

# NCHHSTP

NATIONAL CENTER FOR HIV/AIDS, VIRAL HEPATITIS,  
STD, AND TB PREVENTION

## Strategic Plan Through 2020

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Updated December 2015



**Centers for Disease  
Control and Prevention**  
National Center for HIV/AIDS,  
Viral Hepatitis, STD, and  
TB Prevention



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## Message from the Director



I am pleased to present the new *National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: Strategic Plan through 2020*. This Plan updates the Center's current strategic plan and serves as a blueprint for achieving our vision of a future free of HIV, viral hepatitis, STDs, and TB. It will guide activities across the Center in order to produce the greatest health benefit for all Americans.

The *Plan* sets forth goals to reduce incidence, morbidity, mortality, and health disparities related to HIV, viral hepatitis, STDs, and TB. Key indicators of progress with ambitious targets are included to help us track our progress toward these goals. The indicators are aligned with national plans including the *National Prevention Strategy*, the *National HIV/AIDS Strategy for the United States: Updated to 2020*, and the *HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis*.

The *Plan* reflects NCHHSTP's guiding principal of high impact prevention—an approach that prioritizes cost-effective and scalable programs, policies, and research. It identifies a set of six key strategies which will help us reach our goals. These strategies reflect new opportunities for disease prevention created by critical shifts in the national, state, and local economic and policy environments, including a continually evolving healthcare landscape that emphasizes accountability at every level, strategic allocation of resources, and the principles of high impact prevention. The *Plan* also articulates the key values held by the Center that guide our actions and interactions and it highlights the importance of collaborative effort with partners at the federal, state, and community levels in achieving our goals.

This *Plan* was developed through a participatory process involving staff across the Center. We greatly appreciated input from NCHHSTP stakeholders. The *Plan* will be operationalized through the individual strategic plans being developed by each of NCHHSTP's five divisions. This *Plan* is intended to be a living document—one that we will use to guide our activities and hold ourselves accountable at every level of the Center.

Thank you for your continued partnership as we all strive to realize a world free of HIV, viral hepatitis, STDs, and TB.

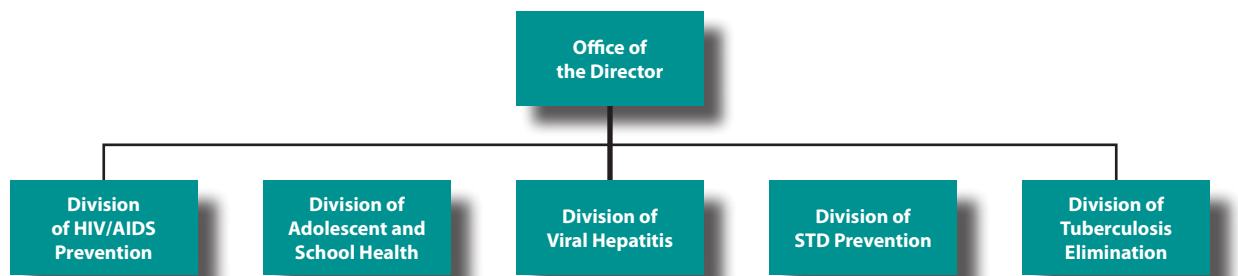
Sincerely,

Jonathan Mermin, MD, MPH  
Director  
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

## 1. About NCHHSTP

The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention is an operating unit of the Centers for Disease Control and Prevention (CDC), an agency of the United States Department of Health and Human Services (DHHS). The National Center for HIV, STD, and TB Prevention was established in 1994 to coordinate CDC's HIV, sexually transmitted disease (STD) prevention and tuberculosis (TB) elimination programs. In 2006, CDC's Division of Viral Hepatitis was added and the Center was renamed the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP). In January 2012, the Division of Adolescent and School Health—whose activities focus on preventing HIV, other STDs, and teen pregnancy and promoting lifelong health among youth—joined NCHHSTP.

### National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention



The infections addressed by NCHHSTP result in high personal, societal and economic costs, both in the United States and around the world. Nearly 20 million STDs, including HIV, occur in the United States each year, most among young persons; consequences include infertility and ectopic pregnancy, as well as cancer and increased risk of HIV. More than 1.2 million persons in the United States are infected with HIV, with tremendous personal and economic costs; the lifetime treatment costs, excluding costs related to lost work and productivity, are an estimated \$402,000 per person living with HIV. Approximately 4.4 million persons are living with chronic viral hepatitis infection, and viral hepatitis are the leading causes of liver cancer and transplants in the United States. Due to effective, ongoing, dedicated TB control programs, TB disease is relatively rare in the United States, with fewer than 10,000 cases annually. However, an estimated 13 millions Americans are infected with the bacteria that cause TB, and, without treatment, are at risk for developing active disease.

These infections have important interactions. Those who are infected with certain STDs, such as syphilis or gonorrhea, are at greater risk for acquiring or transmitting HIV. Likewise, those who are infected with HIV are more susceptible to TB disease due to weakened immune systems. And persons coinfecting with HIV and either hepatitis B or hepatitis C are at increased risk for liver-related morbidity and mortality, compared with persons who have only one of these infections.

These infections also share a number of commonalities, including some modes of transmission and factors contributing to individual risk. For example, because sexual maturation and development occur during adolescence, it is critically important to provide health promotion and disease prevention for youth. Many of the infections disproportionately affect people and communities facing adverse social and economic conditions, such as elevated rates of poverty, homelessness, unemployment, substance use, mental illness, incarceration, homophobia, social stigma, racism, limited education, poor housing, poor healthcare access, and other social and structural factors associated with poor health status.

These factors contribute to unequal access to and participation in effective, science-based interventions including health education, vaccination, screening and treatment. To be effective in protecting the health of most affected populations, it is critically important that public health programs acknowledge and address these broader realities and contexts.



## 2. Vision and Mission

Every year, millions of Americans are infected with HIV, viral hepatitis, STDs or TB, and tens of thousands die because of their infection. The financial cost of these infections is staggering. A conservative estimate for STDs and HIV alone is that the healthcare costs from new infections that occur each year cost the United States more than \$19 billion.

**We as a nation can do better. NCHHSTP is committed to our vision and mission:**

### **NCHHSTP vision:**

A future free of HIV, viral hepatitis, STDs, and tuberculosis

### **NCHHSTP mission:**

Save lives, protect people, and reduce health disparities associated with HIV, viral hepatitis, STDs, and tuberculosis

## **Implementing Our Mission: The Importance of Partnerships**

Partners are critical to achieving NCHHSTP's goals. Partners include, but are not limited to, other federal agencies, state and local health departments and education agencies, national professional associations, businesses, community-based organizations and grantees, faith-based organizations, advisory boards and committees, foundations, universities, media and the entertainment industry. Engaging with partners and members of the affected communities is particularly important as we adapt our strategies to meet the needs of a changing environment. Developing relationships with world-class leaders in science, medicine, technology, education, community engagement, policy, and programmatic management and implementation allows us to provide better leadership to our grantees and the public to advance our core mission and reduce HIV, viral hepatitis, STDs and TB.



