December 2014

Dear Colleagues:

The Association of State and Territorial Health Officials (ASTHO) has compiled a collection of sexually transmitted disease (STD) resources for health officials that may offer innovative solutions for reducing infectious diseases in a dynamic healthcare environment. There are a number of factors in play that make it timely to revisit health department STD programs; for example, the increased focus on public health and primary care integration, the new possibilities of electronic exchange of data, and reduced capacity in health departments. STD programs offer the opportunity to integrate public health and primary care by enhancing collaboration with clinical stakeholders, and state health officials are well positioned to facilitate this integration process.

The STD resources provide a quick snapshot of current STD trends and issues, highlighting the increasing concern about antibiotic-resistant gonorrhea, the need to address underlying contributors to health equity, and the worrying trends of increased STD rates in younger populations. Additional resources, including our ongoing practical research on next steps for integrating public health and primary care for STDs, can be found at the end of this document.

STDs continue to be a problem in communities across the United States, with 20 million new cases each year. In addition to increased infection rates, the epidemic is further complicated by emerging patterns of antibiotic resistance. In order to protect their confidentiality and avoid STD-related stigma and judgment, many individuals access their care and treatment at STD clinics run by public health agencies, regardless of whether or not they have insurance coverage. These clinics reach populations that might not otherwise have access to healthcare. Estimates suggest up to 85 percent of public STD clinic users live below 150 percent of the federal poverty line.

STD risks are not equally distributed across age, race, ethnicity, gender, or sexual orientation. Approximately half of new STD cases occur in young people. Men who have sex with men (MSM) comprised 75 percent of all primary and secondary syphilis infections in 2012. Data from the same year reported that chlamydia rates are six times higher in black women than white women. Consequently, interventions to prevent and treat STDs present opportunities to improve health equity.

STDs left untreated can significantly increase the rate of HIV transmission and may result in other complications, including infertility or pelvic inflammatory disease. Fortunately, STD treatment is relatively simple to administer because bacterial STDs can usually be cured with an antibiotic course. Further, expedited partner therapy (EPT), an approach whereby partners receive treatment for an infection without an intervening clinical assessment, has been shown to both reduce reinfection rates and increase partner treatment. For human papillomavirus (HPV) and hepatitis B, education and vaccination are the pillars of STD prevention.

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Health officials are uniquely positioned to articulate the need for robust STD programs in their jurisdictions. Steps you can take now to help your jurisdiction’s STD program include:

I. Review the epidemiology of STDs in your jurisdiction and talk to stakeholders about the potential emergence of drug-resistant infections, such as gonorrhea. Connect this issue to the growing concern of antibiotic resistance.

II. Promote EPT as a treatment and prevention option if it is allowable in your jurisdiction. If EPT is not permitted, identify the barriers to implementation and work with stakeholders who can help address them.

III. Identify programs within the health agency that have already developed third party billing mechanisms and ensure that those tools and lessons learned are shared with the STD program. This is critical because access to public and private insurance is expanding, while federal prevention dollars are decreasing.

IV. Educate stakeholders about the high return on dollars spent on STD prevention. Build the business case for why it is in the best interest of the community to invest in prevention.

V. Examine the important role that disease intervention specialists (DIS) play in addressing STDs, and find out whether there are creative ways to fund the work they do, and how their knowledge of the community can be useful to other programs within the health department.

VI. Identify leadership among stakeholders in your jurisdiction, such as healthcare, education, or corrections leaders, and other programs within your health department (e.g., HIV, substance abuse) as potential partners in STD reduction.

We hope you will find the following resources helpful as you look for opportunities to reduce infectious disease transmission. The role of the state public health department remains critical in the prevention, detection, and control of the spread of STDs.

Sincerely,

Terry Dwelle, MD, MPH
State Health Officer, North Dakota Department of Health
Co-chair, ASTHO Infectious Disease Policy Committee
Why are STDs a problem?

An estimated 20 million new cases of sexually transmitted diseases (STDs) occur each year in the United States. Although infection rates vary from state to state, most states have populations or regions that are disproportionately burdened by STDs. For example, there are counties with a high incidence of STDs in low incidence states (see maps below). Health departments across the country are instrumental in fighting these infections through surveillance, testing, and prevention programs.

