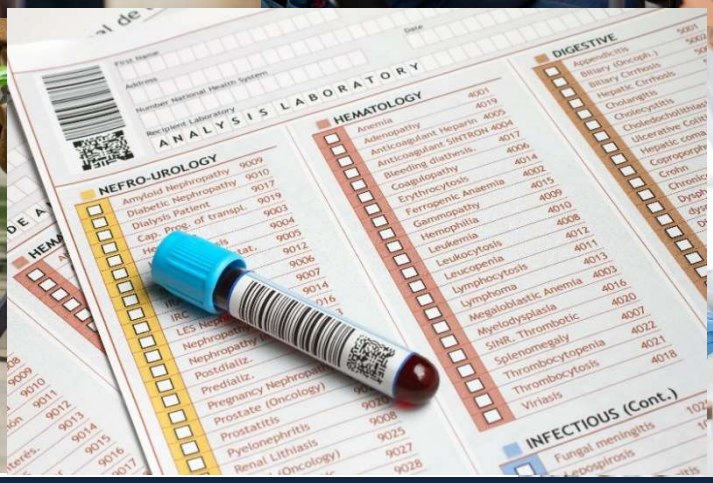
A Report by a Panel of the

NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

for the National Coalition of STD Directors

The STD Epidemic in America: The Frontline Struggle



NATIONAL ACADEMY OF PUBLIC ADMINISTRATION®

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November 2019

The STD Epidemic in America: The Frontline Struggle

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Foreword

The National Coalition of STD Directors (NCSD) advocates on behalf of state and local public health entities across the United States to fulfill their vision of, in their words, "a nation without STDs." NCSD represents their members before Capitol Hill and other federal interests; partners with the Centers for Disease Control and Prevention (CDC) on the design and implementation of sexually transmitted disease response grants; provides technical assistance for members participating in CDC grant programs; and offers coordination services between public health groups. The state and local public health entities that comprise the membership of NCSD carry out the vital, front-line work that contributes to the wellbeing of communities nationwide.

NCSD contracted with the National Academy of Public Administration (the Academy) to undertake a two-part study. The first, Phase I, explored the STD landscape across the United States, examining the scope of the epidemic, intersecting factors that complicate efforts to address STDs, public policy solutions, and federal programs involved in STD prevention and control. The results are presented in the Academy's report, "The Impact of Sexually Transmitted Diseases in the United States: Still Hidden, Getting Worse, Can Be Controlled," issued in December 2018. Phase II, the focus of this report, was to document the challenges experienced by state and local public health entities at the frontline of STD prevention and control.

Like Phase I, this is a report of a Panel of five Academy Fellows. It provides the results of extensive information collection and analysis based on research and interviews conducted over the period of April to October 2019, and builds on Phase I, leveraging research and data. It describes the challenges and burdens—including the intergovernmental obstacles—confronting state and local public health entities in their efforts to address the STD epidemic within their communities.

As a congressionally chartered non-partisan, non-profit organization with over 900 distinguished Fellows, the Academy brings nationally recognized public administration experts together to help organizations like NCSD address the challenges that define our time. We are pleased to have had the opportunity to work with NCSD and its members to conduct this study and to contribute to their ongoing efforts to end STDs in America.

I extend my thanks to the Academy Panel, all experts who offered their invaluable insight and keen analysis, and to the professional study team that provided critical support throughout the project. I expect this report will further inform new efforts by the federal government and state and local health departments to tackle the continuing epidemic and improve the health of millions of people.

Teresa W. Gerton
President and Chief Executive Officer,
National Academy of Public Administration

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Acronyms, Abbreviations, and Definitions

Acronym or Abbreviation	Definition
AAPPS	Assessment, Assurance, Policy Development, and Prevention Strategies, a cooperative agreement issued by CDC covering the time period of 2013 – 2018
ACA	Patient Protection and Affordable Care Act
ADAP	AIDS Drug Assistance Program
AETC	AIDS Education and Training Center
AIDS	Acquired Immunodeficiency Syndrome, the condition caused by HIV
ASHA	American Sexual Health Association
ASTHO	Association of State and Territorial Health Officials
BPHC	Bureau of Primary Health Care, HRSA
CARB	National Strategy for Combatting Antibiotic Resistant Bacteria
CARS	Community Approaches for Reducing STDs
CDC	Centers for Disease Control and Prevention
CHACHSPT	CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment
CHCF	Community Health Center Fund
CISS	Community Integrated Service Systems program
CMS	Centers for Medicare and Medicaid Services
CR	Continuing Resolution, legislation in the form of a joint resolution enacted by Congress, when the new fiscal year is about to begin or has begun, to

	provide budget authority for federal agencies and programs to continue in operation until the regular appropriations acts are enacted.
CSTE	Council of State and Territorial Epidemiologists
DASH	Division of Adolescent and School Health, CDC
DHAP	Division of HIV/AIDS Prevention, CDC
DIS	Disease Intervention Specialist(s)
DSTDP	Division of STD Prevention, CDC
EHR	Electronic Health Record(s)
EIS	Early Intervention Services
ELR	Electronic Lab Record(s)
EMAs	Eligible Metropolitan Areas
EOB	Explanation of benefits
EPT	Expedited partner therapy
FDA	U.S. Food and Drug Administration
FQHC	Federally Qualified Health Center
FY	Fiscal Year
HHS	United States Department of Health and Human Services
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HRSA	Health Resources and Services Administration
IHS	Indian Health Service

IT	Information technology
LEA	Local education agency
LEAHP	Leadership Exchange for Adolescent Health Promotion
LHD	Local health department
MAVEN	Massachusetts Virtual Epidemiological Network
MCH	Maternal and Child Health Services Block Grant
MCHB	Maternal and Child Health Bureau, HRSA
MSM	Men who have sex with men
NASEM	National Academies of Sciences, Engineering, and Medicine
NACCHO	National Association of County and City Health Officials
NCHHSTP	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
NCSD	National Coalition of STD Directors
NEDSS	National Electronic Disease Surveillance System
NGO	Non-governmental organization
NNDSS	National Notifiable Disease Surveillance System
NNECS	National Network to Enhance Capacity of State and Locally Transmitted Disease Prevention Programs
NNPTC	National Network of Prevention Training Centers
OASH	Office of the Assistant Secretary for Health, HHS
OPA	Office of Population Affairs, HHS
PCHD	Strengthening Sexually Transmitted Disease Prevention and Control for Health Departments, the successor program to the AAPPS cooperative agreement, issued by CDC beginning in 2019

PCSI	Program Collaboration and Service Integration
PLWHA	People living with HIV/AIDS
PrEP	Pre-Exposure Prophylaxis
PREP	Personal Responsibility Education Program
PTC	Prevention Training Center
RWHAP	Ryan White HIV/AIDS Program, HRSA
SAMHSA	Substance Abuse and Mental Health Services Administration
S.P.A.C.E. MONKEY	STD Prevention Allocation Consequences Estimator, a spreadsheet tool developed by the CDC to estimate the impact of funding changes in STD prevention programs
SPNS	Special Projects of National Significance
SPRANS	Special Projects of Regional and National Significance
SRAE	Sexual Risk Avoidance Program
SSuN	STD Surveillance Network
STD	Sexually Transmitted Disease, infections acquired sexually, such as syphilis, gonorrhea, and chlamydia
STI	Sexually Transmitted Infection, clinically used term to describe infectious agents that cause STDs. The terms STI and STD are interchangeably used. This report principally uses the term "STD" except where applicable and in-context (for example, where "STI" is used in an official program name or description).
STIC FIGURE	Sexually Transmitted Infection Costs Saved, a spreadsheet tool developed by the CDC to estimate direct medical costs incurred and incidental costs saved by STD prevention programs
SUD	Substance Use Disorder

TB	Tuberculosis
TCE-HIV	Targeted Capacity Expansion-HIV Program
TGAs	Transitional Grant Areas
Title X	Title X Family Planning Program
TPP	Teen Pregnancy Prevention Program
The Academy	The National Academy of Public Administration
URA	Unit rebate amount
USPSTF	United States Preventive Services Task Force
WIC	Women, Infants, and Children Program, a Department of Agriculture program
YRBS	Youth Risk Behavior Survey

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Executive Summary

The United States is in the midst of a major sexually transmitted diseases (STDs) epidemic. Without question, the current rates of STDs are startling. Recorded rates are at an all-time high and are a troubling continuation of a trend that started five years ago and has persisted since then, with new records set each year.

Since 2013, STD rates have been increasing yearly, with gonorrhea, chlamydia, and all stages of syphilis accounting for over 2.4 million cases of disease in 2018[1]. By comparison, HIV diagnoses have generally plateaued, as case rates have hovered around 39,000 new infections per year since 2013.[2] The three reportable STDs addressed in this report are capable of causing significant harm to those who become infected. Infertility and lifelong pain are common complications from severe infections, and in some cases, particularly with syphilis, permanent disability and death are possible. As the number of cases increase, so will the number of adverse health outcomes, as America's under-resourced public health system struggles to keep up with the rapid rise in STDs.

In 2018, the National Coalition of STD Directors (NCSD) asked the National Academy of Public Administration (the Academy) to undertake a two-part study. The first part, Phase I, explored the STD landscape across the United States, examining the "state of the state" of the epidemic, and identifying federal programs and funding supporting STD prevention and control, intersecting factors complicating efforts to address STDs, and promising practices to address STDs and improve public health. The results were presented in the Academy's report, "*The Impact of Sexually Transmitted Diseases in the United States: Still Hidden, Getting Worse, Can Be Controlled,*" issued in December 2018. The report highlights a number of actions for consideration, including the need for an STD champion and increased funding. Phase II began in April 2019. The focus of this study was to document the challenges experienced by state and local public health entities at the frontline of STD prevention and control— "the boots on the ground." Phase 2 builds the findings developed in Phase I.

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[1] CDC, Sexually Transmitted Disease Surveillance 2018, October 2019.

[2] HIV.gov, "Fast Facts," March 13, 2019, Accessed November 4, 2019, https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics.

The Academy formed an expert Panel and a professional study team to collect and review available information on STD trends and state and local efforts delivering services to prevent and control the three reportable STDs—syphilis, gonorrhea and chlamydia. This study explores state and local public health programs and their approach to the STD epidemic, with the goal of ascertaining the resources available to them, the challenges and burdens—both local and intergovernmental—they face, and the practices they employ to address STDs in their jurisdictions. Included in the analysis is a description of the myriad federal funding programs that state and local entities may pursue to support their STD programs. In presenting a detailed look at the programmatic, material, and administrative obstacles facing STD health care providers, the Academy study endeavors to assist NCSD, state and local control entities, and federal stakeholders as work concludes on the development of a Federal Sexually Transmitted Infections (STI) Action Plan led by the Office of the Assistant Secretary for Health in the Department of Health and Human Services.

The Phase II study affirms the findings identified in Phase I. It is clear that many inter-related factors have come together, creating a system that presents fundamental challenges to containing STDs. These challenges are multi-sector and encompass the entire health care landscape, from the difficulty of the most vulnerable populations to access testing and treatment, to the lack of resources to enable adequate staffing for STD public health departments, and the lack of comprehensive sexual health education to raise awareness of the risks associated with STDs. Indeed, these gaps in the system compound one another, engendering even greater obstacles to preventing disease or connecting patients to curative therapies if infected.

The patchwork quilt of the American health care system, with varying points of access to care and payment structures, myriad administrative arrangements, various legal restrictions, and insufficient levels of resources across most jurisdictions, poses a key obstacle to containing STDs. These inconsistencies make it difficult to create uniform STD prevention and control approaches across jurisdictions, constrain public health entities from easily seeking out additional resources, and serve as an impediment to jurisdictions' ability to effectively provide services.

Access to care differs significantly across the nation. In some regions, lack of physical access to care creates, in effect, health care deserts. For patients in these deserts, travel required to reach a location of care, if available, is lengthy and may require access to a personal vehicle or

significant amounts of time on mass transit (should it even exist). Some populations, such as the poor, are more likely to experience this particular obstacle. Care may also be difficult to reach if available facilities are not open to service during irregular or non-traditional business hours, further deterring high-risk individuals from seeking testing and treatment.

Beyond physical barriers to services, cost and other programmatic factors may discourage or prevent prospective patients from being connected to treatment. States that have not expanded Medicaid generally see patients fall into the coverage gap of making too little to afford private insurance and too much to qualify for Medicaid, leaving them unable to pay for STD services. As a result, clinics and other service providers try to fill the void by providing free or subsidized testing and treatment under highly constrained resources. Even when patients have private insurance, they may be reluctant to use the insurance because of privacy concerns, desiring to not have an STD diagnosis processed on their record or the statement of benefits sent to their policyholder with that information. In both cases, and in cases where STD services cannot be billed to insurance or Medicaid (due to either practice or a rule), public health entities are deprived of a revenue stream and, as a result, suffer from a reduced ability to scale up and provide more services.

All jurisdictions, generally, find funding woefully inadequate. Few states provide funding for STD prevention and control. As a result, most programs are funded almost entirely by federal dollars. Some local jurisdictions do provide additional funding derived from property tax revenues or fees, but are unable to yield significant resources from such taxes. The lack of resources limits staff capacity and greatly reduces public health departments' ability to provide services at a scale befitting the scope of the current epidemic.

STDs, as inherently social illnesses, are intrinsically linked to social determinants of health. Certain populations bear a disproportionate burden of STD prevalence, such as minorities, the poor, and men who have sex with men (MSM). These groups may also be less able to receive appropriate or timely care or be deterred from doing so as a result of discrimination. Generally, these populations are also subject to risk behaviors and lifestyles that may be more conducive to STD transmission than others, but may not receive appropriate education or resources to protect themselves and avoid those risks. As they share similar transmission pathways, the three reportable STDs are often comorbid with HIV and other sexually transmitted diseases. As a result, the enhanced threat of coinfection makes the risk of severe harm much higher, further adding to the struggles facing high-burden communities.

A lack of comprehensive, scientifically accurate, and practical sexual health education limits the ability of the average person to protect themselves appropriately from exposure to STDs. An overreliance on abstinence-only education with few exceptions means that many adolescents may not be getting the necessary information to engage in safe sexual activity, and, as a result, may become exposed to an STD. When these adolescents become infected, they may be unable to recognize symptoms and may delay treatment, leaving them at risk of complications and severe illness. The need for sexual health education extends to all ages—not just youth.

Each of these challenges alone fuels rising numbers of infection, but none exist within a vacuum. The many factors contributing to the ongoing national STD epidemic are interconnected and have a multiplier effect on one another. As a consequence, simply resolving one obstacle will not rectify the entire situation. For example, providing free testing and treatment at scale means little if prospective patients are unwilling to seek services due to stigma or are entirely unaware of the nature of their symptoms until complications set in. Conversely, conducting awareness campaigns and providing sexual health education without also expanding the capacity to provide resources and services will not resolve access to care issues or rising STD rates.

As explored in Phase I, many of these challenges were confronted during responses to other infectious disease epidemics, such as HIV and even past STD elimination efforts. Much of the infrastructure, and many of the best practices resulting from those efforts, are still employed today and can be repurposed to resolving the current STD epidemic. Additionally, many jurisdictions have engaged in novel reforms to their health care systems to the benefit of STD prevention and control. Those previous successes provide a strong base upon which to build the STD elimination effort of the 21st century, and helped inform the Academy Panel's development of the following Actions for Consideration, which are intended to guide STD stakeholders as they pursue reforms and new strategies for containing the epidemic.

Actions for Consideration

- ***Reform federal funding to enhance program agility across STD programs.*** Enabling STD entities to respond more rapidly to outbreaks is critical to asserting control over the epidemic. The ability of those entities and jurisdictions to respond quickly and at sufficient scale is currently compromised by a lack of resources and the siloing of programs and program funding. Funding increases are necessary to keep pace with the growing epidemic. Funding provided to a program should also be adaptive and

responsive to changes in the local epidemic. Program funding needs to be de-siloed and allow, within set parameters, state and local jurisdictions to redirect dollars and resources to meet emerging needs, based on local data. Leveraging the existing HIV infrastructure—which is well-established and has proven effective in dealing with HIV—for STD prevention, treatment and control, would also provide public health entities with the necessary agility to make significant corrective actions as trends shift.

- ***Expand access to care, with a focus on delivering community-sensitive and patient-centered care.*** Shifting cultural trends and institutional reforms have changed where and how patients receive medical care. A move away from categorical STD clinics has left many without an option for care that is readily accessible. Concerns over privacy, lengthy travel, cost of care, a lack of appointments outside of working hours, and discrimination serve to deter at-risk communities from seeking advice or treatment. Categorical clinics or other distinct sources of sexual health services must be reestablished and operated with their communities' needs in mind. Where possible, services should be low or no cost, and where insurance is involved, reforms should be implemented to provide added degrees of privacy. Expedited partner therapy should be implemented wherever possible so that more patients can be reached and cases can be contained before spreading past the initial exchange of infection. Telemedicine, in combination with mail-in testing kits, remote diagnosis and prescription of medication, should also be used as much as possible to reach patients in all niches. Further reforms, such as privacy enhancements for insurance billing, service appointments and walk-ins outside of standard working hours, and partnerships with transportation providers, should also be considered by jurisdictions to expand the ability of individuals to seek and obtain care.

- ***Enable more rapid data release and results of research.*** In connection with establishing a more agile and responsive STD control infrastructure, epidemic data should be released more rapidly and legibly. Lengthy data release timelines limit the ability of public health entities to create program justifications for budget cycles, as well as the ability of those entities to deploy resources already on hand to different demographics or areas. It is critical that the data is uniform across jurisdictions, with the same variables specified, tracked, coded, and displayed in a fashion that is immediately interpretable and usable by any stakeholder who may need it.

- ***Implement science-based, health-centric education and awareness campaigns to reduce stigma and encourage healthy behaviors.*** To reduce stigma surrounding STDs and sexual health, and to equip at-risk groups with the information to protect against infection, it is critical that comprehensive, science-based sexual health education be provided in formal school settings. This education must be community-sensitive and address at-risk groups directly, with LGBTQIA+ considerations included. Awareness campaigns must also reach the public outside the traditional school venue, through both traditional media and internet messaging. Local public health groups should engage with their constituencies frequently and build understanding and trust with communities at risk.

In the Phase I report, the Actions for Consideration echoed recommendations offered more than twenty years in the Institute of Medicine's seminal report on the STD landscape at the time, *The Hidden Epidemic*. In that same vein, the actions put forth in Phase II build upon familiar ground. While the health care system has shifted and some of the social factors have changed, the basis of the STD epidemic remains the same. Today, STDs remain hidden, circulating disproportionately among certain communities where risk behaviors are more common and fueled by reduced awareness of the risks of those behaviors. A perfect storm exists where those most at risk are left with few options to seek care to remain healthy, while those who are tasked with providing prevention, treatment and control services struggle under limited resources and potentially restrictive rules. Urgent change is needed if we are to achieve the goal of arresting, reducing and hopefully, eliminating, sexually transmitted diseases.

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Introduction

The United States is experiencing a burgeoning Sexually Transmitted Disease (STD) epidemic, with rates for the three major federally notifiable STDs—syphilis, gonorrhea and chlamydia–at the highest recorded levels in recent years. In fact, STD cases have risen to all-time highs in the past five years in a row, according to the Centers for Disease Control and Prevention (CDC) analysis, with more than 2 million cases reported in 2017 and over 2.4 million cases in 2018.[3,4] Particularly alarming are recent data on congenital syphilis, which can lead to miscarriages, stillbirths, and severe birth defects. In 2017, there were over 900 cases reported, representing an increase of more than 150 percent since 2013. Most recently in 2018, the number of cases surged to 1306, which represents a 40 percent increase from 2017, while newborn deaths related to congenital syphilis increased 22 percent during the same period—indeed startling statistics for an industrialized nation. The economic burden on the nation, in addition to the deleterious health impact, is stark; CDC estimates that the costs associated with congenital syphilis alone were over $12 million in 2017.

STDs are preventable, and if diagnosed early, curable. Unfortunately, stigma, social determinants of health—poverty, unemployment, discrimination, inequity or lack of access to care—and inadequate resources to support prevention and control efforts present critical barriers to arresting STD trends. Young people and marginalized populations suffer the brunt of infections.

Against this setting of rising STD rates nationally, the National Coalition of STD Directors (NCSD) asked the Academy in 2018 to conduct a two-part study. The focus of Phase I was to document the STD landscape, providing a "state of the state" of STDs in the United States. The Phase II charge (this current study) was to document the challenges experienced by those individuals on the frontline—the "boots on the ground"—at the state and local level who are responsible for administering STD prevention and control programs and ensuring that STD services are provided.

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[3] CDC, *2017 Sexually Transmitted Diseases Surveillance*, 2018, accessed October 18, 2019, https://www.cdc.gov/std/stats17/default.htm.

[4] CDC, *2018 Sexually Transmitted Diseases Surveillance*, 2019, accessed October 18, 2019, https://www.cdc.gov/std/stats18/default.htm.

With the end goal to provide evidence to help inform a national action plan or strategy, the Academy, in Phase I, documented the scope and impact of the three major reportable STD infections in the U.S.; assessed the effectiveness of current federally funded prevention and control programs/approaches; identified promising practices; and examined funding streams and funding models.

Released in December 2018, the product of the analysis, *"The Impact of Sexually Transmitted Diseases in the United States: Still Hidden, Getting Worse, Can Be Controlled,"* provided a descriptive assessment of the current state of the three major reportable STDs. The report's principal finding was that the current public health care system creates significant challenges for reducing STD incidence rates. Salient among the challenges is the fragmentation of public health services across governmental entities, funding constraints at all levels of government, limitations in data collection and analysis—together with the interoperability of electronic systems for reporting the data—and changes in the insurance marketplace. Moreover, the lack of public awareness and the continued social stigmatization of STDs crosscut each of these challenges.

The report concluded that key among actions to address this STD health crisis was the need for a comprehensive, unified national strategy and outlined the following six specific actions for establishing a foundation for an effective national strategy to combat STDs in the United States.

- Designate a national STD champion to coordinate federal, state, and local efforts and to lead the development and implementation of a national STD strategy.
- Change the STD narrative.
- Unify the STD field.
- Collect better data and conduct more evaluation to learn about what works—and what does not work—and to foster implementation of best practices.
- Increase education and awareness.
- Expand funding and resources to match the scale of the STD epidemic.

Building on the findings and suggested actions for consideration, Phase II focuses on the steps needed to further develop an action-oriented and achievable national action plan aimed at reducing STD transmission rates and improving public health. These include:

- assessing the efforts of frontline STD prevention and control programs and ascertaining the burden placed upon state and local authorities as a consequence of the intensifying STD epidemic;
- tracing funding streams facilitating those programs and authorities;
- identifying and examining intergovernmental obstacles to program execution including administrative burden, conflicting policies, and funding constraints; and
- developing a set of Actions for Consideration to help inform the federal STD action plan under development by the Assistant Secretary for Health and to bolster efforts to reduce STD rates.

What Has Changed Since Phase I

The rise in the number of reported STD cases and prevalence rates shows no signs of abating. The recently released 2018 data is a testament to this intensifying epidemic. Reasons repeatedly reported for the increases include:[5]

- Impact of substance abuse including methamphetamines, opioids, and injection drug use feeding high risk behaviors and coinfection.
- Impact of social media and dating apps. Some localities also report sex workers and sex trafficking as contributing factors.
- Decreasing use of condoms.
- Interconnected conditions of homelessness, poverty, racism—the social determinants of health.

In addition, CDC has noted new or changing STD transmission patterns with increases occurring among certain populations and expanding to other populations. For example,

[5] NCHHSTP Newsroom 2019/2018 STD Surveillance Report Press Release, 10.8.19 and interviews

increases in syphilis among men who have sex with men has been observed for almost 20 years, but more recently the trend is extending to women and heterosexuals.

Underway, over the past year, are a number of related initiatives that will impact the federal response to STD prevention and control. Most significant is the effort by the Department of Health and Human Services (HHS), Office of the Assistant Secretary for Health (OASH) to develop the first federal STD action plan. The Office of Infectious Disease and HIV/AIDS Policy (OIDP) within OASH is leading the effort, working with HHS agencies and other pertinent federal agencies to develop a plan addressing STD prevention, diagnosis, care, and treatment, as well as the coordination of efforts, policies, and programs across federal agencies to align the federal response to rising STD rates. Stigma, discrimination and coinfections such as HIV and viral hepatitis will also be addressed. Calendar year 2020 is the scheduled release date for the plan, which will be entitled, the "Sexually Transmitted Infections (STI) Action Plan." The Federal Steering Committee for the effort determined that a "more holistic prevention framework" was necessary and chose STI rather than STD to focus on the prevention and treatment of infections before they lead to disease.[6] Also under development are updates to the National HIV/AIDS Strategy, National Viral Hepatitis Action Plan, and Healthy People 2020, which will roll out as Healthy People 2030 and which includes several STD outcome measures.

On February 5, 2019, during the State of the Union address, the President announced a plan to end the HIV epidemic in 10 years. In response, HHS developed an initiative entitled, "Ending the HIV Epidemic: A Plan for America." While there are clear links between STD and HIV transmission—research has documented that STDs are an underlying cause of new HIV infections—the HHS initial plan did not mention STDs. This may be changing, however, as we understand that efforts are in play to broaden the charge to include STDs.

With funding provided by CDC through a cooperative agreement, the National Association of County and City Health Officials (NACCHO) has contracted with the National Academies of Science, Engineering, and Medicine (NASEM) to convene an ad hoc committee—the Committee on Prevention and Control of STDs in the United States. The committee's charge is to examine

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[6] HHS Office of the Secretary, Office of Infectious Disease, "Developing the STI Federal Action Plan," HHS.gov, October 1, 2019, https://bit.ly/342oeiK.

the epidemiological dimensions of STDs in the U.S., factors contributing to the epidemic, the economic burden associated with STDs, current public health strategies and programs to prevent and control STDs, and barriers in the health care system and insurance coverage. The study commenced in late summer 2019, with the Committee holding its first meeting on August 27, 2019. The study, the results of which should further inform federal actions needed to address STDs, will run for 18 months.

There are, however, federal actions in motion that may exacerbate barriers to prevention and treatment of STDs. Recent rule changes in Title X may have a significant impact on access to STD services, especially among disadvantaged communities. The new rules prohibit organizations and physicians that advise and refer patients for abortion from receiving federal funds. There has long been a restriction on the use of federal funds to pay for abortion services—this rule extends the prohibition to referrals. Planned Parenthood and several other providers have pulled out of the program, choosing not to participate under the new rules, leaving some communities—particularly in rural settings—without access to clinics for STD screening and treatment. And some states have also refused to accept Title X dollars under the new ruling. Family planning is an important component for STD prevention and treatment. In addition, changes in federally funded adolescent and school-based sexual health education programs may also have an impact on STD prevention and control efforts as the focus is shifting almost exclusively to abstinence-only rather than as a component of an overall sexual health curriculum. Recent data consistently shows that adolescents account for half of all new STD cases; at the same time, strong evidence supporting abstinence-only programs is lacking. These issues will be addressed in more detail later in the report.

Results in Brief

Not surprisingly, the findings and issues highlighted in the Phase I report were affirmed—the United States health care system is highly fragmented with multiple entities and myriad partners and stakeholders involved. Within that health care system, the STD infrastructure is under-funded and under-resourced. Numerous challenges confront public health related entities in providing services to address STDs within their jurisdictions and in crafting strategies to deal with STDs. Their efforts are further complicated by the very nature of the infections, as they present a particularly thorny health concern given cultural and religious sensitivities influencing public decisionmakers.

In most states, STD clinical prevention and control programs under public health departments are locally administered. The departments provide STD services either directly through a public health clinic or through contracted services—or relationships with—community health centers or Federally Qualified Health Centers (FQHCs), family planning clinics such as Title X, Planned Parenthood, hospitals, and university clinics. However, there is wide variation in the program structure and services provided among these locally administered programs, as well as among those that are state administered. STD and HIV clinical prevention services are more often than not integrated at the service delivery level (i.e., clinics), but the programs' organizations and funding streams are often separate. School-based sexual health education lies in the domain of state departments of education, providing broad guidance with specific rules and practices set by local school boards—and in some cases, individual schools. The extent of coordination and collaboration between the departments of public health and education vary widely.

Funding comes principally through federal grant monies—with CDC providing the only dedicated STD prevention and control funding to states and localities. This federal funding has remained flat, but in terms of purchasing power has declined by 40 percent since 2003. As the principal funding stream for STD prevention and control, this decline in purchasing power effectively reduces the total amount of funding available to disperse to states and localities to address rising STD rates.[7] States and local jurisdictions may supplement those funds through local tax dollars and fees. Additional funds that support STD prevention services include public and private insurance (principally, Medicaid and third party payers); Health Resources and Services Administration's (HRSA's) Ryan White and Health Center programs; and program income and savings from HRSA's 340B Drug Pricing Program. The Ryan White Program may also provide some support for disease intervention specialists (DIS) and partner services. Notices of federal grant opportunities encourage collaboration across programs, agencies, and partners, but the siloing of program funding presents a barrier to the utilization of already scarce resources, particularly at the local level, where resources are constrained and departments have integrated their STD and HIV programs.

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[7] Source: CDC and NCSD

Universally, funding constraints restrict jurisdictions' ability to address rising STD rates. Interviewees consistently raised the need for more funding and staffing resources, particularly in the areas of DIS and informatics staff to analyze surveillance data and assess trends. DIS are seen as the linchpin to surveillance, partner services, and linkage to care, but are inadequately resourced. Interviewees noted repeatedly that turnover among the staff is high, and highlighted where partner services for specific diseases were curtailed because resources were lacking to adequately provide the service. Many public health departments also rely on DIS hired by the STD program to support outbreak investigations for other infectious diseases such as Zika, measles and viral hepatitis.

Since the Patient Protection and Affordable Care Act (ACA), private providers' role in STD screening and treatment has grown, creating disparities and challenges in terms of consistency in screening, treatment, and reporting. As noted in Phase I, the clinic landscape has shifted with many STD categorical clinics closing. Providers' knowledge of STD screening and treatment guidelines, together with their comfort level in discussing sexual health vary, affecting assess to care. Privacy and confidentiality are key issues affecting where services are sought and the use of insurance. The cost of services (insurance co-pays) and lack of insurance, particularly where Medicaid expansion was not adopted, are barriers for treatment. Lack of transportation is also a barrier.

While most states have made progress in moving to electronic lab and health records, the interoperability and integration of systems and the sharing of data across programs continue to be issues for some. Time lags in receiving reported data and analyses, as well as the release of research results, present obstacles for building local support for STD programs and initiatives. (For example, the 2018 CDC surveillance data became available in October 2019, while states are currently collecting and reporting on their 2019 data.) Differences among states in how data are reported—national standards are lacking—contribute to the delays, creating additional work to clean the data and ensure consistency and accuracy to the extent possible.

Universally, jurisdictions note the importance of education and awareness—and the need to address the stigma surrounding STDs. They also point to the need for greater coordination with departments of education and local school districts and school boards. Social stigma and attitudes surrounding STDs and sexual health, in general, are seen as key obstacles to providing effective STD services. Interviewees note that policymakers and administrators are generally hesitant to address STDs formally; state and local cultures/climates shape their receptivity to

addressing sexual health. Navigating the health care system to build program support is time consuming and resource intensive for officials and staff given the multiple stakeholders involved. Better tailored communications and actions to build trust with those most affected by STD policies and practices are needed.

What is clear from our Phase I and Phase II studies is that current funding to address the burgeoning STD epidemic is inadequate. Despite references to the current state of STDs as an "epidemic," STDs are not accorded the same attention, support and resources that other epidemics—HIV, Ebola, Zika, opioids, or most recently, vaping—experience. This needs to change. With the development of a federal STI action plan, the time is ripe to address STDs as the epidemic it is and nationally marshal the attention and resources necessary.

Methodology

The five-member expert Panel the Academy assembled for Phase I was able to continue on to Phase II, directing and overseeing the study. The Panel represents prominent medical, scientific, and management leaders with expertise in public health, epidemiology and biostatistics, and clinical medicine, as well as knowledge of, and experience with, key federal agencies including CDC, the National Institutes of Health, the Department of Veterans Affairs, and the Department of Defense, state and local government, and relevant nonprofits and academic institutions. The Panel held two in-person meetings and an interim, video-conference call. Throughout the process, the Panel provided guidance to the professional study team of four, who carried out the review based on a structured methodology. Appendix A contains a brief biographical sketch of each Panel member and the study team.

The study team performed primary and secondary data collection and conducted structured interviews with federal, state and local officials, as well as stakeholders. In consultation with key stakeholders—NCSD, NACCHO, the Association of State and Territorial Health Officials (ASTHO), and The Big Cities Health Coalition—the study team identified target state jurisdictions for detailed case studies and additional "snapshot" jurisdictions highlighting particular challenges or issues, as well as notable practices. Appendix B includes a list of interviewees, and Appendix C provides a selected bibliography of the document and published research reviewed.

Case study and snapshot jurisdiction selection criteria included: STD cases and prevalence rates (high, medium and low); governance structure (i.e., how programs and services are

administered—state, local, mixed); and status of Medicaid expansion. Within each target state, localities were chosen based on consultation with state officials. Care was taken to ensure a geographic and demographic cross-section including, for example, urban, rural, and frontier settings. The case study jurisdictions are Louisiana, Massachusetts, Missouri, North Carolina, Utah and Vermont; the snapshot jurisdictions are Arizona, Rhode Island, Tennessee, Washington and the city of Philadelphia.

The study team focused on program structures, organization, funding and resources, operational management, impact of policies and guidance, and intergovernmental relationships and coordination. The study team's effort in examining funding streams was augmented by the work of a George Washington University Capstone Project Team. Team members appear in Appendix D. With the exception of CDC's funding specifically targeted to STD prevention and surveillance, identifying funding streams that provide support (that is, monies can be used) for various elements of STD prevention, treatment, and control was a challenge given (1) the wide variety of grants that touch on STDs; (2) funding made available through reimbursements under programs such as Medicaid and the 340B Drug Pricing Program; and (3) limited public information on state and local STD funding provided through taxes and fees. This will be addressed in greater detail in Section 2 of the report. Consistent with the Phase I report, clinical and epidemiological issues, beyond descriptive information, were beyond the scope of this study.

Organization of Report

This report provides an overview of frontline efforts in state and local jurisdictions to prevent, treat, and control STDs. It describes how the efforts are structured and resourced, identifying current funding streams to the extent possible, and points out the challenges that confront officials and staff administering the programs. Notable practices identified during the course of the study are highlighted throughout the report. Six case studies exemplifying frontline efforts appear in appendixes. The report presents the Panel's key findings and concerns based on document reviews and interviews with state, local, and federal officials/representatives and concludes with suggested actions for consideration to inform the development of a federal action plan.

The report is organized as follows:

- Section 1: State and Local Governance of STD Prevention and Control

- Section 2: Funding Streams
- Section 3: STD Program Challenges
- Section 4: Actions for Consideration
- Appendixes: Case Studies by State
    - Louisiana
    - Massachusetts
    - Missouri
    - North Carolina
    - Utah
    - Vermont

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Section I: State and Local Governance of STD Prevention and Control

A complex patchwork quilt of jurisdictions, assisted by a range of contractual and stakeholder partners, plays a role in STD prevention, treatment, and control. As a result, there are many variations in how programs are structured and administered—and how services are provided. Critical to success are the intergovernmental partnerships among federal, state, local, and territorial entities and partnerships with non-governmental organizations (NGOs).

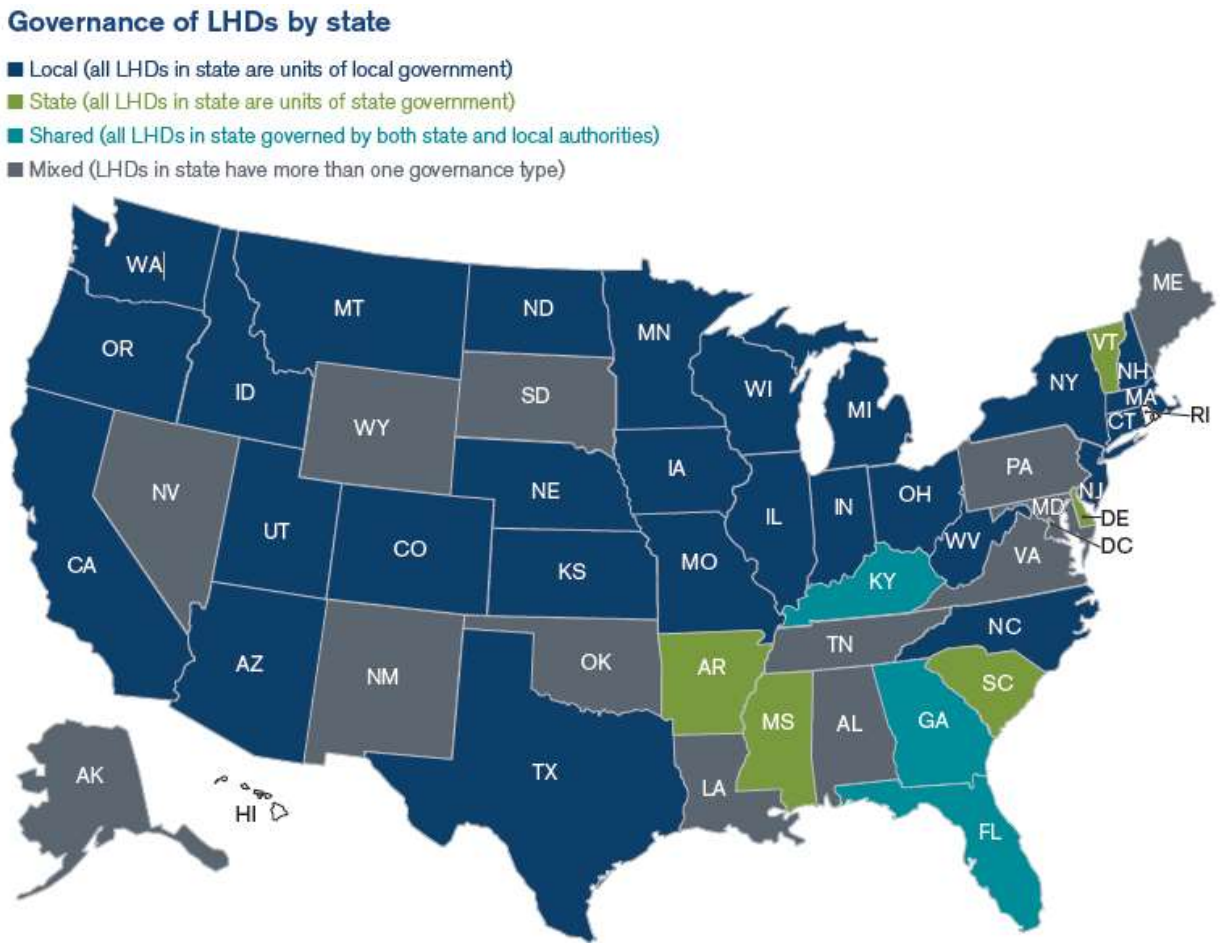
The federal role, as highlighted in the Phase I report, involves providing leadership, research, policy assessment, evidence-based scientific information, screening and treatment guidelines, and, importantly, funding for state and local programs, as well as the training and education of health care professionals. State, local, and territorial jurisdictions are the service providers—the "boots on the ground"—for public health STD prevention and control. They are where the action is.