## 2.1 Core Values

NCHHSTP is built on core values that guide how we think and work together, how we serve our communities, how we make decisions, and how we determine our priorities. They reinforce our respect for the people we serve, our colleagues, and ourselves. The following core values drive NCHHSTP as a public health organization.

- **Accountability:** Be a diligent steward of the use of funds to achieve NCHHSTP's public health mission
- **Respect:** Treat persons with dignity and honesty; value diversity and differences of opinion
- **Integrity:** Be accurate, consistent, and honest
- **Excellence:** Achieve the highest standard of performance in public health science, program, and policy
- **Diversity:** Recruit and maintain a highly trained, inclusive, and professional workforce
- **Transparency:** Keep the public, partners, and staff informed about our programs, policy, and science
- **Equity:** Work to achieve optimal health for the populations we serve
- **Innovation:** Create an environment that encourages and values new ideas



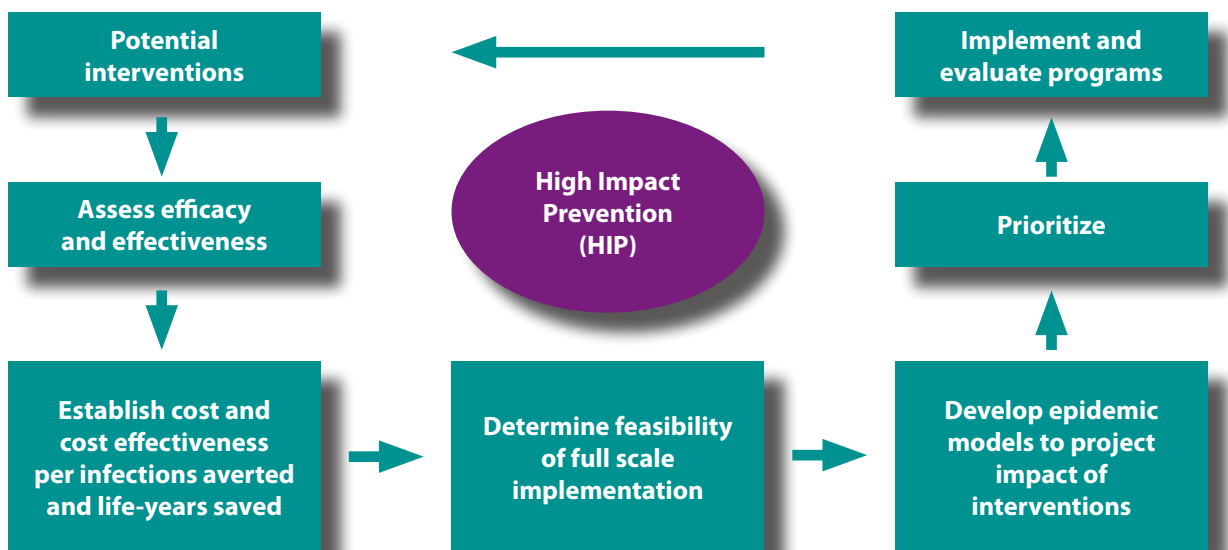
## 2.2 Guiding Principle: High Impact Prevention

NCHHSTP prioritizes cost-effective and scalable programs, policies, and research that will have the greatest impact on its three goals: 1) reducing incidence of infections, 2) lowering morbidity and mortality, and 3) decreasing health disparities. High impact prevention is an approach to planning and implementing activities that promotes efficient and effective use of limited resources. It recognizes that implementing a combination of interventions is not enough—not all interventions are effective, and not all effective interventions are equal. The ultimate purpose of high impact prevention is to achieve the greatest impact given available human and financial resources, whether at CDC, partner agencies and organizations, or the health care system. High impact prevention requires thoughtful prioritization.

### The Center will implement programs, policies and research that:

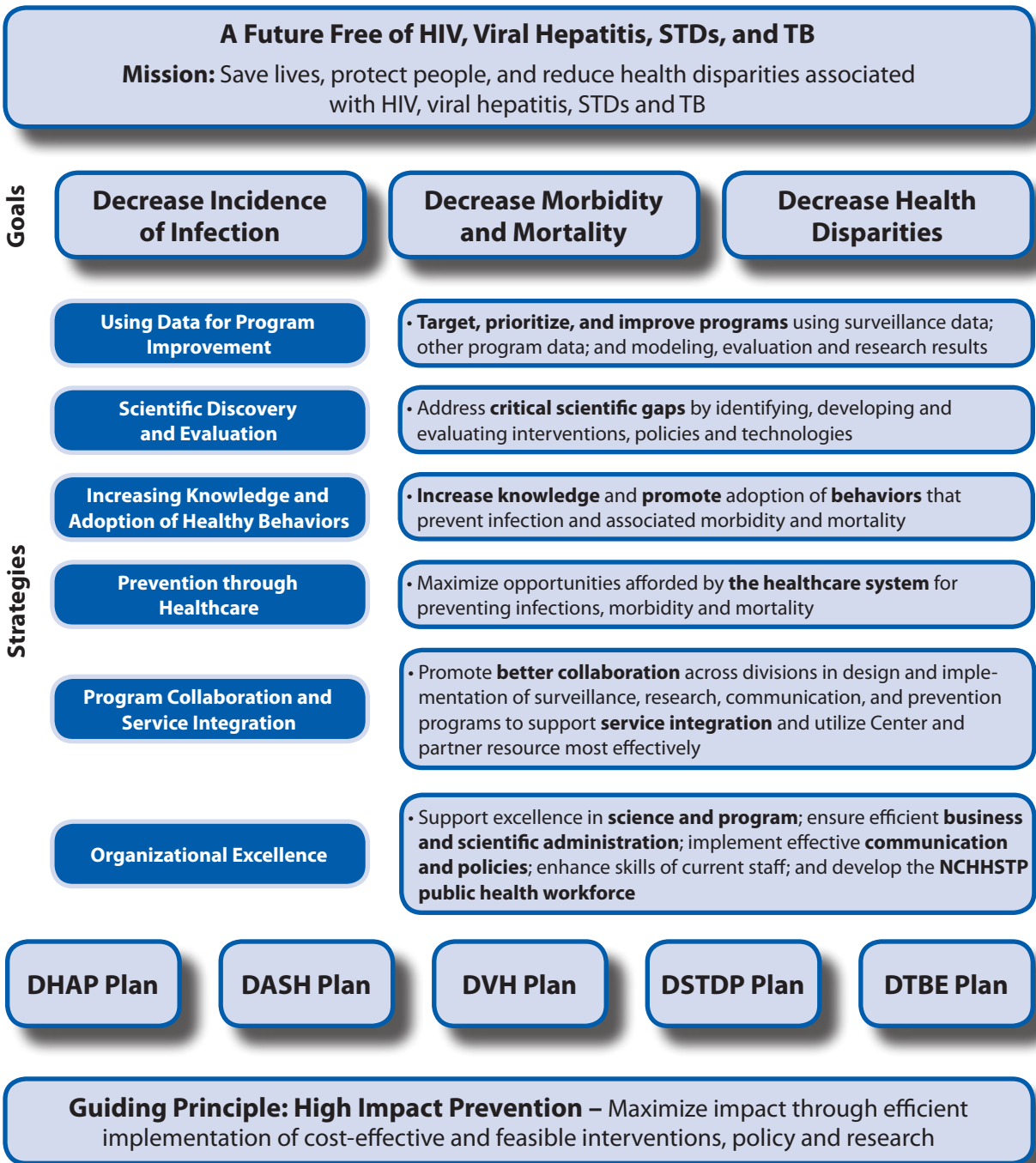
1. Are most **cost-effective** in reducing overall incidence, morbidity, mortality and disparities in health
2. Can be **feasibly implemented at full scale** with currently available resources. Programs and policies should be practical to implement at the scale needed to meet the need in the target population
3. If **prioritized**, will have the greatest impact on reducing incidence, morbidity, mortality and disparities in health when implemented
4. **Include populations that are disproportionately affected** to reduce disparities by ensuring that those with highest rates of morbidity or who are most vulnerable are effectively reached