Health departments can promote steps to prevent STDs, such as educating the public on the correct and consistent use of condoms. If an individual contracts a STD, treatment is critical to avoid health complications and the spread of infection. STD interventions, like EPT, are cost effective means to address potential complications while reducing the spread of infection and risk of reinfection after cure.
Complications Arising from STDs

STDs can be associated with many complications, including facilitating HIV transmission, HIV transfer from mother to baby during childbirth, and infertility. Chlamydia and gonorrhea, the two most common STDs in the United States, may cause pelvic inflammatory disease (PID), which is a major contributor to infertility, ectopic pregnancy, and chronic pelvic pain. STD cases that escalate to PID result in additional treatment costs of $1,167 per case. Syphilis may also cause potential complications including blindness, heart damage, and nerve tissue damage. Public health interventions play a critical role in reducing these complications. Chlamydia screening programs can lead to a more than 60 percent reduction in the incidence of PID according to data from a randomized, controlled chlamydia screening trial in a managed care setting. Antibiotic resistance is also an increasingly challenging STD issue for health departments as gonorrhea has developed resistance to antibiotic drugs prescribed to treat it. In 2012, 33.4 percent of *Neisseria gonorrhoeae* isolates collected through the CDC Gonococcal Isolate Surveillance Project were resistant to penicillin, tetracycline, ciprofloxacin, or a combination of these antimicrobials. As resistance has grown, cephalosporin antibiotics have become essential to treating gonorrhea since resistance to cephalosporin has not emerged in the United States. However, if gonorrhea becomes resistant to cephalosporin, there are few other antibiotic options left to treat the disease. Thus, it is critical for public health organizations at all levels to continuously monitor antibiotic resistance in gonorrhea and encourage research and development of new treatment regimens.

For more information:
Which populations are affected?

STDs represent a significant opportunity to improve health equity and health outcomes for diverse populations. To reduce the number of STDs, public health prevention efforts should continue to address at-risk populations. Although an individual’s sexual behavior can increase the risk of acquiring an STD, the social determinants of health, such as social and economic factors, may also contribute to the burden of STDs in a community.  

Young people, particularly women, are at disproportionate risk for infection. It is estimated that people aged 15-24 acquire nearly half of all new STD cases. The higher prevalence of STDs among young people may be the result of barriers to effective STD prevention and treatment (e.g., lack of access to quality STD prevention services, lack of health insurance or ability to pay, lack of transportation, discomfort with facilities or services designed for adults, and concerns about confidentiality). Additionally, women and infants are disproportionately affected by complications associated with STDs. Infants born to mothers infected with STDs are at high risk for adverse effects during and after birth. Transmission of syphilis during pregnancy can result in fetal death or physical and developmental disabilities.

Social and economic conditions can make it difficult for individuals to protect their sexual health. Although there are some signs of progress, disproportionate STD rates still exist in racial and ethnic minority communities. Potential contributors to the inequity include citizenship status, mistrust of health-care providers, insurance status.

The national trends in gonorrhea rates reflect these inequities. From 2008-2012, gonorrhea rates increased 61.8 percent among American Indians and Alaska Natives (132 per 100,000 in 2012), 22.9 percent among whites (33.3 per 100,000), 18.9 percent among Hispanics (62.2 per 100,000), and 14.5 percent among Asians (17.2 per 100,000). Blacks experienced a 15.5 percent decrease over the same
time period, but rates remain high (458.7 per 100,000 in 2012 versus 33.3 per 100,000) among whites.\(^9\) Acknowledging the inequity in STD rates by race or ethnicity is an important first step in empowering communities to bridge the gap.\(^9\)

**GONORRHEA—RATES BY RACE/ETHNICITY AND SEX, UNITED STATES, 2012\(^2\)**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Men Rate (per 100,000 population)</th>
<th>Women Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI/AN*</td>
<td>88.1</td>
<td>20.2</td>
</tr>
<tr>
<td>Asians</td>
<td>467.7</td>
<td>288</td>
</tr>
<tr>
<td>Blacks</td>
<td>62.1</td>
<td>21.8</td>
</tr>
<tr>
<td>Hispanics</td>
<td>82.0</td>
<td>28.8</td>
</tr>
<tr>
<td>NHOPI*</td>
<td>28.8</td>
<td>21.8</td>
</tr>
<tr>
<td>Whites</td>
<td>33.1</td>
<td>27.7</td>
</tr>
<tr>
<td>Multirace</td>
<td>105.8</td>
<td>105.8</td>
</tr>
<tr>
<td>Total</td>
<td>160.5</td>
<td>108.7</td>
</tr>
</tbody>
</table>

MSM are also disproportionately affected by STDs. A number of individual level risk factors, such as higher number of lifetime sex partners, unprotected sex, higher rates of partner change, and partner acquisition rates, significantly contribute to the ongoing disparities in MSM sexual health. MSM who have a lower economic status or belong to racial and ethnic minority populations are particularly vulnerable to poor health outcomes.\(^10\) Homophobia and discrimination are barriers that negatively affect the quality and accessibility of health care resources for MSM, increasing their risk for infection.\(^11\)

Public health syphilis case investigations can help to describe the disparities among MSM. Although the rate of primary and secondary syphilis cases in the United States declined 90 percent from 1990-2000, the rate increased annually from 2001-2009.\(^12\) Among the 46 states and the District of Columbia that provided information about sex partners, 75 percent of primary and secondary syphilis cases were among MSM.\(^10\) As syphilis infection rates continue to increase, disproportionately affecting MSM, it is important to invest in educational, screening, and health resources for public health providers and the MSM community.
PRIMAR AND SECONDARY SYPHILIS CASES* BY STAGE, SEX, AND SEXUAL BEHAVIOR, U.S., 201212

*Of the reported male cases of primary and secondary syphilis, 17.4% were missing sex of sex partner information.
†MSM=men who have sex with men; MSW=men who have sex with women only.

