

### **HHS Public Access**

Author manuscript

Community Coll J Res Pract. Author manuscript; available in PMC 2020 February 14.

Published in final edited form as:

Community Coll J Res Pract. 2016 September; 4(11): 747–756. doi:10.1080/10668926.2016.1220874.

## Community Colleges: Rethinking STD Prevention for the Nontraditional College Campus

Melissa A. Habel<sup>a</sup>, Jeffrey S. Becasen<sup>b</sup>, Rachel Kachur<sup>a</sup>, Heather Eastman-Mueller<sup>c</sup>, Patricia J. Dittus<sup>a</sup>

<sup>a</sup>Division of STD Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia, USA;

<sup>b</sup>Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia, USA:

<sup>c</sup>Department of Women's and Gender Studies, University of Missouri, Columbia, Missouri, USA

#### **Abstract**

As increased attention and proposed funding are being directed toward community colleges, it is important to consider the sexual and reproductive health care needs of this growing population. Existing data suggest there are significant sexual health needs among this population and often insufficient provision of services. Some community college students are more likely than students at 4-year colleges to test positive for sexually transmitted diseases (STDs). Given resource constraints, creative solutions are required. These may include campus-wide policies addressing STD/HIV (human immunodeficiency virus) prevention, referral systems to connect students to care in the community, and partnerships with local health departments, Federally Qualified Health Centers, or community-based organizations to assist with the provision of services. Colleges have the unique opportunity to provide students with valuable information about sexual health and services. Community colleges, in particular, are uniquely positioned to reach at-risk community members for STD testing and sexual health care who might otherwise be lost to care. More research is needed on the sexual health needs of community college students, especially on factors such as geographic location, how embedded the school is into the community, social norms around sexual health on college campuses, and health services offered. New and innovative ways to promote linkage to care for testing and counseling could offer potential health benefits to this growing at-risk population.

In the United States (US), sexually active youth and young adults (15–24 years) bear a disproportionate burden of sexually transmitted diseases (STDs), accounting for half of the 20 million new cases of STDs each year (Satterwhite et al., 2013). Despite this, many youth do not seek the necessary health care services needed to diagnose and treat STDs primarily due to misconceptions, access challenges, and stigma (Centers for Disease Control and Prevention [CDC], 2014b; Hoff, Greene, & Davis, 2003; Hood & Friedman, 2011). The

**CONTACT** Melissa A. Habel mhabel@cdc.gov Health Scientist, Division of STD Prevention, Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop E-02, Atlanta, GA 30329.

Disclosure

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.

World Health Organization (WHO) stated that "sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence" and that "sexual rights embrace certain human rights" such as "the right to the highest attainable standard of health, including sexual health" (WHO, 2010, pp. 3, 4, 14). In order for "sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled" (WHO, 2010, p. 3).

Over the past decade and a half, a series of United States (U.S.) policy statements have sought to improve the national dialogue around sexual health by making it more of a national health priority. In 2001, the U.S. Surgeon General's report, "The Surgeon General's Call to Action to Promote Sexual Health and Responsible Sexual Behavior" (Office of the Surgeon General, 2001) formally recognized the need for an evidence-based approach to sexual health promotion and the need to widely promote sexual health and responsible sexual behavior to enhance population health (Ivankovich, Fenton, & Douglas, 2013). This modern public health approach to sexual health was reflected in the 2010 National HIV/AIDS (acquired immune deficiency syndrome) Strategy (Office of National AIDS Policy, 2010) and also emphasized in the 2011 National Prevention Strategy. Sexual and reproductive health was designated as one of seven target priorities in the 2011 Prevention Strategy (Office of the Surgeon General, 2011) with an overall vision of emphasizing prevention, wellness, and respect for others (Ivankovich et al., 2013; Satcher, Hook, & Coleman, 2015).

Colleges are microcommunities composed of individuals from all walks of life. With nearly half of the over 30 million 18-24-year olds in the United States currently enrolled in undergraduate or graduate school (U.S. Census Bureau, 2013), college students represent a vast subgroup of young adults who are at-risk for STDs and human immunodeficiency virus (HIV) infection. In line with national policies and recommendations, STDs and HIV are cited in the American College Health Association's (ACHA) Healthy Campus 2020 topics (based on Healthy People 2020) (Office of Disease Prevention and Health Promotion, 2014) and objectives as a major public health concern affecting college students (American College Health Association [ACHA], 2012b). Eighteen of the 58 Healthy Campus 2020 objectives are related to sexual health. Three major objectives specifically focus on reducing the number of positive cases and increasing chlamydia and HIV testing among students (Objectives STD-1, STD-4, HIV-14). Complementary to these four objectives, is a recommended health communication objective for increasing the proportion of students who report receiving information on STD prevention from their college (Objective ECBP-7.8). For many young adults, attending college represents the first time that they will make healthrelated decisions for themselves.