We will evaluate programs and policies and use information gained from routine assessment, operational research, and surveillance data to improve outcomes and highlight areas for productive, pragmatic research.



### 3. NCHHSTP Framework

NCHHSTP has revised and updated its strategic plan, reflecting changes in the Center and the environment in which the Center operates. This updated plan explicitly includes health impact goals and broad strategies designed to enable goal success. The revision has a clear connection to national plans—the *National Prevention Strategy*, the *National HIV/AIDS Strategy for the United States: Updated to 2020*, and the *Plan for the Prevention, Care and Treatment of Viral Hepatitis*—released since the 2010 strategic plan. See Appendix A for descriptions of these and other national frameworks. It also sets the stage for division plans, which will serve to operationalize this strategy.



## 4. Goals Through 2020

NCHHSTP has three overarching goals regarding HIV, viral hepatitis, STDs, and TB:

- Decrease incidence of infection
- Decrease morbidity and mortality
- Decrease health disparities

NCHHSTP will track progress toward these goals using a small set of indicators. These indicators represent the highest level of impact expected from the program, are measurable on a regular basis, and align with goals in other relevant plans and frameworks. The set may be updated if annual or biennial data become available to measure other important impacts, such as incidence of latent TB infection, or co-infections. Indicators related to HIV were revised in 2015 to align with the update of the *National HIV/AIDS Strategy for the United States: Updated to 2020*. They may be updated if significant changes occur in other national plans or if improved methods of measurement become available. Details regarding how the indicators were developed and calculated are included in Appendix B. More specific indicators will be monitored through division plans and funded programs.

### 4.1 Goal 1: Decrease incidence of infection with HIV, viral hepatitis, STDs, and TB

Progress has been made in reducing rates of hepatitis A and B, gonorrhea and TB. There have also been promising reductions in HIV among some populations. However, incidence of other infections, such as hepatitis C and syphilis, has increased as these infections have spread to different populations, and rates of all of these preventable infections remain unacceptably high.

### 4.2 Goal 2: Decrease morbidity and mortality from HIV, viral hepatitis, STDs, and TB

Untreated HIV, viral hepatitis, STDs and TB infections can cause serious health problems, including death. Yet these health problems can be avoided, and transmission of new infections reduced, with screening and treatment with appropriate therapies.

### 4.3 Goal 3: Decrease health disparities across groups affected by HIV, viral hepatitis, STDs, and TB

Differences in HIV, viral hepatitis, STDs and TB occur by factors such as gender, age, race or ethnicity, education, income, disability, geographic location and sexual orientation. Social determinants of health such as poverty, unequal access to health care, limited education, stigma, and discrimination are linked to these health disparities. In addition to reducing HIV, viral hepatitis, STDs, and TB overall, NCHHSTP aims to reduce the preventable disparities in health associated with these infections.

NCHHSTP will track progress toward these goals using the following indicators.

## **Goal 1: Decrease Incidence of Infection**

- 1.1 Reduce new diagnoses of HIV, acute hepatitis B, acute hepatitis C, and TB
- 1.2 Reduce the rate of increase of primary and secondary syphilis
- 1.3 Increase the percentage of high school students who have not had sex or who use condoms if sexually active

## **Goal 2: Decrease Morbidity and Mortality**

- 2.1 Reduce deaths related to HIV, hepatitis B and hepatitis C
- 2.2 Increase the proportion of persons with HIV who achieve viral suppression
- 2.3 Increase the proportion of persons with gonorrhea who are treated with an effective antibiotic regimen
- 2.4 Increase the proportion of persons with HIV, hepatitis B or hepatitis C who are aware of their infection
- 2.5 Increase HIV testing among school aged youth
- 2.6 Increase HIV testing among STD clinic patients who are diagnosed with an acute STD
- 2.7 Increase the proportion of young females who are screened for chlamydia

## **Goal 3: Decrease Health Disparities**

- 3.1 Reduce diagnoses of HIV and TB among racial/ethnic minority populations with rates above the national average
- 3.2 Reduce new HIV diagnoses among gay and bisexual men, especially young African American gay and bisexual men, African American females, and persons living in the southern United States
- 3.3 Reduce the rate of TB among foreign born persons
- 3.4 Increase the proportion of youth and persons who inject drugs who have achieved HIV viral suppression
- 3.5 Reduce the proportion of young sexual minority males in schools who have engaged in HIV/STD risk behaviors

## **NCHHSTP Work with State and Local Governments**

NCHHSTP works closely with state and local health departments and education agencies to reduce incidence, morbidity, mortality, and health disparities due to HIV, viral hepatitis, STDs and TB. NCHHSTP provides technical support and funding to these agencies to achieve our shared goals. NCHHSTP works with

- Health departments to conduct HIV surveillance, prevention program implementation, routine program monitoring and evaluation, and capacity building
- State and local education agencies to work with schools to reach at-risk youth and deliver risk reduction programming; and state and local health and education agencies to conduct school-based surveillance of health risk behaviors and school health policies and practices
- Health departments to conduct STD assessment, including disease surveillance, assurance activities, and policy development
- Health departments to deliver tuberculosis prevention and control activities, including surveillance, contact investigations, targeted testing of high risk populations, case management, laboratory testing, human resource development, and directly observed therapy
- State coordinators to integrate viral hepatitis prevention activities into existing public health programs and improve viral hepatitis screening and linkage to care

In addition, NCHHSTP assigns field staff to state and local agencies to build the agencies' capacity to prevent and control HIV, STD and TB. These field staff not only provide critical support to infectious disease control programs, but are also called in as standing capacity to provide critical public health services, such as contact tracing and field investigation, in the event of public health emergencies.