The structure and responsibility for public health STD programs varies widely. In most states, STD services are the responsibility of the local public health department (also referred to as a decentralized arrangement). A few are fully state administered (centralized), while some have a shared arrangement where governance is shared across the state and local public health departments and still others have a mixed arrangement where governance is a combination of centralized, decentralized and/or shared arrangements across the state. Categorizing state and local public health governance structures is not a straightforward task. A study undertaken for the Association of State and Territorial Health Officials (ASTHO)[8] found that the relationship between state and local government public health is complex; definitions for the common categories of administrative and functional governance structures often varies. For the purposes of this study, we are using the categorization that appears in the National Association of County

[8] Association of State and Territorial Health Officials, *State Public Health Agency Classification: Understanding the Relationship Between State and Local Public Health*, (Arlington, VA: ASTHO), 2012. https://bit.ly/2JiIpAU (accessed October 21, 2019).

and City Health Officials (NACCHO) *2016 National Profile of Local Health Departments* (LHDs),[9] highlighting the diversity of governance structures across the nation.

Figure 1: Public Health Program Governance (NACCHO)



[9] NACCHO, *2016 National Profile of Local Health Departments*, 2017, https://bit.ly/2Eb5Fx2 (accessed October 21, 2019).

As noted in the Phase I report, there are six core functions performed by state and local programs. State health departments have the lead responsibility for public health surveillance, working with local jurisdictions to (1) collect data on STD cases and report to CDC for national tracking and identification of patterns, trends, and outbreaks and (2) respond locally to outbreaks. All other functions may be performed by the state, localities—counties or cities—or a combination of governance arrangements including district or regional offices where individual localities join together to pool resources. The functions include testing, treatment and linkage to care, contact tracing, behavioral counseling, and education.

Disease investigation is a critical activity. As most STDs are reportedly diagnosed outside of public health clinics today, jurisdictions must work with health care providers and organizations to assure the availability of STD screening, treatment, and other services. The National Network of STD Clinical Prevention Centers is a resource comprising eight regional centers funded by CDC to promote quality of care and provide clinical training and education for providers. Interviewees spoke highly of the training provided by these regional centers. The downside reported was that while some providers will attend training frequently, those most in need of understanding STDs and the screening and treatment guidelines are often

Notable Practice: New England Public Health Consortium

The New England Consortium was established as a regional public health networking partnership to address STD prevention. Decreasing federal funding of state programs, cross-state travel of high risk individuals, sexual activity related to summer tourist attractions and high risk venues, and increasing STD rates across the region served as the rationale for creating the consortium. The six New England states saw this as an opportunity to share best practices across states and build collaboration despite differing priorities, resources, processes and protocols. Rather than focusing on the differences, the consortium focuses on their similar program requirements and shared goals. Particularly helpful to the members are alerts of STD patterns or outbreaks in locations within one state's boundaries that are adjacent to others (for example, southern/coastal Maine and New Hampshire and northeastern Massachusetts) as diseases knows no boundaries, and the trends can extend to adjoining states.

absent. In addition to formal training, jurisdictions may also join together as regional consortiums or networks to share information and practices across jurisdictions.

Public health departments also depend on a number of NGOs, for support including technical assistance, capacity building, and policy development as we noted in Phase I. Among the groups cited were the National Coalition of STD Directors (NCSD), NACCHO, ASTHO, and the American Sexual Health Association (ASHA). Other arrangements include partnerships with universities, hospitals and health care providers, large health plans and professional medical and nursing organizations, among others. Often, the support is in concert with federal STD programs, and funding is provided through various grants and cooperative agreements. The CDC-funded National Network to Enhance Capacity of State and Locally Transmitted Disease Prevention Program (NNECS) provides technical assistance to states and localities in the areas of policy development, communication, collaboration and partnerships, and STD program management.

As noted above, in the vast majority of states, public health STD services are locally administered and provided either directly in public health clinics or through contracts or relationships with providers such as community-based clinics including FQHCs, Title X family planning clinics, Planned Parenthood clinics, hospitals and university clinics. However, there is wide variation among the locally administered jurisdictions, as well as among those that are state administered. For example, in a county health arrangement, there may also be a city health department and/or regional health district, encompassing multiple counties and operating more in a shared services arrangement with pooled resources. In some home rule[10] states, public health may be locally administered, but certain program components such as STD programs may be state administered. For example, in Massachusetts and Missouri, program responsibility for STDs and HIV rests with the state departments of health, with some notable exceptions for specified major cities—Boston, in the case of Massachusetts and St. Louis and Kansas City in Missouri—where local control is maintained. While public health services fall within the local public health department domain in these states, the jurisdictions are not administratively responsible for the STD program.

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[10] "Home rule" refers to states where local governments are authorized to directly address public health issues through their own laws and rulemaking.

Program integration of STD, HIV, and other diseases such as hepatitis or tuberculosis (TB) is common. Reasons for integration range from the need to gain efficiencies and make the best use possible of limited resources to attempts to address these intersecting diseases from a more holistic public health approach. CDC's 2009 Program Collaboration and Service Integration Program (PCSI), which promoted program collaboration and service integration in the prevention and control of HIV/AIDS, Viral Hepatitis, STDs and TB, was cited a number of times by interviewees as a catalyst for integration. PCSI no longer exists, but the language of program collaboration and service integration currently appears in the principal cooperative agreements of CDC's Division of STD Prevention (DSTDP) and Division of HIV/AIDS Prevention (DHAP) that fund state and local surveillance and prevention activities. Both encourage recipients to work with CDC-funded activities supporting STDs and HIV. For example, the DSTDP cooperative agreement, *Strengthening STD Prevention and Control for Health Departments* (PCHD) requires recipients to work closely with CDC-funded HIV surveillance and prevention programs operating in their area and designates STD-related HIV prevention as a crosscutting strategy. Similar language appears in the DHAP cooperative agreement. In addition, the PCHD grant allows up to 10 percent of funding/resources to be used for crosscutting support—i.e., 10 percent of STD funding can support HIV activities.

State and local laws vary in their impact on what and how STD services may be provided. For example, states typically define partner services, and almost all states have laws or regulatory provisions on the books allowing Expedited partner therapy (EPT),[11] which CDC has encouraged as an effective tool for the treatment of sexual partners with chlamydia and gonorrhea. EPT allows the delivery of medications or prescriptions to partners of individuals diagnosed and treated for an STD, without the clinical assessment of the partner by a clinician. (Currently, only South Carolina appears to prohibit EPT according to CDC.) However, even though permissible in the vast majority of states, conflicts often occur with other existing laws or regulations governing who can dispense medications (i.e., physicians, nurse practitioners, physician assistant, or nurse midwife), guidance or advisories from medical or pharmacy boards, whether the patient needs to be seen by a physician, and whether pharmacies can dispense drugs without a physician's order or the patient's name. Added to the mix is how these rules are, in turn,

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[11] Centers for Disease Control and Prevention "Legal Status of Expedited Partner Therapy," Accessed October 18, 2019, https://www.cdc.gov/std/ept/legal/default.htm.

interpreted by providers, who are often reluctant to prescribe or dispense medications without seeing the patient. This was a common occurrence cited by interviewees who noted that provider liability concerns played into the equation. In addition, contradictory federal rules can present a barrier. For example, rules governing FQHCs require a patient-physician relationship for dispensing drugs and in effect, prohibit EPT in those facilities.

Similarly, legal requirements for syphilis screening among pregnant women to prevent or treat congenital syphilis vary.[12] The majority of states require prenatal screening at the first visit; however, follow-up screening at the third trimester and delivery varies widely. Only three states—Arizona, North Carolina and Texas—require all three screenings. In 2018, North Carolina's congenital syphilis decreased from 23 cases at a rate 19 per 100,000 live births in 2017 to 17 cases at a rate of 14.1 per 100,000. At the other end of the spectrum, seven states do not require any screening; only one of the seven (North Dakota) has no reported congenital syphilis cases through 2018.

School-based sexual health education is largely driven by local school districts and school boards. Many states have laws at a high level, identifying what can or cannot be taught in terms of sexual health and STDs and HIV/AIDS. In addition, local school boards attach requirements based on the culture and climate of their individual communities. These requirements or restrictions can vary by individual school, as well. Variations occur both across and within states, with some more restrictive than others. For example, larger, urban cities tend to provide a broader, more comprehensive sexual health curriculum than smaller less urban cities or counties. Some jurisdictions develop workarounds to get the message out—for example, working with community organizations to host or promote events in settings located in close proximity to local schools. Sexual health education will be discussed in greater detail in Sections 3 and 4.

CDC's graphic depicting the public health system aptly illustrates the challenges faced in crafting strategies to deal with STDs which present a particularly thorny health concern, given cultural and religious sensitivities influencing public decisionmakers.

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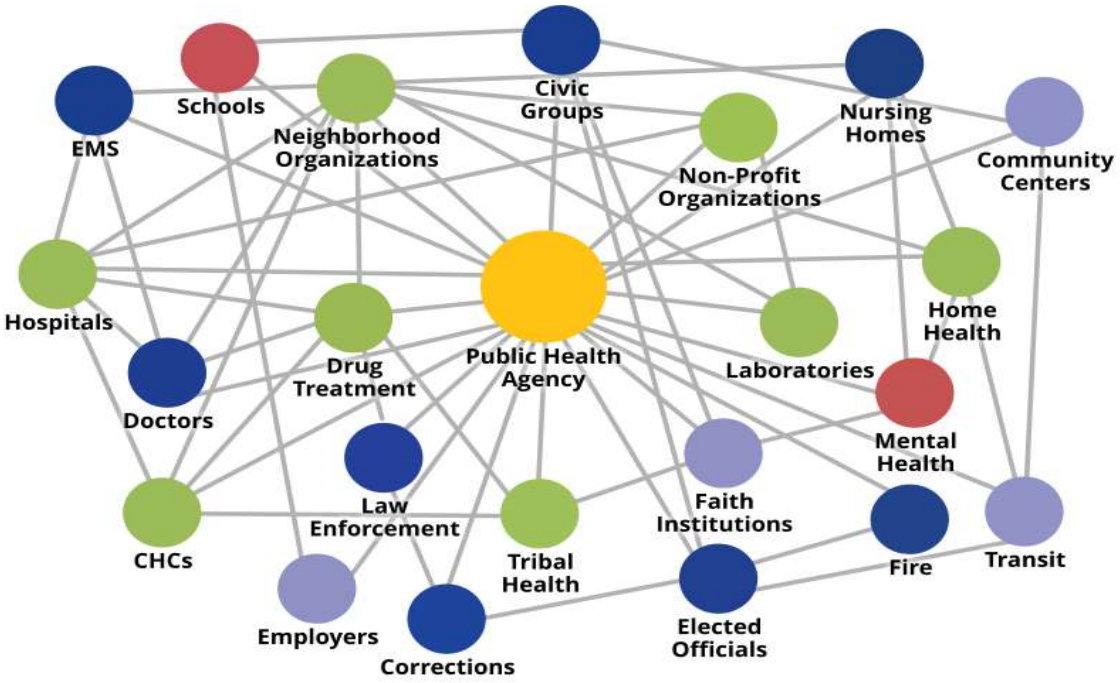
[12] Centers for Disease Control and Prevention, "Prenatal Syphilis Screening Laws," Accessed October 18, 2019, https://www.cdc.gov/std/treatment/syphilis-screenings-2018.htm.

Figure 2: Public Health System (CDC)



Public health agencies typically conduct community health assessments[13] to identify key health needs and issues through a systematic, comprehensive data collection and analysis process. The assessment provides the organizations with comprehensive information on the current health of the community and identifies community concerns through the active involvement of stakeholders noted in the graphic above. The information gathered informs the development of a community health plan and identifies and helps justify resource needs, essentially providing a road map for action. Whether STDs rise to a priority level within a local community health assessment is dependent on the level of knowledge and appetite of stakeholders to address STDs, in addition to case and prevalence rate data. A number of interviewees raised concerns about STDs not being included in their local plans. They attributed this to the lack of awareness of the severity of STDs, together with an unwillingness to discuss STDs.

[13] Note: Hospitals also routinely conduct community health assessments to ascertain the demographics, key morbidities, and medical needs of the communities they serve.

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Section 2: Funding Streams

Identifying funding streams supporting state and local STD prevention, treatment and control efforts is highly complex given the interplay of federal agencies' programs and grant structures* and any separate, available state and local funding through taxes or fees and reimbursements through public and private insurance (Medicaid, Medicare and private insurers). Principal federal funding for STD prevention and control is through the Centers for Disease Control and Prevention (CDC)—this funding is the only dedicated STD funding. Other federal programs that provide support to STD-related activities are through the Health Resources and Services Administration (HRSA) programs—Ryan White HIV/AIDS Program, the Health Center Program, the 340B Drug Pricing Program, and, to a lesser extent, the Maternal and Child Health Block Grant—and other Department of Health and Human Services (HHS) grants, including Title X, Substance Abuse and Mental Health Services Administration (SAMHSA) grants, and a variety of sexual health education programs. As noted in Phase I, there are a number of other federal agencies that fund different aspects of STD research, such as the National Institutes of Health, and fund prevention, treatment, and control for specific constituencies, such as the Department of Defense, the Department of Veterans Affairs, the Department of Justice, and the Indian Health Service, among others. These agencies are outside the scope of this report which is focused on funding that supports state and local STD activities.[14]

Federal Funding Streams

Determining the federal funding that can be used for STD activities and services at the state and local level is a challenge as there are programs that allow the use of funds to support STD-related activities through notices of funding opportunities, but the total grant amount is not directed toward STDs. Once awarded, it is difficult to trace what and how the dollars are used for STDs. There is no comprehensive accounting or reporting of funding sources for STD programs as the programs are siloed across agencies and program definitions are not necessarily aligned with STD activities. Given the broad scope of many of these grant programs and

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*See Appendix E for a map of agencies that provide STD funding.

[14] Note: State and local jurisdictions often coordinate with these agencies where populations may cross agencies and jurisdictions for service—for example, military service members choosing to seek confidential service at a local health department clinic rather than on their military base.

intersecting nature of the diseases, the fact that it is not possible to trace the funding should not be surprising.

Despite an unclear picture of federal funding streams, CDC studies have demonstrated the relationship between funding levels and disease rates. A recent CDC study concluded that federally funded STD prevention activities have a "discernible effect on reducing the burden" of infections—a "one percent increase in federal funding would cumulatively decrease chlamydia and gonorrhea rates by 0.17 percent and 0.33 percent, respectively." [15] The study also advised that the rates for STDs in any given year depend more on prevention funding in previous years than on the current year—an important point when building a case for STD budgets as the impact of funding decisions will have downstream benefits—or consequences.

Section 318 of the Public Health Service Act[16] authorizes STD funding for public health departments, academic institutions, and public health organizations. STD funding to monitor, prevent and control the spread of STDs is principally through CDC's Division of STD Prevention (DSTDP), which includes some funding (about 10.6 percent) from CDC's Division of HIV/AIDS Prevention (DHAP). Both divisions are under the same umbrella organization, CDC's National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP). Some limited flexibility as noted above exists between CDC's STD and HIV funding, the latter of which is considerably larger. Funding for CDC's STD programs has remained stagnant for many years at $157.3 million. Adjusted for inflation, this represents a 40 percent reduction since 2003 (see Figure 3). The proposed FY 2020 House appropriations bill includes a $10 million increase for sexually transmitted infection (STI) prevention and control. It recognizes the intersection between STIs and HIV urging CDC to expand STI programs as part of a focused HIV initiative, expand pre-exposure prophylaxis and condoms availability at STI clinics, increase the number of disease intervention specialists (DIS), and implement HIV and STI education and prevention programs in schools. The proposed FY 2020 Senate appropriations bill does not include a parallel funding increase. The final outcome of the two bills is not known at this time. At the

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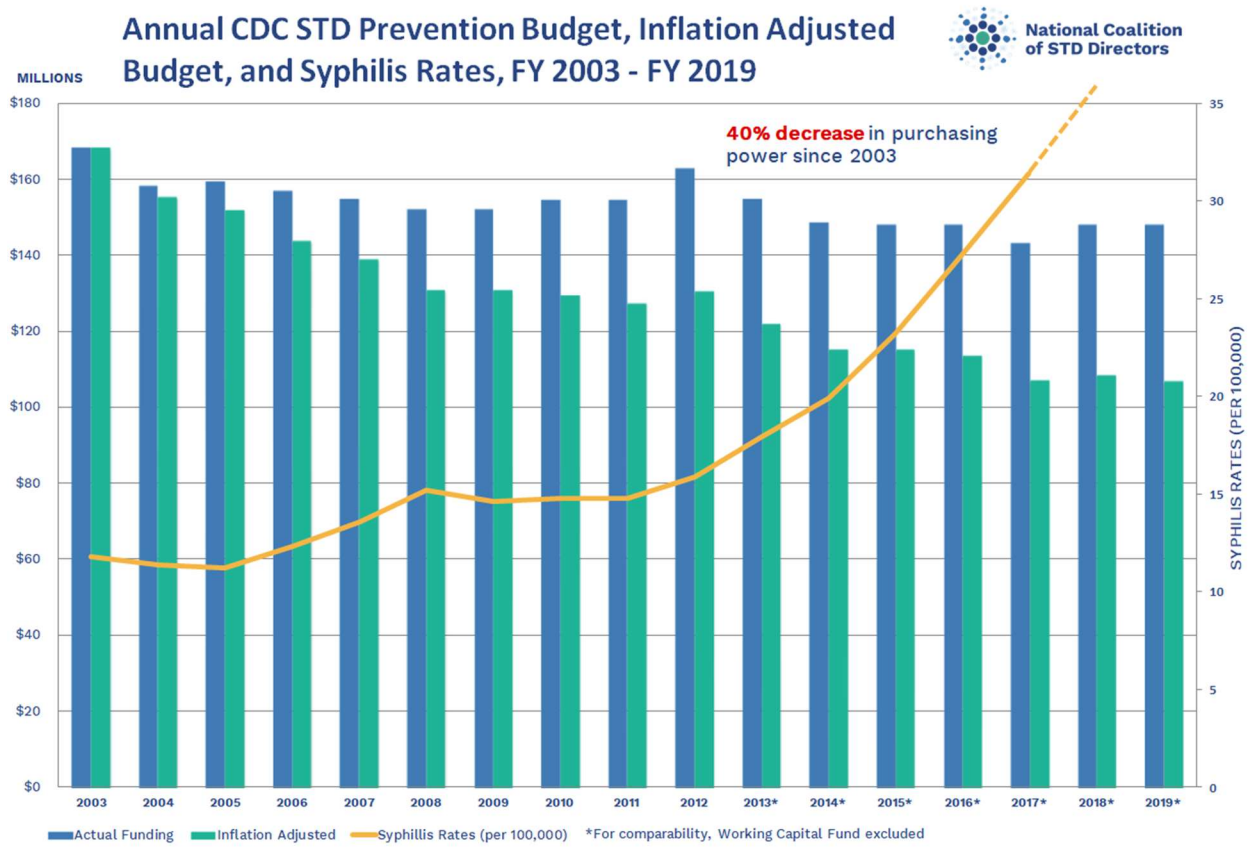
[15] Austin Williams, Kristen Kreisel, and Harrell Chesson, "*Impacts of Federal Prevention Funding on Reported Gonorrhea and Chlamydia Rates*," American Journal of Preventive Medicine, 2019.

[16] Section 318 (a)(b)(c) of the Public Health Service Act [42 U.S.C. Section 247c (a)(b) and (c)] as amended

close of FY 2019, Congress had not passed a FY 2020 appropriations bill; agencies are operating under a continuing resolution (CR) at FY 2019 funding levels through November 21, 2019.

Figure 3. Annual CDC STD Prevention Budget, Inflation Adjusted Budget, and Syphilis Rates, FY 2003 – 2019[17]



Centers for Disease Control and Prevention

As cited above, CDC's DSTDP funds the only dedicated STD federal funding for states and localities. This is principally through the "Strengthening STD Prevention and Control for Health Departments" (PCHD) cooperative agreement. Other cooperative agreements funded by

[17] Source of information for Figure 3 provided by NCSD and CDC

CDC/DSTDP include the STD Surveillance Network (SSuN), the National Network of STD Clinical Prevention Training Centers, the Community Approaches to Reducing STDs (CARS) grants, and the National Network to Enhance Capacity of State and Locally Transmitted Disease Prevention Program (NNECS).

The PCHD STD prevention and control cooperative agreement provides some very limited funding for direct services.[18] Unlike the Ryan White HIV/AIDS Program, which acts as a payer of last resort to cover services, STD prevention and control funds are directed primarily to surveillance, some limited research, capacity building, and prevention efforts. A brief discussion of CDC's Division of HIV/AIDS Prevention is also included below, given the role that the division plays in HIV/AIDS prevention and control that parallels DSTDP's role for STDs. In addition, notices of funding opportunities encourage collaboration across each division's programs and allow some crosscutting use of funding to support activities.

Strengthening STD Preventing and Control for Health Departments (PCHD)

The current primary funding vehicle for states and local jurisdictions is the PCHD cooperative agreement, which funds STD activities and staff, including disease investigators, in states, certain specific local jurisdictions, and territories. Beginning on January 1, 2019, this cooperative agreement runs for five years and focuses on conducting surveillance; responding to outbreaks; identifying individuals and their partners with STDs, and linking them to treatment; providing screening, diagnosis, and treatment recommendations to providers; disseminating local information; developing multi-sector partnerships; supporting HIV prevention goals and collaborations; and analyzing data for program improvement. It builds on CDC's previous five-year cooperative agreement known as the Assessment, Assurance, Policy Development, and Prevention Strategy (AAPPS). PCHD awards focus on DSTDP's priority populations of pregnant women, young adults and adolescents, and men who have sex with men (MSM).[19]

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[18] State and localities are limited to a 10 percent spending cap on direct services.

[19] Centers for Disease Control and Prevention, "NOFO: PS19-1901 Strengthening STD Prevention and Control for Health Departments (2018). Atlanta: Department of Health and Human Services," 2018, Accessed September 2, 2019. https://www.cdc.gov/std/funding/pchd/.

The PCHD funding formula for FY 2019 is similar to the prior AAPPS formula, with an adjusted burden of disease time period. The formula is based 50/50 on population using STD morbidity for 2012-2016 as follows:

- 50 percent based on the population (age 15 to 44) of each eligible project area
- 50 percent based upon disease burden (2012-2016) for primary and secondary syphilis, gonorrhea, and chlamydia. Disease burden is further broken out by:
    - 80 percent based on the number of reported cases of STDs (primary and secondary syphilis, gonorrhea, and chlamydia) from 2012
    - 20 percent based on rates of reported STDs (primary and secondary syphilis, gonorrhea, and chlamydia)

Each recipient receives a floor of $300,000, which represents a $100,000 increase from the base amount provided by the AAPPS grant. In addition, a cap of five percent is in place for any reduction from the recipient's prior year allocation. Figure 4 provides FY 2019 PCHD funding amounts by state and locality.

For FY 2020, the funding formula is changing as follows:

- 50 percent based on the population (age 15 to 44) of each eligible project area
- 50 percent based upon disease burden (2012-2016) for primary and secondary syphilis, gonorrhea, and chlamydia. Disease burden is further broken out by:
    - 40 percent based on the number of reported cases of STDs (primary and secondary syphilis, gonorrhea, and chlamydia—for all ages)
    - 10 percent based on rates of reported STDs (primary and secondary syphilis, gonorrhea, and chlamydia for ages 15-44[20]

The disease burden time frame is the same and will remain in place throughout the life of the PCHD cooperative agreement.

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[20] Email from Acting Branch Chief, CDC/DSTDP, Program Development and Quality Improvement Branch, 10/18/19. Morbidity rates are weighted based on disease type.

Figure 4. FY 2019 Strengthening STD Prevention and Control for Health Departments (PCHD) Awards by State and Locality (excludes Puerto Rico and the Virgin Islands)

State/Locality	Award Amount
Alabama	$1,733,855
Alaska	$352,370
Arizona	$1,657,305
Arkansas	$1,073,706
Baltimore, MD	$1,066,274
California	$6,572,887
Chicago, IL	$1,899,190
Colorado	$1,243,502
Connecticut	$816,242
Delaware	$380,636
District of Columbia	$909,974
Florida	$4,913,989
Georgia	$3,324,783
Hawaii	$412,925
Idaho	$343,720
Illinois	$2,246,838
Indiana	$1,641,159
Iowa	$690,464
Kansas	$705,011
Kentucky	$1,077,420
Los Angeles, CA	$3,097,208
Louisiana	$2,021,618
Maine	$300,000
Maryland	$1,292,892
Massachusetts	$1,512,684
Michigan	$2,544,720
Minnesota	$1,186,877
Mississippi	$1,295,885
Missouri	$1,662,974

State/Locality	Award Amount
Montana	$300,000
Nebraska	$471,572
Nevada	$842,584
New Hampshire	$300,000
New Jersey	$2,330,297
New Mexico	$651,778
New York	$2,320,307
New York City, NY	$4,361,649
North Carolina	$2,864,054
North Dakota	$300,000
Ohio	$3,055,682
Oklahoma	$1,081,414
Oregon	$908,772
Pennsylvania	$2,136,255
Philadelphia, PA	$1,843,711
Rhode Island	$337,862
San Francisco, CA	$1,115,448
South Carolina	$1,502,507
South Dakota	$317,653
Tennessee	$1,905,200
Texas	$6,970,999
Utah	$606,801
Vermont	$300,000
Virginia	$2,032,784
Washington	$1,860,059
West Virginia	$530,257
Wisconsin	$1,287,375
Wyoming	$300,000
Total	**$90,812,128**

Source: CDC

STD Surveillance Network (SSuN)

Since 2005, the CDC has offered five-year cooperative agreements for the STD Surveillance Network (SSuN) which collects and analyzes detailed demographic and clinical information about the population of individuals diagnosed with gonorrhea.[21] There are a limited number of SSuN grants, (see Figure 5), and until FY 2019, the SSuN grant comprised two parts:

- Strategy A funded state and local health departments to implement a range of population-level and facility-based activities.[22] Sixteen health departments received awards under a SSuN cooperative agreement through 2018.

- Strategy B funded four health departments to implement robust and sustainable local collaborations with local health care partners to obtain electronic health data to monitor STD prevention, measure STD clinical services, and assess STD-related health outcomes across a wide group of provider settings and data sources.[23] The activities are nationally significant because of applicability of their findings to STD programs across the country.

With the notice of funding opportunity for its fourth cycle released in February 2019, SSuN grants added an additional strategy that requires recipients to propose one additional surveillance activity designed to focus on short-term activities.

- Strategy C includes the following activities:
    - Enhancing STD surveillance capacity;
    - Monitoring sequela and consequences of STDs;
    - Investigating non-nationally reportable STDs;
    - Evaluating STD surveillance;

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[21] Centers for Disease Control and Prevention, "SSuN: STD Surveillance Network," Atlanta: Department of Health and Human Services, 2016, Accessed September 2, 2019. https://www.cdc.gov/std/ssun/default.htm

[22] Ibid.

[23] National Academy of Public Administration. *The Impact of Sexually Transmitted Diseases on the United States: Still Hidden, Getting Worse, Can Be Controlled.* Washington, DC: 2018. P. 61. Accessed September 2, 2019. https://bit.ly/2CaR7xS

- Modernizing STD surveillance data transmissions to CDC; and
- Providing surveillance-related technical assistance to state, local and national stakeholders.

Total estimated five-year funding is $24 million for approximately 10 grantees.

Figure 5. FY 2019 Cycle 3 and FY 2020 Cycle 4 STD Surveillance Network (SSuN) Funding by Grantee

Grantee	State	FY 2019 SSuN Cycle 3 Award Amount	FY 2020 SSuN Cycle 4 Award Amount
California Department Of Public Health	California	$340,000	$340,000
San Francisco Department Of Public Health	California	$270,000	$270,000
Florida State Department Of Health	Florida	$340,000	$340,000
Baltimore City Health Department	Maryland	$280,000	$280,000
New York City Department Of Health And Mental Hygiene	New York	$361,583	$361,583
Columbus Public Health Clinical Division	Ohio	$250,000	$250,000
Multnomah County Health Department	Oregon	$250,000	$250,000
Utah State Department Of Health	Utah	$280,000	$280,000
Washington State Department Of Health	Washington	$270,000	$270,000
Indiana State Health Department	Indiana	N/A	$260,000
Philadelphia Department of Public Health	Pennsylvania	N/A	$285,417

Source: CDC

National Network of STD Clinical Prevention Training Centers Grants (NNPTC)

CDC currently funds eight Prevention Training Centers (PTC) throughout the United States that work in partnership with health departments and universities. These PTCs are a central clearinghouse for educational materials to better inform the knowledge and skills of health professionals regarding sexual and reproductive health. The PTCs are responsible for developing and disseminating training and assistance to improve STD care at all levels, providing health

professionals with educational opportunities and emphasizing prevention.[24] As of August 2019, CDC posted a new NNPTC grant opportunity that will provide about $50 million over five years to 12 grantees.[25]

Figure 6. FY 2019 National Network of STD Clinical Prevention Training Centers Funding

State	Recipient Name	Training Center	States Served[26]	Award Amount
AL	University of Alabama Hospitals	Alabama-North Carolina STD/HIV Prevention Training Center	Alabama, Georgia, North and South Carolina	$250,000
CA	University of California-San Francisco	California Prevention Training Center	California, Arizona, Nevada, New Mexico, Hawaii	$1,351,352
CO	Denver Health & Hospital Authority	Denver Prevention Training Center	Arkansas, Colorado, Louisiana, Mississippi, Oklahoma, Texas, Utah, and Wyoming	$680,000
MA	Massachusetts State Department of Public Health	Sylvie Ratelle STD/HIV Prevention Training Center	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Florida	$350,000
MD	Johns Hopkins University	STD/HIV Prevention Training Center at Johns Hopkins	Delaware, District of Columbia, Maryland, Pennsylvania, Tennessee, Virginia, West Virginia	$350,000
MO	Washington University	St. Louis STD/HIV Prevention Training Center	Illinois, Iowa, Nebraska, Kansas, Kentucky, Wisconsin, and Missouri	$350,000
NY	Columbia University, School of Arts & Sciences	New York City STD/HIV Prevention Training Center	New York City, New York State, New Jersey, Ohio, Indiana, Michigan	$450,000
WA	University of Washington	University of Washington STD Prevention Training Center	Alaska, Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota and Washington	$700,000

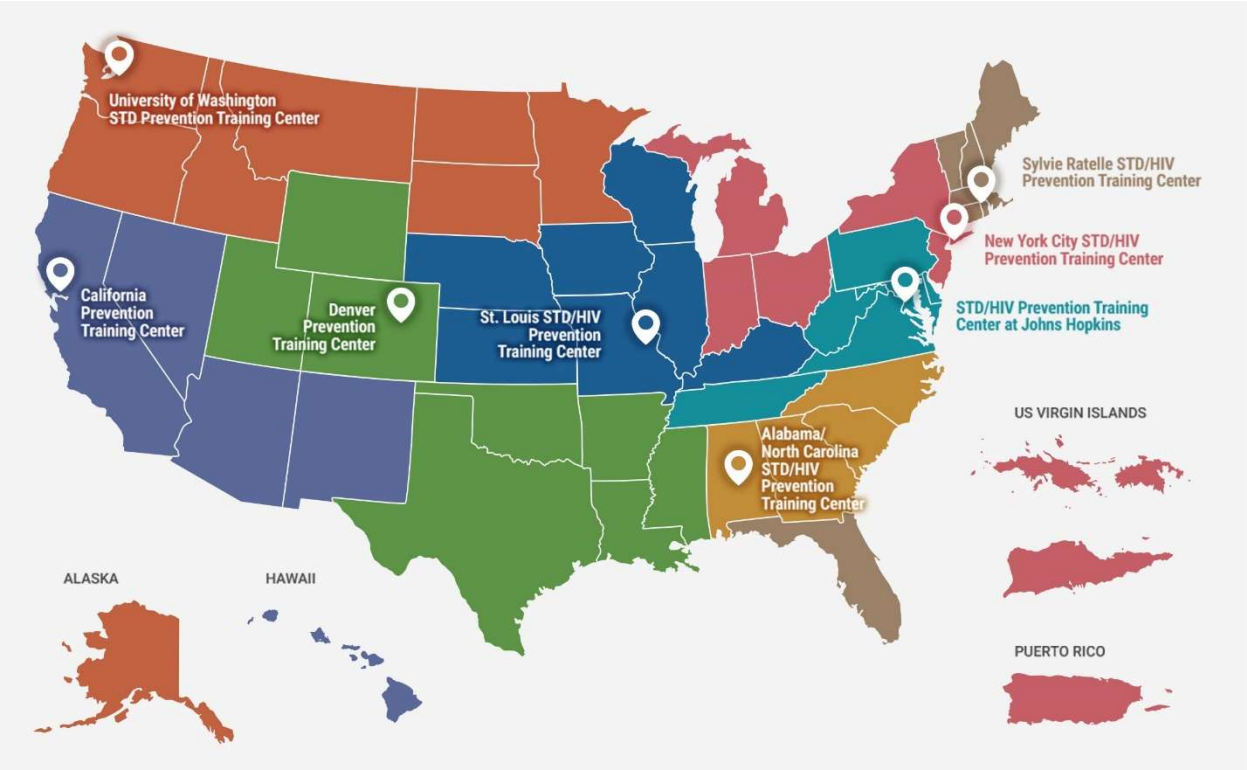
Source: CDC

[24] Center for Disease Control and Prevention, "STD Prevention Courses," 2018. Accessed September 2, 2019. https://www.cdc.gov/std/training/courses.htm

[25] Centers for Disease Control, CDC-RFA-PS20-2004, "National Network of Sexually Transmitted Diseases Clinical Prevention Training Centers (NNPTC)," 2019, Accessed October 25, 2019, https://bit.ly/2pOoyma.

[26] National Network of STD Clinical Prevention Training Centers, "Our Training Centers," accessed October 23, 2019, https://nnptc.org/our-centers.

Figure 7. National Network of STD Clinical Prevention Training Centers – Regional Training Centers



Source: National Network of STD Clinical Prevention Training Centers

Community Approaches to Reducing STDs (CARS)

Since 2011, CDC has funded the Community Approaches for Reducing STDs (CARS) project, providing federal monies to a small number of recipients to build local STD prevention and control capacity within their communities. The purpose of the CARS project is to utilize community-based partnerships to identify social determinants of health, implement interventions to reduce STDs, and improve health equity in an area. To date, there have been three phases of CARS: Phase 1 ran from 2011-2014; Phase 2 ran from 2014-2017; and Phase 3 is currently underway and will run from 2017-2020 (see Figure 8).[27] Award recipients are provided technical expertise, the most up-to-date research, and expert evaluation guidance from their partners at CDC throughout the award.[28] Eligible applicants and previous award recipients included state health departments, university research centers, nonprofits, foundations, and city health departments. A follow-on CARS is under development and will be released in FY 2020.

Figure 8. FY 2019 Community Approaches to Reducing STDs Phase 3 Grants[29]

Grantee	State	Award Title	Award Amount
Capacity Builders Inc.	NM	Community Approaches to Reducing Sexually Transmitted Diseases (CARS)	$ 312,494
Cicatelli Associates, Inc.	NY	Community Approaches to Reducing Sexually Transmitted Diseases (CARS) Buffalo New York	$ 306,067
San Diego State University, Foundation	CA	A Community-Based Participatory Approach for Reducing STDs among Latino youth in South Bay, San Diego	$ 306,470
Wake Forest University Health Sciences	NC	Reducing STD Disparities in a High Incidence Community in the South through Community Engagement and Multisectoral Partnerships	$ 309,105

Source: CDC

[27] Centers for Disease Control and Prevention, "Community Approaches to Reducing Sexually Transmitted Diseases,", 2019. Accessed September 2, 2019. https://www.cdc.gov/std/health-disparities/cars.htm

[28] Centers for Disease Control and Prevention, "CARS Potential Application Conference Call," Atlanta: Department of Health and Human Services, 2014, Accessed September 2, 2019. https://bit.ly/2NalzN2.

[29] Centers for Disease Control and Prevention, "Reducing STD Disparities in a High Incidence Community in the South through Community Engagement and Multisectoral Partnerships Award Information," accessed October 23, 2019, https://bit.ly/32H1zYY.