The Centers for Disease Control and Prevention (CDC) recommends several clinical preventive services relevant to sexual health (e.g., treatment and counseling, screening tests, and vaccines) (CDC, 2015b). Likewise, the 2010 Patient Protection and Affordable Care Act (ACA) allows opportunity for expanding access to sexual health related clinical services through the expansion of access to health care and provision of recommended preventive services without copays (Patient Protection and Affordable Care Act, 2010; Satcher et al.,

2015). However, the availability and visibility of health resources and services varies considerably and depends on the type of college a student attends and can affect students' sexual health behaviors (Eisenberg et al., 2013; (Koumans et al., 2005). As increased attention and potential funding are being directed towards community colleges, it is important to consider the sexual and reproductive health care needs of this growing population.

Last year, a United States White House policy proposed to cover 75% of the average cost of community college for students across the US with participating states contributing the remaining funds, in essence making tuition free for eligible students (The White House, 2015). With the onset of the economic recession in December 2007, (U.S. Department of Labor, 2012) many students turned to community colleges for degrees as a more affordable option (Boggs, 2010; Davis, 2010). Community colleges serve almost half of all the undergraduate students in the United States (Knapp, Kelly-Reid, & Ginder, 2012; Provasnik & Planty, 2008); and with the federal government having invested nearly \$12 billion into revamping the United States' community college system, 50% or 5 million more graduates are expected by 2020 (Boggs, 2010).

Community colleges tend to contain diverse, more mobile populations of students, who are increasingly younger (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2009). Nationally, approximately 12 million students are enrolled across 1,200 community college campuses, of which 37% are age 21 or younger, an age range disproportionately impacted by STDs (American Association of Community Colleges, 2015). An analysis of the Education Longitudinal Study data showed that 44% of low-income students (those with family incomes <\$25,000 per year) attend community colleges as their first college after high school. In contrast, only 15% of high-income students enroll in community colleges initially (National Center for Education Statistics, n.d.; The National Center for Public Policy and Higher Education, 2011). The same analysis found that 50% of Hispanic students start at a community college, along with 31% of African American students. In comparison, 28% of White students begin at community colleges. According to a nationally representative survey of first-time college students in 2003–2004, among first-time college students with family incomes of \$32,000 or lower, 57% started at a 2-year college rather than at a 4-year institution (Berkner & Choy, 2008).

There has been a national dialogue about how increased enrollment will affect these institutions and their students' educational development needs, but there has been less focus on how and if these institutions plan to meet the health care needs of this growing population. In 1999, the American Association of Community Colleges (AACC) released a position statement on health and wellness stating that "community colleges should create an environment that supports health in which institutional mechanisms such as policy, programs, curricula, services, and collaborative work with the community promote and support health and wellness" (AACC, 1999). To our knowledge, the last publication to address the issue of community college health was written over a decade ago (2003), and it focused broadly on the health care needs of community college students (Floyd, 2003). The author did highlight the need for expanded programs and services around HIV and STDs and offer some strategies; however, there is an extensive gap in the literature from 2003 forward

regarding what, if anything, community colleges have done to address the sexual health needs of their students. Similarly, the 1999 AACC policy statement listed HIV infection as one of the health issues to be considered. But the statement did not mention STDs, which are more common among adolescents and young adults. Given that community colleges tend to enroll those of lower socioeconomic status and ethnic minorities, particularly blacks and Hispanics who have been historically disproportionately burdened by STDs and HIV, (CDC, 2014b; Floyd, 2003) additional research and prevention efforts may be needed among these subpopulations. In 2003, Floyd reasoned that the AIDS epidemic and "the concentration of at-risk youth in community colleges, argues that health issues at community colleges can no longer be ignored" (p. 27). Some research has shown that nonstudents (young adults not attending school) are at increased risk for high-risk sexual behaviors and STD/HIV acquisition (Bailey, Fleming, Henson, Catalano, & Haggerty, 2008; Becasen, Habel, Kachur, & Dittus, 2015). But given the socioethnic make-up of community college campuses, other research suggests that these students' risk behaviors may not differ much from the behaviors of their peers not enrolled in school (CDC, 1997; Rosenbaum, 2012; Trepka & Kim, 2010). This may be especially true if youth who previously might not have considered college are now able to do so because of its new affordability.

With the possibility of more students (potentially at higher risk for STDs/HIV) entering into this nontraditional college setting, community college leaders and public health professionals may want to revisit the idea of how to better serve them with regard to sexual and reproductive health care. Also, given that 25% of community college students who enroll in the fall semester do not return in the spring, (Community College Research Center, n.d.), the first year of college (preferably the first semester) could be a critical time to reach high-risk community members who might not otherwise be reached. As such, we may want to consider how our community colleges could possibly function as an STD safety net for this group of young adults, many of whom come from low-income and underserved backgrounds.