## 5. Key Strategies

| Strategy                                                      |                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Using Data for Program Improvement</b>                     | <b>Target, prioritize, and improve programs</b> using surveillance data; other program data; and modeling, evaluation and research results                                                                                                                          |
| <b>Scientific Discovery and Evaluation</b>                    | <b>Address critical scientific gaps</b> by identifying, developing and evaluating interventions, policies and technologies                                                                                                                                          |
| <b>Increasing Knowledge and Adoption of Healthy Behaviors</b> | <b>Increase awareness and promote</b> adoption of <b>behaviors</b> that prevent infection and associated morbidity and mortality                                                                                                                                    |
| <b>Prevention through Healthcare</b>                          | Maximize opportunities afforded by <b>the healthcare system</b> for preventing infections, morbidity and mortality                                                                                                                                                  |
| <b>Program Collaboration and Service Integration</b>          | Promote <b>better collaboration</b> across divisions in design and implementation of surveillance, research, communication, and prevention programs to support <b>service integration</b> and utilize Center and partner resources most effectively                 |
| <b>Organizational Excellence</b>                              | Support excellence in <b>science and program</b> ; ensure efficient <b>business and scientific administration</b> ; implement effective <b>communication and policies</b> ; enhance skills of current staff; and develop the <b>NCHHSTP public health workforce</b> |

## **5.1 Using Data for Program Improvement: Target, prioritize, and improve programs using surveillance data; other program data; and modeling, evaluation and research results**

Highly effective interventions—testing, treatment, partner services and contact tracing, vaccination, education, and health-supporting policies—can reduce the burden of HIV, viral hepatitis, STDs, and TB. Nevertheless, these infections occur frequently and are often concentrated in certain populations, and in specific regions of the country. Better targeting and implementation of combinations of scientifically proven, cost-effective, and scalable interventions is needed to achieve NCHHSTP health goals.

Data on disease burden; risk factor prevalence; availability, use, quality, and outcomes of services; and intervention effectiveness and cost-effectiveness can help NCHHSTP and its prevention partners improve targeting and implementation of prevention programs. For example,

- Data regarding the geographic distribution of disease and at-risk populations reveal profound disparities in health and are being used to guide the allocation of NCHHSTP's extramural funding to state and local health departments, community-based organizations, and education agencies
- Data on the HIV continuum of care reveal important areas needing intervention, such as HIV testing and retention in care and populations most in need of those interventions
- Analyses of hepatitis C data revealed that only 50 percent of persons with hepatitis C are aware of their infection and that 30 percent of persons with hepatitis C will die of hepatitis C related complications that could be avoided with care and treatment
- STD surveillance data indicate that a significant portion of chlamydia diagnoses among women are made by private physicians or HMOs, highlighting the importance of working with the larger healthcare system
- Reports from the National TB Indicators Project (NTIP) reveal important achievements in TB prevention, as well as populations where focused efforts are still needed. For example, in 2011, 97 percent of patients completed treatment and 89 percent of TB patients completed a course of treatment within 12 months.



### 5.1.1 What NCHHSTP will do

NCHHSTP will incorporate disease data to allocate funding within programs to populations and areas in greatest need of interventions. For example, NCHHSTP will

- Refine formula funding for its major health department prevention programs as new project cycles begin
- Work with grantees to align their resources and efforts with the burden of disease in their jurisdictions and will monitor grantee progress in doing so

NCHHSTP will modernize disease surveillance and increase use of new sources of data. For example, NCHHSTP will

- Participate in CDC's efforts to modernize notifiable disease reporting using informatics industry standards through the National Notifiable Disease Surveillance System (NNDSS) Modernization Initiative. The modern NNDSS aims to improve the ability of state and local health department personnel to collect, validate, analyze, transmit and share standardized health-related data
- Refine and improve the collection of data regarding gay and bisexual men, transgender persons, heterosexuals, and persons who inject drugs through surveys such as the Youth Risk Behavior Surveillance System and the National HIV Behavioral Surveillance system, as well as special analyses and studies
- Increase the use of other data sources, including commercial lab reports and Centers for Medicare and Medicaid Services (CMS) Medicaid and commercial claims data, to provide a more complete and timely picture of risk factors, infections, disease state, outcomes, and access to services nationally and across jurisdictions
- Work with its grantees to build partnerships with private and public healthcare provider groups, agencies and consortia developing regional health information exchanges, and safety net providers to obtain, utilize, and share relevant data with state and local health departments
- Work to improve the timeliness of surveillance data release

NCHHSTP will assess and improve the provision and impact of prevention, care and treatment. For example, NCHHSTP will

- Improve monitoring of the continuum of care for HIV and hepatitis B and the continuum of care to cure for hepatitis C for the nation
- Provide guidance and assistance to local jurisdictions to develop and use their own continuums for HIV, and where available, hepatitis B and hepatitis C, to assess provision of prevention, care and treatment services in their areas and, through local providers and case managers, test, link to care, and re-engage individuals who have fallen out of care

- Provide assistance to education agency grantees to improve the assessment of sexual health services available to teens and work with the education system to improve access and use of these services
- Provide assistance to STD and TB programs to better utilize available data to assess and assure the provision and quality of screening and treatment services in their jurisdictions

NCHHSTP will incorporate new knowledge into program and practice guidance.

For example, NCHHSTP will

- Develop, evaluate and provide guidance to the public health community regarding highly effective interventions, and encourage grantees to implement those found to be most cost-effective
- Conduct prevention effectiveness modeling to assess policy and resource allocation options, and estimate the impact and cost-effectiveness of public health interventions.
- Conduct surveillance and research specifically with gay and bisexual men across the lifespan, people who inject drugs, youth, and young adults to assure guidelines address their specific risks and needs
- Provide assistance and advice to multilateral organizations to help them incorporate new knowledge into international guidelines and recommendations
- Provide information to other health and social service agencies regarding the health impacts of social and structural factors such as housing and employment and provide advice and guidance to state and local health programs to foster local linkages to these services to address upstream risks

NCHHSTP will monitor prevention program progress and provide timely feedback.

NCHHSTP will

- Produce national reports to inform our stakeholders of progress towards national goals
- Use surveillance and program data to produce reports to provide state level information on prevention progress
- Use performance data to provide program feedback reports to grantees to help them gauge how they are doing relative to others
- Support routine and systematic, integrated use of surveillance and program data for decision making and program improvement efforts at every level in the Center

### 5.1.2 Expected results

As a result of full implementation of this strategy, NCHHSTP and its health department and education agency partners will provide more timely, accurate, and complete data on risk behaviors, HIV, viral hepatitis, STDs and TB to policy makers, prevention program managers and the public. Surveillance will be improved to fill critical data gaps data, such as those that exist for viral hepatitis. Grantees will better monitor provision of screening and treatment at the state and local level and use such data to improve program planning and prioritize public health interventions. NCHHSTP and grantee performance will continually improve due to better prioritization, monitoring and program feedback. Ultimately, the burden of HIV, viral hepatitis, STDs and TB, and health disparities due to these infections, will be reduced.



