at least some data on both screening coverage and positivity and were eligible for analysis (75.9%).

Facilities included in the analysis were present in 48 states, the District of Columbia, and Puerto Rico. On average, grantees reported data from 2.4 juvenile detention facilities (median: 2, range: 1–13, standard deviation [SD]: 2.2). About one-third of facilities were located in the West region (Table 1). Of the 126 facilities, 36 (28.6%) were required by the CDC to report data for each a half-year reporting period because the annual number of females eligible for screening (entering the facility) was 500 or greater. The vast majority of facilities reported data for the maximum number of reporting cycles (6 cycles); over 90% of facilities reported data for 5–6 reporting cycles. The median facility-specific total number of females eligible for screening over the course of the entire 3-year analysis period (2009–2011) was 770, with a range of 8 to 9,457 females.

The 126 juvenile detention centers analyzed screened a total of 82,689 females from 2009–2011, 55.2% of the total number of females entering the facilities (149,923). The highest number and overall proportion of females screened was in the West (Figure 1). The facility-specific median level of screening coverage was 66.4% (range: 0–100%). Almost half (44.4%) of facilities had screening coverage levels of 75–100%; in 59.5% of facilities, the proportion of eligible females that were screened was 50% or greater (Table 1). Of the 126 total juvenile detention centers, 23 (18.3%) reported a screening coverage of 95% or higher. On average, these 23 facilities screened 997 females from 2009–2011 (median: 570, range: 29–4,009) and had a mean positivity of 13.6% (median: 14.0%, range: 3.2–20.7%).

Across all facilities, screening resulted in the detection of 12,305 chlamydial infections, for an overall positivity of 14.7% (facility-specific median = 14.9%, range: 0–36.9%). Chlamydia positivity was consistently high across all reporting juvenile detention centers; almost 80% of facilities reported a positivity of 11% or higher. The vast majority of facilities reported a chlamydia positivity of >3% (120 of 126 facilities, 95.2%). The six remaining facilities reported a positivity of 0%; four of these facilities tested fewer than 10 females. The highest overall regional positivity (17.1%) was in the in the Midwest (Figure 1).

When considering facilities with high screening coverage levels (50–100%) compared to facilities with low screening coverage levels (1–49%), no significant regional variations were seen (Table 2). Likewise, the mean number of females eligible for screening was similar between facilities with high and low levels of screening. Not surprisingly, facilities with high screening tested a higher absolute number of females for chlamydia. Facilities with low screening levels reported slightly higher chlamydia positivity among those women tested for chlamydia compared to facilities with high screening levels; however, this difference was not significant. The mean positivity of low screening facilities was 15.8% (SD = 8.0%), compared to the mean of 13.7% (SD = 5.0%) in facilities with high screening (p = 0.10). Of the 61 facilities reporting positivity of more than 15% (high positivity), 37.7% were located in the South (Table 2). Of the 65 facilities reporting positivity of 0–15% (low positivity), 46.2% were located in the West and 23.1% were located in the South (p = 0.01).

Analysis examining the correlation between overall screening coverage and positivity showed a weak correlation (r when = −0.16, p = 0.08). However, when considering all data (numerator and denominator), a significant relationship was seen: chlamydia positivity increased as screening coverage decreased (Figure 2). In crude linear regression, screening

coverage was inversely associated with positivity (Table 3). For each percentage point increase in screening coverage (e.g., increasing from 50% to 51% screening coverage), positivity decreased 0.37 percentage points (e.g., decreased from 20.0% to 19.63%). When stratifying by geographic region, the inverse linear relationship between screening coverage and positivity was evident in the South and West ($p < 0.001$ for each region); however, a significant linear relationship was not seen in the Midwest and Northeast.

DISCUSSION

In this convenience sample of juvenile detention centers from across the United States, over 12,000 cases of chlamydia were diagnosed over the course of three years. Despite the large number of detected infections, many infections likely remained undetected due to an overall screening coverage level of only 55.2%.

Chlamydia remains an important public health concern, with young women bearing a disproportionate burden of the adverse outcomes resulting from infection. Chlamydia screening and treatment of young women is an important tool to address this issue, widely recommended, supported, and promoted by a number of professional medical organizations and governmental agencies (Maloney & Johnson, 2008). Juvenile detention centers are opportune settings to deliver recommended prevention services to an at-risk population of young, at-risk females. In the United States, there were an estimated 570,000 juvenile arrests of females (aged <18 years) in 2009 (U.S. DOJ, 2011). Many of these females are at increased risk of STIs due to sexual behaviors (e.g., early sexual debut, commercial sex work) as well as other risk factors (e.g., substance abuse) (Belenko et al., 2009). In a survey of incarcerated youth in a large, urban correctional facility, 90% of female adolescents reported using illegal drugs, 41% reported unprotected vaginal sex in the last month, and 52% reported ever having unprotected sex while drunk or high (Teplin et al., 2003).