#### Challenges

Part of the difficulty in approaching how to provide better sexual and reproductive health care to this population is that community colleges are often overlooked and understudied with regard to their STD prevalence and sexual behavior risks; the data are sparse (Trieu, Bratton, & Marshak, 2011). In general, available data on colleges and their students overwhelmingly represent those attending 4-year colleges, presenting a large research gap. Only three known surveys specifically and regularly collect STD-relevant data from college populations (ACHA, n.d.a; ACHA, n.d.b; College Health Surveillance Surveillance, n.d.). However, these data are not nationally representative and primarily reflect students who attend 4-year colleges. In one of the surveys, less than 2% of the participating schools identified as community colleges; and of those, all but two were from the same state (ACHA, n.d.b). The CDC conducted the National College Health Risk Behavior Survey, (CDC, 1997) a nationally representative survey of college student risk behavior. But the one-time administration was 20 years ago, in 1995, and it reported on sexual risk behaviors not STD prevalence. The last time the American Association of Community Colleges conducted a national survey on health services was over 15 years ago (2000) (Ottenritter, 2002). Other

national surveys exist that allow inferences to be made about college populations. For example, the National Survey of Family Growth (NSFG) (CDC, 2015a) captures current student status as well as sexual behaviors such as sexual experience, number of lifetime sex partners, use of condoms and birth control, and self-reported STD testing or treatment. However, it does not report on type of college institution or the availability and types of health care services on campus. The National Longitudinal Study of Adolescent to Adult Health (Add Health) (Add Health, n.d.) likewise captured similar data as well as STD testing data at its Wave III administration. However, this study follows a nationally representative cohort of individuals who were recruited in 1994, when they were in grades 7–12. To date, few articles have been published on the college populations in both data sets, and none have focused on STD-relevant analyses among college students. Finally, national surveillance systems at the CDC, which track diseases such as chlamydia, gonorrhea, and HIV, do not collect information on student status (CDC, 2014b).

#### Sexual Risk Behaviors, STDs, and Sexual Health Services

College students are assumed to be a relatively healthy population; however, the common behaviors (e.g., binge drinking, sex without a condom, multiple sex partners, and drug use) (ACHA, 2012a) they engage in put them at risk for acquiring and transmitting STDs. Community college students may be at greater risk compared to 4-year college students because students may be drawn from areas with high community prevalence attributable to unfavorable social determinants (e.g., poverty, income, housing) (Hogben & Leichliter, 2008); so as a result, their risk may actually mirror those of their peers not enrolled in school (Rosenbaum, 2012). A study using 2002 NSFG data found that behaviors known to increase HIV risk (e.g., >1 partner during past year, sex with nonmonogamous partner, treatment for an STD past 12 months) were relatively common among young adults (18-22), regardless of student status. The 1995 College Risk Behavior Survey found that compared to 4-year students, 2-year students were more likely to not use condoms and to have had six or more sex partners in their lifetime (CDC, 1997). Similarly, a survey of students in an inner-city community college found that almost half (46%) of respondents had engaged in high risk sexual behaviors (e.g., >5 sexual partners, receptive anal intercourse, or needle sharing) (Rich, Holmes, & Hodges, 1996). Of those who were sexually active, 81% reported not always using a condom. Students identifying as Black or Latino engaging in high risk behaviors reported the risk of AIDS as their number one life risk. Likewise, another study of 13 community college campuses found a 4% self-report rate among the five STDs assessed (genital herpes, HPV [human papillomavirus virus], gonorrhea, chlamydia, pelvic inflammatory disease). And 10% of students reported four or more sex partners in the last academic year (Trieu et al., 2011). The same study compared data from the 13 community college campuses to data from the American College Health Association's National College Health Assessment (ACHA-NCHA) survey of the same year, and researchers found that community college students had higher proportions of 2 or more sex partners (30% vs. 25%) and higher frequency of oral, vaginal, and anal sex. They also found lower rates of condom use at last sexual intercourse. Not surprisingly these students also had twice the rate of unexpected pregnancies (5.3% vs. 2.4%) and 1.5 times the rate of emergency contraception use. Finally, they also reported lower rates of HIV testing compared to students at 4-year campuses (NCHA-ACHA referent group).