## **5.2 Scientific Discovery and Evaluation: Address critical scientific gaps by identifying, developing and evaluating interventions, policies and technologies**

Scientific discoveries have been critical to the success in reducing HIV, viral hepatitis, STDs, and TB in the United States and around the world. CDC has contributed to many of these discoveries including the following:

- Discovery of methods to prevent mother to child transmission of HIV, which led to dramatic reductions in infant infections, and gave rise to research that showed antiretrovirals to be effective in preventing HIV acquisition (post exposure prophylaxis [PEP] and pre-exposure prophylaxis [PrEP]) and transmission in other populations
- Improvements in treatments, such as a shortened regimen for treatment of latent TB infection, which can improve completion rates and patient outcomes and further drive down morbidity
- Development and improvement of technologies to test for infection, such as new HIV and hepatitis C diagnostic algorithms that can identify and differentiate between acute and established infections; blood tests for TB, which, unlike the tuberculin skin test, do not require a follow up visit if the person is uninfected; molecular drug resistance testing to rapidly and effectively identify persons in need of second line drugs for TB; and genomic sequencing that can be used to identify, or rule out, related transmissions
- Development and refinement of effective public health interventions, such as directly observed therapy for TB, which turned the tide on the TB resurgence in the 1990s and remains a critical strategy today; expedited partner therapy for chlamydia to treat partners of persons with infection; and targeted vaccination strategies, such as that used to eliminate racial/ethnic disparities in hepatitis A infection

Yet, despite this progress, critical gaps in prevention knowledge remain. For example, better tolerated and shorter treatments are urgently needed for TB, particularly drug-resistant TB. Improved strategies are needed to address continued high rates of HIV and STDs among gay and bisexual men, to eliminate mother to child transmission of hepatitis B virus and to stop the emerging epidemic of hepatitis C infections among young people who inject drugs. New scientific discoveries, as well as evaluations to demonstrate how best to practically apply existing knowledge, can help improve population health and reduce disparities.

### 5.2.1 What NCHHSTP will do

NCHHSTP will develop better methods for identifying and analyzing gaps in its research portfolio and identify strategies to help fill those gaps. NCHHSTP will also continually refine and improve the quality of its scientific products. Critical areas of inquiry identified thus far include the following:

- Monitoring changes in the population, the environment and the infectious agents that may require new prevention and control strategies. For example, NCHHSTP is monitoring new cases of hepatitis B to detect changes in the viral strains that may require modification to available vaccines. NCHHSTP is also monitoring bacterial and viral isolates from patients for drug-resistant strains of TB, gonorrhea and HIV so that recommended treatments can be adjusted if needed. NCHHSTP is monitoring changes in risk behaviors, such as increased injecting drug use by rural youth, which has been associated with recent increases in acute HCV infections, and STD biomarkers as risk factors for HIV infection
- Evaluating the utility of advanced molecular diagnostics and whole genome sequencing to identify clusters of related infection and characterize transmission networks and allow for public health intervention. This work will focus the public health response, obviating the need for extensive investigation of unrelated cases of transmission. It may also lead to the development of point of care diagnostics that can identify drug-resistant strains and inform treatment
- Providing technical assistance and scientific expertise to multilateral organizations and other countries to investigate scientific questions important to the development and implementation of effective control programs
- Collaborating with NIH and other organizations to develop, predict and validate the impact of biomedical and behavioral tools for disease prevention, including research on pre-exposure prophylaxis PrEP for HIV; PEP and treatment adherence; better tests and testing algorithms; and care and treatments, including shorter TB treatment regimens, and treatment for antimicrobial resistant infections
- Developing and assessing implementation strategies for new prevention tools, such as a shorter 3 month regimen for treating latent TB infection, HIV PrEP, and treatments for hepatitis C
- Collaborating with other public health agencies to develop prevention strategies and program plans for emerging public health problems including antimicrobial resistant bacteria and increasing rates of opioid drug abuse
- Ensuring the availability and use of sound scientific evidence to underpin feasible and cost-effective policies, guidelines, and recommendations for laboratory testing and diagnosis, interventions and treatment

- Assessing the implementation, effectiveness and impact of program interventions and policies to prevent and control infections, such as implementation of school health education to prevent HIV and STDs; vaccines for human papillomavirus (HPV), and hepatitis B; voluntary, opt-out HIV testing in clinical settings; recommended testing for chlamydia, gonorrhea, syphilis, HIV, hepatitis B, and hepatitis C; self-administered therapy using shorter regimens to treat latent TB infection; and expedited partner services to treat partners exposed to chlamydia
- Building the evidence base regarding protective factors for youth, especially lesbian, gay, bisexual and transgender youth, to guide school, community, and parent-based interventions to improve outcomes
- Utilizing program data to identify emerging issues at the program level that would benefit from timely and rigorous, in-depth assessment

### 5.2.2 Expected results

Taken together, these efforts should provide the tools and knowledge needed to increase the effectiveness, efficiency and impact of HIV, viral hepatitis, STDs, and TB prevention programs. More specifically, new prevention challenges will be uncovered and addressed. Models for how to better combine and implement prevention interventions will be developed, evaluated, and packaged. Finally, the knowledge necessary to inform CDC and international recommendations for disease prevention and control will be advanced.



### **5.3 Increasing Knowledge and Adoption of Healthy Behaviors: Increase knowledge of HIV, viral hepatitis, STDs and TB, and promote adoption of behaviors that prevent infection and associated morbidity and mortality**

Knowledge about transmission pathways, effects on health and means to prevent HIV, viral hepatitis, STD, and TB is foundational to the adoption of healthy behaviors, yet is highly variable in the U.S. population. Further, knowledge alone is not sufficient. All persons, especially young people and members of disproportionately affected groups, need skills to adopt health protecting behaviors, including seeking appropriate healthcare. Public health and healthcare professionals can encourage and promote healthy behaviors and the receipt of critical health services. For example,

- CDC assistance to state and local education agencies has helped ensure that health and education policies and practices support adolescent health, development, and information about how to effectively educate young people about HIV and other STDs
- Targeted communication campaigns have educated Americans about the threat of HIV and how to prevent it, promoted testing and engagement in care for HIV, hepatitis B, hepatitis C, and STDs
- CDC informational materials for the public and providers, including fact sheets, webpages, and social and digital media, as well as recommendations, are widely accessed and trusted sources of health information. For example, TB patient education and adherence enhancing activities have been a critical part of overall case management. CDC's STD Treatment Guidelines mobile app combines information from CDC's *STD Treatment Guidelines* and *MMWR* updates and has been downloaded more than 830,000 times
- Training centers for TB and STD provide health professionals with a spectrum of state-of-the-art educational opportunities

#### **5.3.1 What NCHHSTP will do**

CDC will conduct communication and educational campaigns; develop, evaluate and share educational materials and curricula for target populations; develop and implement educational programs, and, with its public health and academic partners, support trainings and provide educational materials to educators and public health and healthcare providers. Efforts will be evaluated and refined to ensure that they are effective in reaching the desired results. NCHHSTP will

- Support efforts to educate all youth and disproportionately affected populations regarding health protecting behavior. Activities include
  - Establishing health messages and dissemination mechanisms for all teens, as well as their parents/caregivers and teachers
  - Developing, and helping partner organizations develop, clear, understandable and actionable education and communication materials and programs
  - Supporting health education and risk reduction programs for persons at highest risk of infection