National Network to Enhance Capacity of State and Local Sexually Transmitted Disease Prevention Programs (NNECS)

CDC also funds a five-year cooperative agreement to a "national organization representing state, local, and territorial STD program directors to enhance workforce and operational capacity of STD prevention programs and ensure that strategic communication channels and partnerships are in place that advance national STD prevention objectives." Funding for FY 2018 and FY 2019 totaled $3,076,190.[30] (Note: The sponsor of this study, NCSD is the current recipient.)[31] The PCHD cooperative agreement requires recipients to collaborate with NNECS to strengthen policy development, communication, and collaboration with other recipients for program improvement.

Division of HIV/AIDS Prevention (DHAP)

CDC's Division of HIV/AIDS Prevention works with national, state, local and community partners to reduce the transmission of HIV/AIDS and link people living with HIV/AIDS (PLWHA) to medical care and treatment. While DHAP does not focus directly on STD treatment and prevention services, it supports collaboration with DSTDP's STD programs, including support for voluntary testing of other STDs (chlamydia, gonorrhea, and syphilis) when implementing HIV tests.[32] DHAP's primary funding tools are its Integrated HIV Surveillance and Prevention Programs for Public Health. As noted in the Phase I report, DHAP provides about 10.6 percent of the funding available to DSTDP for distribution to grantees for STD-HIV related activities. This funding is included in the STD PCHD awards.

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[30] U.S. Department of Health and Human Services, "National Network To Enhance Capacity Of State And Local Sexually Transmitted Disease Prevention Programs (NNECS) Award Information," Accessed October 23, 2019, https://bit.ly/33XyhFr.

[31] U.S. Department of Health and Human Services, "National Network To Enhance Capacity Of State And Local Sexually Transmitted Disease Prevention Programs (NNECS) Grant Opportunity," Accessed October 23, 2019, https://bit.ly/2Wad4pf.

[32] Centers for Disease Control and Prevention, "Integrated HIV Surveillance and Prevention Programs for Health Departments, CDC-RFA-PS18-1802, Notification of Funding Opportunity," Accessed October 23, 2019, https://bit.ly/2MK6PFF.

Integrated HIV Surveillance and Prevention Programs for Health Departments

Similar to the PCHD cooperative agreement, DHAP's surveillance cooperative agreements fund states and select localities to maintain, measure, and evaluate the presence of HIV/AIDS in the United States, and to inform best practices for the targeting and preventing of HIV/AIDS. These cooperative agreements are designed to link HIV/AIDS patients to medical care and ultimately reduce their risk of disease transmission. States and territories are all eligible to receive this grant. Local governments are also eligible for this program if they have an HIV/AIDS surveillance cooperative agreement in place.[33] As noted, earlier, the STD PCHD cooperative agreement allows for HIV-related activities to be conducted by awardees, but these activities are not to exceed 10 percent of the program allocation. The related DHAP surveillance and prevention notice of funding states that, "applicants with the capacity to implement integrated screening activities (e.g., screening for STDs, viral hepatitis, and/or TB) should continue implementing service integration activities and are eligible to utilize up to 5 percent of the requested total funding amount to enhance these efforts."[34] Together, these two cooperative agreements allow states and localities to support the integration of HIV and STD activities.

Figure 9 provides funding amounts for DHAP's surveillance and prevention cooperative agreements. All PCHD recipients receive DHAP surveillance and prevention funding. Additionally, DHAP provides funding to the city of Houston, Texas which is not included in the PCHD awards. Figure 10 illustrates the significant differences in PCHD and DHAP funding awards for FY 2019.

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[33] Centers for Disease Control and Prevention, "Integrated HIV Surveillance and Prevention Programs for Health Departments, CDC-RFA-PS18-1802, Fact Sheet," Accessed October 23, 2019, https://bit.ly/2Pgz5RG.

[34] "CDC-RFA-PS18-1802, Notification of Funding Opportunity," https://bit.ly/2MK6PFF.

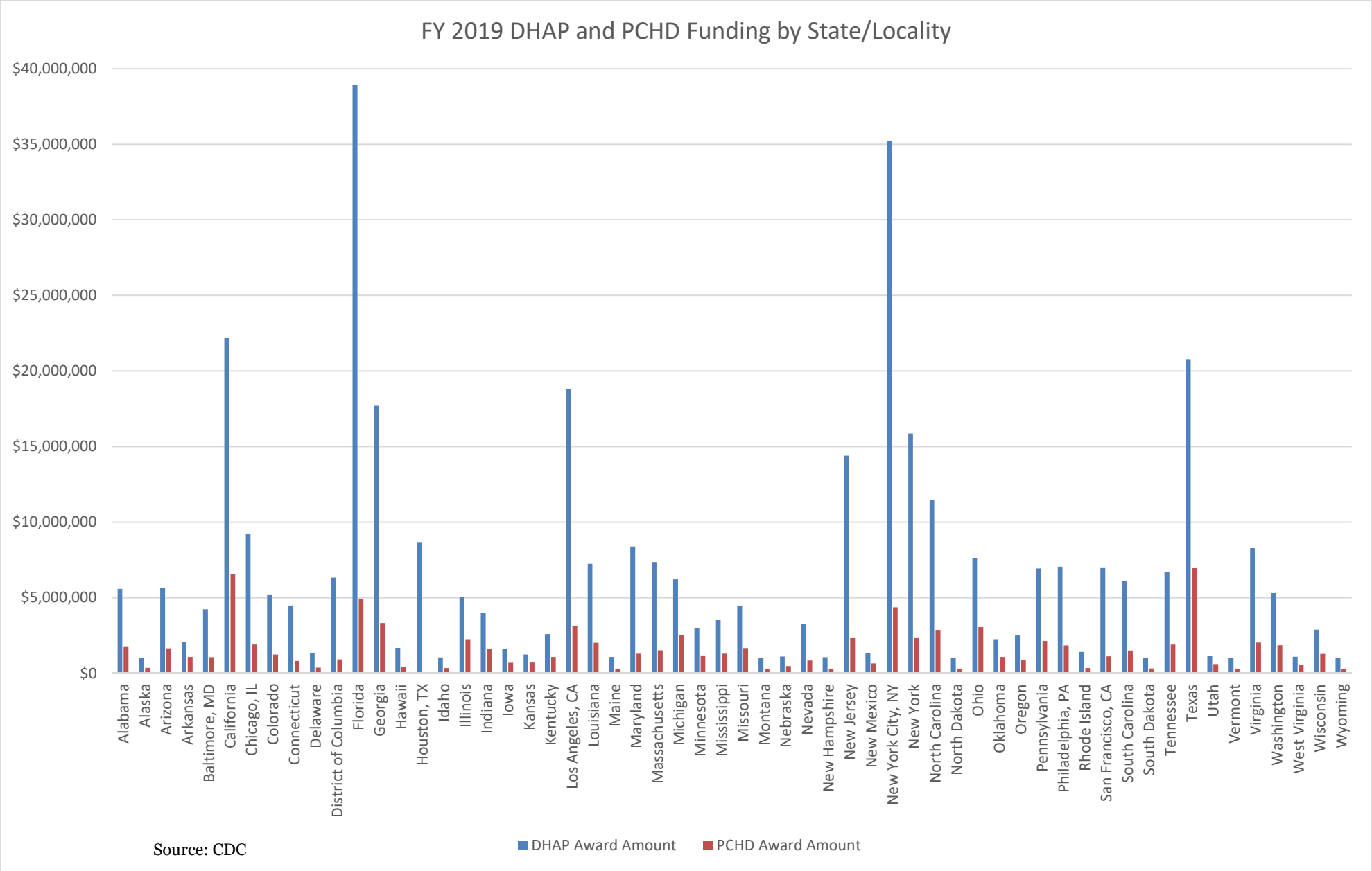
Figure 9. FY 2019 PS 18-802 Integrated HIV Surveillance and Prevention Programs for Health Departments.

State/Locality	Award Amount
Alabama	$5,579,660
Alaska	$1,033,858
Arizona	$5,667,606
Arkansas	$2,084,560
Baltimore, MD	$4,237,790
California	$22,176,700
Chicago, IL	$9,203,621
Colorado	$5,217,099
Connecticut	$4,474,203
Delaware	$1,353,326
District of Columbia	$6,334,314
Florida	$38,904,419
Georgia	$17,697,095
Hawaii	$1,676,488
Houston, TX	$8,671,633
Idaho	$1,054,017
Illinois	$5,037,849
Indiana	$4,006,660
Iowa	$1,621,113
Kansas	$1,233,568
Kentucky	$2,591,200
Los Angeles, CA	$18,786,095
Louisiana	$7,244,981
Maine	$1,075,537
Maryland	$8,387,181
Massachusetts	$7,360,636
Michigan	$6,216,552
Minnesota	$2,985,918
Mississippi	$3,508,228
Missouri	$4,477,486

State/Locality	Award Amount
Montana	$1,029,058
Nebraska	$1,103,682
Nevada	$3,266,705
New Hampshire	$1,064,374
New Jersey	$14,397,053
New Mexico	$1,306,348
New York City, NY	$35,204,236
New York State	$15,860,185
North Carolina	$11,462,335
North Dakota	$1,000,000
Ohio	$7,602,764
Oklahoma	$2,254,311
Oregon	$2,500,169
Pennsylvania	$6,929,483
Philadelphia, PA	$7,044,476
Rhode Island	$1,419,304
San Francisco, CA	$7,008,376
South Carolina	$6,116,419
South Dakota	$1,026,481
Tennessee	$6,710,435
Texas	$20,772,433
Utah	$1,151,669
Vermont	$999,999
Virginia	$8,281,766
Washington	$5,306,808
West Virginia	$1,097,367
Wisconsin	$2,884,087
Wyoming	$1,015,467
TOTAL	$385,715,183

Source: CDC

Figure 10. FY 2019 DHAP and PCHD Funding Awards by State



Source: CDC

Health Resources and Services Administration

Through HRSA, significant resources are available to support STD-related activities at the state and local level primarily through the Ryan White HIV/AIDS Program, Community Health Center funding, the 340B Drug Pricing Program, and the Maternal and Child Health Services Block Grant. As discussed in Phase I, HRSA supports health programs and services targeting the underserved and at-risk populations and promotes improvements in health care access and quality. In that role, HRSA has a key, collaborative relationship with CDC in STD prevention and control. Because identifying the specific amounts that directly support STD activities is not possible, we are not including award amounts for states and localities in the Ryan White program, nor the income generated by through the 340B program.

Ryan White HIV/AIDS Program

The Ryan White HIV/AIDS program (RWHAP), established in 1990, provides federal funding to states, cities, and local organizations for a variety of health care services for people living with HIV.[35] Ryan White is a payer of last resort and as such, funds states and localities to help pay for services not covered by other federal or state programs or private insurance. There are five major parts to RWHAP and each has unique requirements and eligibility standards. While the program is explicit in its goal to assist those diagnosed with HIV/AIDS, the program supports extensive public health outreach and prevention services, including STD services, and supports health centers that serve a broader population in need of health care.

Ryan White HIV/AIDS Program – Part A

Recipients of Part A funds are either Eligible Metropolitan Areas (EMAs) or Transitional Grant Areas (TGAs) where HIV/AIDS is an emerging epidemic. HRSA uses the U.S. Census metropolitan statistical areas to define the geographical limits of EMAs and TGAs, and occasionally they span across states.

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[35] *Ryan White Comprehensive AIDS Resources Emergency Act of 1990,* Public Law 101-381, U.S. Statutes at Large 104(1990): 576-628.

Part A grants are awarded to the chief elected official of a city or county, who then designates a lead agency to administer the grant money. There are four TGAs in the Phase II report target jurisdictions: Kansas City, Missouri; St. Louis, Missouri; Baton Rouge, Louisiana; and Charlotte-Gastonia, North Carolina-South Carolina. The TGAs in Missouri use a Planning Council; the other two do not. Additionally, there is one EMA in the target jurisdictions: Boston, Massachusetts.

Part A funding consists of a formulaic and supplemental component, as well as Minority AIDS initiative funds, which cover services provided to minority populations. Grant monies must be spent on medical treatment and support services for people living with HIV/AIDS. Recipients must spend 75 percent of their funds on core medical services and no more than 25 percent on support services unless they receive a waiver.

HRSA defines core medical services as follows: AIDS Drug Assistance Program, AIDS pharmaceutical assistance, early intervention services, health insurance premium and cost sharing assistance for low-income individuals, home and community-based health care, home health care, hospice services, and medical case management—including treatment adherence services, medical nutrition therapy, mental health services, oral health, outpatient and ambulatory medical care, and substance abuse outpatient care.

Support services within Part A must be linked to health outcomes. These services may include outreach, medical transportation, linguistic services, respite care for caregivers of PLWHA, referrals for health care and other support services, nonmedical case management, and substance use disorder residential services.

Part A funds may be woven together in a health department whose STD and HIV functions are paired together. In Boston's 2017-2021 EMA Integrated Care Plan, one goal is to "expand collaboration with partners, including embedding and integration with existing Part A program sites, to identify newly diagnosed individuals who may be seeking care for HIV, TB, HCV and

other STIs."[36] The Boston Planning Council also recognizes that collaboration with the state health department that receives CDC prevention funds is critical to simultaneously reach people living with and without HIV to reduce disease burden in high-risk communities. Due to funding limitations, the Boston Public Health Commission uses Part A funds and the Integrated Care Plan to initiate "systems change through a variety of structural interventions and quality improvement activities that allow Part A funds to support many non-HIV specific environments where PLWHA may access care services."[37]

Ryan White HIV/AIDS Program – Part B

Part B grants are provided to all 50 states and U.S. territories to improve the quality, availability, and organization of HIV health care and services. Part B contains five distinct parts:

1. Base grant for core medical and support services: Each state and territory determine how they spend their Part B base grant contingent on a needs assessment and available funding. The eligible medical and support services are the same as defined in Part A, with a similar 75 percent and 25 percent respective split in required spending.[38] Additionally, any Part B recipients must vigorously pursue enrollment in available health care coverage options for eligible clients.

2. The AIDS Drug Assistance Program (ADAP) award: Funding is allocated to states and territories to administer coverage of drugs approved by the U.S. Food and Drug Administration (FDA) to PLWHA who have limited or no prescription drug coverage. Program funding is based on annual Congressional appropriations, drug rebates, and funding from other parts of the RWHAP.[39] To qualify for the ADAP program, a patient

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[36] Boston EMA Ryan White Part A, *Integrated HIV Prevention and Care Plan 2017-2021*, Accessed October 23, 2019, https://bit.ly/2N8qs9p.

[37] Ibid.

[38] Health Resources and Services Administration, "Part B: Grants to States & Territories," 2019, Accessed September 2, 2019, https://bit.ly/33VDBt9.

[39] Health Resources and Services Administration, "Part B: AIDS Drug Assistance Program," 2017, Accessed September 2, 2019. https://bit.ly/2f4IqsR.

must be HIV-positive, low-income, and underinsured or uninsured. Each state's ADAP program may develop its own eligibility requirements, which may include residency requirements, and each state may develop its own formulary for coverage of drugs to treat HIV. Some states use their ADAP funds to also provide drugs that treat opportunistic infections and HIV coinfections, such as hepatitis.[40] Additionally, ADAPs may use their funds to support the purchase of any health insurance or health assistance for those who do have health coverage. In states that expanded Medicaid after the Patient Protection and Affordable Care Act (ACA) was passed, the Kaiser Family Foundation found that their ADAPs spent about one-third less on these clients who they enrolled in health insurance with prescription drug coverage, instead of having to purchase the drugs directly.[41]

3. The Part B Supplemental award: This award provides additional funding to supplement states and territories that are already receiving Part B grants and ADAP funding. Funding is prioritized to states and territories that have experienced a decline or disruption in services resulting from any decrease in formula funding between the current fiscal year and fiscal year 2006.[42]

4. Minority AIDS Initiative: These funds are used for education and outreach to improve access to medication assistance programs for minority patients, including ADAP. States qualify for these funds based on the demographics of their population of PLWHA. While this funding supports Ryan White Part B programs, it is implemented outside HRSA's Ryan White program.

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[40] Kaiser Family Foundation, "AIDS Drug Assistance Program," 2017, https://bit.ly/342pSAW.

[41] Ibid.

[42] Health Resources Services Administration, "Ryan White HIV/AIDS Program Factsheet: Part B," December 2016, https://bit.ly/2WbaMWN.

5. Supplemental grants to states with "emerging communities:" This funding is given to states and territories to distribute to communities that have reported 500 to 999 cumulative cases of HIV/AIDS over the past 5 years.

Ryan White HIV/AIDS Program – Part C

Part C grants fund two major awards: The Early Intervention Services (EIS) and Capacity Development Grants. Local community-based organizations are eligible to receive funding for Part C grants alongside states and territories.[43]

EIS grants fund comprehensive primary health care for people living with HIV/AIDS in outpatient settings. Eligible recipients of these grants include Federally Qualified Health Centers (FQHCs), Title X family planning grantees (other than states), rural health clinics, Comprehensive Hemophilia Diagnostic and Treatment Centers, health centers operated by or contracting with the Indian Health Service, community-based organizations (including hospitals and clinics) that provide early intervention services, and nonprofit private entities providing comprehensive primary care to populations at risk of HIV, including faith-based and community-based organizations.

Capacity Development Grants provide funding for public and nonprofit entities seeking to improve their organizational infrastructure and capacity to plan, develop, enhance, and expand access to high-quality HIV primary care in rural and medically underserved communities. Eligible grantees include public and nonprofit entities that are, or intend to become, comprehensive HIV primary care providers, including current Ryan White providers and faith and community-based organizations. There are 672 Part C Early Intervention grants; 142 are going to Community Health Centers and FQHC look-alikes. This is another example of the variety of layers of federal dollars going toward STD-related activities as Health Center Program grantees receive multiple streams of federal funds, including from the Ryan White HIV/AIDS program.

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[43] Health Resources Services Administration, "Part C: Early Intervention Services and Capacity Development Program Grants," October 2017, https://bit.ly/2NfDv98.

Ryan White HIV/AIDS Program – Part D

Part D grants provide funding for outpatient, family-centered primary and specialty medical care for women, infants, children, and youth living with HIV. Eligible recipients of these grants include: private or nonprofit entities that provide direct medical care to HIV-positive women, infants, and children; state and local governments, including tribal organizations, including those not recognized by the federal government; and faith-based and community-based organizations.[44] There are four allowable cost categories for Part D grants:

- Medical Service Costs: Provision of family-centered care, including primary care, for women, children, infants and youth living with HIV.
- Clinical Quality Management Costs: All activities needed to maintain a clinical quality management program, including data collection, training and technical assistance to program staff.
- Support Service Costs: All services needed to ensure patients meet HIV medical outcomes, including transportation, case management, outreach, and recruitment to keep patients in care.
- Administrative Costs: Costs not directly associated with the provision of care. Part D grantees can use no more than 10 percent of the budget for administrative costs.

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[44] Health Resources and Services Administration, "Part D: Infant, women, youth and children," October 2017, https://bit.ly/2MLfMi2.

Ryan White HIV/AIDS Program – Part F

Part F grants provide funding for four main initiatives: AIDS Education and Training Centers (AETCs), Dental Programs, Minority AIDS Initiative, and Special Projects of National Significance. Funding for Part F AETC grants provide funds for training of the public health and health care providers in STD testing, treatment and prevention. The SPNS project, "Improving Sexually Transmitted Infection Screening and Treatment among People Living with or at Risk for HIV," was awarded to Rutgers University for a project period of 2018-2021. Rutgers received $4.3 million for FY 2018 to implement this SPNS.[45]

The AETCs are national and regional centers providing education and training for health care providers treating patients with HIV. They work in conjunction with STD clinics, hospitals, community-based providers, and other health care facilities that treat PLWHA.[46]

Figure 11. FY 2019 Ryan White Program Funding.[47]

Ryan White Program Part[48]	FY2019
Part A: (Title I) - Emergency Relief	$655,876,000
Part B: (Title II) - HIV Care	$1,315,005,000
Part C: (Title III) - Early Intervention	$201,079,000
Part D: (Title IV) - Women, Infants, Children & Youth	$75,088,000
Part F: AIDS Education and Training Centers	$33,611,000
Part F: Dental Reimbursement	$13,122,000
Special Projects of National Significance	$25,000,000
Total: Ryan White CARE Act:	$2,318,781,000

Source: Health Resources & Services Administration

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[45] Health Resources and Services Administration. " Part F: Special Projects of National Significance (SPNS) program" October 2018. https://bit.ly/2PhJ9tM.

[46] Health Resources and Services Administration, "Part F: AIDS Education and Training Centers (AETCs)," October 2018, https://bit.ly/2zvcOtj.

[47] Health Resources and Services Administration, "FY 2011- FY 2019 Ryan White HIV/AIDS Program Funding," https://bit.ly/2BBqql1.

[48] Chart does not include ADAP rebates.

Health Center Program

The Health Center Program, administered by HRSA under the Bureau of Primary Health Care (BPHC), awards Health Center Program grants to eligible FQHCs. A health center includes any community-based entity that serves a traditionally medically underserved population or a special medically underserved population, including migratory and seasonal agricultural workers, residents of public housing, and the homeless. The medically underserved areas are defined by HRSA as having too few primary care providers, high infant mortality, high poverty or high elderly populations.[49] FQHCs must meet a stringent set of requirements, including providing care on a sliding fee scale based on ability to pay and operating under a governing board that includes patients.

The primary funding for community health centers is the Health Center Program, authorized in Section 330 of the Public Health Services Act. These dollars are a combination of two sources: appropriated discretionary funding from Congress and mandatory funding from the Community Health Center Fund (CHCF).[50] This mandatory fund, created in 2010, supported the expansion of health centers expected to treat patients newly insured under the ACA. Grants awarded are for a three-year project period, and grantees receive funding annually. This fund must be reauthorized every two years. The CHCF was due to expire at the end of FY 2019 unless reauthorized by Congress. As of the start of FY 2020, legislation to reauthorize the fund is pending. The CHCF accounts for about 72 percent of all federal health center grants and is a key source of revenue for health centers.[51]

Eligible public and nonprofit entities can apply for Health Center Program funding or apply for a look-alike designation. Organizations with a look-alike designation do not receive Health

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[49] Health Resources and Services Administration, "Medically Underserved Areas and Populations," January 2019, Accessed July 25, 2019. https://bhw.hrsa.gov/shortage-designation/muap.

[50] National Association of Community Health Centers, "Federal Grant Funding," 2019. Accessed July 29, 2019. https://bit.ly/344Eqjv.

[51] Kaiser Family Foundation, "Community Health Centers Prepare for Funding Uncertainty," September 4, 2019, Accessed October 23, 2019, https://bit.ly/2kiceZc.

Center Program funding, but they are eligible for Health Center Program benefits, including the 340B Drug Pricing Program, National Health Service Corps providers, and reimbursements under FQHC, Medicare, and Medicaid payment methodologies.[52]

Health Center Program grant funding supports primary health care services, including preventative health care. Screening services must include at a minimum "screening for tuberculosis, HIV, Hepatitis C and B, and other sexually transmitted diseases/infections based on patients identified risk factors."[53]

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[52] Health Resources and Services Administration, "Program Opportunities: How to Become a Health Center," September 2018, Accessed July 25, 2019, https://bit.ly/2BKZGhL.

[53] Health Resources and Services Administration, "Health Center Program Requirements Form 5A: Service Descriptors," Accessed August 20, 2019, https://bit.ly/2oiUMWq.

Figure 12. FY 2019 Community Grants for New and Expanded Services under the Health Center Program

State	Award Amount
Alabama	$ 89,285,704
Alaska	$ 80,295,383
Arizona	$ 89,458,522
Arkansas	$ 57,118,795
California	$ 689,921,879
Colorado	$ 111,737,786
Connecticut	$ 65,817,882
Delaware	$ 15,782,737
District of Columbia	$ 27,218,977
Florida	$ 247,357,476
Georgia	$ 129,333,201
Hawaii	$ 35,578,062
Idaho	$ 50,086,068
Illinois	$ 212,512,801
Indiana	$ 80,650,932
Iowa	$ 44,946,445
Kansas	$ 49,255,669
Kentucky	$ 85,445,884
Louisiana	$ 107,266,293
Maine	$ 48,234,050
Maryland	$ 70,862,753
Massachusetts	$ 142,581,352
Michigan	$ 136,521,456
Minnesota	$ 45,984,994
Mississippi	$ 2,296,025
Missouri	$ 117,853,284

State	Award Amount
Montana	$ 47,232,585
Nebraska	$ 24,580,962
Nevada	$ 24,130,314
New Hampshire	$ 29,157,708
New Jersey	$ 88,070,657
New Mexico	$ 78,672,525
New York	$ 278,563,779
North Carolina	$ 144,930,577
North Dakota	$ 11,701,402
Ohio	$ 161,475,211
Oklahoma	$ 63,322,765
Oregon	$ 101,549,024
Pennsylvania	$ 134,692,277
Rhode Island	$ 29,482,703
South Carolina	$ 94,491,273
South Dakota	$ 20,936,596
Tennessee	$ 91,423,421
Texas	$ 277,301,425
Utah	$ 43,477,843
Vermont	$ 25,682,181
Virginia	$ 93,224,521
Washington	$ 141,543,420
West Virginia	$ 75,733,128
Wisconsin	$ 47,950,781
Wyoming	$ 8,932,426
TOTAL	$ 4,971,663,914

Source: Health Resources & Services Administration

340B Drug Pricing Program

In 1992, Congress passed the Public Health Service Act, authorizing the 340B Drug Pricing Program. This law requires pharmaceutical manufacturers to sell drugs at discounted prices to safety net health providers[54] and other eligible entities.[55] While this program is not a grant program and as such, is not funded by annual appropriations, revenues derived from the program are available to use for STD and HIV activities.

Manufacturers must provide covered entities a drug below a ceiling price, which is the Average Manufacturing Price minus the Unit Rebate Amount (URA). The URA varies depending on the type of drug purchased.[56] In 2015, most covered entities saved 20-50 percent on their drug costs, for a total of $6 billion in drug cost savings.[57]

There are four categories of eligible entities for the 340B program:[58]

- Health Centers: FQHC and FQHC look-alikes, Native Hawaiian Health Centers, and Tribal/Urban Indian Health Centers;
- Ryan White HIV/AIDS Program Grantees: ADAPS, Ryan White Clinics

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[54] Safety net health providers "organize and deliver a significant level of both health care and other health-related services to the uninsured, Medicaid, and other vulnerable populations," as well as providers "who by mandate or mission offer access to care regardless of a patient's ability to pay and whose patient population includes a substantial share of uninsured, Medicaid, and other vulnerable patients" https://bit.ly/2HzvjjC.

[55] National Conference of State Legislatures, "States and the 340B Drug Pricing Program," 2018, Accessed July 25, 2019, https://bit.ly/2p8MGzS.

[56] Centers for Medicare and Medicaid, "Unit Rebate Amount Calculator," Accessed August 5, 2019. https://bit.ly/33WiK90.

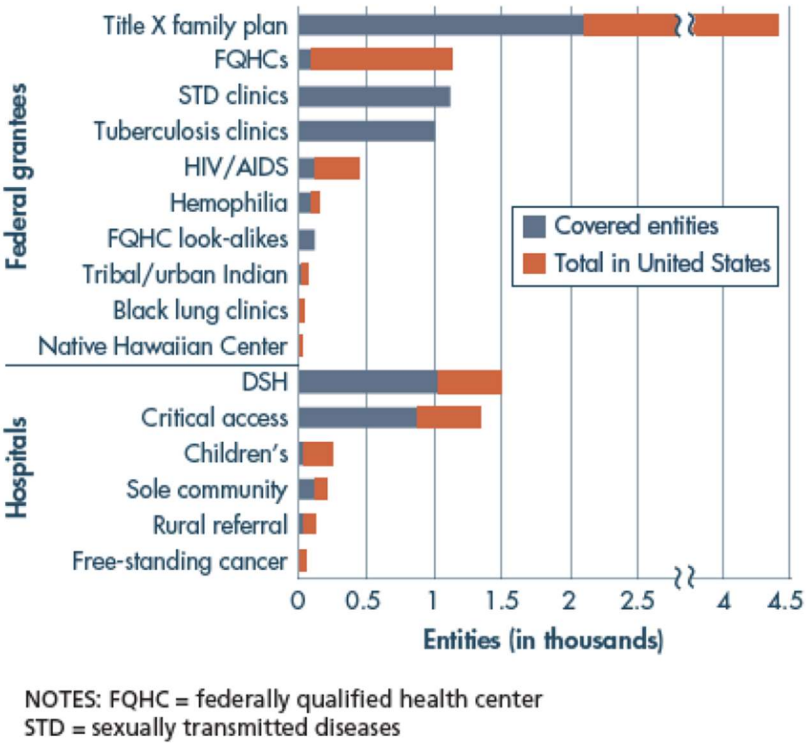
[57] "Health Policy Brief: The 340B Drug Discount Program," *Health Affairs,* September 14, 2017. DOI: 10.1377/hpb2017.10.

[58] Health Resources and Services Administration, "340B Eligibility," May 2018, Accessed July 25, 2019. https://bit.ly/2Wafhkx.

- Hospitals: Children's hospitals, Critical Access Hospitals, Disproportionate Share Hospitals, Free Standing Cancer Hospitals, Rural Referral Centers, and Sole Community Hospitals; and
- Specialized Clinics: Black lung clinics, comprehensive hemophilia diagnostic treatment centers, Title X Family Planning Clinics, STD Clinics, and Tuberculosis Clinics.

The chart below, though dated (2014), demonstrates participation rates by covered entities.

Figure 13. 340B Participation Rates by Covered Entity Category, 2014. [59]



[59] Andrew W. Mulcahy, Courtney Armstrong, Jeffrey Lewis, and Soeren Mattke, "The 340B Drug Discount Program: Origins, Implementation, and Post-Reform Future," Rand Corporation. 2014, Accessed October 23, 2019, https://bit.ly/2DBNhwg.

There are no specific financial need criteria for patients to receive 340B discount drugs. Eligible entities can provide discounted drugs to any of their patients who has an "established relationship" and receives other health care services alongside the receipt of prescription drugs. Eligible drugs include all FDA-approved prescription drugs, prescribed over-the-counter drugs, FDA-approved insulin, and biologics.

Eligible entities may bill third party payers for drugs at a higher price than the 340B discount, except for Medicaid. The revenue that entities receive from their eligibility in the 340B program is considered program income. HRSA regulations determine what entities can fund using program income. For example, FQHCs are required to reinvest their revenue in services, but other covered entities like hospitals are not limited in how they can use their 340B revenue.[60] FQHCs must use their 340B revenues to support activities approved under the Health Center Program scope of project and advance their charitable mission. HRSA's Office of Pharmacy Affairs has oversight over this process.[61]

Anecdotally, entities use the income to hire health care personnel, providing wrap-around services to patients, and for STD prevention and control activities. Additionally, some entities use 340B savings to hire additional DIS to conduct partner outreach and education.

Maternal and Child Health Services Block Grant

The Maternal and Child Health (MCH) Services Block Grant was established to improve the health and well-being of low-income mothers and children. This federal-state partnership is administered through HRSA's Maternal and Child Health Bureau (MCHB). (See Figure 14.)

The MCH Services Block Grant comprises three funding programs: a block grant, a Special Projects of Regional and National Significance (SPRANS) program, and the Community

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[60] Medicaid and CHIP Payment and Access Commission, "Issue Brief: The 340B Drug Pricing Program and Medicaid Drug Rebate Program: How they interact," May 2018, Accessed October 23, 2019, https://bit.ly/31HCUlH.

[61] National Association of Community Health Centers, Letter to Office of Pharmacy Affairs (OPA) in response to the 340B Drug Pricing Program Omnibus Guidance, Federal Register, Vol. 80, No. 167, 52300, (August 28, 2015), Accessed August 22, 2019, https://www.govinfo.gov/content/pkg/FR-2015-08-28/pdf/2015-21246.pdf.

Integrated Service Systems (CISS) program. SPRANS and CISS are both competitive grant programs that account for about 15 percent of the MCH Services Block Grant's funding. SPRANS funds research and training projects and CISS funds projects that support the development or expansion of integrated services for low-income mothers and children at the community level.[62]

The block grant makes up about 85 percent of the MCH Services Block Grant funding in the form of noncompetitive, formula-based block grants to the 50 states and nine territories. The goal of the block grants is to provide low-income mothers and children with access to quality health services. States determine the actual services provided under their block grant which may include counseling, dental care, family planning, immunization, inpatient services, prenatal care, screening services for lead-based poisoning, support for community health centers, vision and hearing screening services, and well-child care.

The four types of services funded by the block grant are direct health care (gap-filling basic services), enabling support services (transportation, education, case management), population-based services (screening, counseling, public outreach), and infrastructure-building services (planning, policy development, systems of care). While states can use funds for direct health care, HRSA prefers the program to be a payer of last resort. These grants are largely intended to expand the capacity of state and local health care systems and infrastructure to care for the target population.

Although block grant funds may not be transferred to any other program or used to provide cash payments to recipients, the program does provide some flexibilities—i.e., some of the funding can be used to prevent and treat STDs, thereby aiding grantees in their efforts to address congenital syphilis. None of our case study or snapshot states or localities mentioned this block grant. However, other jurisdictions and their partners do use the grants. For example, Mary's Center Adolescent Health Project in Maryland works with area partners to provide

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[62] U.S. Library of Congress, Congressional Research Service, *Maternal and Child Health Services Block Grant: Background and Funding*, by Victoria L. Elliot, R44929 (2017), https://crsreports.congress.gov/product/pdf/R/R44929.

comprehensive health services to adolescents, including specific programming on the prevention of STDs.[63] In addition, California is using its MCH Services block grant to respond to the increase in rising congenital syphilis rates by working with local health departments to analyze the causes, contacting infected pregnant women about treatment, intensifying follow-up on women of childbearing age with syphilis, and promoting linkages to prenatal care and screening for women.[64]

A joint CDC and HRSA advisory committee—the CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment (CHACHSPT)[65]—provides advice to HHS officials on objectives, strategies, policies, and priorities for HIV, viral hepatitis, and STD prevention and treatment efforts. This includes surveillance and research on the diseases, identification of relevant policy issues in combating the current resurgence of these diseases, analyzing existing agency policies and programs for effectiveness, and developing recommendations to help HHS fulfill its mission of providing prevention and treatment[66]. Through their efforts on the Committee, MCHB has worked closely with the DSTDP to address the increasing rates of congenital syphilis in the United States.[67]

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[63] HRSA Maternal and Child Health, Funded Projects, "Mary's Center Adolescent Health Project," 2019, Accessed October 25, 2019, https://bit.ly/32KYIOx.

[64] U.S. Department of Health and Human Services, "CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment," Rockville, Maryland, 2017, https://bit.ly/2BHE1ay.

[65] U.S. Department of Health and Human Services, "CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment," Atlanta, Georgia, 2017, https://bit.ly/2WbcqYt.

[66] Centers for Disease Control and Prevention, Management Analysis and Services Offices, "CDC / HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment," April 2018, Accessed October 28, 2019, https://www.cdc.gov/maso/facm/facmCHACHSPT.html.

[67] U.S. Department of Health and Human Services, "Meeting of the CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment: Record of the Proceedings," Atlanta, Georgia, May 10-11, 2017, Accessed October 28, 2019, https://bit.ly/2WbcqYt.

Figure 14. FY 2019 Title V Maternal and Child Health Services Block Grant to the States.

State	Title V Maternal and Child Health Services Block Grant to the States
Alabama	$11,401,820
Alaska	$1,077,677
Arizona	$7,394,328
Arkansas	$6,966,533
California	$39,660,787
Colorado	$7,397,625
Connecticut	$4,667,875
Delaware	$1,992,794
District of Columbia	$6,909,749
Florida	$19,444,613
Georgia	$17,133,550
Hawaii	$2,109,658
Idaho	$3,272,972
Illinois	$21,103,272
Indiana	$12,270,064
Iowa	$6,505,246
Kansas	$4,773,454
Kentucky	$11,092,633
Louisiana	$12,115,931
Maine	$3,311,945
Maryland	$11,756,544
Massachusetts	$10,931,444
Michigan	$18,855,463
Minnesota	$9,098,601
Mississippi	$9,228,087
Missouri	$12,193,258
Montana	$2,300,122

State	Title V Maternal and Child Health Services Block Grant to the States
Nebraska	$4,024,409
Nevada	$2,121,400
New Hampshire	$1,972,621
New Jersey	$11,640,399
New Mexico	$4,125,964
New York	$38,085,393
North Carolina	$17,406,891
North Dakota	$1,738,945
Ohio	$21,955,175
Oklahoma	$7,049,999
Oregon	$6,172,689
Pennsylvania	$23,732,205
Rhode Island	$1,646,441
South Carolina	$11,496,042
South Dakota	$2,174,073
Tennessee	$11,797,538
Texas	$34,479,260
Utah	$6,160,252
Vermont	$1,630,439
Virginia	$12,278,402
Washington	$8,893,654
West Virginia	$6,114,105
Wisconsin	$10,803,817
Wyoming	$1,076,672
TOTAL	$523,542,830

Source: Health Resources & Services Administration

HHS

Title X Family Planning Services

The Title X Family Planning Program (Title X), enacted in 1970 to provide grants to public and nonprofit agencies for family planning services, research, and training, is administered through the HHS, Office of Population Affairs (OPA) and is the only domestic federal program devoted solely to family planning and related preventive health care services (see Figures 15 and 16).