Research using nationally representative data from the Add Health Study (n.d.) found higher chlamydia positivity on community college campuses compared to 4-year campuses (4% vs. 2%). Additionally, the largest STD prevalence disparities were found among African American students attending community colleges as compared to 4-year colleges (Rosenbaum, 2012). Community college students also had similar chlamydia risks as those of nonstudents with a high school degree. Another statewide survey of colleges found that their 2-year students had significantly higher odds for: sex without reliable birth control, sex without a condom, unplanned pregnancy, and STDs, compared to 4-year students. They were, however, more likely to test for HIV (Eisenberg, Lust, & Garcia, 2014). The most recent study examining differences between community colleges and 4-year colleges found a significant difference between chlamydia positivity in females at 2-year institutions (5.3%) compared to 4-year institutions (6.6%) (Habel, Leichliter, & Torrone, 2014). Although positivity was slightly higher at 4-year colleges, both estimates were greater than general population prevalence estimates (4.7%) (Torrone, Papp, & Weinstock, 2014) and greater than positivity estimated (3.8%) from the ACHA Pap Test & STI survey (ACHA, 2015). These differences in behavior and positivity warrant further efforts in data collection on community college students to better identify needs, trends, and differences.

There is no accessible database free of charge containing the total number of colleges that have a designated health center or in some way provide health care services to their students. The most recent national assessment of sexual health care services on community college campuses was conducted in 2000. Of the 1,100 colleges surveyed, there was a 37% response rate. Of the schools responding, 42% reported having a student health center. Regarding sexual health services, approximately 15% addressed sexual health through a written policy on campus, and 15% and 25% offered HIV and STD testing on campus, respectively. Almost all schools were able to make referrals to outside organizations, and 21% of respondents said testing services were funded by a city, county, or state health department (Ottenritter, 2002). Residential provisions at community colleges are rare, and this affects students' expectations of receiving healthcare services from the school. A 2012 study comparing expectations of services from students at 2- and 4-year colleges found that students at community colleges did not perceive on-campus services like condom distribution programs as important as 4-year students; they cited a lack of reason or opportunity to have sex on campus to seek out condoms from the school (Eisenberg, Garcia, Frerich, Lechner, & Lust, 2012). While the two types of students placed differing importance on campus-based services, they shared common interests in wanting to know more about what their school offered in terms of sexual and reproductive health services and more importantly, seeing their school as a legitimate referral point for free condoms and getting off-campus sexual and reproductive health services. Recognizing the financial constraints that their schools are under, providing a dependable referral system to get students the care they need may be more important to community college students than the actual provision of health care services on campus (Lechner, Garcia, Frerich, Lust, & Eisenberg, 2013).

The higher prevalence of STDs among adolescents and young adults reflects multiple barriers to accessing quality STD prevention services including lack of transportation, lack of insurance or other ability to pay, discomfort with facilities and services, and concerns

about confidentiality or perceived need (CDC, 2014b). For enrolled students, colleges have an opportunity to fill these gaps and missed opportunities; however, not enough is known about the extent to which colleges can, and are willing to, provide these services to their students (though, some research is underway) (Habel, Becasen, & Dittus, 2015). Colleges have the opportunity to provide students with valuable information about sexual health and services; these services, including linkage to care, may help students receive important primary preventive services and treatment more readily and empower them to do so across the lifespan.

#### **Addressing the Challenges and Strategies**

Sexual health research on community college populations is limited and requires further investigation. As discussed earlier, some community college students are more likely than students at 4-year colleges to test positive for STDs. This warrants further exploration regarding factors such as geographic location, how embedded the school is into the community, social norms around sexual health on community college campuses, and health services offered. Exploring new and innovative ways to promote linkage to care for testing and counseling could offer potential health benefits for this growing at-risk population.

Moreover, sexual and reproductive health care services offered on college campuses are not uniform; and, in some instances, they are completely lacking. For community colleges especially, we do not have a clear picture of how many schools are offering sexual health services; to our knowledge, data have not been collected in over 15 years on these services. A minimum set of standards for appropriate and quality sexual health services could be created to guide 2-year colleges, as very few community colleges are members of the American College Health Association. In 2000, only 15% of schools had a formal policy related to sexual health practices, community colleges may want to revisit the idea of implementing formal administrative policies that could address these standards, whether it be a policy around the coverage of health services on campus, the offering of sexual health information during orientation annually, the number of referrals within a reasonable walking/driving distance from campus, and/or policies around the availability of condoms on campus. These policies could be included as part of student handbooks, or the information could be easily accessible on the college's website. More broadly, these policies could be included as part of Healthy Campus 2020 recommendations (ACHA, 2012b).

Better data are needed to investigate nontraditional college settings and paint a clearer picture of the STD prevalence and sexual risk behaviors (Trieu et al., 2011). To address these gaps in research and surveillance, educational status could be collected more routinely as part of STD case reporting and state/national surveillance and research efforts. Although some data are already being collected, due to the varying methodologies and challenges faced by college students, a gap exists in investigating this information on a large scale to capture this complexity. This would mean improving state and/or national data collection systems by gathering data specific to a mixture of students, settings and institutions (e.g., part-time vs. full-time; private vs. public; 4-year vs. 2-year; minority serving institutes). When informed by local morbidity trends, health departments may want to consider

providing STD outreach to community colleges in their area to serve as safety nets for this population.