- Use traditional and new media to reach people of all generations with life-saving health information, including resources for prevention, testing and linkage to care for those most at risk of infection. Key efforts include
  - Conducting communications campaigns to promote HIV awareness and the reduction of HIV-related stigma among the general public and populations with highest rate of infections
  - Conducting targeted communication campaigns to promote testing and care among populations with the highest rates of infections
  - Identifying how best to effectively use new communication technologies to reach populations that do not, or have not, accessed traditional communication channels
  - Adapting public health messages and communication as needed to take into account new prevention tools and strategies, including PrEP
- Create resources and educational opportunities so that public health and healthcare providers have the latest information available regarding guidelines/recommendations and best practices. For example, NCHHSTP will
  - Develop user-friendly tools, based on models of impact and cost effectiveness of prevention strategies, that practitioners and policy-makers at the national, state and local levels can use to improve program effectiveness
  - Raise awareness among state and local health officials regarding matters of importance in HIV, viral hepatitis, STD and TB prevention, including how to recognize and address outbreaks
  - Promote the adoption of improved tests and testing strategies, such as nucleic acid amplification tests (NAAT) to provide more rapid diagnosis of TB and guidelines for HIV and HCV laboratory testing
  - Promote utilization of new technologies by providers to improve adherence to CDC screening and treatment recommendations, such as clinical decision support systems in electronic medical records
  - Provide outreach, training, continuing medical education opportunities, and expert consultation to primary care providers to better serve patients with and at risk for HIV, viral hepatitis, STDs, or TB, assisting with referral to specialized care as needed. NCHHSTP will also continue to conduct outreach to primary care to promote testing for HIV, viral hepatitis, and STDs and other recommended prevention services, such as expedited partner therapy for chlamydia and gonorrhea



### 5.3.2 Expected results

Implementation of this strategy will improve the health, including the sexual health, of the U.S. population. Adolescents will have the fundamental health knowledge and skills to establish healthy behaviors for a lifetime, connect to health services, and avoid HIV, viral hepatitis, STDs, TB, and unintended pregnancy. Adults will have the knowledge and skills needed to reduce their risk of infection, and to seek appropriate care to preserve their health and that of their families and partners. Public health and health care professionals will be equipped with the latest information and necessary skills to conduct effective control programs and provide prevention and care services most effectively.



"You know what, HIV? There are many things I still want to accomplish and you are not going to stop me."  
L'Orangelis - San Juan, PR  
Living with HIV since 1988.

**HIV  
TREATMENT  
WORKS**

I was born with HIV so I don't know what a life without HIV is like. There was a period of time where I did not take medicine, but I decided to get back on treatment and seek medical care. I am motivated now to stay healthy because there are so many things I still want to accomplish. I have a whole life to look forward to and an opportunity to be a role model for other young people.

Get in care. Stay in care. Live well.  
[cdc.gov/HIVTreatmentWorks](http://cdc.gov/HIVTreatmentWorks)

## **5.4 Prevention through Healthcare: Maximize opportunities afforded by the healthcare system for preventing infections, morbidity, and mortality**

Services delivered in the healthcare or clinic setting, such as vaccination, screening, treatment and behavioral counseling are critical to the prevention and control of HIV, viral hepatitis, STDs and TB. These systems of care are changing, partly as a result of the Affordable Care Act and partly reflecting other drivers of change, such as technological and scientific advances. These changes include the following:

- Increased number of persons with health insurance, who may now be more likely to seek and receive preventive and treatment services
- Increased emphasis on quality in healthcare, with a focus on prevention and well-being
- Different payment structures developed in response to concerns about increasing costs, that emphasize improvement in outcomes and value, and that rely less on fee-for-service reimbursement
- Increased emphasis on systems of care that place primary care at the center of a network of providers who share the necessary tools and incentives to provide coordinated services
- Marked expansion of electronic medical records, with increased availability of data across information systems, providing new opportunities to track quality metrics



## **Fostering public health and primary care collaboration**

NCHHSTP worked with ASTHO, NACCHO, the National Coalition of STD Directors (NCSD) and the National Association of Community Health Centers (NACHC) to promote collaboration between health departments and FQHCs. Links to webinars and a report from this project “A Practical Look at Using Integration to Better Prevent and Treat Sexually Transmitted Diseases” are available at: <http://www.astho.org/Programs/Infectious-Disease/Hepatitis-HIV-STD-TB/Sexually-Transmitted-Diseases/Integration-Webinar-Series/>

Such system changes are supported by and are transforming the roles of major healthcare providers and payers. For example, the number of persons served by community health centers is expanding dramatically. Many states are expanding their Medicaid programs to cover an increasing portion of the uninsured population. However, the uneven expansion of Medicaid across the country is likely to exacerbate disparities in health nationwide, posing additional challenges to prevention programs, particularly those in non-expansion states. Increasingly, state Medicaid programs are driving quality improvement and the Center for Medicare and Medicaid Innovation (CMMI) is investing in alternative approaches to service delivery that improve health outcomes.

Finally, some specific Affordable Care Act (ACA) provisions provide new opportunities for prevention of HIV, viral hepatitis, STDs, and TB. For example, many preventive services (those with an A or B recommendation by the U.S. Preventive Services Task Force [USPSTF], those recommended by the Advisory Committee for Immunization Practices [ACIP], or by HRSA for children and women) are now covered by most insurance plans without cost-sharing. These include services such as vaccination for hepatitis A, hepatitis B, and HPV; screening for chlamydia, gonorrhea, HIV, hepatitis B and hepatitis C; and high intensity behavioral counseling for those at high risk for STDs.

### 5.4.1 What NCHHSTP will do

NCHHSTP will adopt the following approaches to take advantage of the opportunities offered by the changing healthcare landscape:

- Utilize economic and health services data to create business cases for public and private payers and employers to include the provision of innovative, effective preventive services, such as expedited partner therapy and partner notification, in health plan coverage
- Collaborate with stakeholders, including state Medicaid offices, major nongovernmental organizations, other federal agencies and other parts of CDC to encourage inclusion of HIV, viral hepatitis, STD, and TB outcomes in strategies and initiatives sponsored by those organizations
- Prepare NCHHSTP-funded health departments and community-based organizations to work more closely with healthcare delivery systems such as federally qualified health centers (FQHCs), patient centered medical homes and accountable care organizations to improve testing, and linkage to care and treatment
- Prepare NCHHSTP-funded education agencies to work more closely with health departments and healthcare delivery systems to establish school-based health centers or linkage and referral systems to connect teens to recommended clinical preventive sexual health services
- Leverage opportunities created by the ACA and other federal policies regarding reimbursement for recommended clinical preventive services, to encourage provision of services vital to the control of HIV, viral hepatitis, STDs, and TB. Examples include
  - Collaborating with CMS, state Medicaid programs and other payers on performance incentives for healthcare providers
  - Increasing awareness among at-risk populations regarding insurance coverage without cost sharing of relevant preventive services
  - Conducting analyses and providing evidence to the ACIP and USPSTF to support and improve clinical recommendations addressing HIV, viral hepatitis, STDs, and TB
- Foster improvements in the provision of healthcare for HIV, viral hepatitis, STDs, and TB by leveraging new performance measurement initiatives and changes in information technology. NCHHSTP would collaborate with HRSA and CMS for activities such as
  - Development of clinical decision support tools that can be incorporated into electronic health record systems
  - Development, standardization and promulgation of core performance/clinical quality measures, such as those for hepatitis C, STDs, TB and HIV screening and treatment
  - Development of checklists, applications, feedback reports and other tools to increase the delivery of recommended services in health care settings

### 5.4.2 Expected results

Taken together, these actions aim to influence the healthcare system to address the needs of patients in a more holistic manner and increase the quality and delivery of recommended preventive services for HIV, viral hepatitis, STDs, and TB in healthcare settings, particularly among disadvantaged populations.