For more information:
This page discusses STD disparities related to race, ethnicity, income, gender, religion, sexual identity, and disability.

What is the economic impact?
In addition to morbidity and mortality, STDs place significant economic burdens on society. Quantifying the direct medical costs can be helpful in assessing the economic impact of STDs in the United States. A 2013 study, of data from 2008, estimates an annual burden of $15.6 billion across seven STDs and HIV.13 This study did not include the annual costs of routine cervical cancer screening, which would have increased the annual burden estimate to a total of $21.4 billion. It also did not take into account indirect costs, such as productivity loss.

TOTAL ESTIMATED COSTS FOR THE SEVEN MAJOR STDs13

<table>
<thead>
<tr>
<th>STD</th>
<th>Annual Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPV</td>
<td>$1.7 billion</td>
</tr>
<tr>
<td>Herpes simplex virus type 2</td>
<td>$540 million</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>$516 million</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>$162 million</td>
</tr>
<tr>
<td>Hepatitis B virus</td>
<td>$50 million</td>
</tr>
<tr>
<td>Syphilis</td>
<td>$39 million</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>$24 million</td>
</tr>
</tbody>
</table>
Federal funding for STDs has been reduced in recent years. The decline in funding impedes health departments’ ability to control and respond to disease outbreaks. Funding cuts have put pressure on key public health STD workforce capacities like clinics and disease intervention services. Other activities affected include educating primary care on proper STD screening and treatment. Although STDs continue to place large cost burden on the United States healthcare system, the burden would be much greater in the absence of prevention and control efforts.

Cost Effectiveness

STD prevention is cost-effective. According to the National Coalition of STD Directors, analyses of syphilis rates and federal funding show that every 10 cents of per capita federal syphilis funding was associated with a 30 percent reduction in early syphilis. A separate economic analysis of a school-based sexual risk reduction program found that for every dollar invested in the program, $2.65 was saved in medical costs and lost productivity.

For more information:

What can be done?

STD prevention is an important public health concern. Fortunately, there are several steps that can be taken to improve STD prevention and treatment in your jurisdiction, and numerous resources are available to inform your work. For example, ASTHO’s meeting report, STD Prevention in a Changing Environment: The Role of Public Health Leadership, can guide further engagement in STD issues. Talk to your STD director for more information on any of the steps below.

- **Familiarize yourself with your jurisdiction’s STD epidemiology.** Talk to stakeholders in your jurisdiction about disease hotspots and the potential emergence of drug-resistant infections, such as gonorrhea.

- **Examine and remove policy and payment barriers to EPT in your jurisdiction.** In order to effectively and efficiently help patients with treatable STDs, it is essential that all current sexual partners of the patient be treated to prevent reinfection and further transmission. Research has analyzed effectiveness of EPT, an approach whereby sexual partners of a patient with a confirmed STD are given medication without a medical examination. EPT can be implemented in two different ways, through a written prescription given to the patient to give to recent sexual partners, or by dispensing medication to the patient to give to their recent sexual partners. Currently, there are several operational barriers, such as the unclear legal status of EPT, hindering the implementation of EPT in many jurisdictions. CDC strongly encourages state and territorial health departments to actively work and consult with policymakers and key stakeholders to resolve legal and administrative barriers to its use.

- **Expand third party billing to include STD services.** Identify programs within the health agency that have already developed third party billing mechanisms and share those systems and lessons learned with the STD program. This is critical, particularly as access to healthcare expands and clinical services funded with federal prevention dollars continues to diminish.
• **Continue to support DIS as an integral part of STD programs.** Support infrastructure for STD programs in your agency. DIS are public health outreach workers who are responsible for finding and counseling people with STDs and their contacts. Not only are DIS critical to preventing STDs, they are also in tune with community needs and can fill other roles in the event of a crisis.