Upon consideration of these challenges—and given resource constraints—innovative strategies and partnerships are needed to improve STD testing and prevention education at the community college-level. In line with some of the policies discussed earlier, the strategies discussed below could help promote sexual health on campus as an element of overall health and wellness. These strategies could also help assess the true nature and scope of STD burden in the community and community college population. Importantly, these strategies have the potential to support and/or enhance existing disease control and prevention efforts in the community or on campus. Community college administrators, or any administrator in a college setting, may consider one or more of the following options when developing sexual health strategies for their campus:

#### Creating a Formal Written Campus-Wide Policy Addressing STD/HIV Prevention

Depending on whether health care services are available on campus, policies regarding confidentiality, counseling, testing and referrals, billing, condom availability, prevention education and health promotion activities, and compliance with local, state, and federal regulations, could be helpful in implementing STD prevention strategies on campus (Floyd, 2003; Hoban, Ottenritter, Gascoigne, & Kerr, 2003). In essence, these policies could help create a safe environment for students to access STD and HIV education, screening, testing, and treatment. Policies around condom availability and access (or referral) to confidential STD and HIV testing (and billing) could help facilitate "a campus atmosphere of non-discrimination." (Warren-Jeanpiere, Jones, & Sutton, 2011, p. 328). Future studies could explore whether the presence of these policies is welcomed by students and/or associated with improved sexual health services and prevention activities for students. Also of value would be research to see if such policies are associated with an increase in STD testing among students. (Trieu et al., 2011; Warren-Jeanpiere et al., 2011).

## Improving Linkage to Prevention, Services, and Care When These Are Not Available on Campus

Use of national testing campaigns like GYT: Get Yourself Tested campaign (Friedman et al., 2014) could help normalize testing and improve linkage to care. Webinars on how to bring the GYT campaign to college campuses are available on the ACHA website with continuing education credits offered as well (ACHA, 2014). Likewise, exploring adaptations of referral systems like the Project Connect (CDC, 2014a) model for the community college population could improve linkage to prevention, services, and care as well as partnerships with Single Stop<sup>TM</sup> (Single Stop<sup>TM</sup>, n.d.). Project Connect has demonstrated efficacy in referring adolescents to offsite adolescent-friendly providers. Results from the original trial conducted in a Los Angeles, CA public school district demonstrated an increase in receipt of birth control and STD and HIV testing among intervention high school students, relative to controls (Dittus et al., 2014). A community-college adaptation of Project Connect would be a low-cost, feasible means of connecting students to services and could make use of existing staff (e.g., faculty, counselors) with minimal training. Single Stop<sup>TM</sup> is actively working on 31 college campuses across the U.S. to connect them with an array of social services (e.g.,

stable housing, financial aid, legal aid, tax preparation, nutrition assistance, etc.) including enrolling students in free or low-cost health insurance; linking students to free or reduced-cost sexual and reproductive healthcare could easily be added to the mix. Community colleges unable to offer health care services could consider working with Single Stop<sup>TM</sup> to make sure their students get connected with appropriate health care services. Similarly, the National Coalition for STD Directors (NCSD) has developed an implementation kit for developing a referral system for sexual health services specifically for education agencies (National Coalition for STD Directors [NCSD], 2015a). Though targeted at the high school level, the tools and guidance in the kit could be adapted for the community college setting.

# Forming Partnerships with State/Local Health Departments or Federally Qualified Health Centers (FQHCs)/Community-Based Organizations (CBOs) to Assist with Providing Free/Reduced Cost STD/HIV Testing

Campus administrators may consider identifying key community partners that could facilitate campus STD/HIV prevention efforts (Floyd, 2003; Trieu et al., 2011; Warren-Jeanpiere et al., 2011). The formation of partnerships with local/state health departments or other CBOs could assist with express STD/HIV testing on campus, or free/reduced cost testing could be promoted and offered to students at a nearby health department or CBO during key points throughout the school year such as orientation, National STD Awareness Month, or after spring-break. Colleges may need technical assistance developing memoranda of agreement or understanding (MOA/MOU) with such partners. NCSD has developed a guide for establishing organizational partnerships to increase student access to sexual health services (NCSD, 2015b). Examples of successful partnerships, service delivery, and sample MOAs are included. Preliminary data from a national survey assessing sexual and reproductive health care services on college campuses found that over three quarters of colleges (77%) reported they were interested in partnering with a local FQHC or community health center (CHC) (Habel et al., 2015). Partnerships with FQHCs/CHCs could be particularly beneficial if the majority of enrolled students are already Medicaid eligible.