Confidential clinical services provided through Title X include contraceptive services and supplies; natural family planning methods; prevention education, counseling, testing, referral, and treatment for STDs, including HIV/AIDS; cervical and breast cancer screening; preconception health services; nondirective pregnancy testing and counseling; sterilization services; basic infertility services; adolescent services; and other patient education and referrals. By law, Title X funds cannot be used for abortions.[68]

Title X funded clinics charge clients on a sliding scale based on their income and ability to pay, with no charges for individuals at or below 100 percent of the federal poverty level. In 2018, Title X served nearly 4 million clients through over 6.5 million encounters, providing over 5,271,842 STD tests and 1,237,968 HIV tests. This included 2,142,561 chlamydia tests, 2,376,993 gonorrhea tests, and 752,288 syphilis tests performed by Title-X funded clinics in 2018.[69]

The *Quality Family Planning Recommendations*, developed jointly by the CDC and OPA, describe STD services as integral to family planning services as they improve health and can affect a person's ability to conceive and have healthy children. The *QFP Recommendations*

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[68] U.S. Library of Congress, Congressional Research Service, *Title X Family Planning Program*, by Angela Napili, IF10051 (2018): 1, Accessed October 28, 2019, https://crsreports.congress.gov/product/pdf/IF/IF10051.

[69] Fowler, C. I., Gable, J., Wang, J., Lasater, B., & Wilson, E., *Family Planning Annual Report: 2018 national summary*. Research Triangle Park, NC: RTI International. August 2019, Accessed October 28, 2019, https://bit.ly/2mUd6US

advise providers to offer STD services to all at-risk clients in accordance with the CDC's *Sexually Transmitted Diseases Treatment Guidelines, 2015*.[70]

The project period for Title X grants is generally three years; grantees do not need to re-compete for the funds during this period. The funds are awarded in annual budget periods and continuing awards are contingent, like other federal grants, on factors such as appropriations, grantees' compliance with federal requirements, and the "best interests of the government." Title X grantees can provide family services directly or sub-award their grant funding to other public or nonprofit entities to provide these services.[71]

Title X funding and services support a variety of state STD prevention and treatment activities. An interviewee noted that their university health center received Title X funding, allowing them to provide reproductive health services on campus. Title X dollars are often used to provide STD services in localities where no STD state funding is available. In these areas, community-based entities like Planned Parenthood and other Title X funded clinics provided the majority of STD services, in conjunction with local health departments.

On March 4, 2019, HHS published a final rule on the Title X Family Planning Program in the Federal Register that changes how Title X grantees can provide family planning services to clients. While grantees have never been able to use Title X funds for abortion service, until the new rule, Title X required the provision of non-directive counseling for pregnant patients and referrals for pre-natal care, adoption and pregnancy termination based on the client's wishes. The new rule does not require, but permits, non-directive pregnancy counseling provided by clinicians, but prohibits grantees from referring patients for abortions. The rule also requires the financial and physical separation between family planning services and prohibited services such as abortion and abortion referrals, among other changes.

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[70] Workowski, MD, Kimberly A., and Gail A. Bolan, MD. *Sexually Transmitted Diseases Treatment Guidelines, 2015*. MMWR Recomm Rep 2015;64(No. 3):1-137. https://www.cdc.gov/std/tg2015/tg-2015-print.pdf.

[71] U.S. Library of Congress, Congressional Research Service, *Title X Family Planning Program*, by Angela Napili, IF10051 (2018): 1, Accessed October 28, 2019, https://crsreports.congress.gov/product/pdf/IF/IF10051.

Initially, two national injunctions and an injunction in the state of California kept the final Title X rule from being implemented; however, on June 20, 2019, the 9th Circuit Court of Appeals granted a request from HHS to remove the injunctions while a multitude of lawsuits make their way through the court system. On July 20, HHS gave Title X grantees until August 19, 2019 to submit a written assurance of their plan to come into compliance, demonstrating that they were "acting in good faith" with the new rule.[72] As a result of the new rules, as of October 2019, 18 grantees have dropped out of the Title X program, as well as all Planned Parenthood sites (see Figure 15). Grantees that voluntarily left the Title X program resigned their funds which were then dispersed in six-month supplemental awards to several grantees who remained in the program (see Figure 16).[73] Several states that have opted out of Title X funding have adjusted their state funding to cover some or all of the relinquished funds. Massachusetts passed H. 3638, *An Act making appropriations for the fiscal year 2019 to provide for supplementing certain existing appropriations and for certain other activities and projects (Title X)*, in April 2019 to provide funding for qualified entities.[74] Vermont is using reserved funds to cover lost federal funding,[75] and Maryland has also passed a bill to fund its Family Planning Program with state funds.[76] However, as of October 2019, not all states who terminated their Title X awards

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[72] "Compliance with Statutory Program Integrity Requirements: Final rule," *Federal Register* 84, no. 42 (March 4, 2019): 7781. https://bit.ly/2MJkInC.

[73] U.S. Department of Health and Human Services, "HHS Issues Supplemental Grant Awards to Title X Recipients," September 30, 2019, Accessed November 4, 2019, https://www.hhs.gov/about/news/2019/09/30/hhs-issues-supplemental-grant-awards-to-title-x-recipients.html.

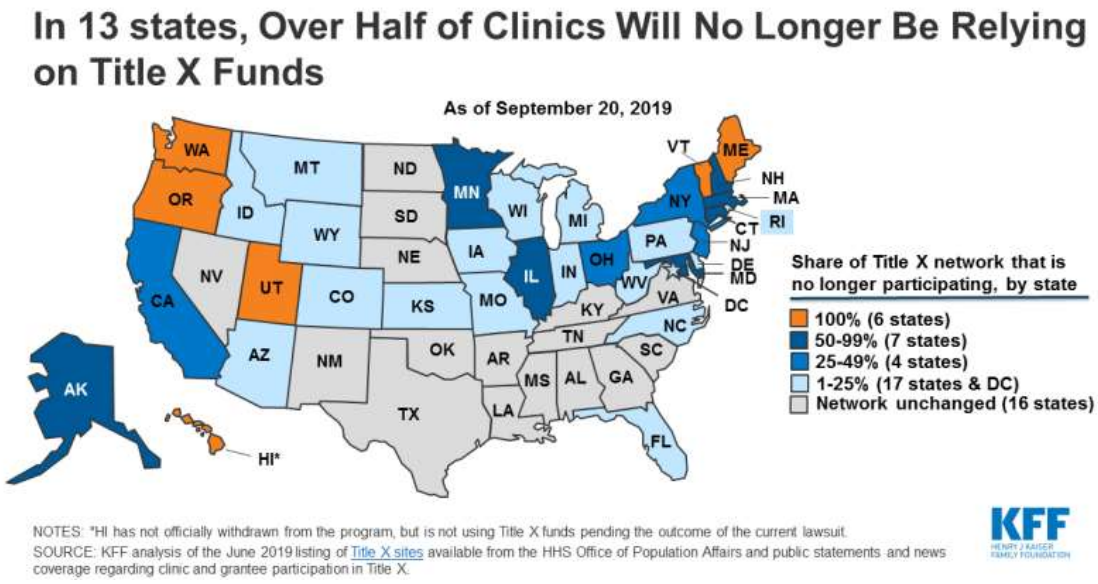
[74] Commonwealth of Massachusetts, "Photo Release, Governor Baker Signs Bill to Restore Funding for Title X Services," April 1, 2019, https://www.mass.gov/news/photo-release-governor-baker-signs-bill-to-restore-funding-for-title-x-services.

[75] Jane Lindholm and Ric Cengeri, "Vermont's Response to New Federal Limits on Family Planning Funding," August 27, 2019, Vermont Public Radio, https://www.vpr.org/post/vermonts-response-new-federal-limits-family-planning-funding#stream/0

[76] Associated Press, "Maryland passes countermeasure to Trump family-planning rule," *WTOP*, April 3,2019, https://wtop.com/maryland/2019/04/maryland-lawmakers-ok-response-to-trump-family-planning-rule/.

have opted to use state funds to cover the loss of their Title X grants, including Utah which relies solely on Planned Parenthood clinics to provide Title X services. As such, Planned Parenthood has continued to subsidize its clinics in Utah, but does not expect this to be a permanent solution.[77]

Figure 15. Share of Title X Network



[77] Jacob Fischler, "As abortion 'gag-rule' lands in court, states seek funding fix," *Roll Call*, September 23 ,2019, https://www.rollcall.com/news/congress/abortion-gag-rule-lands-court-states-seek-funding-fix.

Figure 16. FY 2019 Title X Family Planning Services Funding by State

State	Initial Funding	Final Funding
Alabama	$5,300,000	$7,200,000
Alaska	$1,600,000	$1,083,121
Arizona	$5,200,000	$6,600,000
Arkansas	$3,900,000	$5,225,000
California	$22,700,000	$22,600,000
Colorado	$3,800,000	$4,378,200
Connecticut	$2,400,000	$1,141,019
Delaware	$1,100,000	$2,033,700
District of Columbia	$1,300,000	$1,480,000
Florida	$11,800,000	$12,607,700
Georgia	$8,300,000	$9,036,500
Hawaii	$2,000,000	$2,000,000
Idaho	$1,800,000	$1,808,302
Illinois	$8,000,000	$3,671,022
Indiana	$5,000,000	$5,231,800
Iowa	$3,800,000	$3,905,300
Kansas	$2,500,000	$2,613,800
Kentucky	$5,000,000	$5,950,000
Louisiana	$4,500,000	$4,500,000
Maine	$1,800,000	$675,000
Maryland	$4,000,000	$3,232,309
Massachusetts	$5,800,000	$3,643,624
Michigan	$7,600,000	$7,600,000
Minnesota	$3,300,000	$2,335,124
Mississippi	$4,300,000	$4,625,000
Missouri	$5,000,000	$5,000,000
Montana	$1,900,000	$2,530,700
Nebraska	$2,000,000	$2,887,300
Nevada	$3,400,000	$5,090,700
New Hampshire	$1,400,000	$971,739
New Jersey	$8,300,000	$8,300,000
New Mexico	$3,000,000	$4,900,000
New York	$14,300,000	$5,839,510
North Carolina	$7,250,000	$7,250,000
North Dakota	$1,000,000	$1,472,800
Ohio	$8,300,000	$7,633,336
Oklahoma	$4,300,000	$6,268,200
Oregon	$3,100,000	$1,026,368
Pennsylvania	$12,700,000	$15,298,900
Rhode Island	$1,100,000	$1,373,000
South Carolina	$5,500,000	$6,725,000
South Dakota	$1,000,000	$1,366,500
Tennessee	$6,600,000	$8,125,000
Texas	$14,900,000	$17,240,000
Utah	$2,000,000	$591,996
Vermont	$800,000	$205,522
Virginia	$4,500,000	$4,500,000
Washington	$4,100,000	$2,328,496
West Virginia	$2,300,000	$2,421,500
Wisconsin	$3,800,000	$5,620,000
Wyoming	$900,000	$1,028,400

Source: U.S. Department of Health and Human Services

Sexual Health-Related Education Grants

The primary federal funding streams for school-based sexual health-related education flow through the CDC's Division of Adolescent and School Health (DASH) and HHS' Personal Responsibility Education Program (PREP), Title V Sexual Risk Avoidance Education (Title V SRAE) Program, the Sexual Risk Avoidance Education (SRAE) Program, and the Teen Pregnancy Prevention Program (TPP). Figure 17 provides FY 2019 funding for each state by program. In addition to the basic program information provided below, these programs will be covered in Section 3, STD Program Challenges.

DASH Cooperative Agreements to Promote Adolescent Health through School-Based HIV/STD Prevention and School-Based Surveillance

CDC's DASH partners with the nation's schools to promote an environment where youth can learn how to stay healthy and establish healthy behaviors.[78] DASH does not directly fund actual program delivery; instead it provides funding at the local level to help district schools achieve program goals, with five-year cooperative agreements that fund school-based surveillance systems. The FY 2020 House appropriations bill included an increase of $16,919,000 for DASH to bolster school capacity for sexual health education, as well as access to sexual health services and safe and supportive environments. As noted earlier, in the discussion on the STD budget, the Senate bill does not include corresponding increases and all agencies are operating under a CR through November 21, 2019.

There are three main components within this cooperative agreement program, and funding is disbursed annually: [79]

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[78] Centers for Disease Control and Prevention, "DASH Snapshot: How CDC Prepares Healthy Youth for Successful Futures," Atlanta: Department of Health and Human Services, 2018. Accessed September 2, 2019, https://bit.ly/2BGzipu.

[79] Centers for Disease Control and Prevention, "Frequently Asked Questions: Promoting Adolescent Health Through School-Based HIV Prevention (CDC-RFA-PS18-1807)," Accessed September 2, 2019. https://bit.ly/2WeZIrJ.

Component 1: School-Based Surveillance, available for the administration, dissemination, and use of the Youth Risk Behavior Survey (YRBS) and School Health Risk Profiles. The YRBS has collected national, state, and city survey data from approximately four million high school students since 1991. School Health Risk Profiles surveys collect data about health policies and practices in our nation's schools. Eligible entities for Component 1 awards include state, local, and territorial education agencies.

Component 2: School-Based HIV/STD Prevention, used to help schools provide exemplary sexual health education, increase access to key sexual health services, and establish safe and supportive environments for students and staff.[80] Eligible entities for Component 2 awards include local education agencies (LEA) only. These LEAs are required to select a minimum of 10 "priority" schools where youth are at high risk for HIV and STD infection, and LEAs must do a thorough program evaluation.[81] DASH programs start with a small number of schools within an LEA and expand to district-wide by the end of the five-year funding period.

Component 3: Technical Assistance and Capacity Building, awarded to national non-governmental organizations (NGOs) to provide intensive technical assistance and capacity building support to local and state education agencies. These NGOs help education agencies strengthen the effectiveness of their instructional materials, delivery, health service initiatives to reduce HIV and STD infection, and initiatives to create and maintain supportive environments in schools. The NGOs are also charged with assessing policies and practices in state education agencies. As of 2018, there were six recipients, including NCSD.[82]

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[80] Sexuality Information and Education Council of the United States, "State Profiles Fiscal Year 2018: Federal Funding Overview," 2019. Accessed September 2, 2019. https://bit.ly/31HDQq4.

[81] Centers for Disease Control and Prevention. "About the Division of Adolescent and School Health," March 29, 2019, Accessed September 2, 2019. https://bit.ly/2pRI41m.

[82] Centers for Disease Control and Prevention, "Funded Non-Governmental Organizations: Cooperative Agreements to Improve the Health and Educational Outcomes of Young People," 2018. Accessed September 2, 2019. https://bit.ly/31JZIRR.

Personal Responsibility Education Program (PREP)

The Personal Responsibility Education Program (PREP) educates adolescents on both abstinence and the use of contraception to prevent pregnancy and STDs. Established by the ACA as a mandatory program, the PREP program awards grants to state health departments, community groups, and tribal organizations to replicate evidence-based programs that have been proven to influence teenager's behaviors.

Recipients of PREP funds must fulfill several requirements, including: (1) providing youth with information on at least three of six specified adulthood preparation subjects (healthy relationships, adolescent development, financial literacy, parent-child communication, education and career success, and healthy life skills); (2) providing "medically-accurate and complete" instruction; (3) educating sexually active youth on responsible behavior with respect to abstinence and contraception use; and (4) providing age-appropriate information and culturally-competent activities.[83] On February 9, 2018, Congress signed the *Bipartisan Budget Act of 2018*, which extended funding for PREP through the end of FY 2019. As of October 1, 2019, agencies are operating under a CR through November 21, 2019. If Congress takes no action in the FY 2020 appropriation, PREP will effectively end.[84] This will, in turn, curtail access to sexual health education for a vulnerable population of youth.

Title V Sexual Risk Avoidance Education (Title V SRAE) Program

The Title V Sexual Risk Avoidance Education (Title V SRAE) program focuses solely on encouraging participants to practice abstinence and voluntarily refrain from sex before marriage. Grantees may set aside portions of their funding to conduct rigorous research on sexual risk avoidance (i.e., "abstinence-only") in teenagers.

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[83] U.S. Library of Congress, Congressional Research Service, *Teen Pregnancy: Federal Prevention Programs*, by Adrienne L. Fernandes-Alcantara, R45183 (2018): 9. https://crsreports.congress.gov/product/pdf/R/R45183.

[84] U.S. Library of Congress, Congressional Research Service, *Bipartisan Budget Act of 2018 (P.L. 115-123): CHIP, Public Health, Home Visiting, and Medicaid Provisions in Division E*. by Alison Mitchell, Elayne J. Heisler, Evelyne P. Baumrucker, Cliff Binder, Adrienne L. Fernandes-Alcantara, and Susannah V. Gopalan, et. al., R45136 (2018), Accessed September 28, 2019, http://bit.ly/2pKWC2K.

States are eligible to request mandatory Title V SRAE funds if they also submit an application for Title V Maternal and Child Health Block Grant funds for the same fiscal years. Title V SRAE funds are based on the proportion of low-income children in each state or territory. In FY 2017 and FY 2018, for every $1 of federal funding for the Title V SRAE program, states had to provide $0.75 in funding or an in-kind match.

States are required to measure the success of their programs through at least two outcome measures, one of which must be abstinence, as a means for preventing teen pregnancy, births, and/or STDs.[85] Additionally, each grantee is able to utilize up to 20 percent of its appropriation to conduct research to build the evidence base for sexual risk avoidance programs.

Title V Sexual Risk Avoidance Education Program – Competitive Grants

Title V SRAE competitive grants are available for organizations in states that did not apply for the Title V SRAE program grants.[86] City or local governments, local school districts, public higher education institutions, public housing authorities, tribal organizations, and nonprofit organizations, including faith-based and community organizations, may apply for funding. The program prohibits organizations from demonstrating how to use condoms and other forms contraception and from distributing contraception to students. While demonstration and distribution of contraceptives is prohibited, educators may provide information on contraception while stressing its use as a risk reduction strategy only and not a risk avoidance strategy. The grants are designed "to competitively fund projects to implement prevention education with messages to youth that normalize the optimal health behavior of avoiding non-marital sexual activity, with a focus on the future health, psychological well-being, and economic success of youth."[87] The target population of the Title V Competitive SRAE Program is youth between 10 and 19 years old, especially in vulnerable populations. Those populations include

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[85] U.S. Library of Congress, Congressional Research Service, *Teen Pregnancy: Federal Prevention Programs*, by Adrienne L. Fernandes-Alcantara, R45183 (2018): 15.

[86] Family & Youth Services Bureau, "Title V Competitive Sexual Risk Avoidance Education: Fact Sheet," February 27, 2019, Accessed October 28, 2019, http://bit.ly/2qzNxdg.

[87] Ibid.

youth in areas with high teen pregnancy and STDs, youth of color, youth in the foster care system, victims of human trafficking, homeless youth, runaway youth, and other vulnerable groups. A component of the funding opportunity requires projects to create linkages to local organizations in the participants' communities that share an interest in supporting the wellbeing of youth.

Sexual Risk Avoidance Education (SRAE) Program

The SRAE Program funds sexual health education projects that encourage voluntary refraining from non-marital sexual activity and address other topics such as healthy relationships, underage drinking and illicit drug use, and goal setting. SRAE project curriculum must take a positive youth development approach. For FY 2019 funding, the SRAE Program added a new objective to ensure that the program is inclusive and non-stigmatizing for all program participants. Grantees of the SRAE program, distinct from the Title V Sexual Risk Avoidance Education program, must use the funding solely for abstinence-only, 36-month-long programs, and are encouraged to implement evidence-based approaches that teach the benefits associated with resisting risky behavior, including avoiding the contraction of STDs. In addition, grantees must link program participants with community agencies that could "support the health, safety, and well-being of the participants."

Multiple types of entities are eligible for SRAE funding including states, territories, and localities (county, city, township, special districts); school districts; public and state-controlled institutions of higher education; federally recognized tribal governments; Native American tribal organizations; public and Indian housing authorities; nonprofit organizations other than institutions of higher education; private institutions of higher education; small business; and for-profit organizations other than small businesses.[88] The target population of SRAE is the same as the Title V Competitive SRAE Program.

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[88] U.S. Library of Congress, Congressional Research Service, *Teen Pregnancy: Federal Prevention Programs*, by Adrienne L. Fernandes-Alcantara, R45183 (2018): 17.

Teen Pregnancy Prevention Program (TPP)

The Teen Pregnancy Prevention Program (TPP), established in 2010 through the ACA, provides five-year grant funding to public and private entities for evidence-based or innovative programs to reduce the rates of teen pregnancy in their communities. Examples of eligible entities include nonprofits, for-profit organizations, universities and colleges, faith and community-based organizations, hospitals, research institutions, and the like. Eligibility requirements are set through various funding announcements and other HHS publications. Grantees must provide "age appropriate" and "medically accurate" information to their teenage clients. HHS must approve the materials used by grantees.[89] Within the past two years, federal efforts have been underway to end the program by withholding funding already awarded. However, legal challenges to this action resulted in a retraction of the efforts to cancel the program. Instead, funding was reduced.[90]

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[89] Ibid, 6.

[90] Santhanam, Laura, "Why the federal Teen Pregnancy Prevention Program's fate is uncertain," *PBS NewsHour*, March 22, 2018, https://to.pbs.org/2BBSvbM.

Figure 17. FY 2019 Sexual Health-related Education Funding by State.

State	Teen Pregnancy Prevention Program (TPP)	DASH	Title V Sexual Risk Avoidance Education (Title V SRAE) Program	Sexual Risk Avoidance Education (SRAE) Program	Personal Responsibility Education Program (PREP)	Title V Sexual Risk Avoidance Education Program (Competitive)
Alabama	$ -	$100,037	$1,209,897	$ -	$773,399	$ -
Alaska	$ -	$100,000	$ -	$ -	$787,054	$ -
Arizona	$3,315,029	$94,329	$1,516,713	$445,773	$1,150,617	$ -
Arkansas	$ -	$99,827	$713,980	$445,773	$490,086	$ -
California	$8,119,728	$2,044,499	$ -	$445,773	$9,334,640	$1,150,000
Colorado	$ -	$70,000	$680,277	$445,772	$887,226	$ -
Connecticut	$999,999	$100,000	$ -	$ -	$573,477	$ -
Delaware	$ -	$99,907	$ -	$ -	$250,000	$154,835
District of Columbia	$1,365,913	$1,947,500	$ -	$ -	$855,617	$118,700
Florida	$2,971,492	$2,250,673	$3,834,831	$1,337,318	$2,976,762	
Georgia	$4,166,908	$99,477	$2,369,325	$849,452	$2,553,812	$ -
Hawaii	$493,000	$99,999	$ -	$ -	$250,000	$ -
Idaho	$ -	$100,000	$306,479	$ -	$308,088	$ -
Illinois	$3,285,268	$759,935	$2,219,146	$ -	$2,049,419	$ -
Indiana	$1,735,999	$98,776	$1,288,913	$445,129	$998,819	$ -
Iowa	$988,908	$100,000	$401,978	$445,773	$519,632	$ -
Kansas	$ -	$97,241	$ -	$ -	$ -	$225,100
Kentucky	$493,000	$100,000	$1,017,410	$ -	$705,030	$ -
Louisiana	$2,731,963	$99,741	$1,399,018	$ -	$1,606,974	$ -
Maine	$ -	$100,000	$ -	$ -	$250,000	$ -

State	Teen Pregnancy Prevention Program (TPP)	DASH	Title V Sexual Risk Avoidance Education (Title V SRAE) Program	Sexual Risk Avoidance Education (SRAE) Program	Personal Responsibility Education Program (PREP)	Title V Sexual Risk Avoidance Education Program (Competitive)
Maryland	$3,717,072	$99,978	$729,768	$ -	$938,985	$ -
Massachusetts	$ -	$510,000	$832,848	$ -	$1,042,236	$ -
Michigan	$768,000	$820,000	$1,914,492	$ -	$2,826,027	$ -
Minnesota	$1,499,999	$30,109	$684,308	$ -	$892,845	$ -
Mississippi	$4,002,772	$94,965	$865,122	$855,884	$507,450	$ -
Missouri	$1,182,497	$96,408	$1,150,391	$879,054	$1,634,245	$ 263,325
Montana	$153,085	$100,000	$149,969	$ -	$250,000	$ -
Nebraska	$ -	$95,860	$299,377	$ -	$324,411	$ -
Nevada	$1,172,055	$100,000	$568,320	$ -	$460,628	$ -
New Hampshire	$ -	$100,000	$ -	$ -	$250,000	$ -
New Jersey	$959,500	$446,000	$1,242,636	$891,546	$1,396,326	$ -
New Mexico	$1,728,295	$459,265	$595,651	$ -	$1,217,534	$ -
New York	$7,978,946	$549,130	$3,665,915	$ -	$2,913,835	$ -
North Carolina	$3,294,680	$422,713	$2,197,684	$868,294	$1,646,142	$ -
North Dakota	$ -	$100,000	$ -	$ -	$250,000	$81,084
Ohio	$1,183,658	$490,290	$2,342,574	$891,546	$2,664,683	$ -
Oklahoma	$4,109,063	$112,000	$925,065	$332,879	$655,696	$ -
Oregon	$1,574,999	$390,143	$644,256	$781,374	$925,152	$ -
Pennsylvania	$2,650,229	$459,969	$2,028,769	$ -	$,937,593	$ -
Rhode Island	$ -	$100,000	$ -	$ -	$250,000	$ -
South	$4,260,132	$ 458,985	$1,118,359	$ -	$784,156	$ -

State	Teen Pregnancy Prevention Program (TPP)	DASH	Title V Sexual Risk Avoidance Education (Title V SRAE) Program	Sexual Risk Avoidance Education (SRAE) Program	Personal Responsibility Education Program (PREP)	Title V Sexual Risk Avoidance Education Program (Competitive)
Carolina						
South Dakota	$749,999	$70,000	$157,204	$ -	$849,760	$ -
Tennessee	$2,690,000	$810,000	$1,436,756	$342,889	$1,048,555	$ -
Texas	$9,279,283	$851,543	$6,959,247	$1,733,562	$4,209,900	$ -
Utah	$ -	$96,456	$446,535	$ -	$621,790	$ -
Vermont	$ -	$100,000	$ -	$ -	$250,000	$ -
Virginia	$300,000	$100,000	$1,178,197	$ -	$2,267,753	$ -
Washington	$5,713,659	$389,977	$ -	$ -	$1,107,164	$332,004
West Virginia	$1,984,337	$85,000	$427,940	$445,772	$262,411	$ -
Wisconsin	$1,198,969	$100,000	$829,918	$ -	$1,277,557	$ -
Wyoming	$ -	$ -	$ -	$ -	$250,000	$72,484
TOTAL	$92,818,436	$17,00,695	$49,139,371	$12,883,563	$61,673,033	$2,397,532

Source: U.S. Department of Health and Human Services

Substance Abuse and Mental Health Services Administration (SAMHSA)

The Substance Abuse and Mental Health Services Administration (SAMHSA) provides federal funding to support substance abuse and mental health prevention and treatment services in local communities through both formula and competitive grants. Many interviewees discussed the impact of substance abuse on rising STD rates. Section 3 takes a deeper look at the interplay between substance abuse, including the opioid epidemic, and the rise in STDs.

The SAMHSA grant programs that focus on STDs are part of an initiative that supports individuals with substance abuse or mental health disorders who are either HIV-positive or at risk for HIV. These funds are specific to prevention and may not be used for pharmaceutical treatment. The two major SAMHSA programs for HIV prevention and treatment are its Targeted Capacity Expansion-HIV (TCE-HIV) Program and its Prevention Navigator Program.[91] While HHS guidance prohibits funds from being used for treatment of HIV/AIDS and STDs, an allowable use of the funds is developing HIV prevention strategies for those with substance abuse issues. As HIV prevention strategies are also effective in preventing STDs, the funds provide additional support to health centers where HIV and STD services are integrated.

In FY 2018, SAMHSA grant funding related to STD-HIV activities was $2,583,018. Of the case study and snapshot jurisdictions interviewed for this study, only North Carolina referenced a SAMHSA grant.

Targeted Capacity Expansion-HIV (TCE-HIV) Program:

Grantees of the TCE-HIV and the Prevention Navigator Program are expected to use the funds for activities related to outreach, screening, prevention, and treatment. The funding can be used to prevent HIV and to treat comorbid behavioral health disorders and HIV.

Prevention Navigator Program:

The Prevention Navigator Program allows community health workers, neighborhood navigators, and peer support specialists to help people at high risk for HIV and substance use disorder obtain prevention and support services. These funds can be used to enhance outreach to high-

[91] Substance Abuse and Mental Health Services Administration, 2017, "SAMHSA awards $166 million for HIV prevention and treatment," http://bit.ly/362W0Gb.

risk populations and then expedite assisting them in receiving HIV medical care to reduce their risk of transmission. The purpose of these grants is to develop appropriate HIV prevention strategies that can effectively reach those with substance abuse issues and their sexual partners. Grantees are expected to coordinate with other public stakeholders including state governmental agencies and publicly funded STD programs including CDC, Ryan White Planning Councils and others.[92]

State and Local Funding

With the exception of certain cities and counties funded directly by CDC,[93] localities typically receive STD program dollars from the states as a pass-through from federal cooperative agreements and grants. Some states also provide limited funding for specific initiatives, financed through tax revenues or fees. In others, including Utah and Missouri, no additional funds are provided by the state.

As noted in Phase I, a number of surveys have been conducted, or are planned, to gain a better understanding of state and local funding for STD activities. NCSD's 2018 survey of state and local STD directors found that state and local health departments may not be able to readily identify their source of funding.[94] Since that report, no additional survey results have been publicly released that provide more information regarding state and local funding. The National Association of County and City Health Officials (NACCHO) completed a CDC-funded survey of state and local public health entities from April to May of 2018, which reportedly yielded a 49 percent response rate. CDC hopes to release several analyses of the data collected early in FY 2020. NCSD is also in the midst of conducting a Clinic+ Initiative survey of public and private clinics that seeks to assess the location, infrastructure, billing practices, and range of services the clinics provide, with the goal of building capacity for STD clinics and providing technical

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[92] Substance Abuse and Mental Health Services Administration, *HIV Capacity Building Initiative (HIV CBI)*, (2015), http://bit.ly/2N7pjyR.

[93] New York City, Los Angeles County, Chicago, Washington, D.C., Philadelphia, San Francisco, and Baltimore

[94] NCSD, *Reduced U.S. Funding would Force Cutbacks to Core Public Health Services: A Survey of State and Local STD Directors*, (2018).

support.[95] And, in an attempt to elucidate the complex funding structure of state level STD activities, the Association of State and Territorial Health Officials (ASTHO) is developing a survey, that will be funded by CDC in FY 2020, to track funding streams.[96]

While the majority of state budgets are readily available online, not all state budgets provide detailed spending breakdowns making it difficult to identify how states use funds to support STD prevention and treatment. For example, North Carolina's state budget provides a detailed breakdown of its HIV/STD prevention activities, but even within the line-item breakdown, it is difficult to discern the specific funding streams directly related to STD activities.[97] Comparatively, Utah's state budget does not have a line-item breakdown for STD activities.[98] In many public state budgets, there is no clear indication about where state dollars—as federal pass-through monies or state appropriated funds—are dispersed to local jurisdictions.

Although there are no clear public documents identifying how funding is distributed within states, interviewees indicated that funding may be distributed based on population or need. For example, in Missouri, almost all funding for mainline STD programs is provided through the PCHD grant, with the majority of funding going to St. Louis and Kansas City. Localities may supplement funding to various degrees through local tax revenues—this is generally dependent on the local climate or willingness to address STDs—and some are able to secure grants directly from other federal agencies or other sources including foundations. In Mecklenburg County, North Carolina, county dollars and private grants supplement state funding. However, local tax dollars rarely close the funding gap for STD programs, and in some cases, tax rates have remained stagnant. In one striking example, a local health department has been funded by the county using a tax rate set in 1981.

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[95] NCSD, "'Reimagining STD Clinics for the Future' Launched in Response to Growing Burden of STDS, Now at an All-Time High," April 6, 2018, Accessed October 28, 2019 http://bit.ly/3630oo1.

[96] Because of the various surveys underway, involving the same participants and asking the same or similar questions, administering a survey was not included in the scope of this study.

[97] State of North Carolina, *Recommended Base Budget and Fund Purpose Statements 2019-21: Health and Human Services*, February 2019, Accessed October 28, 2019, http://bit.ly/2JjaeJ8.

[98] Office of the Legislative Fiscal Analyst, *Budget of the State of Utah and Related Appropriations, 2019-2020*, May 2019, Accessed October 28, 2019, http://bit.ly/2NcNnAn.

Demonstrating the varied capacity of local jurisdictions, some cities, like Boston, offer funding opportunities to community-based organizations to carry out intervention programs designed to increase access to sexual health information for specific populations. The Education and Outreach Office funds eight community-based organizations that engage populations at high risk for STD infections or re-infections, including young people of color and women engaged in commercial sex.

Seeking Grants Opportunities

At the state and local levels, the ability to seek out additional grants is highly dependent on the availability and capacity of staff to apply for grants, as well as the eligibility requirements for the particular grants. While representatives of some states and localities interviewed noted that they had sufficient grant writing capacity, many reported the lack of grant writing specialists or time to complete grant applications. Some localities opted not to apply for grants given the time and resources spent on the application process and reporting requirements relative to the dollar value of each grant—the administrative costs outweighed the potential benefits. For some states and localities willing to apply for grant funding, they faced the additional challenge of meeting grant eligibility requirements, such as required a minimum population to qualify.

Stagnant Funding

States and localities have experienced stagnant funding or declining funds, affecting service and staffing levels. Interviewees consistently note that current funding is inadequate to address rising STD rates and lament the fact that funding is transient, making it difficult to plan. They note the need for more staffing resources, particularly in the areas of disease intervention specialists (DIS) and informatics staff to analyze surveillance data and assess trends. These will be discussed in greater detail in Section 3.

Changes in federal funding formulas and program guidance in how grant money can be spent affect states and localities deeply as they primarily depend on federal funding to carry out their programs. Some have experienced reductions in federal funding as a result of the redefinition of funding formulas. While CDC has attempted to make its primary STD prevention and treatment funding more equitable by incorporating the numbers of cases and prevalence rates into the PCHD grant funding formula—and established a floor amount (currently $300,000), as well as a cap (currently 5 percent) on any reduction in funding from the prior award year—states that see sharp increases in STD rates throughout the life of the 5-year grant may be at a

disadvantage. The number of STD cases and prevalence rates used in the formula are derived from 2012-2016 morbidity data. As the data will be used throughout the 5-year PCHD cooperative agreement—2019 through 2023—some states and localities can be at a disadvantage from the starting gate, given the delta between the data period and the commencement date of the grant award. The impact becomes even greater for those states and localities that experience significant yearly increases in their STD rates. While the time period will not be adjusted during the life of the PCHD cooperative agreement, the formula may change in terms of the percentages used for cases or rates in the calculation. The FY 2020 PCHD formula does just that by redefining the breakout of disease burden among cases and rates by age groups, as noted earlier in this section.

Virtually all interviewees raised concerns about the 10 percent cap in the PCHD cooperative agreement on what can be spent on related clinical services such as screening. In the prior AAPPS cooperative agreement, a floor of 13.5 percent was in place for related clinical services. As a result, state and local programs varied considerably in terms of the amount of award monies they spent on clinical services. With the new 10 percent cap, some jurisdictions will require significant changes in how they fund their STD services. A number of interviewees noted that the change will impact the extent to which they can provide services. According to CDC, there are no current plans to change this component of the formula.

Ultimately, the federal STD dollars available for distribution to states and localities are dependent on annual appropriations funding, which, in turn, can be potentially further affected by an appropriations rescission during the course of a fiscal year. The bottom line is that federal funding can be a moving target and when considered in conjunction with the lack or limited state and local funding available, it becomes apparent why planning and delivering on services at the state and local level is so challenging. States and localities need increased funding to address STDs in their jurisdictions—but importantly, they also need a reliable, stable source of revenue for program planning and the delivery of STD-related services.

Estimating Funding Needs

The challenges associated with assessing costs and estimating funding needs were addressed in Phase I and are not covered in this report other than by reference. As noted in the Phase I report, CDC provides states and localities with two tools to help estimate the impacts of budget changes on state budgets:

- The STD Prevention Allocation Consequences Estimator (SPACE Monkey), a spreadsheet that allows "STD prevention personnel make evidence-based calculations that show how budget changes impact disease burden, direct medical costs, and partner services;"[99] and
- The Sexually Transmitted Infection Costs Saved Version 1.1 (beta test version) (STIC FIGURE) which helps estimate direct and indirect costs saved by STD prevention programs

Both tools serve as useful instruments for states and localities.

The Association of State and Territorial Health Officials (ASTHO) and NCSD have developed a customizable factsheet for jurisdictions to communicate the results of SPACE Monkey data analysis to stakeholders and have hosted webinars on the how to use the tool. Some interviewees noted that they had used, or planned to use, SPACE Monkey to develop estimates. One noted that by using the tool, they found that to reduce disease incidence by 50 percent would require a sevenfold increase in funding, highlighting the disparity between current funding and STD rates for the jurisdiction.

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[99] Centers for Disease Control and Prevention, "SPACE Monkey 1.0," Accessed October 28, 2019, https://www.cdc.gov/std/program/spacemonkey/default.htm.
Note: The intended use of SPACE Monkey is for evidence-based projections specifically related to chlamydia, gonorrhea, syphilis, and STD-related HIV. CDC has not validated use beyond those STDs.

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Section 3: STD Program Challenges

Overview of Challenges Facing the STD Field

The fragmented nature of the U.S. health care system with its many moving parts presents formidable challenges to stemming rising sexually transmitted disease (STD) rates. Time and time again in interviews, state and local officials affirmed the barriers and challenges highlighted in Phase I. These include the often inverse relationship between prevalence rates, which continue to rise, and funding—federal, state, and local—which is inadequate to provide the level of services needed; fragmentation of funding across programs, in general; the changing clinic and insurance landscape and access to care; challenges related to surveillance data, the sharing of data across systems, and technology; and the overriding issue of stigma and lack of adequate sexual health education at all levels on STDs.