• **Identify and convene primary care and public health partners to discuss integrating STD services.** Integration is a promising strategy to lessen the effects of budget cuts while improving the prevention and treatment of STDs in your jurisdiction. Primary care is a natural partner in STD health and evidence suggests that there is great potential benefit in integration.\(^9\) The first steps in effective integration are discussions both internally and externally with potential partners to assess opportunities for collaboration. ASTHO collaborated with national partners and public health stakeholders at state and local levels to discuss the current status of integration of services provided for STDs and ways to move forward.\(^{19}\) The following are some best practices and solutions to barriers:
  > **Confidentiality:** Public health has expertise in providing confidential services, free from judgment, and could offer primary care specialized training in cultural and clinical competency for vulnerable populations.
  > **Billing and reimbursement:** A partnership between a health center and a public health clinic can take advantage of the billing expertise of the health center, which can translate into more sustainable STD clinics.
  > **Clinical expertise:** Both public health and primary care have extensive experience in STD care. Attending one another’s meetings and trainings could be a way to share experience and facilitate integration discussions.
  > **Health informatics and technology:** Effective health information exchanges between public health and primary care can help both entities achieve better, more coordinated care.
  > **Consider engagement opportunities with nontraditional partners:** Although public health and the private healthcare system are the two main providers of STD care, some other agencies and organizations also provide care and often reach at-risk populations. Collaborating with these entities provides an opportunity for mutual benefit. The following are a few examples of entities that provide some STD services:
    > **Education departments, high schools, or university health services:** Nearly half of new STDs are contracted by people aged 15-24 years, making education departments, high school systems, and colleges compelling partners.
      • In response to high rates of chlamydia infections and unintended pregnancies among youth aged 15-17, the Washington State Department of Health and the Office of the Superintendent of Public Instruction collaborated to develop guidelines for sexual health and disease prevention. In addition, the Healthy Youth Act was passed in 2007, requiring all sexual education to be medically and scientifically accurate as well as culturally appropriate for all adolescents. These improvements to sexual health education ensure that all young people are able to make informed decisions and protect themselves from STDs.\(^{21}\)
    > **Corrections departments:** Although some integration already exists between public health and prisons and jails, correctional facilities historically have had high STD rates and are an area of opportunity for continued partnership.\(^{22}\)
    > **Non-traditional healthcare STD staff:** In some small and rural jurisdictions, traditional STD services are not available due to resource constraints. Some jurisdictions have expanded the roles of visiting nurses, mobile clinics, and paramedics to address the communities’ STD health needs.
For more information:

ASTHO collaborated with national partners and public health stakeholders on the state and local levels to discuss barriers to integration and best practices for STD prevention and treatment, which resulted in this report.

This extensive Institute of Medicine report lays out the case for integrating public health and primary care, as well as some components of successful integration.

The National Coalition of STD Directors prepared a factsheet on EPT and its benefits.

The National Coalition of STD Directors collaborated with partners to develop a resource to support the sustained delivery of STD services in the changing funding landscape.

NCSD designed this factsheet for state policymakers. It outlines the impacts of state budget cuts on STD/HIV programs.

The National Institute of Justice and CDC released this report on collaboration between public health and correctional facilities. It outlines the value, barriers, and best practices of collaboration.

“Making the Case for Infectious Disease Infrastructure.” Available at http://www.astho.org/Programs/Infectious-Disease/Infrastructure/Making-the-Case-for-Infectious-Disease-Infrastructure/.
ASTHO and Porter Novelli, a communications and social marketing firm, developed a toolkit that helps state health agencies develop a strong infrastructure for evaluating public health and efficiently responding to infectious diseases.
National organizations engaged in STD work:

National Alliance of State and Territorial AIDS Directors (NASTAD).

NASTAD represents all state health agency staff working on HIV/AIDS or viral hepatitis. It works toward reducing incidence of HIV/AIDS and viral hepatitis, improving quality of care, and promoting responsible public policy.

http://www.nastad.org/

National Association of County and City Health Officials (NACCHO).

NACCHO’s members consist of the 2,700 local health departments in the country. It works with its members as a leader, partner, catalyst, and voice in public health topics such as community health, environmental health, public health infrastructure and systems, and public health preparedness.

http://www.naccho.org/topics/HPDP/hivsti/index.cfm

National Association of Community Health Centers (NACHC).

NACHC works with state health centers and primary care organizations to advocate for health centers, educate public about health centers, provide technical assistance, and develop alliances with other stakeholders.

http://www.nachc.com/Sexual%20Health.cfm

National Chlamydia Coalition (NCC).

NCC is comprised of national nonprofit organizations, government representatives, healthcare professional organizations, insurers, and advocacy groups. The coalition works on provider education, public awareness, research translation, and adolescent confidentiality. Its website provides a wealth of STD resources, including multimedia tools for public awareness and education.

http://www.sexualhealthresourceexchange.org/

National Coalition of STD Directors (NCSD).

NCSD represents nearly all state-level STD programmatic staff and works to develop the nation’s STD system and promote awareness of policies that influence STDs.

http://www.ncsddc.org/

Centers for Disease Control and Prevention (CDC).

CDC is the nation’s health protection agency and provides a wealth of both STD information and funding opportunities.

http://www.cdc.gov/std/default.htm
References