#### Conclusion

Data, although limited, suggest that community college students are at risk for acquiring and transmitting STDs and HIV. The college setting is well-suited to normalizing sexual health as part of one's overall well-being and to introduce routine preventative health care screenings. As the landscape of community colleges changes, so must our view of how to implement STD/HIV prevention strategies in these nontraditional campus settings. Future research could involve an environmental scan to assess if campus policies ignore or encourage issues regarding sexual health (Floyd, 2003). Likewise, an assessment of the sexual health needs of students could determine whether community referrals would be preferred to a local health department or CBO coming to campus and offering STD services (Floyd, 2003). Additionally, to effectively provide sexual and reproductive health services to this population, sexual behavior and STD data are needed on students attending a broader range of college-level institutions, and on the range of services being provided to them. Such data should include how embedded the school is into the community and the social norms around sexual health on college campuses. Community college administrators who aim to

meet the sexual health needs of their students can do so through policies, improved linkage to care, and/or community partnerships. Moreover, in an effort to contribute to the literature, when colleges have had success implementing these strategies, they should consider taking steps to publish their successes and lessons learned. Finally, given the populations they serve, it is important for public health professionals to consider community colleges as a safety net for STD testing and an opportunity for reaching high-risk community members who might otherwise be lost.

#### References

- Add Health. (n.d.). The national longitudinal study of adolescent adult health. about add health. Retrieved from http://www.cpc.unc.edu/projects/addhealth/about
- American Association of Community Colleges (AACC). (1999). AAC Position Statement on Health and Wellness. Retrieved July 31, 1999, from http://www.aacc.nche.edu/About/Positions/Pages/ps08011999.aspx
- American Association of Community Colleges (AACC). (2015). 2015 fact sheet. Retrieved from http://www.aacc.nche.edu/AboutCC/Documents/FactSheet2015.pdf
- American College Health Association (ACHA). (2012a). American College Health Associationnational college health assessment II: Reference group executive summary spring 2012. Hanover, MD: Author.
- American College Health Association (ACHA). (2012b). Healthy campus 2020 Student objectives. Retrieved from http://www.acha.org/HealthyCampus/student-obj.cfm
- American College Health Association (ACHA). (2014). Bringing GYT to your campus. Retrieved from http://www.acha.org/Continuing\_Education/online\_ce\_bringing\_gyt\_to\_your\_campus.cfm
- American College Health Association (ACHA). (2015). ACHA 2014 Pap and STI survey for calendar year 2013 data: Survey data report. Retrieved from http://www.acha.org/topics/docs/ACHA\_CY2013\_PapTest\_and\_STI\_SurveyFullDataReport.pdf
- American College Health Association (ACHA). (n.d.b). Pap Test and STI Survey. Retrieved from http://www.acha.org/topics/pap\_sti\_survey.cfm
- American College Health Association-National College Health Assessment (ACHA-NCHA). (n.d.a). About ACHA NCHA. Retrieved from http://www.acha-ncha.org/overview.html
- Bailey JA, Fleming CB, Henson JN, Catalano RF, & Haggerty KP (2008). Sexual risk behavior 6 months post-high school: Associations with college attendance, living with a parent, and prior risk behavior. Journal of Adolescent Health, 42(6), 573–579. doi:10.1016/j.jadohealth.2007.11.138 [PubMed: 18486866]
- Becasen J, Habel M, Kachur R, & Dittus P (2015, 3). Sexual and healthcare seeking behaviors of young adults by college enrollment. Poster presented at the 2015 annual meeting of the Society for Adolescent Health & Medicine, Los Angeles, CA. doi:10.1016/j.jadohealth.2014.10.144
- Berkner L, & Choy S (2008). Descriptive summary of 2003–04 beginning postsecondary students: Three years later (NCES 2008–174). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Boggs GR (2010, 8). Democracy's colleges. The evolution of community colleges in America. Washington, DC:American Association of Community Colleges.
- Centers for Disease Control and Prevention (CDC). (1997). Youth Risk Behavior Surveillance: National College Health Risk Behavior Survey – United States, 1995. National College Health Risk Behavior Survey: MMWR, 46(SS–6), 1–54. [PubMed: 9393659]
- Centers for Disease Control and Prevention (CDC). (2014a). Project Connect: Implementation guide. Retrieved from http://www.cdc.gov/std/projects/connect/guide-overview.htm
- Centers for Disease Control and Prevention (CDC). (2014b). Sexually Transmitted Disease Surveillance 2013. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention (CDC). (2015a). About the National Survey of Family Growth. Retrieved from http://www.cdc.gov/nchs/nsfg/about\_nsfg.htm

Centers for Disease Control and Prevention (CDC). (2015b). Sexually Transmitted Diseases Treatment Guidelines, 2015: MMWR, 64(No.RR-3), 1–137.