## **5.5 Program Collaboration and Service Integration: Promote better collaboration across divisions in design and implementation of surveillance, research, communication, and prevention programs to support service integration and to utilize Center and partner resources most effectively**

Program collaboration and service integration (PCSI) is a mechanism of organizing and blending interrelated health issues, separate activities, and services in order to maximize public health impact through new and established linkages across programs to facilitate the delivery of services. Through PCSI, NCHHSTP strengthens collaborative work across disease-specific programs, develops capacities that can be shared across programs, and integrates services at the individual, or client, level.

NCHHSTP has issued population specific recommendations that address populations in a more holistic manner; developed joint guidelines and trainings to enable grantees and staff to better address related infections; developed internal mechanisms to facilitate cross-Center project officer collaboration; and allowed its health department grantees to allocate a portion of their awards to PCSI efforts. For example, NCHHSTP

- Awarded funding to six health departments for integration of health services. New York City, North Carolina, Philadelphia, San Francisco, Texas, and Washington, D.C., were funded as PCSI demonstration sites to plan, scale-up, and support the implementation of a syndemic approach for the prevention of HIV, viral hepatitis, STDs and TB. Success stories were disseminated through NCHHSTP's website to showcase accomplishments and lessons learned
- Issued comprehensive partner services recommendations that cover both STD and HIV infections. Previously, there were separate STD and HIV partner services recommendations
- Issued data security and confidentiality standards for HIV, viral hepatitis, STD, and TB surveillance. Adoption of these standards is the necessary first step in securely sharing surveillance data across programs to improve program effectiveness
- Issued integrated preventive services recommendations for persons who inject drugs, providing a single reference for prevention and healthcare providers serving this at risk population
- Developed the NCHHSTP Atlas—a data visualization tool that serves as a single platform to disseminate comparable state and, where available, county level data on HIV, syphilis, gonorrhea, chlamydia, TB, and hepatitis A, B and C
- Developed an information technology platform to coordinate site visits by NCHHSTP project officers and initiated quarterly project officer meetings
- Conducted communication research on how people think about STIs to identify opportunities for effective prevention messages addressing overlapping epidemics
- Developed the Pacific Islands FOA, which combines multiple prevention program activities across disease areas into one program plan to better support prevention program capacity in the islands

Progress is being made at the client level in improving service integration. For example, the vast majority of persons diagnosed with TB are screened for HIV. Similarly, increased attention has been focused on improving the proportion of STD clinic patients who are screened for HIV and the proportion of persons with HIV who are screened for STDs. And programs are urged to offer hepatitis C and HIV screening for persons at-risk for both infections.

However, new challenges and opportunities are emerging. In many parts of the country, syphilis has increased among men, with most of those increases occurring among gay and bisexual men who are HIV-infected. This increase of syphilis cases may be fueled by increased use of seroadaptive behaviors and reliance on treatment as HIV prevention. At the same time, new technologies and improvements in intervention science offer the opportunity to improve collaborative work among prevention and care programs and the integration of prevention services for at-risk populations.

### **5.5.1 What NCHHSTP will do**

Looking forward, NCHHSTP will

- Align surveillance systems, policies, standards and procedures and encourage data use for program improvement and data sharing across programs in order to improve efficiency of surveillance and completeness of data, identify the temporal relationship of infection and syndemic disease interaction, and identify and address gaps in service provision for at-risk populations
- Develop a Center-wide, life course approach to address HIV, viral hepatitis, and STD prevention among gay and bisexual men that takes into account changing needs from early adolescence through late adulthood
- Identify and promote opportunities for cross-program training for NCHHSTP staff and public health partners
- Coordinate health messaging across NCHHSTP programs concerning new prevention tools to maximize opportunities for effectively reaching at-risk populations and to minimize unintended effects
- Identify and leverage opportunities to provide services to prevent co-morbidities, such as testing persons taking PrEP for STDs and referral of STD clinic patients with acute STD diagnoses to PrEP services
- Ensure that project officers/program consultants and grantees maximize opportunities for and remove barriers to program collaboration to support service integration at the client level
- Standardize and improve cooperative agreement planning and management across the Center
- Develop models and conduct analyses to identify the circumstances in which program collaboration and service integration efforts are most likely to be beneficial, the costs of such efforts, and factors that contribute to success

## 5.5.2 Expected results

These efforts are expected to improve provision of services for individuals at risk of multiple infections, thereby reducing co-morbidities and disparities in health. They will also reduce administrative burden on state and local health department grantees, develop shared capacity that can be used across programs and improve the consistency and quality of NCHHSTP's oversight and management, ultimately maximizing the effectiveness and efficiency of NCHHSTP programs.

The screenshot displays the CDC's "Get Tested" website for National HIV and STD Testing. The page features a search bar for finding testing locations, a gender selection form, and sections for frequently asked questions, a "Did You Know?" fact, and a "Start Talking, Stop HIV" campaign. The website is branded with the CDC logo and the slogan "CDC 24/7: Saving Lives. Protecting People.".

**Get Tested**  
National HIV and STD Testing

Find Free, Fast, and Confidential Testing Near You

Enter ZIP Code or City, State

Not Sure What Test You Need?  
Answer a few questions and we'll help you.

What is your gender?

Male  Female  Transgender

**Find Answers to Your Questions**

- How do HIV, Viral Hepatitis, and STDs relate to each other?
- How do I protect myself and my partner(s) from HIV, Viral Hepatitis, and STDs?
- What puts me at risk for HIV, Viral Hepatitis, and STDs?
- What are sexually transmitted diseases and should I be tested?

**Did You Know?**

HIV is spread through unprotected sex and drug injecting behaviors, so people who engage in these behaviors should get tested more often.

**Testing Campaigns**

**Start Talking. Stop HIV.** **Start Talking. Stop HIV.** This national campaign seeks to reduce new HIV infections among gay, bisexual, and other men who have sex with men by encouraging open discussion about a range of HIV prevention strategies and related sexual health issues between sex partners.