Among the subset of juvenile detention centers reporting performance measure data to the CDC from 2009–2011, the proportion of females entering facilities who were screened for chlamydia was only 56%, a suboptimal coverage level. Although this coverage is similar to females receiving care in health maintenance organizations (NCQA, 2012) and federally-funded family planning clinics (Fowler et al., 2011), young females entering detention facilities are present in a controlled setting that can facilitate the delivery of on-site healthcare. Many of the juvenile detention facilities reported higher screening coverage: 56 facilities (44.4%) had screening in the range of 75–100%, while 23 (18.3%) reported near-perfect screening of females entering the facility (95–100%). These high-performing juvenile detention centers served a range of 29–4,009 females, demonstrating that facility size alone should not be a barrier to executing screening at a high level. The number of eligible females can also be considered a proxy measure for the complexity and scope of operations.

In examining the relationship between positivity and screening, the correlation between the two appeared to be weak. However, in linear regression analyses, an overall significant inverse relationship between chlamydia positivity and chlamydia screening was found. This finding appears to be driven by screening and positivity in the South and West, suggesting

that facilities in these geographic areas with low screening could be diagnostically testing adolescent females for chlamydia on the basis of signs or symptoms, or, possibly, applying some form of targeted screening. Thus, a smaller subset of the eligible population is tested (low screening coverage) with a high diagnostic yield (high chlamydia positivity). Despite a possible higher diagnostic yield, the substantial overall chlamydia positivity among both low- and high-screening facilities demonstrates an ongoing need to screen all eligible women, per current recommendations, and not just a subset (targeted screening).

Despite the success of some facilities in achieving high screening, over a third of facilities reported screening coverage levels of less than 50%. Barriers to universal screening at intake can occur at the patient-level and the provider-level, as well as the facility-level (Spaulding et al., 2013). For example, some females entering facilities decline screening. In a series of focus groups with delinquent youth, participants stated that fear of surreptitious drug testing might keep them from getting tested, along with fear of finding out that they were infected (Blake et al., 2003). Providers may be hesitant to screen at intake due to concerns over ability to treat the infection before the release, as some arrestees may be rapidly discharged (Spaulding et al., 2013). Additionally, facilities may consider costs (including staff time and cost of the test kits and treatment), confidentiality concerns, and limitations in the time available during the intake process prohibitive to universal screening (Belenko et al., 2009). One way to improve screening coverage is to integrate chlamydia screening into a comprehensive health assessment. For example, urine used for pregnancy or drug testing could also be used for the chlamydia screening (Spaulding et al., 2013). Additionally, correctional facilities may find it beneficial to partner with local public health facilities to facilitate timely treatment and ensure compliance with confidentiality and reporting laws (Belenko et al., 2009; Miller et al., 2009).

High chlamydia positivity in juvenile detention centers has been well demonstrated. Consistent with other findings, the median positivity of 14.8% in the 126 facilities reporting performance measure data was much higher than prevalence in the general population of adolescent females (estimated to be about 4% in 2008) (Datta et al., 2012), higher than positivity among young women screened in family planning clinics (median positivity of 9.8% in 2011) (CDC, 2012), and higher than prevalence among female entrants to the National Job Training Program, a vocational program for socioeconomically disadvantaged young adults (10.4% in 2011) (CDC, 2012). The CDC currently recommends that emphasis be placed on screening and treating young women in venues where chlamydia positivity ≥3%, a positivity level where chlamydia screening is considered to be cost-effective (Marrazzo et al., 1997). Only six facilities analyzed had a positivity of <3%, suggesting that chlamydia screening in juvenile detentions should remain a critical component to national chlamydia prevention efforts. Screening in these settings presents a cost-effective opportunity to deliver needed healthcare services to an at-risk population and may have the potential to decrease chlamydia prevalence in the surrounding communities (Owusu-Edusei et al., 2013).