- College Health Surveillance Network. (n.d.) National Social Norms Institute at the University of Virginia. Retrieved from http://socialnorms.org/college-health-surveillance-network/
- Community College Research Center. (n.d.). Community college FAQs. Retrieved from http://ccrc.tc.columbia.edu/Community-College-FAQs.html
- Davis MR (2010, 4). The alternative: Younger students give community college a second look. The Washington Post Retrieved from http://www.washingtonpost.com/wp-dyn/content/article/2010/04/02/AR2010040202553.html
- Dittus P, DeRosa C, Jeffries R, Afifi A, Cumberland W, Chung E, ... Ethier K (2014). Evaluation of the project Connect health systems intervention: Linking sexually experienced youth to sexual and reproductive healthcare. Journal of Adolescent Health, 55, 528–534. doi:10.1016/j.jadohealth. 2014.04.005 [PubMed: 24856358]
- Eisenberg M, Lust K, & Garcia C (2014). Differences in sexual behaviors among unmarried sexually active students at 2- and 4-year colleges. Research in Nursing & Health, 37(2), 128–134. doi: 10.1002/nur.v37.2
- Eisenberg ME, Garcia CM, Frerich EA, Lechner KE, & Lust KA (2012). Through the eyes of the student: What college students look for, find, and think about sexual health resources on campus. Sexuality Research and Social Policy, 9(4), 306–316. doi:10.1007/s13178-012-0087-0
- Eisenberg ME, Hannan PJ, Lust KA, Lechner KE, Garcia C, & Frerich EA (2013). Sexual health resources at Minnesota colleges: Associations with students' sexual health behaviors. Perspectives on Sexual and Reproductive Health, 45(3), 132–138. doi:10.1363/psrh.2013.45.issue-3 [PubMed: 24020774]
- Floyd DL (2003). Student health: Challenges for community colleges. Community College Journal of Research and Practice, 27, 25–39. doi:10.1080/713838081
- Friedman A, Brookmeyer K, Kachur R, Ford J, Hogben M, Habel MA, & McFarlane M (2014). Normalizing talking and testing among youth through the GYT: Get yourself tested campaign: An integrated approach to STD prevention communication. Sexually Transmitted Diseases, 41(3), 151–157. doi:10.1097/OLQ.000000000000100 [PubMed: 24521718]
- Habel M, Becasen J, & Dittus P (2015, 3). The state of sexual health services at U.S. colleges and universities. Poster presented at the 2015 annual meeting of the Society for Adolescent Health & Medicine, Los Angeles, CA. doi:10.1016/j.jadohealth.2014.10.149
- Habel M, Leichliter J, & Torrone E (2014, 6). Exploring chlamydia positivity among females on college campuses, 2008–2010. Oral presentation at the STD prevention Conference, Atlanta, GA.
- Hoban MT, Ottenritter NW, Gascoigne JL, & Kerr DL (2003). Campus HIV prevention strategies: Planning for success. Washington, DC: Community College Press.
- Hoff T, Greene L, & Davis J (2003). National survey of adolescents and young adults: Sexual health knowledge, attitudes and experiences. Menlo Park, CA: Henry J. Kaiser Family Foundation.
- Hogben M, & Leichliter J (2008). Social determinants and sexually transmitted disease disparities. Sexually Transmitted Diseases, 35(12 Suppl), S13–S18. doi:10.1097/OLQ.0b013e31818d3cad [PubMed: 18936725]
- Hood J, & Friedman AL (2011). Unveiling the hidden epidemic: A review of stigma associated with sexually transmissible infections. Sexual Health, 8, 159–170. doi:10.1071/SH10070 [PubMed: 21592429]
- Ivankovich MB, Fenton KA, & Douglas JM Jr. (2013). Considerations for national public health leadership in advancing sexual health. Public Health Reports, 128(Suppl 1), 102–110. [PubMed: 23450891]
- Knapp LG, Kelly-Reid JE, & Ginder SA (2012). Enrollment in postsecondary institutions, fall 2011; financial statistics, fiscal year 2011; and graduation rates, selected cohorts, 2003–2008: First Look (Provisional Data) (NCES 2012–174rev). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Koumans EH, Sternberg MR, Motamed C, Kohl K, Schillinger JA, & Markowitz LE (2005). Sexually transmitted disease services at US colleges and universities. Journal of American College Health, 53(5), 211–217. [PubMed: 15813231]

Lechner KE, Garcia CM, Frerich EA, Lust K, & Eisenberg ME (2013). College students' sexual health personal responsibility or the responsibility of the college? Journal of American College Health, 61(1), 28–53. doi:10.1080/07448481.2012.750608 [PubMed: 23305542]