Rising Prevalence Rates

Through the turn of the millennium, STD rates and cases were generally declining in the United States.[100] This trend took a sharp turn around the year 2000, with disease rates steadily increasing nationwide, and more recently, setting record levels of prevalence. From 2013 to 2018 alone, diagnoses rose at a significant pace:

- **Gonorrhea:** ↑ 75 percent, from 333,004 cases in 2013 to 583,405 cases in 2018—the highest case count since 1991 (621,918).
- **Primary and Secondary Syphilis:** ↑ 101 percent, from 17,375 in 2013 to 35,063 cases in 2018—the highest case count since 1992 (34,009).
- **Chlamydia:** ↑ 25 percent, from 1,401,906 cases in 2013 to 1,758,668 cases in 2018—the highest recorded level of chlamydia incidence in U.S. history.

While the epidemic touches all corners of the nation, certain populations bear far more of the STD burden than others. People of color, men who have sex with men (MSM), young people

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[100] Centers for Disease Control and Prevention, *2017 Sexually Transmitted Diseases Surveillance*, 2018, accessed October 18, 2019, https://www.cdc.gov/std/stats17/default.htm.

ages 15–24, racial and ethnic minorities, and women, comprise the bulk of disease burden. Across these categories, rates have been increasing at a pace that far surpasses others. The Center for Disease Control and Prevention's (CDC's) *Sexually Transmitted Disease Surveillance Report 2018* posits that as many as half of all new STD cases are found in the 15–24 year old age group, and that as many as 25 percent of active adolescent females have contracted an STD.[101] The rates for chlamydia among black women are five times higher than for white women, and among black men, 6.6 times higher than white men.[102] Among MSM, syphilis runs rampant. Although comprising only 4 percent of the U.S. male population, MSM account for 58 percent of primary and secondary syphilis cases reported in 2017.[103]

The factors contributing to the disparity between these groups and others vary and are often interrelated, but they are also closely linked to social determinants of health. Social determinants of health, as discussed later in this section, contribute heavily to STD contraction. As STDs are inherently social illnesses, their transmission can be amplified (or reduced) by the social, economic, and political environment in which they exist. Higher rates of STD prevalence among minorities, for example, are associated with the social inequities, such as poverty, that often affect those communities.[104]

Social inequities and their associated determinants of health mean that, not only are those individuals comprising the population more likely to contract disease, but they are also less likely to get timely and appropriate care to resolve the disease. These factors, combined with programmatic and resource constraints, conspire to create an environment in which STDs can thrive without significant resistance.

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[101] Centers for Disease Control and Prevention, *2018 Sexually Transmitted Diseases Surveillance*, 2019, accessed October 18, 2019, https://www.cdc.gov/std/stats18/default.htm.

[102] Centers for Disease Control and Prevention, *2017 Sexually Transmitted Diseases Surveillance*, 2018, accessed October 18, 2019, https://www.cdc.gov/std/stats17/default.htm.

[103] Centers for Disease Control and Prevention, "Syphilis & MSM (Men Who Have Sex with Men) – CDC Fact Sheet," January 2017, Accessed October 28, 2019, http://bit.ly/2pM9ANA.

[104] Centers for Disease Control, "STDs in Racial and Ethnic Minorities," July 2018, Accessed October 28, 2019, http://bit.ly/361sCAf.

Congenital Syphilis

Especially troubling are the current trends in congenital syphilis, which was reduced to a record low of 334 cases (8.4 per 100,000) in 2012, but began resurging in 2013. In 2018, a staggering 1,306 cases (33.1 per 100,000) were diagnosed—the highest number since 1995,[105] eclipsing the 2017 total of 951 cases. Indeed, syphilis as a whole is experiencing a return to previous highs, with overall case counts across all stages of infection at 115,045 in 2018—a 13 percent increase over 2017's count, and the highest number of diagnoses since 1991.

As a consequence of syphilis infection during pregnancy, congenital syphilis adversely effects both mother and child. Cases can result in miscarriage, newborn death, and permanent disability. Of the 1306 cases nationally in 2018, 94 resulted in deaths—a 22 percent increase from the 77 deaths in 2017. This increase in deaths and the associated rise in cases are a direct consequence of the surge in general syphilis prevalence. While a variety of screening and therapeutic measures aimed at pregnant women and at-risk women of child bearing age can significantly reduce congenital syphilis, elimination is unlikely while syphilis prevalence at large remains significant and growing.

Notable Practice: Congenital Syphilis Review Boards (Louisiana)

Louisiana had the highest congenital syphilis rates in the United States, from 2012 through 2017 with a peak case rate of 84 per 100,000 in 2015 (six times higher than the national rate at the time). To redress the situation, the state Department of Health STD/HIV Program established Congenital Syphilis Review Boards in 2016 based off the already extant HIV Review Boards. Utilizing an AAPPS Congenital Syphilis Supplemental award issued as part of the FY 2016 funding cycle, these boards were convened with the intent of assessing where failures in the system occurred that led to a congenital case being undetected before birth.

In the wake of the initial case reviews, Louisiana implemented several reforms aimed at addressing the failures identified, and as of 2018, is no longer ranked as having the highest number of congenital syphilis cases in the nation.

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[105] CDC, *2017 Sexually Transmitted Diseases Surveillance*, accessed October 18, 2019, http://bit.ly/34z1jvD.

Reasons for the rise in STDs

The causes for the stark increase in STD cases and rates are myriad and were explored in our Phase I report. In Phase II, further study revealed a complex tapestry of drivers of infection, with contributing factors found across the social, political, economic, and physical landscape of the nation. Biologically, in terms of transmission, the diseases in question have changed little; the environment in which they exist, however, has become host to a perfect storm of conditions that enable STDs to spread and, for those infected, make timely treatment less likely.

These disparities are deeply interconnected and layered. Among MSM, 36.5 percent of primary and secondary syphilis cases were among white patients, with 28 percent among black and 24 percent among Hispanic patients.[106] Relative to the white population of the U.S., which represents 61.2 percent of the population as a whole, minority communities disproportionately carry the burden of STD prevalence.

Social Determinants of Health

STDs do not discriminate—they are capable of infecting anyone, regardless of ethnicity, class, gender, or sex. However, certain demographic groups experience a greater burden of disease associated with STDs. The social determinants of health can be enablers of infection, as well as impediments for those seeking care. During this study, state and local officials consistently cited the social determinants of health as contributors to the STD epidemic. Among the factors cited were:

- **Discrimination and Stigma:** Cultural attitudes that stigmatize sex and the discussion of sexual behavior leave individuals ill-informed about safe sexual practices and encourage riskier behaviors, such as anonymous hookups or sex without a condom, which can impact infection. Homophobia and other forms of discrimination and stigma, both internal and external to a community, may create additional pressures to covertly engage in potentially risky sexual behaviors without being able to seek information or resources to safely do so. Beyond stigma around sex or sexuality that create an

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[106] Centers for Disease Control and Prevention, "STDs in Men Who Have Sex with Men," July 2018, Accessed October 28, 2019, https://www.cdc.gov/std/stats17/msm.htm.

environment in which STDs more readily circulate, discrimination may make those in certain communities wary of medical advice, leaving them without knowledge of how to avoid risky practices or when to seek care.

- **Distrust of Medical Institutions and Government:** Among racial and ethnic minority communities, who often bear the brunt of STD morbidity, distrust of medical institutions can pose a significant obstacle to patients seeking care or advice. This is particularly true for the African American community, with studies documenting perceptions of care provided for the sake of profit rather for the well-being of the patient, expectations of racism, and fears over medical experimentation.[107] In addition, the 2017 CDC Surveillance Report cites a study whose findings indicate that Hispanic migrant communities, in particular, are often distrusting of health care providers,[108] and notes that this can be attributed to the perceived or actual presence of discrimination, language barriers, and provider bias. Health departments officials echoed this sentiment in our conversations and identified its presence in other minority groups, as well.

- **Poverty:** A problem with innumerable linkages, poverty is both a cause of infection and a barrier to the ability to seek care. Poorer populations are less likely to receive appropriate sexual health education, suffer higher rates of substance abuse, and may have more trouble accessing sexual health services.[109]

- **Physical Access to Care:** As a result of the reduction in discrete STD clinics throughout the country, many patients have limited choices of where to seek services. In some jurisdictions, reaching these care facilities may entail travel over long distances, or

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[107] Elizabeth A. Jacobs, Italia Rolle, Carol Estwing Ferrans, Eric E. Whitaker, and Richard B. Warnecke, "Understanding African Americans' Views of the Trustworthiness of Physicians," *Journal of General Internal Medicine* 21, no. 6 (June 1, 2006): 642, https://doi.org/10.1111/j.1525-1497.2006.00485.x.

[108] Rafael Pérez-Escamilla, Jonathan Garcia, and David Song, "HEALTH CARE ACCESS AMONG HISPANIC IMMIGRANTS: ¿ALGUIEN ESTÁ ESCUCHANDO?[IS ANYBODY LISTENING?]," *NAPA Bulletin* 34, no. 1 (November 2010): 47–67, https://doi.org/10.1111/j.1556-4797.2010.01051.x.

[109] CDC, "STDs in Racial and Ethnic Minorities," Accessed October 28, 2019, https://www.cdc.gov/std/stats17/minorities.htm.

require access to a personal vehicle, if public transportation is not available. Those without access to a car or have a car in poor condition may be unable to make that trip and have no alternative means of travel. The availability and cost of hailing a cab or using ridesharing for long distances would further pose a deterrent to seeking care. Additionally, for patients who work irregular hours or are in a position with limited ability to take time off from work and arrange child care if necessary, lengthy travel or services available only during working hours can prevent those individuals from getting care.

Substance Abuse

Almost all jurisdictions we spoke with reported substance abuse as contributing in some capacity to transmission of STDs. Methamphetamine and opioids were the most frequently cited narcotics in use, with crack/cocaine and heroin mentioned by a few others. While direct transmission of STDs through injection drug use as in the case of HIV is clearly a concern, substance abuse as a contributor to infection is often associated with comorbid risk behaviors, like sex in exchange for drugs.

A CDC study published in the February 15, 2019 *Morbidity and Mortality Weekly Report* reported substantial increases in methamphetamine, heroin, and injection drug use among women and heterosexual men with primary and secondary syphilis.[110] Interviewees supported these findings, with health officials explaining that risky sexual behaviors linked to substance abuse are contributing to the spread of STDs within local communities. Behaviors particularly noted included sex as a form of payment for drugs and increased sexual activity resulting from drug use.

In addition to illicit drug use, some interviewees attributed alcohol use and abuse to the rise in STD prevalence. They noted that alcohol use played a similar role to other drugs in boosting risky sexual behaviors and contraction of illness.

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[110] Sarah E. Kidd, Jeremy A. Grey, Elizabeth A. Torrone, and Hillard S. Weinstock, "Increased Methamphetamine, Injection Drug, and Heroin Use Among Women and Heterosexual Men with Primary and Secondary Syphilis — United States, 2013–2017," MMWR. *Morbidity and Mortality Weekly Report* 68, no. 6 (February 15, 2019): 144–48, https://doi.org/10.15585/mmwr.mm6806a4.

Emerging Medical Advancements

As discussed in Phase I, the advent of pre-exposure prophylaxis (PrEP) to prevent HIV may encourage individuals at risk for HIV to engage in risky sexual behavior such as condomless sex. With PrEP rendering HIV a lesser threat in the public conscience, and the availability of effective, long-acting contraceptives, many may choose to forego condoms. Due to the lack of adequate sexual health knowledge about the threats of STDs and how they spread, concerns surrounding syphilis, chlamydia, and gonorrhea may never arise among partners. Compounding the situation is the perception that syphilis, chlamydia, and gonorrhea are easily curable nuisances, in contrast to the death sentence that once was HIV.

The perception of a reduced risk of serious illness, lowered risks of pregnancy, and a general lack of awareness of STDs creates a perfect storm of conditions in which risky behaviors are practiced without mitigation. Condom use, particularly among young people (who comprise a significant portion of STD morbidity), remains low, with a 2017 CDC survey finding that only 23.8 percent of women and 33.7 percent of men aged 15–44 reported using a condom during their last sexual intercourse in the preceding 12 months.[111] As condoms are the only currently extant contraceptive that protects against most STDs for both partners, reduced condom use leaves those who do not use them at risk of contraction, particularly if they have multiple partners or practice riskier behaviors, such as anal sex.

Cultural Trends

Nearly all interviewed jurisdictions reported that social media and hookup apps such as Tinder and Grindr are contributing to riskier sexual practices, and, consequently, boosting contraction of STDs. Although research supporting these observations is scarce, anecdotal accounts and reports from local clinics suggest that the ease of contact with partners and more immediate access to sex facilitated by dating apps without building a personal relationship may be a factor in rising prevalence in recent years.

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[111] Casey E Copen, "Condom Use During Sexual Intercourse Among Women and Men Aged 15-44 in the United States: 2011-2015 National Survey of Family Growth," *National Health Statistics Reports*, no. 105 (August 2017): 1–18, Accessed October 28, 2019, https://www.cdc.gov/nchs/data/nhsr/nhsr105.pdf.

Notable Practice: RIghtTime App (Rhode Island)

Rhode Island's RIghtTime app allows individuals to learn about STDs, find resources and care facilities, and even notify partners of possible infection anonymously through the partner notification service function. By making this information accessible to individuals in a more private way, Rhode Island is reducing barriers to seeking treatment.

Figure 3: RIghtTime App Dashboard, taken on a Study Team member's iPhone

The app provides comprehensive information on STD risk behaviors, symptoms of various diseases, testing sites and mechanisms, treatments, in addition to information on available birth control options, family planning, consent, domestic violence resources, and connections to partner services.

Universally cited by all jurisdictions was a lack of awareness surrounding STDs and a generally poor understanding of sexual health. One interviewee went so far as to declare that students coming out of primary education are "scientifically illiterate" when it comes to sexual health concerns. Interviews and research into the sexual education standards across the nation reveal that few jurisdictions provide comprehensive, science-based sexual health education, leaving students without an authoritative and trustworthy source for medically accurate information. This lack of awareness goes beyond schooling and current generations, as levels of knowledge are lacking in general, leaving young people unable to turn to their parents for guidance—an already difficult task, due to stigma concerns. As young people already comprise the majority of STD prevalence in the U.S., this lack of readily accessible counsel poses a critical obstacle to effective containment.

Sex Trafficking

Sex trafficking was reported as a major contributor to STD prevalence in certain jurisdictions. As individuals trafficked are unlikely to access care as they are transported between jurisdictions and forced into extremely unsafe sex with numerous parties, they can become victims of multiple infections, as well as a vector for

transmission. Sex trafficking may also co-occur with narcotic exposure, further enhancing the risk of STD contraction for victims.

Resource Constraints

Unlike the HIV/AIDS effort which has consistently received considerable attention and funding to control the spread of the disease, STD efforts have not seen a comparable level of federal funding despite the increasing prevalence of STDs and their economic cost to the nation. Funding does not match disease incidence. Importantly, the fiscal health of state and local jurisdictions also affects the availability of resources to carry out STD programs. Constrained budgets and budget cuts are not uncommon at the federal, state, and local levels necessitating the stretching of tight dollars to cover services and exacerbating the strain on already underfunded resources combatting STDs. Among factors noted by CDC as contributing to rising STD rates are the budget cuts in recent years experienced by more than half of the local STD programs resulting in clinic closures, reduced screening, and loss staff, particularly, disease intervention specialists (DIS). As noted in Phase I, less funding translates to less screening and testing, less treatment, less partner services and linkage to care, and less outreach—collectively leading to increases in STD incidence.

Underfunded State and Local Health Departments

The rise in STDs across the nation increases the burden on health departments to deliver services with the resources—funding and staffing—available to them. Because funding often does not meet current requirements for service delivery, public health agencies experience the strain of scarce resources. For many states and localities, federal grant dollars (discussed in Section 2) are their only available funding source, and changes in funding formulas over time affect how the money is distributed, with some states and localities receiving more and others less. For localities that receive additional funding through taxes and/or fees, the added funding generally does not close the gap. In one locality, as noted earlier, the local health tax in place to support public health activities has not kept pace with rising health costs as the tax rate was set over 35 years ago. Interviewees noted that in some areas, clinics have closed, mobile clinics eliminated, and hours curtailed because of reduced resources.

The Phase I report highlighted the impact of budget cuts in state and local health departments referring to surveys conducted, including the National Association of County and City Health Officials' (NACCHO's) *2017 Forces of Change* and CDC studies based on analyses of 2013 and

2014 data. CDC is currently analyzing data collected in 2018 in a survey instrument administered by NACCHO; reportedly, analyses are at various stages of progress, with some results tentatively scheduled for release in the Fall 2019. At this time, there is no available update data to indicate any changes to what was reported earlier or to what was gleaned from our interviews with state and local officials and staff. Examples of the impact of current funding on state and local programs are highlighted below and in the case studies that appear in Appendix E.

Staffing Concerns

Universally, state and local officials we spoke with emphasized the critical need for additional staff resources. Underfunded STD programs constrain jurisdictions' ability to provide services—simply stated, bandwidth affects their ability to address STDs. Among the staffing needs highlighted, disease intervention specialists (DIS), along with informatics and information technology staff, rose to the top as priorities.

DIS are essential to STD surveillance and control efforts. DIS perform disease investigation, contact tracing, linkage to care, and partner notification services (PNS). Unfortunately, DIS are commonly in short supply. Virtually all jurisdictions noted the need for more DIS staff, together with training and adequate compensation for the staff to address the high levels of turnover experienced. DIS staff tend to be difficult to retain—salaries are low and workloads high, leading to considerable turnover. One jurisdiction shared its experience that it can take an average of six months to a year to train the staff who after a year or two on the job then leverage the training and experience they gained as a DIS to move on to other better paying positions. Others highlighted the need to recruit "qualified" candidates and to ensure that DIS reflect the communities they serve. Particularly challenging for jurisdictions is providing DIS services in rural communities because of the distances between communities, the pervasiveness of substance abuse, and the distrust—and at times, hostility—to public health care workers.

The availability of DIS has a direct impact on availability of PNS, which varies among states and even among jurisdictions and health care facilities within a single state. Some states are able to offer PNS to patients infected with any of the three reportable STDs. Others limit it to certain diseases based on morbidity or a combination of resources and morbidity. In some, PNS is restricted to HIV and cases of coinfection. Given the high rates of chlamydia and limited staffing, it is not uncommon for jurisdictions to suspend PNS for the infection. Interviewees

bemoaned that STDs like chlamydia and gonorrhea may not be fully covered by DIS because of the large burden of the cases and the limited number of DIS. Also noted was the struggle of DIS to identify anonymous partners and the barriers to notification resulting from dating and social media apps that DIS may not have access to.

All levels of government acknowledge the important role DIS play in arresting the rise of STDs. In recent years, efforts have been underway, with CDC in the lead, to develop a DIS certification program to aid in the recruitment and retention of DIS. The goals of a certification program are to standardize and validate the knowledge, skills and abilities of DIS, standardize and improve training, increase the quality and consistency of service delivery and increase recognition of DIS skills and abilities. Foundational activities completed include a feasibility assessment, development of a DIS registry and a job task analysis which was completed in 2016. The process endorsed for certification is a test-based approach. The effort, however, has stalled because the funding is not available to implement the program. At this time, it is unclear when the effort will proceed.

Notable Practice: Reclassification of DIS (Massachusetts)

Massachusetts addressed DIS recruitment and retention by reclassifying their DIS as field epidemiologists. By reclassifying the position, Massachusetts is now able to attract candidates with advanced degrees, and strong skill sets relevant to the position, including facility with languages germane to the communities served—and they are able to compensate the staff with higher pay, which has aided staff retention.

Technology Staffs

In addition to DIS, jurisdictions identified the need for more information technology (IT) and in particular, informatics staff. As more and more jurisdictions have moved to electronic reporting of health and lab records, IT staff are needed to work with providers and address the interoperability of systems. Informatics staff, in particular, are needed to ensure data quality, conduct data analysis and assess trends, and address the sharing and integration of data across surveillance systems. A recent report by the Council of State and Territorial Epidemiologists

(CSTE)[112] highlighted the important need for highly trained data science and informatics workforce in public health. It noted that public health departments struggle to recruit and retain this staff given pay structures. However, these staff play an increasingly important role in the ability to identify and respond to disease outbreaks.

Siloed STD and HIV/AIDS Funding

The structure of federal grants supporting STD activities has an impact on the how funding can be leveraged by state and local officials to carry their programs. Interviewees repeatedly cited concerns that despite the fact that many notices of grant opportunities encourage collaboration across programs, agencies, and partners, program funding tends to be siloed, restricting their ability to do so. Siloing of funding opportunities and programs, together with different program and reporting requirements, presents a barrier to the utilization of already scarce resources in overlapping circumstances particularly at the local level, where resources are constrained and departments have integrated their STD and HIV programs. Despite the common practice of integrating STD and HIV clinical services programmatically, the lack of financial integration between STD and HIV programs often stifles jurisdictions' abilities to adequately deliver STD services.

Access to Care

Public Health Infrastructure

The fragmented nature of the public health infrastructure in the United States presents challenges for accessing care. Program structures, governing rules and regulations, and the availability of monetary and staffing resources—all ultimately impact the availability of services through this public health infrastructure. Numerous public health stakeholders play a role in supporting STD prevention and control services, and the settings where STD screening and treatment services can be obtained vary across the STD landscape. These settings include STD

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[112] Celia N. Hagan, Emily J. Holubowich, and Tamara Criss, "Driving Public Health in the Fast Land: The Urgent Need for a 21st Century Data Superhighway," Council of State and Territorial Epidemiologists, September 2019, Accessed October 28, 2019, https://www.debeaumont.org/wp-content/uploads/2019/09/DSI-White-Paper_v15-Spreads.pdf.

categorical clinics, Federally Qualified Health Centers (FQHC), Title X Family Planning clinics, public health clinics, hospitals, university clinics, and private providers. (The services and eligible populations serviced by FQHCs and Title X clinics were described in Section 2.) In addition to variations in health care service delivery, insurance coverage greatly varies depending on whether a state adopted Medicaid expansion under the Patient Protection and Affordable Care Act (ACA).

Changing Health Care Settings

The advent of the ACA shifted the ways individuals can access health care with millions of Americans gaining access to primary care through expanded insurance coverage. As a result, the role of private providers in STD screening and treatment increased. The ACA added coverage for many STD services, allowing individuals to obtain these services from private providers with either a low or no copay or deductible through a primary practitioner. Some patients, however, prefer to receive care at a discrete clinic where the physicians have expertise in STDs, and the visit can be kept confidential.

Among the settings that provide STD screening and treatment, STD categorical clinics are the most specialized. They offer STD testing, treatment, partner notification services, and counseling typically at low or no cost to the patient. Some of these clinics may offer testing for HIV and other communicable diseases, in addition to reproductive services. For an uninsured or underinsured individual, STD clinics may be the best option due to their common practice of offering testing and treatment on a sliding fee scale based on the individual's ability to pay or providing the service for free as, typically, no patient is turned away. This setting also offers an increased sense of privacy for many individuals, especially for those who feel uncomfortable discussing sexual health with a primary care physician.

Notable Practice: Student Sexual Health Services (Massachusetts)

Some higher education institutions, such as Salem State University in Salem, Massachusetts, found ways to expand sexual health services available to students through Title X funding. As a result of the university's health center contracting with a nearby FQHC, the university acquired Title X funding to provide some reproductive health services, including birth control, condoms, and other contraceptive options to students. These sexual health care services complement and enhance the already existing STD testing and treatment options offered at the campus health center. The students have access to holistic, confidential sexual health services with the convenience of the services being located in close proximity to their classes, dormitories, and extracurricular activities.

However, the shift in the ways patients access health care, combined with decreasing public health funding, has caused many STD categorical clinics to close.[113] The reduction of categorical clinics closes off a key location of care for populations who bear the heaviest infection and disease burden, such as the poor and young people. Multiple interviewees attested to STD categorical clinics as still playing a critical role as a provider of safety net services to uninsured, underinsured, and insured people alike.

In lieu of categorical clinics, many public health entities have moved service provision to other locations of care. Public health centers administered by public health departments, along with FQHCs and Title X family clinics, provide critical STD services in the United States. Public health clinics typically offer primary and preventative care services, including STD testing and treatment. Where the services are located will vary; for example, a town or city may operate its own public health clinic, or a county may operate a public health center as a part of a regional agreement to serve all member localities in the county, or a state public health authority may operate public health centers throughout the state.

[113] Karen W. Hoover, Bradley W. Parsell, Jami S. Leichliter, Melissa Habel, Guoyu Tao, William S. Pearson, and Thomas L. Gift, "Continuing Need for Sexually Transmitted Disease Clinics After the Affordable Care Act," American Journal of Public Health 105, no. S5 (September 5, 2015): S690–95. Accessed October 28, 2019, http://bit.ly/2BMsGpw.

Hospitals and emergency rooms also function as safety net providers, but can be a potentially cumbersome and expensive solution. To expand the reach of STD services, a public health department may contract with a hospital or urgent care facility to provide screening and treatment services. In some instances, such as the Rhode Island STD Clinic at Miriam Hospital, there may be a specialized STD clinic within the hospital. In the case of Rhode Island, the state contracts with the privately operated Miriam Hospital to provide STD services to the broader public. Without a specialty clinic or services contract, patients must see a doctor through the traditional emergency room walk-in procedure, which can be costly and take several hours.

Campus health centers provide a broad range of primary and preventative health services and often provide STD testing and treatment services to students, as well as referral services. While the services provided on a university campus may not be as extensive as in other health care settings, university health centers can serve as a critical service provider to students offering confidential and convenient care.

Depending on state and local laws and regulations, some public high schools offer STD testing and referral services to students in the school nurse's office or the school health clinic. By offering testing to teenage students in a nurse's office or school clinic, which generally is a trusted and safe environment, young people have the opportunity to seek the care that they may be hesitant to seek with their parents knowing. The nurse's office or a school health clinic can also be a location where condoms are readily available for distribution to students who look to practice safer sexual behaviors.

While there are many different avenues to seek STD screening and care, access may not be readily available, particularly in rural settings. In addition, the varied health care settings where an individual may receive STD services also presents a challenge for arresting the spread of STDs. When localities, regions, and states offer services in completely different settings from one another, people may have trouble understanding where they can receive affordable and convenient STD testing and treatment. The problem is amplified when people are more transient, such as travelling, attending college, or moving to a new area. STD infections require a sense of urgency in testing and treatment, so any unfamiliarity with the STD services available in an area may delay the treatment and pose a risk of more people becoming infected.

Provider Familiarity with STD Guidelines

As highlighted earlier, the role of private providers in testing and treating STDs has grown with the shift towards private provider care and increased numbers of insured individuals. While private providers are able to test and treat their patients for STDs, private providers do not always follow the CDC guidance on how frequently to test patients, depending on their risk status, or may not have conversations with patients to openly understand their patients' STD risk. Providers may be hesitant to provide STD services as a result of their own biases or feeling uninformed about how to test and treat STDs. Providers who are unfamiliar with some STD services often err on the side of caution and forego providing those services directly to their patients.

Provider unfamiliarity with CDC guidelines for screening and treating STDs can result in delayed or insufficient care as providers may not consider STDs during diagnostics. Interviewees shared anecdotes where providers failed to test for an STD, even when the symptoms were clear that testing was needed. This lack of attentiveness to STD care is attributable to multiple factors, including medical school curricula not emphasizing sexual health, as described in our Phase I report. State health department officials noted that training made available by the STD prevention training centers is immensely helpful to both the private providers and STD health care staff that attend, but attendance is not universal.

In most jurisdictions, as noted in Section I, providers can legally offer expedited partner therapy (EPT) to patients' partners for chlamydia and gonorrhea, but the actual implementation of EPT varies greatly in practice. Some states have rules governing physicians and pharmacies about the distribution of antibiotics to individuals that have not been screened for STDs. Other states have rules that prohibit pharmacists from distributing prescriptions without a patient's name attached, which prevents those with partners who choose to stay anonymous from receiving EPT for the partners. In instances where a provider is unfamiliar with EPT guidance, the provider will often not offer EPT as a treatment option to patients for their partners. Aside from provider constraints, resources may result in limited EPT usage. Chlamydia cases have burgeoned across the country, often to the point where providers cannot keep up with the caseload. Some states have suspended the use of EPT for chlamydia as a result of the skyrocketing caseload.

Insurance Issues

As noted in the Phase I report, the number of individuals insured rose consistently between 2009 and 2017. However, the latest data for 2018 show that the number of insured individuals is beginning to decline. This reversal in the trend may be a consequence—at least in part—of the elimination of the ACA's mandate for coverage as a result of the Tax Cuts and Jobs Act signed into law in December 2017. Another contributing factor may be the rising cost of insurance coverage, which may result in individuals having no choice but to end or minimize their coverage because they can no longer afford it and will no longer be penalized for not having coverage. Those who enroll in a plan with minimal coverage often find themselves vulnerable to high out-of-pocket costs in the event of an unexpected health problem. The bottom line is that a portion of the U.S. population, including immigrants who may be legally residing in the country, remains uninsured or underinsured.

Notable Practice: Walk-In Clinics (Philadelphia)

The City of Philadelphia designated one of its nine district public health centers, Health Center 1, as a walk-in STD clinic where people may receive STD and HIV testing and treatment for free. In addition to STD and HIV testing and treatment, Health Center 1 offers vaccinations for Hepatitis A and B, vaccinations for HPV, and PrEP and PEP. This wide array of sexual health services allows people as young as age 13 to receive comprehensive sexual health care services.

Uninsured individuals are less likely to seek STD health care services because of out-of-pocket costs. If an uninsured person does seek health care for an STD, they may be able to choose a specialized STD clinic, if available, where services may be offered on a sliding fee scale or for free. In addition, there are a number of clinics and health care facilities that offer free care, occasionally on a walk-in basis, but that practice is not universal. If a person is unable to pay for services, fees may be waived. While interviewees universally noted that no individual would be turned away from a public health clinic if they could not afford the services, interviewees also mentioned that free or low-cost services are more often available to women than they are to men, especially within the MSM population.

Even if insured, some individuals may not be able to afford care as health care providers do not always accept all insurance options. Additionally, in the United States, a segment of the population makes too much to qualify for Medicaid but not enough to pay the copays,

premiums, and fees to enroll in health care. This population is part of an insurance gap where they are unable to pay for care. When the Supreme Court ruled against mandatory Medicaid expansion in the 2012 case, *National Federation of Independent Business v. Sebelius*, some states chose not to participate in the expansion, as they were no longer legally required to do so. In states that chose not to expand, residents left in the coverage gap (making too much money to qualify for Medicaid, but not enough to be able to pay for insurance) remained without coverage. More than two million poor, uninsured adults are estimated to fall into the coverage gap, with the majority residing in the South. This coverage gap affects health outcomes and disproportionately impacts access to care for people of color.[114] In a few instances, non-Medicaid expansion states have attempted to fill the insurance gap by providing other safety net health care services.

Medicaid expansion states in this study reported a greater ability to reach patients as a direct result of the expansion. These states experience a smaller coverage gap where fewer individuals are left without insurance. In states that did not implement Medicaid expansion, many interviewees noted their belief that expanded Medicaid coverage would make a real difference in their residents' access to care. Generally, interviewees expressed that states that experience a heightened STD burden would benefit from Medicaid expansion because of the increased access to care. However, they also pointed out that action to adopt Medicaid expansion was not likely.

For the population in the insurance coverage gap, multiple solutions have been attempted to close the gap. Some health departments have instituted flat or sliding fee scales for services to make STD services more accessible to this population. The health care facilities that offer screening and treatment services for low to no cost are often facilities that are beneficiaries of state-operated laboratories with minimal testing fees, or they receive sufficient funding to provide services at a lower cost. In states where fee-for-service models are permissible, implementing that model would expand care options to the pool of patients who previously would have been unable to seek care.

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[114] Kendal Orgera, Anthony Damico Published: Mar 21, and 2019, "The Coverage Gap: Uninsured Poor Adults in States That Do Not Expand Medicaid," *The Henry J. Kaiser Family Foundation*, March 21, 2019, https://www.kff.org/medicaid/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicaid/.

Explanation of Benefits Statements and Confidentiality

Many individuals, especially young people or spouses who may be on another person's insurance, do not seek STD screening or treatment out of concern that the policyholder will see the services received on the explanation of benefits (EOB). As sexual health is a sensitive and private issue for many people, confidentiality is paramount to ensure that individuals are comfortable seeking care. Disclosure of services on the EOB presents a considerable barrier to care because of confidentiality concerns. In the Phase I report, confidentiality was a major concern noted, and interviewees in this study consistently echoed that concern. A few states, such as California and Massachusetts, have passed laws addressing this concern.

Coverage of Screening Tests

Some state officials mentioned that providers may be uncertain as to what services and tests are covered by insurance—which may lead them to be hesitant to order or perform tests for a patient. For some patients, screening through rectal and pharyngeal testing in addition to urethral tests is necessary to accurately determine a person's infection status. Concern was expressed about whether the insurance provider would cover multiple tests in one day as the insurer may consider the tests as duplicative. A related insurance issue is how insurers code the tests which again can lead to rejection of the tests for reimbursement. Provider hesitancy to screen patients for STDs out of concern over whether insurance will cover multiple tests creates barriers for patients accessing needed care.

Deterrents to Seeking Care

Barriers to receiving STD services do not stop at the complex public health infrastructure or the constraints of insurance and an individual's ability to pay. Individuals may face several other impediments to seeking out care. As highlighted earlier, factors not related to health care that prevent individuals from receiving care may include a distrust of the system, a lack of transportation, family responsibilities, or the inability to leave work.

Individuals may be hesitant to seek care for numerous personal reasons. Some people, especially racial and ethnic minorities, might distrust the health care system out of fear that doctors or other health care providers may discriminate against them. Others might hold the opinion that the health care system will misdiagnose or overcharge them. Patients might also not feel comfortable discussing sexual health with their private provider, which is another inhibitor to receiving care. Overcoming personal barriers or a strong hesitancy to seek care proves difficult

for many people, who, if they become infected with an STD, likely would have a harder time pursuing the testing and treatment they need.

Transportation

While getting past personal barriers to receiving treatment is difficult, physically getting oneself to a STD care facility when there are no reliable means of transportation available proves to be yet another difficulty. Transportation is a significant challenge for some individuals to access STD services. Unless public transportation or personal transportation is readily available to an individual who needs care, finding the means to get to a care facility is a hurdle in the way of getting the necessary testing and treatment. In much of the United States, especially in rural or frontier areas, reliable methods of public transportation are hard to come by. Health care facilities offering STD services may be miles away from a person's home or workplace, which can be either inaccessible by public transportation or too costly to visit if a rideshare service is the only option available.

Work or Family Life

Family responsibilities present challenges to individuals needing care. For teenagers, their only opportunity to access STD treatment may be right after the school day ends, but for teens who must look after younger siblings once school lets out, that opportunity to access care vanishes. For adults with children or other family members under their care, finding childcare or other supervision presents a challenge in getting oneself to an STD clinic or other care facility for testing and treatment.

Individuals may be unable to leave work to be tested or treated for an STD because of work-related barriers. Lack of paid time off or the flexibility to leave work to attend an appointment can prevent cases of infection from being handled quickly and stopping the infection from spreading. Individuals who work long shifts or in service industries may not be able to access STD health care facilities during normal business hours, and for those working in low-wage jobs, losing the income from the hours it takes to attend a medical appointment is typically not a viable option. As a result, getting tested or treated for STDs may be a lower priority, not out of choice, but out of necessity.

Notable Practice: "Hub and Spoke" Health Care Model (Vermont)

The "Hub and Spoke" model of treatment facilities for substance use disorder (SUD) offers a host of different health services, such as mental and behavioral health care, counseling, and primary care services, with the goal of keeping people in the system throughout recovery. The nine regional "Hub" facilities offer daily services for the most complicated cases of SUD, while the multitude of "Spoke" facilities provide general health and wellness services. Recognizing that SUD is often comorbid with other diseases or infections like HIV, Hepatitis C, or STDs, the model integrates more accessible treatment and referral services into the system. The "Hub and Spoke" model demonstrates the potential of an interconnected health care system to expand care to individuals who need it most.

Health Equity

Health inequities and related social determinants of health place a significant disease burden on vulnerable groups, and, along with curtailed access to care, result in those communities playing host to ongoing STD outbreaks. Social determinants create conditions that disproportionately prevent certain individuals from achieving good health. Social determinants such as a person's socioeconomic status, education, physical environment, employment, and social networks impact health outcomes because certain groups have different levels of access to care. STDs tend to circulate within social networks in a geographic area, leaving certain groups at a higher risk for contracting an STD; however, the social networks of each STD are different. For example, women and young people are more vulnerable to chlamydia than other groups, whereas MSM and people of color are disproportionately affected by gonorrhea and syphilis.[115]

[115] Workowski, MD, Kimberly A., and Gail A. Bolan, MD. *Sexually Transmitted Diseases Treatment Guidelines, 2015*. MMWR Recomm Rep 2015;64(No. 3):1-137. https://www.cdc.gov/std/tg2015/tg-2015-print.pdf.

Surveillance and Technology

Among the various resources necessary for establishing STD control, data are among the most critical. Accurate and current epidemiological data are essential for addressing infectious diseases outbreaks and hold a particular place of prominence when that disease is spread predominantly through social interactions. Without accurate information on the demographics of an outbreak, or the geographic distribution of cases, or partner contacts—among myriad other points of data—a targeted STD response cannot be executed, and effective control cannot be achieved. Today, STD response requires data that is accurate, readily accessible, swiftly distributed, and up-to-date. Unfortunately, these characteristics are not found in all STD programs across the nation.

In a September 2019 white-paper, "*Driving Public Health in the Fast Lane,* the Council of State and Territorial Epidemiologists highlighted systemic failures that keep public health systems in the "slow lane," stating:

> *"Despite progress in moving surveillance into the 21st century, antiquated, fragmented, and siloed data sharing systems continue to impede public health action."*[116]

This assessment succinctly summarizes many of the issues rife within the STD control community. Otherwise robust service delivery and program operations can be easily handicapped by data constraints attributable to outdated and/or unsupported technical systems, a lack of uniformity in reporting standards, and difficult-to-access data.