Our study had several limitations. Data were reported in aggregate form, limiting the scope of the analysis to only summary-level information, and we were not able to investigate differences in screening coverage or positivity by race/ethnicity and age. Likewise,

information on the proportion of females diagnosed with chlamydia who were treated was not available. While efforts were made to standardize data based on performance measure case definitions, some variation in data sources and methods used to generate the self-reported performance measure data could have occurred. The sample included in our analysis was a convenience sample. However, most facilities included in our analysis consistently reported data over the six time frames that were included, suggesting the presence of a standardized reporting procedure. While some level of reporting was required of all grantees, and some high-volume facilities were required to report (36 facilities booking 500 or more females annually, 28.6% of the sample), the sample of juvenile detention centers included may not have been representative of all facilities. In 2008, 734 facilities defining themselves as juvenile detention centers reported holding juvenile offenders (male and females) (U.S. DOJ, 2012); in our study, 126 facilities were included, roughly 17% of all facilities in the United States.

Our analysis demonstrates high chlamydia positivity among females entering juvenile detention settings, supporting universal screening and treatment of females at entry per current recommendations. While high screening coverage is feasible, as indicated by the 44% of facilities with >75% coverage and the 18% of facilities with >95% coverage, many facilities had suboptimal screening coverage. Identification and amelioration of barriers to screening in juvenile detention centers can enhance screening and treatment of women infected with chlamydia.

ACKNOWLEDGMENT

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

REFERENCES

Belenko S, Dembo R, Rollie M, Childs K, and Salvatore C. 2009 Detecting, preventing, and treating sexually transmitted diseases among adolescent arrestees: An unmet public health need. Am J Publ Health 99(6):1032–41.

Blake DR, Kearney MH, Oakes JM, Druker SK, and Bibace R. 2003 Improving participation in chlamydia screening programs: Perspectives of high-risk youth. Arch Pediatr Adolesc Med 157(6): 523–9. [PubMed: 12796231]

Centers for Disease Control and Prevention. 1993 Recommendations for the prevention and management of *Chlamydia trachomatis* infections, 1993. MMWR 42(RR-12):1–38.

Centers for Disease Control and Prevention. 2010 Sexually transmitted diseases treatment guidelines, 2010. MMWR 59(RR12):1–110.

Centers for Disease Control and Prevention. 2011 CDC grand rounds: Chlamydia prevention: Challenges and strategies for reducing disease burden and sequelae. MMWR 60(12):370–3. [PubMed: 21451447]

Centers for Disease Control and Prevention. 2012 2011 Sexually transmitted diseases surveillance. Atlanta, GA: Department of Health and Human Services.

Datta SD, Torrone E, Kruszon-Moran D, Berman S, Johnson R, Satterwhite CL, et al. 2012 *Chlamydia trachomatis* trends in the United States among persons 14 to 39 years of age, 1999–2008. Sex Transm Dis 39(2):92–6. [PubMed: 22249296]

Farley TA, Cohen DA, and Elkins W. 2003 Asymptomatic sexually transmitted diseases: The case for screening. Prev Med 36(4):502–9. [PubMed: 12649059]

Fowler CI, Lloyd SW, Gable J, Wang J, and Krieger K. 2011 Family planning annual report: 2010 national summary. Research Triangle Park, NC: RTI International.

Maloney S, and Johnson C. 2008 Why screen for chlamydia? An implementation guide for healthcare providers. Washington, DC: Partnership for Prevention.

Marrazzo JM, Celum CL, Hillis SD, Fine D, DeLisle S, and Handsfield HH. 1997 Performance and cost-effectiveness of selective screening criteria for *Chlamydia trachomatis* infection in women. Implications for a national chlamydia control strategy. Sex Transm Dis 24(3):131–41. [PubMed: 9132979]

Miller J, Samoff E, Bolan G, and Chlamydia Screening Project (ClaSP) Group. 2009 Implementing chlamydia screening programs in juvenile correctional settings: The California experience. Sex Transm Dis 36(2 Suppl):S53–7. [PubMed: 18449073]

National Committee for Quality Assurance. 2012 The state of health care quality 2012. Washington, DC: National Committee for Quality Assurance.

Office of Justice Programs. 2011 Juvenile offenders and victims: National report series bulletin. Washington, DC: U.S. Department of Justice.

Office of Justice Programs. 2012 2010 annual report: How OJJDP is forming partnerships and finding solutions. Washington, DC: U.S. Department of Justice.