- National Center for Education Statistics. (n.d.). Education Longitudinal Study, ELS: 2002–06 public release data.Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010338
- National Coalition for STD Directors (NCSD). (2015a, February 13). Developing a referral system for sexual health services. Retrieved from http://www.ncsddc.org/resources/developing-referral-system-sexual-health-services-implementation-tool-kit
- National Coalition for STD Directors (NCSD). (2015b, February 13). Establishing organizational partnerships to increase student access to sexual health services. Retrieved from http://www.ncsddc.org/sites/default/files/referral\_system\_implementation\_kit\_020615\_\_1.pdf
- Office of Disease Prevention and Health Promotion. (2014). Healthy people 2020. Washington, DC: U.S. Department of Health and Human Services.
- Office of National AIDS Policy. (2010). National HIV/AIDS strategy for the United States. Washington, DC: The WhiteHouse.
- Office of the Surgeon General. (2001). The surgeon general's call to action to promote sexual health and responsible sexual behavior. Washington, DC: U.S. Department of Health and Human Services.
- Office of the Surgeon General. (2011). National prevention strategy. Washington, DC: U.S. Department of Health and Human Services.
- Ottenritter N (2002). National study on community college health. American Association of Community Colleges Research Brief. Retrieved from http://files.eric.ed.gov/fulltext/ED464663.pdf
- Patient Protection and Affordable Care Act, Pub. L. No. 111–148, §2702, 124 Stat. 119, 318–319 (2010).
- Provasnik S, & Planty M (2008). National center for education statistics. Community colleges special supplement to the condition of education 2008: Statistical analysis report. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Rich J, Holmes M, & Hodges D (1996). Preferred sources of AIDS information, risk perceptions, and risk behaviors among inner-city community college students. JAMA: Journal of the American Medical Association, 88(2), 87–93.
- Rosenbaum J (2012, 3). 'Clap' for college: Educational roots of STI disparities between students at community colleges versus 4 Year colleges. Presentation at STD Prevention Conference, Minneapolis, MN.
- Satcher D, Hook EW, & Coleman E (2015). Sexual health in America improving patient care and public health. JAMA: Journal of the American Medical Association, 314(8), 765–766. doi: 10.1001/jama.2015.6831 [PubMed: 26087251]
- Satterwhite C, Torrone E, Meites E, Dunne E, Mahajan R, Ocfemia MCB, ... Weinstock H (2013). Sexually transmitted infections among U.S. women and men: Prevalence and incidence estimates, 2008. Sexually Transmitted Diseases, 40(3), 187–193. doi:10.1097/OLQ.0b013e318286bb53 [PubMed: 23403598]
- Single Stop<sup>TM</sup>. (n.d.). Our Work. Retrieved from http://singlestopusa.org/our-work/
- The National Campaign to Prevent Teen and Unplanned Pregnancy. (2009, March). Unplanned pregnancy and community colleges. Retrieved from http://www.thenationalcampaign.org/resources/pdf/briefly-unplanned-pregnancy-and-community-colleges.pdf
- The National Center for Public Policy and Higher Education. (2011, June). Policy alert: Affordability and transfer: Critical to increasing baccalaureate degree completion. Retrieved from http://www.highereducation.org/reports/pa\_at/PolicyAlert\_06-2011.pdf
- The White House. (2015, January 9). Fact Sheet White House unveils America's college promise proposal: Tuition-free community college for responsible students. Retrieved from https://www.whitehouse.gov/the-press-office/2015/01/09/fact-sheet-white-house-unveils-america-scollege-promise-proposal-tuitio

Torrone E, Papp J, & Weinstock H (2014). Prevalence of chlamydia trachomatis genital infection among persons aged 14–39 years – United States, 2007–2012. Mmwr, 63(38), 834–838. [PubMed: 25254560]

- Trepka MJ, & Kim S (2010). Prevalence of human immunodeficiency virus testing and high-risk human immunodeficiency virus behavior among 18 to 22 year-old students and nonstudents: Results of the National Survey of Family Growth. Sexually Transmitted Diseases, 37(10), 653–659. [PubMed: 20585277]
- Trieu SL, Bratton S, & Marshak HH (2011). Sexual and reproductive health behaviors of California community college students. Journal of American College Health, 59(8), 744–750. doi: 10.1080/07448481.2010.540764 [PubMed: 21950256]
- U.S. Census Bureau. (2013). School enrollment, 2013 American Community Survey 1-Year estimates. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml? pid=ACS\_11\_1YR\_S1401&prodType=table
- U.S. Department of Labor. Bureau of Labor Statistics. (2012). The recession of 2007–2009. Retrieved from http://www.bls.gov/spotlight/2012/recession/pdf/recession\_bls\_spotlight.pdf
- Warren-Jeanpiere L, Jones S, & Sutton MY (2011). Health administrator perspectives on human immunodeficiency virus/acquired immunodeficiency syndrome prevention and services at historically black colleges and universities. Journal of American College Health, 59(4), 327–329. doi:10.1080/07448481.2010.502202 [PubMed: 21308594]
- World Health Organization (WHO). (2010). Developing sexual health programmes. A framework for action. Retrieved from http://apps.who.int/iris/bitstream/10665/70501/1/WHO\_RHR\_HRP\_10.22\_eng.pdf