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[116] Celia N. Hagan, Emily J. Holubowich, and Tamara Criss, "Driving Public Health in the Fast Land: The Urgent Need for a 21st Century Data Superhighway," Council of State and Territorial Epidemiologists, September 2019, Accessed October 28, 2019, https://www.debeaumont.org/wp-content/uploads/2019/09/DSI-White-Paper_v15-Spreads.pdf.

Adoption and Implementation of Electronic Lab Reporting and Health Record Systems

Most states are transitioning, or have transitioned, to electronic lab records (ELR) and electronic health records (EHR), but allow some providers or jurisdictions to continue to use of other forms (paper, fax, phone) of reporting. When health clinics, agencies, and labs are short on resources, these time-consuming reporting methods may absorb valuable staff members' bandwidth. Additionally, paper, fax, or phone reporting may fall through the cracks and may introduce opportunities for errors when transporting the data to the official reporting system, resulting in incomplete understandings of the epidemic in a jurisdiction and potential harm to patients who are not able to be connected with care.

While many states, localities, providers, laboratories, and other stakeholders have moved towards using ELR and EHR systems, the system integration between these actors is not always harmonious. Many systems remain works-in-progress, with some jurisdictions being more successful than others. Interoperability and integration conflicts can result in compromised data sets, jeopardizing the effectiveness of control efforts.

Local health departments report surveillance data to their state health agency, but may not have easy access to aggregate data showing trends in their localities or the entire state due to the way systems are set up or interoperability conflicts between state and local systems.

Notable Practice: STD Surveillance

CDC's STD Surveillance Network (SSuN) awards funding to state, county, and city health departments to collect enhanced STD data and to explore how to improve STD surveillance efforts. Part A of the award supports health departments in collecting data on population-level and facility-based activities. The data informs CDC of trends in the care received, provider practices delivered, and the numbers of patients diagnosed with STDs. Health departments receiving Part B funding aim to develop better electronic health data reporting among their local partners. Part B projects have the potential for broad applicability to STD programs across the country.

Notable Practice: Massachusetts Virtual Epidemiological Network (Massachusetts)

The Massachusetts Virtual Epidemiological Network (MAVEN) is an online disease surveillance and case management system that has increased efficiency by eliminating siloed data sharing practices. The system offers functional elements for its users such as real-time information sharing, cluster identification and outbreak management, and built-in analysis tools. All laboratory reports are processed through MAVEN, allowing for easier case tracking and better data gathering.

The easy accessibility and wide breadth of data within MAVEN enables more innovative uses of that data. To combat congenital syphilis, the Massachusetts Department of Public Health created an automated triage tool for women between 14 and 44 that identifies syphilis diagnoses and alerts public health workers. This mechanism enables those workers to follow-up and ascertain pregnancy status, and connect the patient with care, if necessary.

Data Sharing

The sharing of data, particularly across disease categories, is hindered by a lack of clarity on what data is permissible for sharing. Some states and localities noted that they are unable to share HIV data and STD data because of federal rules. Conversely, federal officials note that they encourage the sharing and integration of data across the programs, and recent CDC and HRSA funding opportunities specifically address enhancing the linkages between HIV and STD data. This conflicting messaging creates an environment of confusion and reluctance to share data.

In Philadelphia, for example, STD and HIV data remains separate, despite the two infectious diseases having considerable overlap. The city's STD clinic often faces challenges in gathering information about the HIV condition in the city because of the data sharing barriers, which pertain mostly to privacy concerns surrounding HIV surveillance. HIV data is accessible by STD staff, but requires significant effort and the consent of the local HIV program, which makes data correlation more burdensome and complicated.

CDC's Division of HIV/AIDS Prevention (DHAP) encourages the sharing of HIV and STD data because of the commonalities they share. But this sharing is impeded, at times, by outdated regulations at the state level regarding the categorization and cataloging of data or by general confusion regarding data sharing. The situation is exacerbated by inconsistencies of standards (and interpretation of those standards) across jurisdictions. Particularly problematic is the interface between state or local health departments, hospitals, independent providers, and other locations of care, as these entities may be using different systems or have different standards for data management.

Data Processing and Review

Release of surveillance data typically involves lengthy turnaround times that prevent stakeholders from receiving data that is current and actionable as soon as possible. Surveillance data is pulled from across jurisdictions and comprises data that may be collected and compiled in accordance with different standards. This, in turn, necessitates considerable labor to clean up, normalize, and make digestible any findings. Achieving total compliance with the rigor required can be an extremely time consuming endeavor. These varying standards are set entirely by states, as CDC and other federal entities, generally, do not possess the authorities to set data reporting standards nationwide.

This same lengthy procedure is also true of research analyses, which follow scientific peer review processes and often take time to obtain approvals for

Notable Practice: Electronic Disease Surveillance System (Utah)

Utah's UT-NEDSS system, modeled after the National Electronic Disease Surveillance System (NEDSS), is an open source epidemiologic and disease surveillance system for the state and local public health agencies. Through this system, data can be sent directly to CDC. The system is maintained by the state public health department on servers hosted by the Utah Department of Technology Services. UT-NEDSS enables two-way data access, with local entities able to both transmit to and search through data from the system.

Reporting is conducted through EpiTrax, which is the software utility employed to access UT-NEDSS. EpiTrax is used for lab reporting, as well as electronic health record updates. When a case is identified in need of local follow-up, a nurse assigns it to a DIS or other public health figure that is geographically best positioned to handle it. The system also logs contact information and general notes for the patient.

publication. As a result, release windows can be extremely belated, becoming public months or even years after the data was originally gathered. Data that is more than a year old likely will not reflect the most recent state of the epidemic and may hinder the ability of control entities to respond.

Interviewees noted the need for personnel trained in informatics to do data analysis, as well as for information technology staff. Without on-site staff to conduct this analysis, or the capacity to retain their own data, jurisdictions may be reliant on other entities for data needs or be otherwise unable to get a complete view of the outbreak within their borders. This deficiency reduces the efficacy of any given provider and creates an overall weaker system. The inability to process data in a comprehensive and timely fashion leaves states with gaps in their fence of disease control, making it all the more difficult to assess local trends and track down clusters.

Stigma and Education

Perhaps one of the greatest barriers to fighting the STD epidemic is the massive stigma surrounding STDs. Since the release of *The Surgeon General's Call to Action to Promote Sexual Health and Responsible Behavior*[117] in 2001, little has changed in how people approach the topic of STDs and sexual health. In that report, the Surgeon General noted that while there are "many positive aspects of sexuality, we also need to understand that there are undesirable consequences as well—alarming high levels of sexually transmitted disease." The Surgeon General expressed the need to appreciate sexual health and its connection to physical and mental health. Yet today, nearly two decades later, stigma still prevents recognition of sexual health as a component of a person's wellbeing.

Despite sexual messages bombarding the public regularly through popular culture mediums including social media, music, television, film, and literature, there still exists a strong hesitancy to broadly normalize sexual health and with it, the discussion of STDs as a public health problem. Some people have difficulty speaking to a trusted friend or partner about sex, let alone

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[117] General (US), Office of the Surgeon, and Office of Population Affairs (US), A Letter from the Surgeon General, *U.S. Department of Health and Human Service.* Office of the Surgeon General (US), 2001, https://www.ncbi.nlm.nih.gov/books/NBK44223/.

their doctor. Frank discussions about sexual health are too often taboo regardless of the audience.

Social stigma and negative societal attitudes surrounding STDs and sexual health are key obstacles in providing effective STD services. STDs remain stigmatized because much of the country perceives STDs as the consequence of behavioral shortcomings rather than a public health issue. Despite the commonalities STDs share with HIV, such as the method of transmission, efforts addressing the HIV epidemic have much stronger support than those focusing on STDs. Consequently, STDs continue to rise and will likely continue to rise until the public and policymakers move past this stigma. Refusing to speak about STDs perpetuates the epidemic and leaves the citizenry uneducated and ill-prepared to stop their spread.

Notable Practice: #ProtectYourselfRI Awareness Campaign

Rhode Island's Center for HIV, STD, Hepatitis, and Tuberculosis launched a data-driven multimedia campaign for HIV/STD prevention called #ProtectYourselfRI. In this campaign, the center posted messages for prevention and testing availability on different social media sites geared toward different populations, including young people, MSM, and Spanish-speaking individuals. This campaign's success in reaching certain populations in the state demonstrates the importance of tailoring messaging to different communities so that STD prevention and treatment information is more accessible and relevant.

Universally, jurisdictions noted the importance of education and awareness in addressing the stigma surrounding STDs. Stigma may cause people to be reluctant to seek care out of shame or fear of being judged.[118] Various jurisdictions referenced the importance of reaching out to at-risk populations in culturally sensitive ways so that individuals will be more likely to seek care and more accepting of services and follow-up. As mentioned earlier, STDs disproportionately affect certain groups, which means that the content of STD and sexual health education needs to be relevant to the affected demographic group to resonate with them. Although STDs place a heavier burden on certain groups of people, STDs can affect anyone. Stigma exists among people of all ages and demographics, which is why education throughout one's lifetime about STDs and sexual health is critical to preventing STDs.

Notable Practice: Community Engagement Gatherings (Louisiana)

In Baton Rouge, Louisiana, a state-funded wellness center holds community gatherings, oftentimes once per month, where community members can gather in a social, health-focused setting where educational materials and STD screening is available. This wellness center has been proactive in reaching out to and educating parents about STDs. This, in turn has helped to engender receptivity to educating their children about STDs. Educating parents about STDs and sexual health benefits their children because comprehensive sexual health education is not permitted in the schools. Off-site events, such as the gatherings at this Baton Rouge wellness center, demonstrate potential to raise STD awareness among community members in a social, comfortable setting.

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[118] Shayna D. Cunningham, Deanna L. Kerrigan, Jacky M. Jennings, and Jonathan M. Ellen, "Relationships Between Perceived STD-Related Stigma, STD-Related Shame and STD Screening Among a Household Sample of Adolescents," *Perspectives on Sexual and Reproductive Health* 41, no. 4 (December 3, 2009): 225–30, https://doi.org/10.1363/4122509.

Public Awareness

The lack of public awareness of STDs and the severity of STD-related health risks stymie efforts to marshal support for additional resources to address rising STD rates. To the extent that the public may be aware of STDs, it is often in passing through media reports when STD surveillance data is released annually, during STD awareness campaigns such as STD Awareness Month (April of each year), and messages and alerts sent out through public health departments and STD-related advocacy groups. Public awareness is critically important to ultimately prevent and control the spread of STDs. Importantly, the need for sexual health education extends beyond the general public, as legislators and policymakers are often similarly uninformed. Sexual health awareness and education are essential for everyone.

Currently, the availability and visibility of information on STDs—how a person can contract an STD, testing and treatment options, risk reduction practices, and the prominence of the STD epidemic—vary considerably across jurisdictions. All STD programs have some information on the infections and where to access services, but the ease with which to find the information varies widely. While state and local jurisdictions strive to provide their constituencies with culturally sensitive and accurate information about STDs and services, the extent and depth of the information differs considerably, largely in response to public sensitivities to the subject matter and staff capacity to maintain the websites. As a result, some states and localities offer limited information about STDs and services on their health departments' websites—and what information they do provide may be difficult for users to navigate. Additionally, there are some states whose webpages for STD services contain a content warning, citing that;

> *"This site contains STD prevention messages that may not be appropriate for all audiences. Since STDs are spread through sexual practices, prevention messages and programs may address these topics. If you are not seeking such information or may be offended by such materials, please exit this website."*[119]

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[119] Alabama Department of Public Health, "STD," February 2019, Accessed October 28, 2019, http://www.alabamapublichealth.gov/std/.

The presence of such a message on health departments' websites further stigmatizes STDs. In addition, some states reference ASHA, using its former name—the American Social Health Association—despite the fact that ASHA changed its name to American Sexual Health Association in 2012 and despite the fact that they provide active links to ASHA's website. Stigma continues to be a major hurdle for arresting the STD epidemic.

CDC provides a wide range of materials available for distribution to different audiences, which may include health care providers, health departments, youth, the general public, pregnant women, and gay and bisexual men. Every April, the CDC observes STD Awareness Month and digitally publishes several toolkits to help their prevention partners raise awareness in their respective communities. These toolkits provide information through social media graphics and messages, customizable articles based on localities, and widgets that can help website visitors locate STD testing facilities. In 2019, the campaigns for STD Awareness Month were *Treat Me Right*; *Syphilis Strikes Back*; *Talk. Test. Treat.*; and *GYT: Get Yourself Tested*. Year round, CDC offers other resources that often take the form of guides, brochures, or social media.

Public acceptance of sexual health as a component of whole health is vital to the effort to end the STD epidemic. Acceptance needs to come from public health officials, public health agencies and organizations, legislators and the general public to be successful in combating the stigma and challenges surrounding STDs.

Barriers to Sexual Health Education

Education is a critical piece to STD prevention; yet, as many interviewees noted, lawmakers are more often than not hesitant to address sexual health in a formal way. While state and local legislators in some states are supportive of comprehensive sexual health education, others may be less willing to do so, given sensitivities and other priorities. Interviewees consistently noted the need for comprehensive sexual health education.

States typically define the broad parameters of sexual health education in public schools. Not surprisingly, these parameters vary widely among states. The role of states and state departments of education also differs considerably. Some have more influence in determining the curriculum than others. While some states do establish requirements (whether through law, regulations or standards) on what may be taught to students about sexual health and HIV and/or STDs, there is little consistency in what states teach their students. The vast majority of states do require parental and guardian notification of sexual health instruction, with most

Notable Practice: Philadelphia's Public School STD Testing

Philadelphia public schools have offered STD testing to their students since 2002 through their school-based health clinics. Additionally, condoms have been available in the public high schools and some charter schools since 2013, when support from the Mayor allowed students to gain access to this method of STD prevention. This approach provides students with accessible STD testing and prevention in a safer, more familiar school setting. Public high schools in Boston and the District of Columbia offer similar programs.

providing an "opt-out" of instruction. Several, including North Carolina and Utah, have a parental/guardian "opt-in" for instruction. (North Carolina requires local school boards to make the determination as to whether to afford "opt-out" or "opt-in.") By and large, however, the role of determining the specifics of school curriculum rests with localities.

Local Challenges of School-Age Sexual Health Education

Education is primarily the role and responsibility of local school boards which make determinations about sexual health education curriculum and content. The school boards are cognizant of, and may be responsive to, parental views, local culture, and other concerns when making decisions on what elements of sexual health can be taught to students. Local school boards have the power to decide what content is appropriate for what ages and where the content can be taught. Due to differences among localities across the country, sexual education curriculum varies considerably in content, depth of material covered, requirements, and restrictions. Some interviewees explained that in their jurisdiction, laws prohibiting comprehensive sexual health education go so far as to prevent the material from being taught on school grounds. Some community-based organizations from these jurisdictions often fill that void by engaging the youth in programs that teach sexual health education.

The relationship between the local public health agencies and local school boards also vary considerably. Some local public health agencies play a role in advising on the curriculum or making presentations at schools, while others have no involvement whatsoever. Many interviewees from local public health agencies expressed frustration in not having more of a role in the sexual health education of teenagers in their community. Others stressed the importance of relationship building between the local public health agencies and schools. Interviewees who

were successful in building relationships with schools explained that some schools occasionally invite them in to present on sexual health, contraception, or STD screening to their students.

Due to the ever-present stigma and concern that sexual health education is not appropriate for a classroom setting, school boards often omit comprehensive information about STDs, prevention, treatment, and safe sex practices, leaving students either uninformed or left to get the information on their own terms. Comprehensive sexual health education is more of the exception than the rule—generally, large urban settings offer more comprehensive programs including access to condoms, while smaller jurisdictions place more limitations on what can be taught in the classroom.

Federal Agencies' Role in Sexual Health Education

While the federal government does not insert itself in the specifics of school-based sexual health education, as that role is left most often to local school boards, it does provide several funding opportunities to promote sexual health education in schools and other settings as highlighted in Section 2. The funding opportunities range from funding school-based surveillance, STD and pregnancy prevention curriculum, and research projects. States and local jurisdictions typically apply only for grants that align with the community's culture and perception of what is appropriate for school-aged children. Funding opportunities often have strict rules about what can and cannot be taught, and grant recipients must follow those instructions and any predetermined curriculum guidance.

The key federal agency involved with funding sexual health education in school settings is CDC's Division of Adolescent and School Health (DASH), whose mission focuses on helping "students gain fundamental health knowledge and skills, establish healthy behaviors for a lifetime, connect to health services, and avoid becoming pregnant or infected with HIV or STDs." DASH offers funding for school-based HIV and STD prevention and school-based surveillance with the overall goal of promoting adolescent health. Recipients aim to improve the health of middle school and high school students by promoting safe sexual behavior, encouraging STD and HIV testing and treatment, and addressing social determinants of health in their curriculum. The Youth Risk Behavior Survey (YRBS), administered by DASH, provides data on students' health and behavior to identify and reach at-risk students for HIV and STDs. YRBS data demonstrate relevant trends among high school students over time that can inform policymakers in deciding which data-driven interventions to pursue in fighting the STD epidemic in youth populations. While the data is highly useful in evaluating trends and determining local health-focused

interventions and services, not all jurisdictions participate and those who have participated in the past, such as two localities in Rhode Island, have opted out of YRBS because of unease about certain questions in the survey. In the Rhode Island case, the localities expressed concern that questions surrounding suicide and sexual health were inappropriate for school-aged teenagers.

Through funding from DASH, NCSD partnered with the National Association of State Boards of Education in July 2019, to implement the Leadership Exchange for Adolescent Health Promotion (LEAHP) program to increase students' access to sexual health services and education in safe and supportive environments. LEAHP aims to use state-level leadership teams, comprised of at least one representative from the state education agency and at least one representative from the state health agency, to devise actionable plans to achieve those goals. Massachusetts and North Carolina, along with Michigan, Wisconsin, and the District of Columbia, make up the first LEAHP membership cohort. By bringing state public health and education stakeholders together, LEAHP will assist in the collaborative development of state-specific policies and evaluation methods to bring better sexual health education to students.

Aside from school-based surveillance, a number of federal grant programs geared toward school-age sexual health education have a prominent role in curriculum choices of schools and community organizations. These programs include HHS' Sexual Risk and Avoidance Education (SRAE) Program, Title V Competitive SRAE Program, the Personal Responsibility Education Program (PREP), and the Teen Pregnancy Prevention (TPP) Program. The programs and the grants awarded were discussed in Section 2. In recent years, some significant changes have been made to the program requirements outlined in the related funding opportunity announcements. The federal focus of school-based sexual health education curriculum has shifted almost exclusively to teaching abstinence—and, in some cases, prohibiting the discussion and distribution of contraceptives. While abstinence will prevent an individual from contracting an STD and is an important component of sexual health education, abstinence-only curricula falls short of educating students comprehensively about safe sexual behavior.

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Section 4: Actions for Consideration

The sexually transmitted disease (STD) field suffers from inadequate resources. Exacerbating the lack of resources are social and structural issues that prevent individuals from accessing treatment or avoiding STDs in the first place. Without additional resources, or the flexibility to make better use of already existing resources, STD programs at the frontlines of the epidemic are left to innovate as best they can to grapple with the environment in which their epidemic thrives. Resource scarcity is attributable not only to constrained funds, but also to the siloing of programs and program restrictions on how available funding can be used.

The latest STD surveillance data present a particularly worrisome picture. STD rates are soaring, setting records for recorded levels of the infections, while showing no signs of abating. At the same time, attention to this STD epidemic by policymakers is limited. Those involved directly in STD programs and services appear to be making the most of the resources they have and are innovative to the extent they can be under existing program structures. To facilitate their ability to leverage resources to identify all STD cases and get everyone with an STD successfully treated, changes are needed.

As noted earlier, federal efforts are now underway, spearheaded by the Assistant Secretary for Health, to assemble a federal sexually transmitted infection (STI) action plan. This plan is scheduled for release in calendar year 2020, along with updates to the National HIV/AIDS Strategy, National Hepatitis Action Plan, and Healthy People (2030), and the End HIV Initiative. This new STI effort offers an opportunity to bring cohesion and coordination to STD prevention and control efforts across the federal government. Moreover, intensified efforts to combat hepatitis, HIV, and STDs can be tied together through a cross-cutting plan to bring different entities to the table and to design funding opportunities and programs that will allow for more flexibility in the dollars provided.

As the STI action plan develops, emphasis should be placed on developing cohesion across federal entities and providing tools for states and localities to do the same. Greater coordination between entities with intertwined goals, as in the case of STD and HIV elimination, can reduce program conflicts, provide a greater pool of available funding, and enable public health services in different program areas to reach patients they may otherwise miss. Efforts should be directed towards building “one-stop shop” public health care services, in order to provide for more streamlined and wide-reaching STD treatment and control. Wherever possible, services should be collocated or otherwise bundled together.

Above all, changes are necessary in the underfunded, under-resourced STD infrastructure. As stated previously in this report and in Phase I, effective infrastructure models for infectious disease control already exist in the case of other pathogens. HIV, in particular, provides a clear model for effective STD control, as it spreads through many of the same vectors and behaviors. HIV prevention and control has a proven, successful infrastructure in place that can be leveraged to address STDs. While sharing many of the pathogenic and demographic characteristics of HIV, conventional STDs are a condition for which effective cures exist and containment is medically feasible; but financial and programmatic obstacles stand in the way of reducing STDs nationwide. Integration of STD programs and the de-siloing of dollars between STD and HIV are key to addressing the epidemic. When making changes to programs, stakeholders need to keep open lines of communication and consider the intersections in their communities that may contribute to the epidemic. Most importantly, stakeholders at all levels need to approach STD control with the same urgency and attention as other infectious disease epidemics.

To this end, the Panel offers the following Actions for Consideration:

Institute federal funding reforms to enhance program agility across STD programs.

Infectious disease outbreaks are dynamic events that ebb and flow as a result of a confluence of factors. Social, economic, and political factors can deeply affect populations vulnerable to infection and the rate at which they are exposed. Like other infectious diseases, STDs cross community and geographic boundaries. The demographics they reach are varied and require different approaches to address. As such, no one response will fit uniformly across the nation, or even within a county, and actions will need to be tailored to meet local needs to respond to shifting social, economic, and epidemiological trends. STD prevention and control cannot be established without an agile, adaptive infrastructure at the core of any program.

Perhaps the most fundamental reform in the area of resources relates to the direct funds accessible by STD programs. Currently, STD funding is almost universally outpaced by prevalence. Public health departments frequently noted their struggle to provide vital services and the lack of staff capacity and resources to effectively carry out their mission. As described in Section 3 under Resource Constraints, multiple jurisdictions reported reducing disease intervention specialists (DIS), partner services, and other personnel and resource intensive operations due to funding constraints. For most jurisdictions, funding increases are essential for them to ramp their efforts to more fully tackle the levels and burden of diseases encountered. Ideally, this funding, like other aspects of an effective prevention and control program, needs to

be adaptive and dynamic, with adjustments and the ability to shift resources to meet local needs based on disease data permitted.

Accordingly, to better reach underserved communities where the bulk of STD prevalence is found, STD programs would benefit from additional flexibilities in the use of program funding. At present, limitations on the use of program funds and assets prevent ready shifts in resource utilization. Flexibility can be accorded in multiple ways and will vary based on the jurisdiction. Instituting flexibilities would help to break down the program silos that were consistently identified as key obstacles to STD program execution.

De-siloing would afford necessary broader authority for public health departments to pursue practices and techniques that have proven to be effective for STD control. Funding opportunities should be structured such that dollars can be more flexibly shifted between program areas over time to compensate for the dynamic nature of an infectious disease epidemic as supported by the data collected on case and prevalence rates. Additionally, funds for programs with overlapping constituencies should provide as much latitude as possible to allow use across funding categories for staff and services. Currently, DIS conducting HIV duties using HIV dollars generally have some flexibility to engage in STD work. That model should be standard across the board and expanded.

De-siloing federal STD and HIV cooperative agreements and grants would enable quicker program response and better adaptability to outbreaks, while remaining fiscally accountable and effective. Each program currently has its own rules and reporting requirements that inhibit the ease of movement of funds and may be contradictory. These rules should be closely examined to identify and remove specific barriers. Allowing for greater integration would facilitate more effective use of already extant dollars, enhancing the capacity of public health departments without requiring additional investment. It does not, however, eliminate the need for additional funding.

Trepidation is not uncommon among some STD and HIV control entities that de-siloing could result in the available dollars being spread too thin. Program staff may be hesitant to share resources—funds or staff—for fear of losing control over resources they view as uniquely "theirs." While the formal breaking down of siloes would provide a vote of confidence to those merged programs, de-siloing would be far more effective in combination with additional funding. It will be important to incentivize resource sharing and kick-start the use of integrated

programs. As the Panel noted in the Phase I Actions for Consideration, an expansion of STD services is necessary to address emerging trends and requires the influx of new money.

Interruptions in funding can greatly handicap STD programs and stymie progress. To contain the STD epidemic, a sustained effort is necessary. In that same vein, it is critical that funding opportunities be planned as long-term investments, with the goal of enabling a viable public health infrastructure that can be responsive to not only the current STD epidemic, but any future increases in prevalence, as well.

Expand access to care, with a focus on delivering community-sensitive and patient-centered care.

The fractured nature of the American health care system creates deterrents to accessing care. In the case of STDs, this is all the more significant, as the populations afflicted are often lower income, uninsured or underinsured, or otherwise disadvantaged. Medicaid expansion has helped reach this population where implemented, but not all states have adopted it. While solutions to address limitations in the health care system to providing care for all Americans are beyond the scope of this study—and require reforms far beyond the realm of STDs—multiple approaches exist that can be applied to enhance the ability of STD prevention and control entities to link populations, especially those vulnerable, to care and equip them to more readily prevent illness.

Health care affordability and issues related to insurance and billing are critical barriers to effective STD prevention and control. But, as highlighted in this report, they are not the only impediments. Transportation stood out as an issue for demographic groups prone to STD infection. In rural and in particular, frontier communities, the nearest clinic may require a lengthy drive, delaying or preventing diagnosis and treatment; in urban or suburban areas, public transportation may be insufficient to reach STD services at care facilities. Across all settings, poorer patients may be unable to afford the cost of transportation to a service center or unable to get the time off from work to make a lengthy trip. They may also lack adequate and affordable childcare. Where possible, service providers should provide care outside of traditional business hours and provide opportunities for screening and care either remotely or through mobile approaches. Jurisdictions, however, will need funding to support these activities.

To further address the issue of access, public health entities need to be empowered and resourced to expand opportunities to meet the care needs of their communities whether directly or through partnerships. Telemedicine in combination with mailed test kits for remote diagnosis

and prescription of medication, expanded DIS staff for off-site testing and prescription, reinstitution of STD clinics, partnerships with other health care providers to provide STD services, and increased use of expedited partner therapy (EPT) are all ways to enable patients to be connected to care.

Expanding the use of EPT at the state and local level would streamline delivery of care to a larger patient set, and curtail the spread of disease without requiring a visit to a clinic by identified partners. Federal leaders should advocate for the practice, and incentivize its use in funding opportunities, training, and awareness campaigns. Accordingly, the Health Resources and Services Administration (HRSA) should explore changing the rule that currently prohibits Federally Qualified Health Centers from providing EPT, as it would enable a much wider base of providers to reach key populations. To further allay concerns regarding techniques and legality surrounding the practice, the United States Preventive Services Task Force should review EPT for potential inclusion as a recommended service for providers. Such an inclusion would improve EPT utilization as a standard of care and expand reimbursement for its use. In order to enable effective use of EPT, training should be offered to all providers, whether by way of the STD Clinical Prevention Training Centers, online materials, or any other outlet or combination thereof. This training would help assist providers address the communities they service and how to best utilize EPT within them.

For patients struggling with coinfections or recurrent illness, having to go to multiple providers or between facilities to access treatment and laboratory services can be a major obstacle to obtaining care and to effective control. Services should be consolidated, to the extent possible, to facilitate “one-stop-shopping” at clinics or other points of care. Providing access to most or all testing and treatment during a single trip would radically simplify the experience for patients while also enabling more ready treatment of coinfections and early detection of diseases, such as syphilis and HIV, and afford better, more efficient use of resources. Removing funding siloes by providing more flexibility and incentives in funding streams, then tying them to local data to support immediate needs, promotes integrated services and moves towards a one-stop shopping model. This one-stop shop for point of care, along with off-site mechanisms described above, would remove critical barriers to care for some of the most vulnerable populations in the field.

Prospective patients are less likely to seek care when service providers and staff are not sensitive to their communities. Repeatedly, interviewees cited concerns that patients from communities that are underserved, disadvantaged, or prone to discrimination will often be hesitant to seek treatment because of distrust in health care institutions or concerns for privacy and safety. As

these underserved communities often bear much of the burden of STDs, it is vital that they feel safe and comfortable when seeking care or preventive services. Program administrators and staff should consult with community leaders and individuals embedded within their jurisdictions to gain a better understanding of the factors present that contribute to prevalence tailor their response accordingly.

Appropriate training should made be available so that all involved in contact with patients have the knowledge and tools at hand to sensitively and respectfully address members of minority or other marginalized groups and their concerns. Efforts to build relationships with community groups through awareness campaigns and events should be conducted where possible. Some jurisdictions, such as St. Louis, Missouri, enter into partnerships with community groups to target different populations and carry out direct messaging and engagement.

In order to alleviate concerns around privacy and confidentiality with insurance billing, reforms need to be instituted on how insurance providers communicate with patients. Nondescript or generic explanation of benefits documents, or the option to not disclose a visit via an explanation of benefits, are among the potential solutions. Massachusetts, by way of the 2018 Protecting Access to Confidential Health Care (PATCH) Act, provides an effective case model for states to enable insurance billing in a manner that retains patient confidentiality and encourages them to seek care.

Enable more rapid data release and results of research.

Without actionable data, public health entities cannot paint an immediate and current picture of their epidemic. Delays in the release of data from trusted sources compromise the ability of public health departments to present metrics before policymakers or seek out new funding opportunities. Data from preceding years are often released well after the conclusion of a calendar year, resulting in a missed opportunity to advocate for additional funding. A salient example of the dynamic nature of the STD epidemic is Arizona's experience with congenital syphilis, which almost doubled in cases between 2016 and 2017, and again from 2017 to 2018. Such numbers require immediate response. Delays in data release mean that the numbers, when finally, available, might reflect an outbreak that is eclipsed by the current scale. To enable more rapid program enhancements and agile activities, STD data releases need to be more frequent and timely. An example of a more adaptive data release mechanism is the release of "provisional" data and research publications between public health entities to disseminate emerging trends.

The agility of the data means little, however, if it is not immediately usable. Varying standards regarding data collection mean that there are often conflicts in the variables collected across jurisdictions, making it hard for national organizations, or even adjacent jurisdictions, to create a cohesive image of the epidemic. Nonstandard data further complicates analysis of the STD epidemic by requiring greater staff resources to reconcile conflicting or mismatched datasets. The Centers for Disease Control and Prevention (CDC) does not currently have the authority to create universal standards for data or require the submission of the data; providing CDC that authority would enable uniform variable sets across jurisdictions, and ensure that where data is collected, it is consistent and more immediately actionable.

Implement science-based, health-centric education and awareness campaigns to reduce stigma and encourage healthy behaviors.

Regardless of resources, stigma and social factors continue to pose a significant obstacle to effective STD prevention and control. Effective STD prevention and control can only be realized if outreach and access to care is enabled, and individuals are empowered to address health concerns in a culturally sensitive health care setting. Above all, there is a need for comprehensive sexual health education. Virtually all interviewees raised significant concerns about the lack of public understanding and awareness of the causative agents, symptoms, transmission methods, health implications, and treatment options surrounding STDs. Interviewees at all levels of government lamented the lack of comprehensive, science-based sexual health education that accurately represents to individuals the risk behaviors that could cause infection, what precautions to take to avoid infection, and how to seek care for infection.

Comprehensive sexual health education is necessary to establish effective STD control to address risk behaviors, by providing common sense, realistic and practical information that fits the lifestyles of students. Many states offer some form of sexual health education, but it is rare to find a compulsory program that is broad and not centered on abstinence. While abstinence-only education has not been observed in studies to reduce STD rates, abstinence can and should remain a component of sexual health education. Avoiding the reality that teens and young adults have sex and not instructing them on how to safely engage in sexual behaviors contributes to expanded prevalence of STIs.

The groups most vulnerable to STDs tend to engage in sexual activity with often limited education on the risks of their behaviors and how to reduce those risks. STD rates are rising in teens and young adults, as are the number of cases of congenital syphilis cases associated with young mothers. When combined with decreasing condom use observed across-the-board, the

critical need for sexual health education that is clear, up-front, and comprehensive about safe sexual practices and the risks, symptoms, and treatments for STDs becomes apparent.

Sexual health education, like other aspects of any STD response, needs to be community sensitive and address the gamut of sexual practices one may encounter, as well as factors pertinent to the LGBTQIA+ community. This level of openness serves two purposes: first, to inform on STD-related details for avoiding and treating infection and second, to reduce the stigma associated with STDs and create an environment in which individuals are not afraid to seek assistance for illness.

While comprehensive sexual health education in a formal setting is an absolute necessity, it is not a silver bullet for awareness or for mass education of the public. Everyone in the community must be made aware of the risks, symptoms, and options for prevention and treatment of STDs, irrespective of who they are or the population group to which they belong. Beyond education in formal settings, health departments must be proactive in creating general awareness of STD symptoms and transmission vectors and providing information on where and how to obtain testing and treatment. Awareness campaigns can take many forms suited to each community, with advertising through the Internet, TV, radio, and public posting—as well as through hosted town halls and other events. To reach the key vulnerable demographics associated with increasing rates, targeted advertisements or messaging should be further expanded through smart phone apps common within the communities (such as Grindr and other hookup apps).

Accurate and complete information must be readily accessible. During the course of this study, the study team found that many public health department websites are outdated, difficult to navigate, and suffer incompatibilities with modern hardware (especially, cellphones, which most patients in vulnerable populations use as opposed to traditional computers). In some cases, the websites have very little jurisdiction-specific information and mostly link to CDC or other sources of information such as the American Sexual Health Association (ASHA). This is often a function of resources, both in terms of health care and technology staff, and local culture. In addition, some websites contain content warnings with links to STD and HIV information, as noted earlier. It is imperative that patients seeking care or information for a condition can, with minimal effort, find the relevant material and easily learn about what local resources are available and how to access them. Websites such as the Arizona Department of Health

Services[120] and the City of Philadelphia[121] can provide models for site design and data access at the local level.

Health care providers must also turn inward and assess their own STD knowledge. Interviewees commonly reported that private providers are often reluctant to make an STD diagnosis, and will regularly consider other diagnoses before issuing an STD test or connecting symptoms to an STD. As the epidemic intensifies and record case numbers are observed, it is vital that providers consider sexual health as a core component of general health in their practice. Doctors, nurses, and other medical professionals should receive training to more readily identify STD symptoms and complications, to speak to patients about their sexual history in a sensitive and nurturing fashion, and to provide proactive support for potential STD cases.

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[120] Arizona Department of Health Services, "Sexually Transmitted Disease (STD) Control," Accessed October 28, 2019, http://bit.ly/2Jvs4J7.

[121] City of Philadelphia, "HIV & STDs," August 14, 2019, Accessed October 28, 2019, http://bit.ly/31ZV6Hu/.

Conclusion

To combat the STD epidemic, it must first be recognized as an epidemic, akin to any other large-scale and rapidly growing infectious disease outbreak. In September 2019, the CDC activated its Emergency Operations Center to investigate 380 cases of lung injury associated with the vaping of illicit THC products, including six deaths at the time.[122] With over 1300 congenital syphilis cases, including 77 deaths in 2018 alone, and rapidly rising case counts across all three diseases, a question arises: why are not similarly urgent measures underway to address the STD epidemic? This urgency is not confined to federal entities; containment requires a concerted effort at all levels, from the frontlines of care to the Congress.

In the foreword to CDC's 2018 STD surveillance report, as well as earlier reports dating back to 2015, the Director of the Division of STD Prevention notes:

> *It is imperative that federal, state, and local programs employ strategies that maximize long-term population impact by reducing STD incidence and promoting sexual, reproductive, maternal, and infant health. The resurgence of syphilis, and particularly congenital syphilis, is not an arbitrary event, but rather a symptom of a deteriorating public health infrastructure and lack of access to health care.*[123]

Importantly, the Director emphasizes that the cases in the report are not just numbers—they represent real people.

Stakeholders at all levels need to be better aligned and willing to undertake a restructuring of the systems that support STD prevention, treatment, and control. Some of the actions outlined in this report are specific to STDs, while others are broader given the intersection of infectious diseases and the structure of the health care system. Regardless, changes are needed to reduce morbidity and mortality and to improve health for all.

As described in the Phase I report, STD prevention and control needs to be approached from a whole-health perspective, with sexual health as a core component of overall wellness. Stigma around sexual health in the general public must be broken—a feat achievable through universal,

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[122] Centers for Disease Control, "Investigation of Lung Injury Associated with E-cigarette Product use, or Vaping," September 16, 2019, Accessed October 28, 2019, http://bit.ly/2JuM8v9.

[123] CDC, Sexually Transmitted Disease Surveillance 2018, October 2019.

scientifically accurate, personally relatable, and community-sensitive sexual health education in formal education settings and in robust awareness campaigns at all levels. Providers, too, need to confront their discomfort in addressing sexual health concerns and afforded appropriate training and resources to order to provide effective counsel and services to their patients. In addition, the settings in which services are provided should be revisited. The return of STD categorical clinics, reframed as sexual health clinics or health and wellness clinics, would provide accessible and private spaces to seek care and importantly assist in de-stigmatizing efforts by making sexual health facilities more commonplace.