Owusu-Edusei Jr. T. K, Gift TL, Chesson HW, and Kent CK. 2013 Investigating the potential public health benefit of jail-based screening and treatment programs for chlamydia. Am J Epidemiol 177(5):463–73. [PubMed: 23403986]

Peterman TA, Newman DR, Collins DE, Doshi SR, and Berman SM. 2011 Sexually transmitted diseases program performance measures: How are they performing? Sex Transm Dis 38(7):610–6. [PubMed: 21278623]

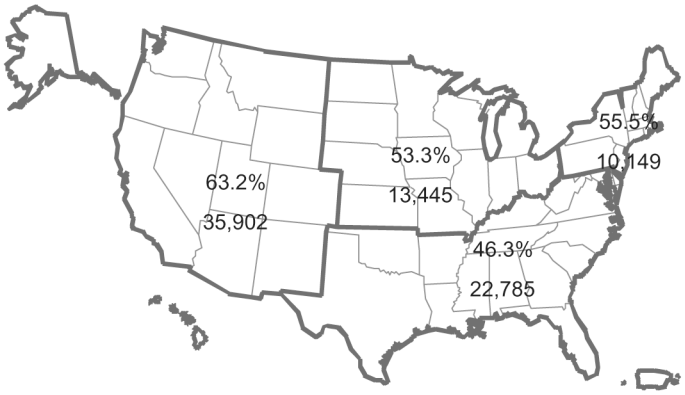
Satterwhite CL, Torrone E, Meites E, Dunne EF, Mahajan R, Ocfemia MC, et al. 2013 Sexually transmitted infections among US women and men: Prevalence and incidence estimates, 2008. Sex Transm Dis 40(3):187–93. [PubMed: 23403598]

Spaulding A, Miller J, Trigg BG, Braverman P, Lincoln T, Reams PN, et al. 2013 Screening for sexually transmitted disease in short-term correctional institutions: Summary of evidence reviewed for the 2010 Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines. Sex Transm Dis 40(9):679–84. [PubMed: 23945422]

Teplin LA, Mericle AA, McClelland GM, and Abram KM. 2003 HIV and AIDS risk behaviors in juvenile detainees: Implications for public health policy. Am J Publ Health 93(6):906–12.

U.S. Government Accountability Office. 2009 Medicaid preventive services (GAO-09–578). Washington, DC: U.S. Government Accountability Office.

a. Chlamydia screening coverage and number of females screened



b. Chlamydia positivity

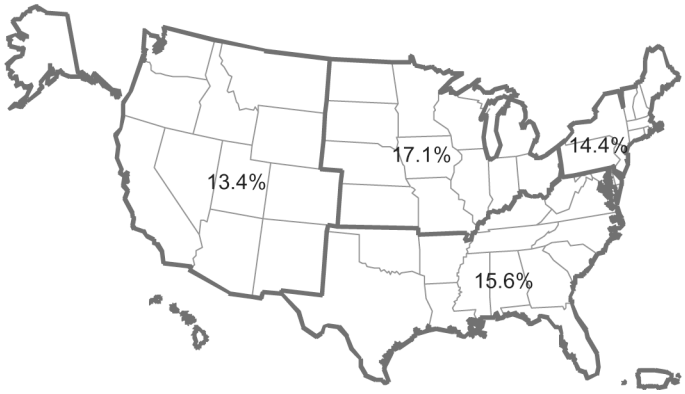


FIGURE 1.

Chlamydia screening and positivity in juvenile detention centers, by region, United States, 2009–2011.