Multiple practical and programmatic changes are needed to address the nation's alarming STD rates. First and foremost, overall STD funding needs to be substantially increased to address head-on the challenge of insufficient resources to tackle the significant and growing STD morbidity nationwide. The Panel recognizes that budgets are tight at all levels of government—federal, state, and local. Each faces extraordinary pressures, with numerous interests and priorities competing against one another while at the same time, resources are limited. It is because of this fiscal environment that jurisdictions also need flexibility and agility in programs so that existing funding resources can be best leveraged to meet identified needs. To that end, already extant funds need to be, to the extent possible, de-siloed so as to provide local health departments with the maximum flexibility to tailor their programs to their jurisdiction-specific populations demographics and challenges, supported by accurate surveillance data. New funding is absolutely necessary, but affording flexibilities in existing and future program funding would maximize the effectiveness of the available dollars and enable programs to become more agile and effective.

These changes should be implemented using data that is more immediately and readily available. By taking advantage of modern electronic health records and lab reporting systems, and publishing provisional data, reports can be more quickly delivered to local prevention and control entities. With improved data access, health departments can design their programs to be more adaptive to emerging epidemic trends, while also having the necessary evidence to present to decisionmakers to justify the additional resources they will need to address those trends.

To achieve these fundamental changes, the STD field requires not only a champion, as described in Phase I, but also standard bearers to represent the consequences of inaction to the public. Several officials are well suited to serve as the champion. Among the most prominent is the Assistant Secretary for Health, particularly given that office's role in the forthcoming Federal STI Action Plan. As the architect and overseer of not only the Federal STI Action Plan, but also

the End HIV Epidemic, updates to the hepatitis and HIV action plans, and Healthy People 2030, the Assistant Secretary for Health is uniquely positioned to provide the high-level guidance and advocacy for integration that will be required. These plans and other potential public health initiatives present a perfect opportunity for synergy in addressing STDs.

Whether exploiting linkages between STDs and HIV to eliminate both infections, examining drug use in connection with hepatitis to reduce risk behaviors that effect STDs, or establishing data standards and assessing the state of the nation through Healthy People, the Assistant Secretary for Health can tie together disparate initiatives to multiply effectiveness at all levels. As the STD field generally suffers from a lack of attention on the part of the general public and policymakers, having a prominent official with the appropriate authority to link STD concerns with other public health concerns would be especially advantageous. Standard bearers are much harder to come by, but could be brought to the forefront by tackling STDs as a component of other, high-profile initiatives.

The three STDs addressed in this report are curable, have significant morbidity, are not necessarily fatal, and have known clinical qualities. They do not have the public image that HIV had from its initial emergence as a new, terrifying illness with a death sentence. While perhaps not as immediately visible as HIV, the overall societal impact of syphilis, chlamydia, and gonorrhea, as well as their significant morbidity and potential mortality are unmistakable. The long list of complications include infertility, impotence, chronic pelvic inflammatory disorder, blindness, paralysis, miscarriages, or death from untreated or inadequately treated sexually transmitted illnesses come with a huge cost. The STD field does not currently have a highly visible symbol to rally around; but, like many epidemics, the significant growth of STDs needs to become more visible to secure the political action needed to address it.

Containing the STD epidemic and reducing illness caused by STDs will not be a speedy or low-cost initiative. It is a chronic condition with intersections to poverty, criminal justice, substance use, and the health care system itself that will require commitment over time and an expenditure of political will in equal or greater sum than the dollar value required. That said, it is possible. The reforms that will enhance STD control will also contribute to HIV control, as well the control of other sexually transmitted infections such as hepatitis and herpes. Indeed, a common sentiment expressed by interviewees throughout both phases of this study (as well as reported in recent research) was that HIV cannot be eliminated without also addressing STDs, as STDs are an underlying cause of new HIV infections. The de-stigmatization of sexual health

and provision of sexual health education to school-age youth can help avert future infections, while aiding in a reduction in teen pregnancy and risky behaviors.

The End HIV Initiative and forthcoming Federal STI Action Plan present a prime opportunity to engage in the necessary reforms to greatly reduce or eliminate outright conventional sexually transmitted diseases in the foreseeable future. By resolving constraints in data reporting and availability, expanding access to care, increasing awareness and knowledge surrounding STDs, enabling public health entities to better use the resources they receive, and empowering them with sufficient funding to combat the epidemic in their jurisdictions, control can be established. Syphilis, gonorrhea, and chlamydia are curable and well-understood; effective practices are known; gaps in the system are defined and ready to be remedied. The epidemic may still be hidden—and still be getting worse—but it can be controlled. It takes only the will, and the investment, to address it as the epidemic it is.

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Appendix A: Panel of Fellows and Study Team

Panel of Fellows

Dr. Georges C. Benjamin, M.D. (Chair)*— A well-known health policy leader, practitioner, and administrator, Dr. Benjamin currently serves as the Executive Director of the American Public Health Association, the nation's oldest and largest organization of public health professionals. He is also a former Secretary of Health for the state of Maryland. Dr. Benjamin is a graduate of the Illinois Institute of Technology and the University of Illinois College of Medicine. He is board-certified in internal medicine, a Master of the American College of Physicians, a fellow of the National Academy of Public Administration, a fellow emeritus of the American College of Emergency Physicians, and a member of the National Academy of Medicine. He serves on several nonprofit boards such as Research!America, the Truth Foundation, and the Reagan-Udall Foundation. He is also a member of the National Infrastructure Advisory Council, a council that advises the President on how best to assure the security of the nation's critical infrastructure.

Dr. Gregg A. Pane*— Dr. Pane is currently the Senior Director, Health Care Affairs, Association of American Medical Colleges. Formerly, he was the Medical Director, National Medical Policy and Operations, AETNA, Incorporated; Director, Department of Medical Assistance Services, Commonwealth of Virginia; Director, Division of Medical Assistance Services and Director, National Healthcare Preparedness Programs, Office of the Assistant Secretary for Preparedness and Response, U.S. Department of Health and Human Services; Director and State Health Officer, District of Columbia Department of Health; System Vice President, Clinical Quality and Safety Medical Director, Public Policy Initiatives, Henry Ford Health System; Chief Policy and Planning Officer, Veterans Health Administration; Vice President, Quality Management and Chief Medical Officer, Unisys Health Information Management; Medical Director, Louisiana Medicaid Program; Associate Adjunct Professor and Assistant Chief and Residency Program Director, Division of Emergency Medicine, University of California at Irvine.

Dr. Kenneth W. Kizer*—Dr. Kenneth W. Kizer is currently the Chief Healthcare Transformation Officer and Senior Executive Vice President at Atlas Research. His previous positions include distinguished professor and Director of the Institute for Population Health Improvement at the University of California, Davis; founding President and CEO, National Quality Forum; Chairman, Chief Executive Officer and President, Medsphere Systems

Corporation; Under Secretary for Health, U.S. Department of Veterans Affairs; Director, California Department of Health Services; Director, California Emergency Medical Services Authority; and Chairman, The California Wellness Foundation. Among his multiple current roles at IPHI, he serves as the Chief Medical Officer for the California Department of Managed Healthcare, Director of the California Cancer Reporting and Epidemiologic Surveillance Program, and Chief Quality Improvement Consultant for the Medi-Cal Quality Improvement Program. He is a member of the National Academy of Medicine and a fellow or distinguished fellow of twelve professional societies.

Dr. Shoshanna Sofaer*— Dr. Sofaer is Managing Researcher at the American Institutes for Research and Senior Scholar at the Graduate School of Public Health and Health Policy at the City University of New York and an independent consultant. From 1998 to 2014, Dr. Sofaer was the Robert P. Luciano Professor of Health Care Policy at the Baruch College School of Public Affairs. She previously held academic positions at George Washington University Medical Center and the UCLA School of Public Health. She completed her M.P.H. and D.P.H. degrees at the UC Berkeley, School of Public Health. Her career spans the fields of health care delivery and public health. She is a nationally recognized policy expert in such diverse areas as Medicare, health insurance access and reform, disparities in maternal and infant outcomes, quality measurement, public reporting and patient and family engagement. Dr. Sofaer studied issues in the delivery of care for infectious diseases including HIV/AIDS and tuberculosis. She has expertise in a variety of qualitative and quantitative research methods, and in the translation and dissemination of findings, topics on which she has trained many other researchers. Dr. Sofaer has published over sixty-five peer-reviewed articles and designed and led over thirty research and evaluation studies in her fields of expertise. She is a member of the Board of Directors of Academy Health, the professional society of health services and policy researchers and Public Health Solutions, the largest non-profit public health organization in New York City.

William H. Gimson*—Mr. Gimson is a senior executive with experience leading large organizations through transformative changes. Currently a health management consultant, he most recently served as the Chief Operating Officer of St. Boniface Hospital in Haiti during challenging times that included a cholera outbreak, a Zika epidemic and the Hurricane Matthew response. Mr. Gimson is the Former Executive Director, Cancer Prevention and Research Institute of Texas. Previously, Mr. Gimson had a long career with the Centers for Disease Control and Prevention in positions including Chief Operating Officer, Associate Director for Budget and Finance, and Associate Director Chronic Disease Division, among others. Mr.

*Academy Fellow

Gimson served on a Provincial Reconstruction Team (PRT) in Iraq in 2008 as the civilian leader of the PRT health section. Awards include HHS' Secretary's Award for Distinguished Service, Presidential Meritorious Rank Award and Distinguished Rank Award, and the Roger W. Jones Award for Executive Leadership, American University, Washington, D.C. Mr. Gimson has an MBA from Duke University and BA from the University of Wisconsin-Milwaukee.

Academy Study Team

Brenna Isman, *Director of Academy Studies* — Ms. Isman oversees the Academy's studies and provides strategic leadership, project oversight, and subject matter expertise to all of the project study teams. In coordination with the Academy Panels of Fellows, she guides the teams in developing work plans, research methodology, and comprehensive analysis and recommendations. Ms. Isman has led Academy projects assisting a national regulatory and oversight board in development and implementation of its strategic plan, as well as a statutorily required assessment of the National Aeronautics and Space Administration's use of its Advisory Council and a study of regulatory affordability for the Environmental Protection Agency. Her expertise includes directing organizational studies of the U.S. State Department's Office of Inspector General and strategic plan development for the Postal Regulatory Commission and the Social Security Administration, as well as organizational change consulting support for the U.S. Coast Guard. Ms. Isman also led the Academy's work on the Collaborative Forum, which investigated best practices for states' management of federally funded programs. She holds an MBA from American University and a Bachelor of Science in Human Resource Management from the University of Delaware.

Cynthia Heckmann*, *Project Director* — Ms. Heckmann is a fellow of the National Academy of Public Administration. A retired senior executive, Ms. Heckmann served as the project director for both Phase I and Phase II of the STD studies for the National Coalition of STD Directors. Previously she served as Project Director on the Academy's review of the study and administrative processes of the National Academies of Science, Engineering and Medicine, the Secret Service's organizational change efforts, the National Science Foundation's use of cooperative agreements in support of large-scale research facilities, the Department of Justice's Civil Rights Division, and the Center for Disease Control and Prevention's human resource process review. Her extensive career at the Government Accountability Office includes serving as the Chief Human Capital Officer (CHCO) and Deputy Chief Information Officer. Ms. Heckmann also has executive branch experience, as well as state government experience. Ms. Heckmann served as a strategic advisor on research studies for the Partnership for Public

Service and is currently a CHCO SAGE—Strategic Advisor for Government Executives—for the Partnership. She holds a Master of Public Administration from Northeastern University and a Bachelor of Arts from Simmons College. She also attended the Senior Executive Fellows Program at Harvard University's John F. Kennedy School of Government and Yale University's School of Organization and Management.

*Academy Fellow

Kate Connor, *Research Analyst* — Ms. Connor joined the Academy in 2018 and has served on several Academy studies, including work for the Agricultural Research Service and the Defense Nuclear Facilities Safety Board. Prior to joining the Academy, she also served as a Public Policy and Government Relations Intern with the American Association of University Women and as an intern on the U.S. Senate Committee on the Budget. Ms. Connor taught high school for several years in Guilford County, North Carolina and she recently graduated from Georgetown University with a Master's in Public Policy. Ms. Connor also holds a Bachelor of Arts in History and Political Science and a Master's in Teaching from the University of North Carolina at Chapel Hill.

Richard Pezzella, *Research Associate* — Mr. Pezzella joined the Academy in June 2018 after completing a series of internships around Washington, D.C. Previously, during the summer of 2016, he worked in Washington, as a grassroots organizer with Mayday America, a campaign finance reform group. After college graduation, in May 2017, Mr. Pezzella returned to Washington to intern in the office of Congressman Eliot L. Engel, and for the government relations and communications firm, Signal Group. His areas of interest and experience include infrastructure, public health, international relations, technology, and space policy. Mr. Pezzella graduated in May 2017 from SUNY New Paltz with a Bachelor of Arts in Anthropology and International Relations.

Elise Johnson, *Research Associate* — Ms. Johnson joined the Academy as a Research Associate in June 2019, however, she is not new to the Academy. In the fall of 2018, Ms. Johnson participated in a capstone project for her Public Policy degree that was in collaboration with the Academy. Ms. Johnson and her team wrote a 35-page report titled, *Harnessing the Power of Data to Transform Intergovernmental Grant Programs*. The report focused on how data-driven performance evaluation methods can improve the efficiency of intergovernmental poverty-reducing grant programs. Ms. Johnson graduated in May 2019 from the University of Maryland earning a B.A. in Public Policy and in Government & Politics, with a Minor in Spanish.

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Appendix B: Participating Individuals and Organizations

Louisiana

- **Dr. Alexander Billioux**, Assistant Secretary of Health for the Office of Public Health, Louisiana Department of Health
- **Natalie Cooley**, Regional Coordinator, Office of Public Health STD/HIV Program, Louisiana Department of Health
- **Dr. Chaquetta Johnson,** Deputy Director of Operations, STD/HIV Program, Office of Public Health, Louisiana Department of Health

Massachusetts

- **Karyn Clark**, Director, Worcester Division of Public Health
- **Kevin Cranston**, Assistant Commissioner, Director, Bureau of Infectious Disease and Laboratory Sciences, Massachusetts Department of Public Health
- **Kimberly Daly**, Former Associate Director of the Office of Counseling and Health Services, Salem State University; Former President of the New England College Health Association
- **Julie Federman**, Health Director, Amherst Department of Health
- **Dr. Michael Hirsh**, Medical Director, Worcester Division of Public Health
- **Antonella Lisanti-Park**, Project Manager, Worcester Division of Public Health
- **Monica Valdes Lupi**, Executive Director, Boston Public Health Commission
- **Leslie Pelton-Cairns**, Director, Public Health Initiatives, Massachusetts League of Community Health Centers
- **Kathleen Roosevelt**, Director, Division of STD Prevention, Massachusetts Department of Public Health

Missouri

- **Dr. Rex Archer**, Director of Health, Kansas City Health Department
- **Tonya Bailey**, Clinics Manager, Kansas City Health Department
- **Dr. Carole Baskin,** Director, Communicable Disease Control Services, St. Louis County Department of Public Health
- **Lesha Dennis,** Epidemiology Specialist, Kansas City Health Department
- **Dr. Fredrick Echols**, Director of Health, City of St. Louis Department of Health
- **Ken Griffin,** Chief Operating Officer, St. Louis County Department of Public Health
- **Craig Highfill**, Director of Prevention and Field Operations, Missouri Department of health and Senior Services
- **Kenneth Moore**, Public Health Specialist II, Kansas City Health Department
- **Christine Smith**, STD Bureau Chief, Missouri Department of health and Senior Services
- **Simone Taylor,** Nurse Supervisor of STD and TB Clinics, Kansas City Health Department
- **Tiffany Wilkinson**, Division Manager of Communicable Disease Prevention, Kansas City Health Department

North Carolina

- **Asya Akins**, Nursing Supervisor over STDs and Epidemiology, Cumberland County Health Department
- **Rachel Bridgeman**, Women's Health Nurse Practitioner, Appalachian District Health Department
- **Jacquelyn Clymore**, State HIV/STD Director, NC Division of Public Health
- **Evelyn Foust**, Communicable Disease Branch Head, NC Division of Public Health

- **Jennifer Greene**, Public Health Director, Appalachian District Health Department
- **Lori Haigler,** Medical Director, Cumberland County Health Department
- **Gibbie Harris,** Director, (Charlotte)/Mecklenburg County Public Health Department
- **Duane Holder**, Interim Health Director, Cumberland County Health Department
- **Rod Jenkins,** Deputy Health Director, Cumberland County Health Department
- **Sandy Jennings**, District Clinical Nursing Supervisor, Albemarle Regional Health Services
- **Anita LaFon**, Public Health Nurse Supervisor I, Albemarle Regional Health Services
- **Dr. Victoria Mobley**, Medical Epidemiologist, HIV/STD Medical Director, Field Services Unit Director, NC Division of Public Health
- **Zack Moore**, Epidemiology Section Chief, NC Division of Public Health
- **Nancy Nash**, Director of Nurses, Albemarle Regional Health Services
- **Erika Samoff**, HIV/STD Surveillance Manager, NC Division of Public Health
- **Krystal Vinson,** Director of Nursing, Cumberland County Health Department
- **Kelly Welsh**, Director of Clinical Services, Appalachian District Health Department

Philadelphia

- **Dr. Lenore Asbel**, Medical Director, City of Philadelphia District Health Center 1
- **Cherie Walker-Baban**, Program Manager, City of Philadelphia STD Program
- **Dr. Caroline Johnson**, Deputy Health Commissioner, City of Philadelphia Department of Public Health
- **Melinda Salmon**, Program Manager, City of Philadelphia STD Control Program

Rhode Island

- **Thomas Bertrand**, Chief, Center for HIV, Hepatitis, Sexually Transmitted Diseases & Tuberculosis Epidemiology, Rhode Island Department of Health

Tennessee

- **Leonardo Parker**, Medical Director, Tennessee Department of Health

Utah

- **Kirk Benge**, Director, San Juan County Department of Health
- **Bradon Bradford**, Health Director and Health Officer, Southeast Utah Health Department
- **Wendy Garcia**, Division Director, Davis County Health Department
- **Kassy Keen**, Prevention Manager, Division of STD Prevention, Utah Department of Health
- **Dr. Joseph Miner**, Executive Director, Utah Department of Health
- **Scott White**, STD Surveillance Manager, Division of STD Prevention, Utah Department of Health
- **Sarah Willardson**, Manager, Disease Control & Prevention Bureau, Davis County Health Department

Vermont

- **Daniel Daltry**, Program Chief, HIV/STD/Hepatitis, STD and Hepatitis C Program, Vermont Department of Health
- **Dr. Mark Levine**, Commissioner of Health, Vermont Department of Health

Washington

- **Zandt Bryan,** Infectious Diseases Field Coordinator, Washington State Department of Health

Association of State and Territorial Health Officials

- **Elizabeth Ruebush**, Director, STD, HIV, and Viral Hepatitis program
- **Dr. Karen Smith**, Director and State Public Health Officer, California Department of Public Health (California)
- **Dr. Nathaniel Smith**, Director and State Health Officer, Arkansas Department of Health (Arkansas)

Big Cities Health Coalition

- **Chrissie Juliano**, Executive Director

National Coalition of STD Directors

- **Stephanie Arnold Pang**, Director, Policy and Government Relations
- **Amanda Dennison**, Director, Programs and Partnerships
- **David Harvey,** Executive Director
- **Leandra Lacy**, Manager, Capacity Building
- **Summer Wagner-Walker**, Senior Manager, STD Clinic Initiative

National Association of County & City Health Officials

- **Adriane Casalotti**, Chief, Government and Public Affairs
- **Lori Freeman**, CEO
- **Gretchen Weiss**, Director, HIV, STI, and Viral Hepatitis program

United States Department of Health and Human Services

- **Tammy Beckham,** Director, Office of Infectious Disease and HIV/AIDS Policy
- **Carol Jimenez**, Deputy Director, Strategic Initiatives, Office of Infectious Disease and HIV/AIDS Policy
- **Shanise Owens**, ORISE Fellow

United States Centers for Disease Control and Prevention, Division of STD Prevention

- **Dr. Gail Bolan**, Director, Division of STD Prevention
- **Tom Gift,** Director, Health Services Research and Evaluation Branch, Division of STD Prevention
- **Dr. Raul Romaguera**, Deputy Director, Division of STD Prevention

Division of HIV/AIDS Prevention

- **Dr. Eugene McCray,** Director, Division of HIV/AIDS Prevention

Division of Adolescent and School Health

- **Dr. Kathleen Ethier,** Director, Division of Adolescent and School Health

Health Services Research and Evaluation Branch

- **Dr. Laura Cheever,** Associate Administrator and Chief Medical Officer, HIV/AIDS Bureau

Other Organizations of Interest

- **Naomi Seiler**, Associate Professor, George Washington University

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Appendix D: George Washington University Capstone Project Team

Members of the George Washington University, Trachtenberg School of Public Policy and Public Administration Capstone Project Team assisted the Academy team during the course of this report with research on funding streams associated with the STD field. The students listed below conducted this work as part of the requirements for their Masters in Public Administration/Public Policy:

- Nora Blalock
- John Plack
- Zachary Poss
- Paige Schwartz
- Leslie Zelenko

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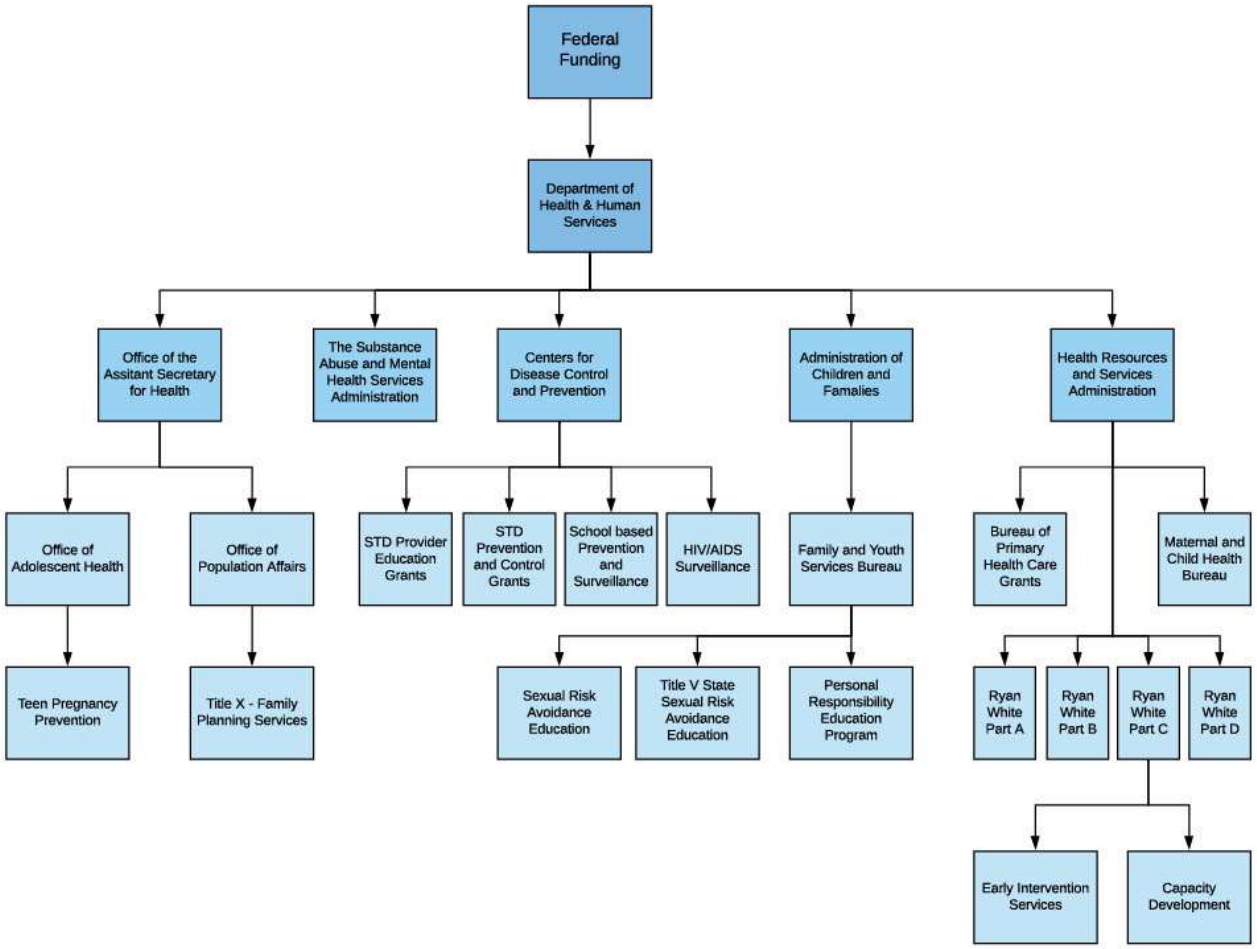
Appendix E: Federal Agencies that Provide STD Funding



Appendix F: Case Studies

The case studies that follow showcase six selected jurisdictions and their frontline efforts in combatting the STD epidemic. Each case study presents information on the state's public health governance structure, STD prevalence rates, funding supporting STD activities, STD services and activities, perceived impacts from the ACA and Medicaid expansion, surveillance and reporting, sexual health education and public awareness efforts, and notable practices and challenges in addressing the STD epidemic. The case studies appear in the following order:

- Louisiana
- Massachusetts
- Missouri
- North Carolina
- Utah
- Vermont

Case Study

Louisiana

State Public Health Structure

Louisiana's public health has a mixed governance structure, with a combination of centralized state and decentralized local control over public health services. The STD/HIV Program (SHP) is centrally housed within the Office of Public Health in the Louisiana Department of Health. It is subdivided into the following organizational units: prevention, services, surveillance, and evaluation. SHP integrates the state's HIV, STD, hepatitis, and family planning programs. The catalyst for this integration in 2014 was constrained resources.

Louisiana's public health system is organized into ten health regions, each comprising a number of the state's 64 parishes. Regional government entities operate the local health districts (LHD). Orleans and Plaquemines parishes operate separate STD clinics.

STD Prevalence

Louisiana has experienced some of the highest STD rates nationwide. In 2017, Louisiana ranked 2nd in rates of reported cases of chlamydia, 3rd for gonorrhea, 3rd for rates of primary and secondary syphilis, and 1st for congenital syphilis. In 2018, Louisiana rates continued to rise for chlamydia and gonorrhea, but syphilis rates slightly declined, with congenital syphilis decreasing by 22 percent. In 2018, Louisiana ranked 2nd in rates of reported cases of chlamydia, 5th for gonorrhea and 7th for rates of primary and secondary syphilis.

Reasons for the increase in STD prevalence rates in Louisiana include:

- Drug usage, including opioids, which may coincide with risky sexual behavior
- Transportation, especially in rural areas, which limits access to care
- High vulnerability to STD transmission in settings such as homeless shelters and transitional homes

STD Prevalence Rates in Louisiana (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	28,739	621.3	8,669	187.4	2,006	43.4	40	63.3
2014	28,955	622.7	9,002	193.6	2,173	46.7	46	71.3
2015	32,325	692.7	10,282	220.1	2,466	52.8	54	83.5
2016	31,727	677.7	10,782	230.3	2,599	55.5	48	76.0
2017	34,756	742.4	12,017	256.5	2,856	61.0	59	93.4
2018	36,293	774.8	12,043	257.1	2,747	58.6	46	72.8

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Louisiana funds its STD services through several federal grants and minimal state funding. The state's activities are primarily funded through the CDC's Prevention and Control for Health Departments (PCHD) Cooperative Agreement. In FY 2019, Louisiana received $2,021,618 in PCHD Cooperative Agreement funding.

In addition to PCHD funding, HRSA's HIV/AIDS Program funds help pay for disease intervention specialists (DIS) and CDC's Division of HIV/AIDS Prevention funding supports STD activities throughout the state's regions. Louisiana also leverages additional funding through Community Health Center Grants, Teen Pregnancy Prevention Program Grants, CDC's Division of Adolescent and School Health Grants, Title V Sexual Risk Avoidance Education Grants, and Personal Responsibility Education Program Grants.

Rebates through HRSA's 340B Drug Pricing Program contribute substantially to funding the state's STD program. This funding is generally consistent and predictable, enabling the state to assume sustained levels year-to-year. As family planning services are integrated in the parish clinics, clinic nursing staff are primarily funded through Title X funding. Louisiana's FY 2019 Title X funding was not impacted by the 2019 mid-year changes to statutory and regulatory requirements.

Louisiana's STD/HIV Program pursues funding opportunities from foundations whenever possible. Currently, the STD/HIV Program's hepatitis activities are partially funded by foundation grants.

STD Services and Activities

Parish health units typically operate a family planning clinic that offers testing for STDs, HIV, and hepatitis. Services also included at these parish health units are children's health services, Women, Infant and Children (WIC) services, tuberculosis testing, and vital records. Some parishes may contract to external organizations to deliver services, but many are operated jointly by the parish and state government. Louisiana is beginning to move towards the "Hub and Spoke" model of health care facilities, similar to that of Vermont, so that STD services are available at both main parish health centers and lower volume health units across the state.

Expedited partner therapy (EPT) is legally permissible in Louisiana, but public health officials explained that the actual provision of the treatment varies. In Louisiana, providers may issue an EPT prescription for a patient's sexual partner(s), as long as the provider screened the patient first.

Partner notification services (PNS) are automatic for most conditions, but it does depend on the circumstances. DIS in the central state office most often perform PNS by way of a phone call.

Impact of the ACA and Medicaid Expansion

In 2016, Louisiana expanded Medicaid. The expansion of Medicaid increased access to sexual health services, including STD and HIV testing and treatment, for adults earning up to 138 percent of the federal poverty level, reducing the number of uninsured in the state by more than 50 percent. The state continues efforts related to Medicaid expansion which allows them to maximize federal revenue and cover over 500,000 individuals to date.

Surveillance and Reporting

Regional DIS evaluate and provide follow-up care for individuals that test positive for syphilis. Patients with gonorrhea and chlamydia typically do not receive DIS services unless the individual is coinfected with HIV. The state's central office receives positive gonorrhea and chlamydia tests. DIS also perform some hepatitis investigations because of the office's integration.

As of May 2019, the state can directly receive electronic laboratory reporting data from the parishes, which helps to pinpoint where and to what extent providers perform STD testing across the state. While the state does not have a centralized lab system, nearly 90 percent of labs report information electronically; some, however, continue to use paper.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

Louisiana does not require sexual health education at any grade level, but allows abstinence-based education that covers sexual risk behaviors, HIV/AIDS, and STDs to be taught to students in grades 7–12. Orleans Parish is unique and may offer sexual health education in grade 3 and above. Schools have the discretion to teach students about contraceptive methods, such as condoms or birth control, as a way to reduce risk related to sexual activity. The curriculum must stress abstinence as the most effective way to avoid both pregnancy and STDs. State law prohibits educators from using any "sexually explicit" materials depicting same-sex activity, counseling or advocating on abortion, or distributing condoms or contraception to students.

Practitioner Training

As one of the eight states in the region covered by the Denver Prevention Training Center (Denver PTC), Louisiana practitioners may receive training from expert medical practitioners and STD clinicians. Denver PTC can provide technical assistance in addition to innovative provider training on STD and HIV prevention. Congenital Syphilis Review Boards also serve as provider training for identifying missing linkages in care.

Public Awareness

STD and HIV screening events, commonly hosted by community-based organizations, work to increase awareness among the public. These community-based organizations that host the outreach events can often receive funding from the state STD/HIV Program to perform the testing.

The STD/HIV Program's website offers tailored information on STDs for certain groups of people including women, children, and public health professionals.

Notable Practices

Community Engagement Gatherings – In Baton Rouge, a state-funded wellness center often hosts community gatherings where community members can access educational materials and STD screening in a social, health-focused setting. Reportedly, parents are receptive to these events, which provide a comfortable and safe environment for their children to learn about STDs and supplement the lack of formal education in schools.

Congenital Syphilis Review Boards – In 2016, SHP established Congenital Syphilis Review Boards to target the congenital syphilis epidemic by assessing systematic failures that led to undetected cases. Health care professionals on the boards gather at a Federally Qualified Health Center to consider missing linkages in prenatal care, testing, treatment, partner services, postnatal care, and care facility settings.

Congenital Syphilis House Calls – In some regions, public health nurses may make house call visits to deliver treatment to pregnant women diagnosed with syphilis, reducing the barrier of transportation.

Challenges

- Hesitancy to address the STD epidemic exists in the state.
- Opioid use, which has been linked to a syphilis and HIV outbreaks in the state, is increasing.
- Patient concerns about missing work and finding childcare hinder accessing treatment.
- High prevalence rates, together with constrained and stagnant funding force programs to creatively stretch resources.
- Restrictions on public school sexual health education and the lack of a uniform, comprehensive sexual health curriculum prevent students learning about the risks of STDs.

Case Study

Massachusetts

State Public Health Structure

Massachusetts is a home rule state, with public health services principally provided by the local health departments (LHD). Additionally, there are 16 regional public health districts representing 116 communities that share resources. Regional districts may be as small as two jurisdictions or as large as 24.

STD services, however, are the responsibility of the state—with the exception of Boston which retains control over STD services. The Massachusetts Department of Public Health's (MDPH's) Bureau of Infectious Disease and Laboratory Sciences houses the Office of HIV/AIDS, the Office of Integrated Surveillance and Informatics Services, and the Division of STD Prevention. The Bureau oversees prevention, surveillance, response, and risk mitigation for 90 infections, including STDs. The Bureau operates the state's sole public health laboratory.

STD Prevalence

STD rates in Massachusetts have risen consistently over recent years. Nationally, the state ranked 39th for chlamydia prevalence, 40th for gonorrhea, and 24th for syphilis in 2018. Significantly, Massachusetts experienced a 55 percent increase in the number of gonorrhea cases between 2016 and 2017 and 62 percent increase between 2016 and 2018. While the state saw a few cases of congenital syphilis over the past few years, Massachusetts did not have any cases in 2017 or 2018, indicating a positive trend.

Reasons attributable to the increase in STD rates in Massachusetts include:

- Other public health issues, such as the opioid epidemic and homelessness
- Relaxed attitudes towards sexual activity, decreased condom usage, and increased pre-exposure prophylaxis (PrEP) usage

STD Prevalence Rates in Massachusetts (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	23,210	346.8	3,106	46.4	990	14.8	4	5.6
2014	21,271	315.3	3,817	56.6	813	12.1	3	4.2
2015	24,100	354.7	3,817	56.2	1,263	18.6	4	5.6
2016	26,807	393.5	4,980	73.1	1,446	21.2	3	4.2
2017	29,315	430.4	7,737	112.8	1,474	21.5	0	0.0
2018	30,460	444.0	8,076	117.7	1,305	19.0	0	0.0

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Massachusetts receives several federal grants, but the state itself does not appropriate any specific funding for local public health departments (with the exception of Boston) as STD services are provided by the state. In FY 2019, Massachusetts received $1,512,684 through the CDC's Prevention and Control for Health Departments (PCHD) Cooperative Agreement.

The state receives additional funding through Community Health Center Grants, Teen Pregnancy Prevention Program Grants, CDC's Division of Adolescent and School Health Grants, Title V Sexual Risk Avoidance Education Grants, and Personal Responsibility Education Program Grants.

Rebates from the 340B Drug Pricing Program are often used for clinical activities in cases of HIV coinfection, and CDC's Division of HIV/AIDS Prevention funding is used to fund the public health laboratory, HIV-STD testing, and some staff where there is an intersection with HIV/AIDS.

While originally funded by the Title X program for FY 2019, Massachusetts now rejects Title X funding and has since voted to replace the missing funding with state funds. As a result of leaving the Title X program, the state's FY 2019 Title X final grant funding was $3,643,624, a reduction of $2,156,376 from the state's initial funding award.

In 2008, the economic recession forced the state to make budget cuts that eliminated all state funding for STD program contracts. In conjunction with MassHealth, the state's health insurance program that covers certain low and medium income people, shifting where people seek care to more private providers, the budget cuts caused 6 of 8 state-funded STD clinics closed. In 2013, the state legislature integrated STDs into the HIV/AIDS line item in the budget. This line item's statutory change at the state level permits funding integration between the state's STDs, HIV/AIDS, Tuberculosis, and Hepatitis programs.

The LHDs do not provide STD services, but for the public health services they do provide, they are reliant on local tax dollars and federal funding that is passed through the state.

STD Services and Activities

While localities have control over most public health services, the state delivers STD services because it determined that it could perform more cohesive data analysis and consistent case follow-up statewide. The state is responsible for surveillance, investigations, epidemiologic analysis and control of sexually transmitted infections. The Bureau of Infectious Disease and Laboratory Science supports a network of integrated prevention, screening and case management services in clinical settings. The state contracts for services through the HIV/AIDS line item in the state budget. These services are offered through 47 contracted vendors, many of which are in hospitals or health care centers, that work with STDs, HIV, Tuberculosis, and Hepatitis.

Massachusetts has a large number of sophisticated walk-in health care sites, that are not STD clinics in the classic sense, but are considered to be centers of excellence. Field Epidemiologists are typically stationed in these care facilities. Additionally, Massachusetts has over 50 Federally Qualified Health Centers, allowing the state to have a broader safety net of health care services for uninsured and underinsured people.

Boston, unique in that the city runs its own STD services, offers STD testing and treatment at numerous care facilities, including the many hospitals in the city. Patients may choose to pay $75 out-of-pocket and not notify their insurance.

Due to the high volume of cases, partner notification services (PNS) typically are not used for chlamydia or gonorrhea unless requested by a clinician. Diseases are more likely to be followed up on if they are cases of coinfection with HIV or syphilis. Massachusetts reclassified the DIS position to Field Epidemiologist so that they could attract more qualified applicants and be better equipped to respond to outbreaks of disease. With Field Epidemiologists and PNS centralized at the state level, the state prevents duplication of efforts from localities attempting to contact a partner and ensures follow-up and linkage to care.

Expedited partner therapy (EPT) is only explicitly permitted by statute for chlamydia patients' partners. In the state, the prescription may be filled without the partner's name on it.

Impact of the ACA and Medicaid Expansion

In 2006, before the ACA, Massachusetts expanded MassHealth, a program first introduced in 1997 that provided nearly universal insurance coverage to residents, and increased access to private provider care with a state-based insurance marketplace known as the MassHealth Connector. In turn, Massachusetts adopted Medicaid expansion in 2013 further expanding access to health care services for low income adults earning up to 138 percent of the federal poverty level. However, in 2017, the state requested 1115 waiver authority, which allows Medicaid provisions to be waived, to reduce the eligible population from 138 percent to 100 percent of the federal poverty line. In its place, Massachusetts would move individuals no longer eligible for Medicaid to the state's subsidized health plans through its health care exchange. The reason for the request were the costs of maintaining provisions of both the MassHealth Connector and Medicaid. In 2018, the Centers for Medicare and Medicaid Services responded that it was not approving that request "at this time." No further action on that request has taken place. The state did not observe many changes in its STD care landscape as a result of the ACA, because of its earlier experience with MassHealth.

Surveillance and Reporting

The Massachusetts Virtual Epidemiologic Network (MAVEN) System, used for STD surveillance and case management, is maintained by the Department of Public Health. First implemented in 2006 by the Bureau of Infectious Disease, MAVEN has since increased efficiency significantly by eliminating siloed data sharing practices and introducing several new elements of functionality such as real-time information sharing, case management, cluster identification and outbreak management, and analysis and evaluation of data. However, testing has not been linked to the MAVEN system yet. MAVEN is almost universally used by all hospitals, commercial labs, and state labs. All 351 jurisdictions are mandated to use the MAVEN system, but a few localities have been slow to integrate due to limited resources. The state offers MAVEN technical assistance.

The Bureau's annual HIV/AIDS, STD, and Viral Hepatitis Surveillance Report provides information about the diseases. State officials mentioned that the next report will likely go into more depth about co-morbidity.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

The more than 351 local and regional educational jurisdictions decide what sexual health education should be taught in schools. Some jurisdictions' boards of health manage school health programs and others partner with community-based organizations for school health program development or prevention activities.

There is neither a mandate for sexual health education coming from the state level nor a consensus on what should be taught. A few legislative attempts at passing laws for more comprehensive sexual health education curriculum, such as the *Healthy Youth Act* of 2018, have occurred, but to date, have not been successful. While the state has little influence over sexual health education in schools, the Division of STD Prevention works with the Office of Youth and Adolescent Health to voice concerns about curriculum's exclusion of STDs.

Massachusetts recently joined the new initiative, the Leadership Exchange for Adolescent Health Promotion (LEAHP), which works with the schools and its partners on setting the direction for sexual health education in the state. NCSD is a lead organization in this initiative, along with Child Trends and the National Alliance of Black School Educators (NABSE), providing technical assistance in this DASH funded program.

Practitioner Training

The Sylvie Ratelle STD/HIV Prevention Training Center (Ratelle PTC) provides training and education for clinicians on STDs and HIV. The Ratelle PTC is a collaborative effort of the Massachusetts Department of Public Health and the CDC. As a member of the National Network of STD Clinical Prevention Training Centers, clinicians can receive clinical consultation services through the Ratelle PTC and the STD Clinical Consultation Services on cases that might need another professional opinion. Courses offered at the training center are related to the diagnosis, treatment, and management of STDs and the prevention of HIV. The Ratelle PTC serves clinicians in New England and Florida through clinical and online courses taught by health care professionals. Massachusetts General Hospital in Boston also offers training for clinicians.

Massachusetts is also a member of the New England Consortium, which was created as a regional partnership to address STD prevention. Consortium members include regional programs and universities, CDC, NCSD, and the six states that make up New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont). Massachusetts participates in monthly calls coordinated through the prevention training center staff, and they use the experience of other states to inform new developments in Massachusetts. The consortium states alert each other of outbreaks and issue clinical alerts. The communication and collaboration between consortium member states is critical because there is a lot of travel between the New England states, which means that STDs do not stay contained to geographic boundaries.

Public Awareness

The STD website from MDPH offers accessible information on several STDs, including symptoms, complications, and many resources. The site directs people to find care facilities by their zip code and offers information about their Partner Services Program.

Notable Practices

Protecting Access to Confidential Health Care (PATCH) Act – In 2018, insured individuals seeking health care in Massachusetts were afforded greater confidentiality with the passage of the PATCH Act. The law provides a choice on what information will appear on the policyholder's explanation of benefits (EOB) and to whom that EOB will be sent. The PATCH Act significantly reduces the confidentiality concerns many individuals, especially children and spouses face when receiving sensitive medical care, like STD testing and treatment.

Field Epidemiologists – By reclassifying the DIS position to Field Epidemiologist, which attracted individuals with advanced degrees and special skillsets, Massachusetts reduced the high turnover rates. The state can pay Field Epidemiologists more for their experience resulting in greater retention and less frequent loss of institutional knowledge.

Challenges

- Clinician unfamiliarity with insurance coverage of STD tests may prevent the clinician from providing all needed types of screening for the patients.
- Inadequate screening contributes to an increase in STD prevalence, however, the state may also be underreporting cases due to the myriad of providers offering STD services.
- Reduced condom usage partially explains the rise in STDs, particularly among men who have sex with men.
- Technology, dating apps, and social media contribute to STD prevalence rates.
- Some hospitals and care facilities use reporting systems other than MAVEN, making reporting difficult.
- More IT and informatics staff are needed to advance the state's surveillance and data analytics.
- There are insufficient resources to match the STD prevalence in the state.
- A lack of education and knowledge of STDs perpetuates the STD epidemic.

Case Study

Missouri

State Public Health Structure

As a home rule state, Missouri's public health system has a local governance structure with local health departments handling most public health services. However, like Massachusetts, STD prevention and control activities are within the state's domain. The Bureau of STD, HIV, and Hepatitis, in the Missouri Department of Health & Senior Services, is responsible for the STD program for all jurisdictions, with the exception of the St. Louis County, the City of St. Louis and Kansas City.

STD Prevalence

In Missouri, rates continue to rise across all reportable STDs. With the exception of 2015 for syphilis and 2014 for congenital syphilis, where the state saw a decrease in the number of cases over the previous year, Missouri's STD prevalence rates have consistently risen year to year. As of 2018, the state ranks 18th in reported rates of chlamydia, 7th in gonorrhea, 11th in primary and secondary syphilis, and 12th in congenital syphilis. Syphilis cases, including congenital, rose precipitously between 2016 and 2018, with the 2018 syphilis case count representing a 43 percent increase over the prior year, and a doubling of rates since 2016. Congenital syphilis rates also more than doubled between 2016 and 2018; they rose by 70 percent between 2017 and 2018. As a result of rising syphilis rates, the director of the Missouri Department of Health & Senior Services issued a Health Advisory in February 2019, alerting health providers of the increases.

Reasons attributable to the increase in STD rates in Missouri include:

- Narcotic usage, particularly methamphetamine and opioids
- Social media and hookup app that change how people find partners
- Lack of access to care, especially among homeless youth and low-income people
- Unstable home life, other social factors, and associated risk behaviors

STD Prevalence Rates in Missouri (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	27,328	452.1	7,546	124.8	609	10.1	3	4.0
2014	27,981	461.5	7,387	121.8	771	12.7	1	1.3
2015	28,948	475.8	8,942	147.0	778	12.8	4	5.3
2016	30,843	506.2	11,479	188.4	955	15.7	8	10.7
2017	32,683	536.4	13,086	214.8	1,337	21.9	10	13.4
2018	34,728	568.1	15,090	246.8	1,913	31.3	17	22.8

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Missouri's primary funding for STD activities comes through the CDC's Prevention and Control for Health Departments (PCHD) Cooperative Agreement. In FY 2019, Missouri received a PCHD award of $1,662,974. To support its STD activities, Missouri also leverages funding from the CDC's Division of HIV/AIDS Prevention, Community Health Center Grants, Title X Family Planning Grants, Teen Pregnancy Prevention Program (TPP) funds, CDC's Division of Adolescent School Health (DASH) Grant, Title V Sexual Risk Avoidance Education (Title V SRAE) funds, Sexual Risk Avoidance Education (SRAE) funding, and Personal Responsibility Education Program (PREP) grants. Missouri's FY 2019 Title X funding was not impacted by the 2019 mid-year changes to statutory and regulatory requirements.

Some local jurisdictions, such as St. Louis City, receive Ryan White Part A funding from HRSA through an arrangement where those dollars are disseminated throughout a cross-state region that spans into Illinois. 340B rebates through HRSA's Drug Pricing Program are used by some jurisdictions to assist with clinical costs.

While the state runs the STD program, the state does pass through federal funding to Kansas City, the City of St. Louis, and St. Louis County, which collaborates with the city. These cities receive local funds to supplement STD services, including for testing, partner services, and surveillance. Kansas City also has a health tax which partially supports clinical operations. Elsewhere in the state, local funding supports clinics. For other health services, the state provides material support to local clinics in the form of testing kits and other items used in STD service provision.

STD Services and Activities

STD services are mostly provided through contracts established by the state or in the case of Kansas City and St. Louis City and County, by those local jurisdictions. The contracts set the standards of care in STD-related health care facilities. Hospitals, Federally Qualified Health Centers (FQHC), and Title X and community-based facilities, such as Planned Parenthood often provide STD services. These facilities offer the testing, treatment, and counseling for residents of Missouri. In addition, there are two STD specialty clinics in Missouri—the Kansas City Health Department Sexual Health Clinic and St. Louis County's North Central Community Health Center.

Kansas City and St. Louis provide their own disease intervention specialists (DIS)—otherwise, all DIS staff are state employees. DIS link patients to care providers and require a consult to obtain medication. DIS capacity is lacking across the state and local levels, which reduces the investigative capacity of the state overall.

Internet partner notification services (PNS) are legally allowed and administratively sanctioned, but the technical infrastructure behind it has not yet been built out. In 2017, the state decided to discontinue the use of PNS for gonorrhea and chlamydia going forward, due to high caseload and limited staff capacity. Expedited partner therapy (EPT) is also legally permissible for the treatment of chlamydia and gonorrhea. A licensed physician may prescribe and dispense medications for partners of patients with whom they have a physician/patient relationship.

Impact of the ACA and Medicaid Expansion

Missouri has not expanded Medicaid. Many localities try to fill that void in insurance coverage by offering safety net services for the uninsured and underinsured population of the state, which is often accomplished through partnerships with external organizations. Local entities place an emphasis on innovation to ensure that resources are properly leveraged.

Billing for STD services is generally limited. Local clinics do not often charge fees, though Kansas City is investigating adding a small administrative fee for STD visits. In Kansas City's case, city council consent would be required to implement a fee for service model. No state level prohibition on fees exists.

Surveillance and Reporting

The state has instituted an integrated electronic surveillance system that is used for various communicable diseases. About 60 percent of the state uses Electronic Lab Reporting (ELR), however, a large number of stakeholders still use paper reporting forms which takes considerable time to process. Quest Labs recently joined the ELR system, but challenges remain with getting IT solutions to integrate other lab services providers. No dedicated IT staff are on hand for the state STD program.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

Sexual health education pertains primarily to HIV and associated health topics, and according to a Missouri statute, must present abstinence as the preferred option for unmarried students, along with a message that generally discourages sexual activity.

STD education addresses HIV/AIDS, HPV, and hepatitis, but touches on other diseases as well (only the former three are specifically highlighted). Local school boards control the curriculum for sexual health education. The state's sole mandate is that the education touches on HIV; STDs are not a required topic. There have not been any recent attempts to introduce more comprehensive sexual health education in Missouri schools.

Practitioner Training

The CDC-funded St. Louis STD/HIV Prevention Training Center, in partnership with the Washington University School of Medicine in St. Louis and other experts in the field, offers STD and HIV training—both online and in-person—to practitioners in Illinois, Iowa, Kansas, Kentucky, Missouri, Nebraska, and Wisconsin. In St. Louis County, practitioners have received training on STD and HIV prevention from the Denver Provider Training Center (Denver PTC) in the past.

Public Awareness

At the state level, there are few public awareness campaigns on STDs. In 2018, the City of St. Louis launched the "Get Tested, St. Louis" public awareness campaign. This campaign was developed with Project ARK, a product of the Washington University School of Medicine in St. Louis. The campaign targets key demographics, with messaging tested against a focus group comprised of individuals representing that group.

Some STD prevention marketing is employed throughout the state. In the City of St. Louis, the health department has contracted with Vector Media, the marketing group that services mass transit provider, Metro Transit, to conduct targeted outreach via ads on city buses.

The Department of Health and Senior Services website provides a detailed overview of various STDs, including syphilis, chlamydia, gonorrhea, herpes, and hepatitis B, along with an overview of common STD symptoms and methods of transmission. A list of specialty STD clinics in the state is also available.

Notable Practices

"Get Tested, St. Louis" – This public awareness campaign—produced by the city, Project ARK, and a focus group consisting of members from vulnerable populations—aims to encourage STD testing. The target population focus group members review marketing materials before distribution to ensure that the information, including treatment options and care facilities, is relevant to target communities.

Challenges

- Low staff capacity forces some localities to focus entirely on control, with little attention to prevention.
- Perception and the lack of education surrounding STDs has led to a dearth of resources to implement control measures and deters patients from seeking treatment.
- Stigma, combined with a lack of education on STDs, engenders obstacles in communications between public health entities and policymakers when seeking additional resources.
- Limited community engagement between STD control entities and affected individuals, especially with disproportionately affected populations, results in a perception that STDs are not a high priority.
- High staff turnover forces entities to be reactive, rather than proactive, in responding to the epidemic.
- Opioids and other illicit drugs boost the likelihood of risky behavior that may lead to STD contraction.
- Reduced condom usage leads to increased STD transmission.

Case Study

North Carolina

State Public Health Structure

North Carolina's Communicable Disease Branch supports the state's local governance structure where STD services are provided by the local health departments (LHD) in each of the 100 counties. The LHDs provide STD testing, treatment, and surveillance. The North Carolina Department of Health and Human Services (NCDHHS) provides guidance, a small amount of funding, and assistance in disbursing federal grant funding. The STD and HIV prevention staff in the state office also run the state's drug shipment program.

In 2003, North Carolina integrated its STD and HIV programs. While funding for the STD and HIV programs is separate, there is integration of LHD staff where federal guidance allows.

STD Prevalence

Rates continue to rise among the three reportable STDs, with the exception of congenital syphilis which declined by almost 26 percent from 2017 to 2018. Overall, for 2018, the state ranked 6th for reported rates of chlamydia, 9th for gonorrhea, and 15th for primary and secondary syphilis. The reasons attributable to the increase in STD rates in North Carolina include:

- New technology and dating apps that increase partner anonymity
- Reduced condom use from an increased use of pre-exposure prophylaxis (PrEP) and long-acting reversible contraceptives
- Illicit drug use, including opioids and cocaine, that can influence risky sexual behavior
- Selling sex for drugs and a rise in sex trafficking cases in some areas

STD Prevalence Rates in North Carolina (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	48,416	491.6	13,666	138.8	1,153	11.7	4	3.4
2014	47,147	474.1	14,415	145.0	1,998	20.1	6	5.0
2015	64,376	641.0	19,809	197.2	2,741	27.3	9	7.4
2016	58,006	571.7	19,687	194.0	2,655	26.2	18	14.9
2017	62,876	612.0	22,871	222.6	2,949	28.7	25	20.7
2018	66,553	647.8	23,725	230.9	2,987	29.1	17	14.1

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Funding for North Carolina's STD services and activities primarily comes CDC's Prevention and Control for Health Departments (PCHD) Cooperative Agreement; in FY 2019, North Carolina received $2,864,054 in PCHD funding.

North Carolina uses other federal grants to support their STD activities including Community Health Center Grants, Title X Family Planning Grants, Teen Pregnancy Prevention Program (TPP) funding, CDC's Division of Adolescent School Health (DASH) Grant, Title V Sexual Risk Avoidance Education (Title V SRAE) funding, Personal Responsibility Education Program (PREP) funds, and Sexual Risk Avoidance Education (SRAE) grants. North Carolina's FY 2019 Title X funding was not impacted by the 2019 mid-year changes to statutory and regulatory requirements.

Revenue generated from local taxes contribute to LHDs' funding streams, which helps operate STD services. However, the state does not provide additional appropriations explicitly for STD prevention activities.

The LHDs that participate in the HRSA 340B Drug Pricing Program receive rebates for purchasing drugs needed for STD and HIV treatment. While testing and treatment are free for residents, the 340B rebates generate savings for the LHDs' clinical operations. North Carolina also receives funding from the Division of HIV/AIDS Prevention to support efforts related to STDs.

Some funding from SAMHSA support STD and HIV services in the state, where in some instances, funding may be used for screening activities.

STD Services and Activities

Free STD testing and treatment is available at LHDs, many community-based organizations, and some correctional facilities. The Integrated Targeted Testing Services (ITTS) projects provide STD testing for chlamydia, gonorrhea, and syphilis across multiple testing locations including homeless shelters, migrant health centers, nightclubs, colleges, and drug treatment centers. These sites serve high-risk, diverse populations, including men who have sex with men and racial and ethnic minorities.

North Carolina provides STD counseling and testing at substance abuse centers through the Substance Abuse and Mental Health Services Administration (SAMHSA) funds. The CDC provides the Communicable Disease Branch funding for testing in selected jails with high-risk populations throughout the state.

Some counties' public health services rely on Federally Qualified Health Clinics, free clinics, and hospitals to create an effective network of safety net and surveillance coverage. Community testing mechanisms are available within abuse treatment centers and other community health facilities.

Impact of the ACA and Medicaid Expansion

North Carolina has not expanded Medicaid coverage as part of the ACA. While Medicaid is a payer of STD screening and treatment, state residents can access care for free through the LHDs. When possible, LHDs can bill a patient's insurance company for services.

Surveillance and Reporting

The North Carolina Electronic Disease Surveillance System (NC EDSS) enables LHDs and the state to gather data on all communicable diseases. LHDs track cases, analyze historical data, map disease outbreaks, and store information in this one system. In 2012, NC EDSS integrated syphilis and HIV/AIDS into the system. NC EDSS is part of the CDC's Public Health Information Network.

The state's field services disease intervention specialists (DIS) investigate syphilis (and HIV) cases only. Located at LHDs, DIS counsel patients, ensure they receive treatment, and work to inform and counsel partners. Partner notification services are provided for positive syphilis cases and limited cases of gonorrhea.

Legally, Expedited partner therapy (EPT) is permissible for the treatment of chlamydia and gonorrhea for partners of patients under treatment by a clinician. However, in dispensing drugs, the prescription label must bear a patient's name. In practice, EPT varies widely from county to county due to varying comfort levels with prescribing medication without seeing a patient.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

North Carolina's Healthy Youth Act (2011) requires medically accurate, age-appropriate sexual health education to be taught in all public middle and high schools. The state does not teach abstinence-only curriculum, but rather relies on stressing an abstinence-before-ready approach. While the state requires certain concepts to be taught, local school boards decide what to include and how to teach the material. The curriculum includes information on how STDs are transmitted, how to reduce disease transmission and infection rates among young people, and where to access state-provided services. Schools must include information about various contraception methods in the curriculum. State law prohibits condom distribution in schools, but teachers may demonstrate correct use. The Department of Public Instruction and the Communicable Disease Branch do not have influence over curriculum choices.

Practitioner Training

The Alabama-North Carolina STD/HIV Prevention Training Center (AL/NC PTC) is a collaborative effort with CDC to provide STD and HIV training for the state's clinicians. LHD officials and expert medical practitioners from area medical universities train clinicians on clinical management, vulnerable populations, PNS, and testing and treatment guidelines for STDs and HIV. AL/NC PTC partners with the state's Communicable Disease Branch to publish an annual statewide STD update. The Enhanced Role Registered Nurse Training Program, administered by the University of North Carolina at Chapel Hill, provides LHD nurses with STD Nurse Clinician Training ensuring that LHDs continue to provide accessible STD services in their counties.

Public Awareness

The NCDHHS website offers information on over 20 common STDs, highlights testing sites and services at LHDs and other settings and provides links to federal resources, as well as information on HIV services, given the program's integration with STD services across the state.

Notable Practices

Anticipating Spikes in STD Transmission – Albemarle Regional Health Services recognizes that STDs spike during certain times in the year, such as when students return to college, and will stock up on STD testing supplies and treatment medications to anticipate times of increased need in their community.

Challenges

- Inadequate human resources classification of DIS employees has resulted in lower salary rates and high employee turnover in some counties.
- Current DIS programs cannot keep pace with social media and apps that connect partners, and many LHDs do not have the staff capacity to keep up with the caseload.
- At LHDs near military bases, members of the military often seek confidential STD screening and treatment, but LHDs typically do not receive additional funding or staff to aid the increased service provision.
- Public health needs more informatics specialists to increase data analytics capabilities.
- Siloed federal funding restricts the state's work by inhibiting flexibility and collaboration between STD and HIV programs, despite the two coinciding in cases of coinfection.
- Differing climates across the state create variations in the curriculums used to instruct students on sexual health.
- Limited access to transportation and care facilities presents challenges in rural areas.

Case Study

Utah

State Public Health Structure

Utah has a local governance structure for its public health system. Public health services are decentralized, with 13 local health departments (LHD) throughout the state encompassing 29 counties. Utah's counties span urban, suburban, rural, and frontier communities, each of which present unique challenges to the local health districts. These LHDs operate independently of the Utah Department of Health (UDOH) and are managed by local officials. Some LHDs also coordinate with the Indian Health Service because of the large Native American population residing in their jurisdictions.

Utah's STD Prevention Program is organized within the Prevention, Treatment, and Care Program in the UDOH Bureau of Epidemiology, which sits within the Disease Control and Prevention Division. This office is responsible for disbursing federal grant funds, reporting local cases to the federal government, providing oversight and quality assurance, operating and funding the State Public Health Laboratory, and offering staff training and development assistance for local disease intervention specialists (DIS) and other staff. The state program passes on federal funding and offers staff support to 12 of the 13 LHDs. The thirteenth LHD opts to not receive support on ideological grounds. The state STD program is entirely integrated with HIV, both financially and programmatically. Some LHDs are also integrated, but the level of integration varies by jurisdiction.

STD Prevalence

Utah is among the states with the lowest prevalence rates in the U.S. For 2018, Utah ranks 46th in reported cases of chlamydia, 44th in gonorrhea, and 36th in primary and secondary syphilis. Congenital syphilis was not observed in the state until early 2018 and is attributed to an individual who became infected out-of-state. While STD rates are low in comparison with other states, the velocity of rate increases has been significant, with gonorrhea rates increasing almost 85 percent between 2015 and 2018, and syphilis rates almost tripling during the same time period. Between 2017 and 2018 alone, syphilis cases rose by 41 percent.

Reasons attributable to the increases in STD rates in Utah include:

- Opioids, other substance use, and mental health conditions
- Alcohol abuse in certain populations, including the Native American population
- Social media and dating apps that boost partner frequency and anonymity
- Social determinants of health factors, especially affecting low-income residents
- A highly transient population during the year, due to tourism and seasonal employment

STD Prevalence Rates in Utah (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	7,501	258.4	951	32.8	172	5.9	0	0.0
2014	8,223	279.4	1,441	49.0	149	5.1	0	0.0
2015	8,633	288.2	1,562	52.1	169	5.6	0	0.0
2016	9,457	309.9	2,100	68.8	259	8.5	0	0.0
2017	10,135	326.7	2,543	82.0	299	9.6	0	0.0
2018	10,541	339.8	2,895	93.3	423	13.6	1	2.0

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Utah receives funding from several federal programs, relying most heavily on CDC's Prevention and Control for Health Departments (PCHD) Cooperative Agreement which provided $606,801 to the state in FY 2019. Utah also receives funding from CDC's Division of HIV/AIDS Prevention, the CDC's STD Surveillance Network (SSuN) Cycle III - Part B, Community Health Center Grants, Title X Family Planning Grants, CDC's Division of Adolescent School Health (DASH) Grant, Title V Sexual Risk Avoidance Education (Title V SRAE) funding, and Personal Responsibility Education Program (PREP) funds.

It is important to note that Planned Parenthood was the sole organization receiving Title X funding in Utah. With the recent changes to Title X rules prohibiting recipients from offering referrals for abortion services, Planned Parenthood has since rejected all Title X funding. The full effects of this change have yet to be seen, but as a result of mid-year changes to Title X regulations and requirements, Utah only received $591,996 of its initial $2,000,000 Title X funding award.

HRSA awarded UDOH multiple grants in FY 2019, including Ryan White Part B and Maternal and Child Health Services grants. In some instances, where HIV or maternal and child health care may overlap with STD care, the funds may be used for STD purposes. Some LHDs use 340B rebates through HRSA's Drug Pricing Program to cover HIV and STD screening and treatment, but there is inconsistency in their application.

The state passes federal funds on to LHDs. The amount LHDs receive varies greatly, with some receiving over half of its budget from federal funds and others receiving only a few thousand dollars. The amount of funding is generally linked to population. In cases of an emergency or outbreak, the state will offer additional financial support to a LHD to assist with services, such as testing or partner services.

STD Services and Activities

LHDs are the sole providers of public STD services. LHDs provide the majority of services through either their own clinics or in partnership with other organizations operating in their jurisdictions. Some jurisdictions rely on Planned Parenthood, Federally Qualified Health Centers, and similar entities for services. Because government-run facilities often struggle with billing or accepting insurance, many public STD clinics offer services for a flat fee instead. All STD testing is covered by the state-funded public health laboratory.

Expedited partner therapy (EPT) is legal in Utah, though how often it is used is unclear, as EPT usage is not tracked by the state. Partner notification services (PNS) are used commonly for gonorrhea and syphilis in the state, but the chlamydia caseload has become so large that the state struggles to keep up with it. Salt Lake County is the only LHD that has designated DIS in the state.

Impact of the ACA and Medicaid Expansion

Utah passed Medicaid expansion for individuals making up to 138 percent of the federal poverty level by a ballot initiative in November of 2018, but implementation was put on hold while the state legislature altered the structure of the expansion, after the ballot-approved version was deemed too expensive. In April 2019, Utah partially expanded Medicaid after the Centers for Medicare and Medicaid Services (CMS) approved a waiver that allowed the state to expand coverage to residents with income up to 100 percent of the federal poverty level. Utah submitted another waiver in July 2019 that requested enhanced matching for their partial expansion and received informal notice shortly thereafter in August 2019 that CMS will not approve the waiver. CMS has yet to formally reject the waiver, but has cited a “per capita cap” and the request for enhanced matching rate while at the same time only partially expanding Medicaid as reasons that it would not be approved. Utah will have an opportunity to submit a “Fallback Plan” waiver if CMS does not approve July 2019 waiver. If the “Fallback Plan” is not approved by July 2020, Utah will adopt Medicaid expansion as approved by the 2018 ballot initiative.

Surveillance and Reporting

The Utah National Electronic Disease Surveillance System (UT-NEDSS), maintained by UDOH, is an open source epidemiologic and disease surveillance system for the state and local public health agencies. STDs are among the diseases surveilled in this system. UT-NEDSS lets the state send data directly to CDC. Local entities can both submit and search through data in the system. UT-NEDSS assists in investigating and managing cases and outbreaks, as well as offers several data analysis tools users can apply to their work.

EpiTrax, is the fully integrated, comprehensive electronic reporting system used by the state. Entities may submit lab reports and electronic health records through the system. While most entities use the electronic method of reporting, a few LHDs continue to use paper-based, manual reporting, although that is becoming rarer. While Utah will need more time to fully transition to electronic-only reporting, the state is relatively well positioned in terms of technology infrastructure.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

Utah state law does not mandate a specific sexual health education curriculum across the state. Health education courses are restricted in content, with reproductive health topics requiring parental authorization an opt-in for elementary and junior high school students. High school courses are abstinence-based and do not require the educator to provide information on STDs. There is a legislative push to expand sexual health education to a more comprehensive approach, but that effort, to date, has not yielded any major changes.

Practitioner Training

The Denver Prevention Training Center, which receives funding from CDC, also provides critical prevention training instruction and technical assistance for STD health professionals in Utah and seven other states across the country. Practitioners receive training on STD and HIV testing, treatment, PNS, and other critical clinical duties.

The STD Prevention Program educates providers by writing informative letters to providers who may be treating cases improperly, contacting them by phone regarding challenging syphilis infections, and hosting educational presentations. The state will also offer training on the electronic reporting system to North Carolina staff in local health departments, on CDC guidelines, and different circumstances these staff members may encounter in their role. In 2019, the state intends to release a training manual for DIS.

Public Awareness

Several counties in Utah have launched an STD public awareness campaign, often over social media sites like Facebook. The UDOH STD Prevention Program's website offers information for the public on STDs, testing sites, and local health departments. The state also partners with organizations to spread STD awareness and promote sexual health in the community.

Notable Practices

"Catch the Answers" Q&A Website – This website from the Prevention, Treatment and Care Program offers reliable answers to common questions that young adults, parents, and health care providers have about STDs. The website also connects visitors to STD services at different care facilities in each LHD.

Grant Writing Pilot Program – The Southeast Utah Health Department currently has an AmeriCorps VISTA member serving as a grant writer in an experimental program to determine the department's need for a full-time position. By expanding the department's grant writing capacity, the department can find additional funding opportunities.

Challenges

- Low population density and the rural and frontier nature of the state impede efforts to reach patients and connect them with services.
- Rural and frontier regions may have smaller DIS and health care staffs in LHDs which presents challenges in reaching the affected population in those regions.
- The year-round population is much smaller than during tourist seasons, which not only results in increased STD transmission during the peak seasons, but also makes anticipating the need for resources and STD services more challenging for LHDs.
- Utah's climate towards sexual health and sexuality in general creates an impediment to public awareness, which deters policymakers from providing greater resources to combat the STD epidemic.
- LHDs often lack the staff capacity and resources to perform data analysis on social determinants of health and their link to STDs, constraining their outreach to vulnerable populations.
- Competing legislative funding priorities, including Medicaid expansion, have prevented STDs from being recognized as a prominent issue supported with the funding to match.

Case Study

Vermont

State Public Health Structure

Vermont has a public health system administered fully by the state. The Department of Health provides a centralized, state-run STD program that partners with Planned Parenthood to provide STD services for its constituents. Local health department offices do not provide STD care. Oversight of the state program follows national standards and is reported on the Department of Health website. Vermont's STD/HIV program has been integrated in both programming and financial allocations since 2006.

STD Prevalence

In 2018, Vermont saw a decrease in chlamydia cases from the prior year; and for another consecutive year, Vermont did not have any cases of congenital syphilis. While Vermont is ranked 50th for reported rates of gonorrhea and syphilis, the state experienced an increase in cases and rates for both STDs from 2017 to 2018. Recent increases in cases and rates of gonorrhea, in particular, stand out. Between 2016 to 2018, the rates more than doubled, while the 2018 rates rose 32 percent from 2017.

Reasons attributable for the increases in Vermont's STD rates include:

- Social determinants of health, such as low socioeconomic status
- Limited access to transportation, which may prevent some people from receiving STD services
- Inability to pay copays, which may be a barrier to getting testing and treatment

STD Prevalence Rates in Vermont (2013-2018)

	Chlamydia		Gonorrhea		Syphilis**		Congenital Syphilis	
	Cases	Rates*	Cases	Rates*	Cases	Rates*	Cases	Rates*
2013	1,842	294	97	15.5	10	1.6	0	0.0
2014	2,237	357.0	84	13.4	12	1.9	0	0.0
2015	1,901	303.7	155	24.8	15	2.4	0	0.0
2016	1,690	270.6	126	20.2	37	5.9	0	0.0
2017	1,858	297.9	203	32.5	26	4.2	0	0.0
2018	1,712	274.5	268	43.0	29	4.6	0	0.0

*Per 100,000 people

** For all stages of syphilis

Data Source: CDC Sexually Transmitted Disease Surveillance 2017 and 2018 Reports

Funding Supporting STD Activities

Vermont's STD program is entirely federally funded with the majority of the funding coming from the CDC's Division of STD Prevention grants. In FY 2019, received a Prevention and Control for Health Departments (PCHD) Cooperative Agreement award of $300,000 from CDC. Other federal grants used to support Vermont's STD activities include Community Health Center Grants, Title X Family Planning Grants, the CDC's Division of Adolescent School Health (DASH) Grant, and the Personal Responsibility Education Program (PREP) funding.

Vermont also uses HRSA's HIV/AIDS Program funding and CDC's Division of HIV/AIDS Prevention funds to support their STD program. Rebates from the 340B Drug Pricing Program are also used to support disease intervention specialist (DIS) services. Rebate funds must be used before the state can use Ryan White HIV/AIDS Program base funds. No teen pregnancy or Title X funding is used for STD services. The state has used viral hepatitis funds for surveillance in the past. The Vermont state budget includes a $45,000 line-item for treatment and screening in a Federally Qualified Health Center (FQHC).

Vermont provides funds to 12 Planned Parenthood sites to operate as the state's STD clinics. The state also has one FQHC in Burlington to provide STD services. Located in the most populous county in Vermont, this FQHC reports a positive test rate of more than 10 percent. As a result of mid-year changes to Title X regulations and requirements, Vermont will no longer accept federal Title X funds, but will continue contracting with Planned Parenthood to provide STD services. As a result of terminating its grant, Vermont received only $205,522 of its initial $800,000 FY 2019 Title X grant award. It remains to be seen how the withdrawal of Planned Parenthood from the Title X program will impact service delivery.

STD Services and Activities

STD services are provided by Planned Parenthood and the Community Health Center of Burlington, a FQHC. Some patients pay for services on a sliding scale or with their personal insurance. Other patients have their fees waived if their income falls below a certain threshold.

DIS carry out partner notification services (PNS) for infectious syphilis and gonorrhea. Due to insufficient DIS staffing levels, Vermont only provides PNS for chlamydia cases within high-priority populations including pregnant women. Currently, there are opt-in STD testing services for Vermont jails for HIV and syphilis. Expedited partner therapy (EPT) is provided free for patients recently diagnosed with chlamydia and gonorrhea. In 2009, Vermont became the first New England state to pass legislation authorizing EPT for chlamydia treatment.

Impact of the ACA and Medicaid Expansion

Vermont expanded Medicaid under the Affordable Care Act in 2014. Prior to the ACA, in 2011, Vermont implemented a state-subsidized health care system, known as Green Mountain Care, that lasted until 2014. Medicaid expansion built upon the increased access to care that Green Mountain Care established. Individuals previously covered under the Green Mountain Care subsidized health plan continued to be covered after Medicaid expansion. The ACA and Medicaid expansion have not been reported to have impacted billing in Vermont.

Surveillance and Reporting

Vermont requires reporting of gonorrhea, chlamydia, and syphilis within 24 hours of a diagnosis to the state health department. Those who are required to report include health care providers, school health officials, and administrators of long-term care and assisted living facilities.

Vermont helped develop Electronic Laboratory Reporting (ELR) and currently uses it to integrate datasets across the state. A program initiative in 2006 helped connect datasets, allowing health officials to see links between diseases. For Vermont, ELR allows customer service and prevention efforts to appear seamless to the consumer.

Sexual Health Education and Public Awareness Efforts

School-Age Sexual Health Education

Vermont mandates sexual health education that is age appropriate. In addition to covering abstinence as a form of pregnancy and disease transmission prevention, sexual health education in Vermont covers additional methods of contraception. Vermont's Agency of Education has committed itself to continued support for comprehensive sexual health education.

Practitioner Training

Practitioners throughout the state can access clinical training through Vermont's regional STD prevention training center, the Sylvie Ratelle STD/HIV Provider Training Center, which serves New England and Florida. The training center provides a "warmline" to answer providers' questions throughout the year.

Vermont also participates in the New England Consortium, a regional partnership to address STD prevention. In the consortium, Vermont participates in monthly calls with other stakeholders to communicate disease outbreaks, clinical alerts, and new developments in the prevention and treatment of STDs. As New England is a region with a transient population, it is critical that consortium states communicate and collaborate because the spread of STDs is not contained to state lines.

Public Awareness

Vermont's Department of Health website includes information that is easily accessible to the public about STDs including where to get free condoms in the state and the 12 Planned Parenthood facilities located throughout Vermont. The website also offers relevant information for different populations including the LQBTQ+ community, teenagers and young adults, individuals with low-incomes, and community partners.

Notable Practices

"Hub and Spoke" Health Care Model – The "Hub and Spoke" model of treatment facilities for substance use disorder (SUD) offers a host of different health services, such as mental and behavioral health care, counseling, and primary care services, with the goal of keeping people in the system throughout recovery. The "Hub" facilities offer daily services for complicated cases of SUD, while the many "Spoke" facilities provide general health and wellness services. As SUD is often comorbid with other diseases or infections including STDs and HIV, the model integrates STD and HIV screening, treatment, and referral services into the comprehensive array of SUD treatment options.

Challenges

- High turnover among DIS, in part because of low wages, impacts the state's ability to manage STD cases.
- While the state has an ELR system, the state has been slow to transition to more modern reporting systems because of competing priorities.
- Most of the state's population is insured, but there exists a small population that struggles with a lack of access to transportation, limited to no insurance, or trouble paying copays, which inhibits their ability to receive care.
- Low STD incidence rates excludes Vermont from some federal grants, which may inhibit its ability to reach vulnerable populations and all infected partners.
- Vulnerable populations, such as those in jails and prisons, and drug and alcohol centers, sometimes lack easily accessible STD testing and treatment options.
- The state's public health workforce is aging, which may present a hurdle +in maintaining adequate staffing levels in the coming years.

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