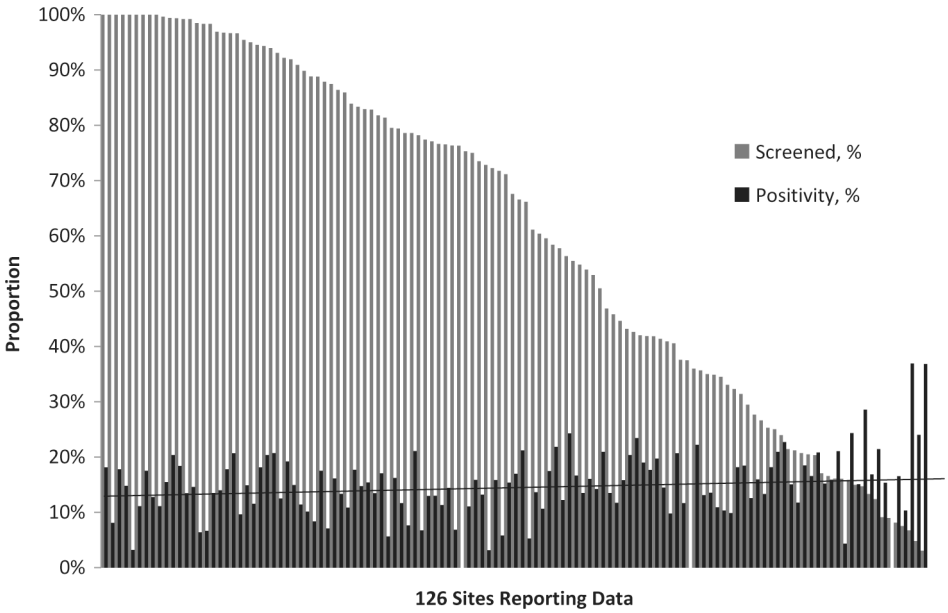


FIGURE 2.

Proportion of females screened for chlamydia and corresponding chlamydia positivity, juvenile detention centers, United States, 2009–2011. Each set of two bars (gray and black) represent the proportion of females screened for chlamydia and the chlamydia positivity in a single juvenile detention center. The horizontal line represents the modeled linear relationship between the proportion of women screened for chlamydia and the proportion of women testing positive (positivity).

TABLE 1

Juvenile Detention Centers Reporting Data on Chlamydia Screening Coverage and Positivity, United States, 2009–2011

	Number of facilities (*n* = 126)
Region, %	
Midwest	28 (22.2)
Northeast	16 (12.7)
South	38 (30.2)
West	43 (34.1)
Puerto Rico	1 (0.8)
Reporting required,* %	
Yes	36 (28.6)
No	90 (71.4)
Number of half-year reporting cycles, %	
1	2 (1.6)
2	2 (1.6)
3	1 (0.8)
4	6 (4.8)
5	22 (17.5)
6	93 (73.8)
Mean number of females eligible for screening (median)	1,190 (770)
Proportion screened, %	
0–24	25 (19.8)
25–49	26 (20.6)
50–74	19 (15.1)
75–100	56 (44.4)
Mean number of females tested for chlamydia (median)	663 (313)
Proportion positive, %	
0–10	29 (23.0)
11–14	36 (28.6)
15–17	28 (22.2)
> 17	33 (26.2)

*Mean number of eligible females per year ≥ 500.

TABLE 2

Screening Coverage and Positivity in Juvenile Detention Centers, United States, 2009–2011

	Facility screening coverage		
	0–49% (*n* = 51)	**50–100% (*n* = 75)**	***p*-Value**
Region,* %			0.22
Midwest	13 (25.5)	15 (20.0)	
Northeast	3 (5.9)	13 (17.3)	
South	14 (27.5)	24 (32.0)	
West	21 (41.2)	22 (29.3)	
Mean number of females eligible for screening (median)	1,262 (792)	1,141 (749)	0.66
Mean number of females tested for chlamydia (median)	268 (194)	932 (582)	< 0.01
Proportion positive, %			0.03
0–10	11 (21.6)	18 (24.0)	
11–14	9 (17.7)	27 (36.0)	
15–17	11 (21.6)	17 (22.7)	
> 17	20 (39.2)	13 (17.3)	
	Facility chlamydia positivity		
	0–15% (*n* = 65)	**> 15% (*n* = 61)**	***p*-Value**
Region,* %			0.01
Midwest	9 (13.9)	19 (31.2)	
Northeast	10 (15.4)	6 (9.8)	
South	15 (23.1)	23 (37.7)	
West	30 (46.2)	13 (21.3)	
Mean number of females eligible for screening (median)	898 (574)	1,501 (960)	0.02
Mean number of females tested for chlamydia (median)	633 (335)	695 (291)	0.67
Proportion screened, %			0.03
0–24	7 (10.8)	18 (29.5)	
25–49	13 (20.0)	13 (21.3)	
50–74	9 (13.9)	10 (16.4)	
75–100	36 (55.4)	20 (32.8)	

*One facility in Puerto Rico reported a screening coverage level of 50–100% and a positivity of 0–15%.

TABLE 3

Linear Regression Parameter Estimates: Chlamydia Screening Coverage and Positivity, United States, 2009–2011

Model	Parameter estimate	95% CI	*p*-Value
Overall	−0.37	−0.44, −0.29	< 0.001
Midwest	−0.11	−0.29, 0.06	0.203
Northeast	−0.08	−0.31, 0.16	0.523
South	−0.58	−0.71, −0.46	< 0.001
West	−0.31	−0.43, −0.19	< 0.001

CI = confidence interval.