## **5.6 Organizational Excellence: Support excellence in science and program; ensure efficient business and scientific administration; implement effective communication and policies; enhance skills of current staff; and develop the NCHHSTP public health workforce**

An effective public health system is critical for building a healthy society and reducing preventable disease and death. The cornerstone of such a system is a workforce that is trained and empowered to use all available resources to target health improvement efforts, to collaborate with partners in health care and other sectors, and to respond when there are urgent threats to the public's health. NCHHSTP has undertaken multiple efforts to build the public health workforce, including internships, mentoring programs, career development seminars, and a coaching and leadership initiative for its team leads, branch chiefs and division directors.

NCHHSTP has also established business, information, and scientific administrative systems to support HIV, viral hepatitis, STD and TB prevention nationwide. Collectively, the Center manages multiple cooperative agreements with health departments in every state, Puerto Rico, the Virgin Islands, the U.S. Affiliated Pacific Islands, and twelve localities. NCHHSTP field staff builds the capacity of health departments nationwide to conduct partner services, outbreak investigations and other essential public health functions. These field staff have aided in the public health response to the anthrax attack of 2001, Hurricane Katrina, Hurricane Sandy, and, most recently, the occurrence of Ebola in the United States. NCHHSTP manages cooperative agreements with 36 state and 21 local education agencies. Further, NCHHSTP also manages cooperative agreements and contracts with multiple universities and non-profit organizations supporting research, partnership, training and capacity building. These extramural efforts engage researchers and non-profit organizations to provide outside perspectives and solutions to scientific, programmatic and policy issues. In addition, NCHHSTP supports the National Prevention Information Network, to meet the information sharing needs of NCHHSTP programs and prevention partners.

### 5.6.1 What NCHHSTP will do

Achieving NCHHSTP's HIV, viral hepatitis, STD and TB prevention goals requires that NCHHSTP be fit for purpose—that staff are well trained and have efficient and effective systems to support their work. To this end, NCHHSTP will continually refine and improve its business and scientific administration, adapting to the needs of stakeholders and grantees, leveraging new technologies, and incorporating new administrative directives. NCHHSTP will maintain effective communication with stakeholders and grantees, and conduct business in a transparent manner. In addition, NCHHSTP will participate actively in CDC-wide business improvement efforts to ensure that such efforts meet the needs of NCHHSTP programs. Finally, NCHHSTP will work to ensure that its staff are well trained and can meet current and anticipated program needs. Specifically:

- NCHHSTP will work to modernize scientific administration and support continuous improvement of scientific, programmatic, and policy endeavors. For example,
  - NCHHSTP laboratories will play an active role in CDC's laboratory safety improvement initiative
  - NCHHSTP will pursue effective methods for improving the quality of the scientific process and its information products, implement and evaluate the NCHHSTP science quality assurance plan; and identify effective methods for improving research portfolio gap analysis and strategies for filling those gaps
  - NCHHSTP will continue to support extramural research and program innovation and evaluation to help answer questions of public health importance to the nation and the world
  - NCHHSTP will leverage cooperative research and development agreements, Small Business Innovation Research set-asides and other mechanisms to advance development of critical scientific products
- NCHHSTP will use new technologies and capabilities to improve management and communication within the Center and with NCHHSTP field staff, grantees, partners, and agencies. For example, NCHHSTP will
  - Improve NCHHSTP administrative systems to be more efficient and effective, with high quality and enhanced customer service
  - Be at the forefront of CDC's new Grant Solutions initiative. This program is expected to greatly increase the efficiency of grant management at CDC
  - Increase the use of commercially available, customizable information technology to facilitate collaboration across the Center
  - Improve communication with grantees and other prevention partners and program stakeholders, through coordinated, transparent communication and outreach activities

- NCHHSTP will recruit, develop and support highly trained public health staff who can provide leadership and technical expertise in science, policy, programs, and practice to improve the health and well-being of the nation and the world. Key tactics include:
  - Developing a recruitment and placement strategy to ensure that the best candidates are recruited and developed to fill key roles in the field and headquarters
  - Improving the collection and monitoring of data on the NCHHSTP workforce to better assess and improve the supply, distribution, diversity, and development of the current and future workforce
  - Fostering a work environment that promotes a healthy work-life balance and a culture of recognition for employee contributions and achievements
  - Using new technology platforms to facilitate collaboration and training, and improve the services offered to health agencies
  - Ensuring an effective learning environment that includes sharing critical knowledge across the programs, branches and divisions, at headquarters and in the field
  - Improving coordination across NCHHSTP, CDC and with other federal agencies to ensure a strategic approach to workforce development and succession planning

### 5.6.2 Expected results

Taken together, these efforts are expected to ensure the quality of NCHHSTP scientific, programmatic and policy endeavors, as well as the quality of NCHHSTP managerial and administrative activities and are expected to attract, maintain, develop, and utilize NCHHSTP's professional workforce to effectively implement prevention activities.



## 6. Next Steps

NCHHSTP is committed to broad engagement with staff and stakeholders in its strategic thinking and planning. NCHHSTP leaders will incorporate ways to seek new ideas and obtain feedback to continue to improve our performance. The Center will rely on staff and internal and external partners, including other federal agencies, state and local governments, the research community, and nongovernmental partners to work together to achieve its vision, *"A Future Free of HIV, Viral Hepatitis, STDs, and TB."*

The NCHHSTP Strategic Plan provides an overarching framework that allows for greater responsiveness to ever-changing internal and external environments. The Plan provides a more structured way for NCHHSTP and its partners to think critically and comprehensively about priorities, operations and impacts. The divisions in NCHHSTP are developing plans which will operationalize this plan. These division plans will provide more detailed and specific goals, strategies, and indicators of progress. Like this plan, the division plans will be made publicly available on CDC's website.



## 7. Implementation, Monitoring, and Evaluation

Achievement of the goals of this plan requires a commitment at every level of the organization. Each division is working to identify disease-specific objectives and strategies for addressing the goals of this plan and achieving division specific programmatic goals. NCHHSTP will take the following specific steps to implement, monitor, and evaluate its success.

- Provide an electronic copy of the strategic plan to all staff and other key stakeholders
- Highlight the plan on both the NCHHSTP internet and intranet sites
- Reflect on the NCHHSTP plan when developing or updating NCHHSTP division plans
- Discuss accomplishments related to the strategic plan annually at a NCHHSTP all-hands meeting
- Annually engage NCHHSTP leadership to answer broad questions:
  - Are we on track toward achieving our targets? Do they need adjusting?
  - Are we focused on our goals and strategies?
  - What challenges or opportunities have we encountered? Should these be formulated as additional strategies? Do any strategies need elimination or revision?
- Report publicly on the strategic plan and major achievements annually

## Appendix A — Relevant frameworks that guided plan development

1. *CDC Mission, Role, and Pledge*: <http://www.cdc.gov/about/organization/mission.htm>. CDC works 24/7 to protect America from health, safety and security threats, both foreign and in the U.S. by detecting and responding to new and emerging health threats, tackling the biggest health problems causing death and disability for Americans, putting science and advanced technology into action to prevent disease, promoting healthy and safe behaviors, communities and environment, developing leaders and training the public health workforce, including disease detectives, and taking the health pulse of our nation. CDC pledges to be a diligent steward of the funds entrusted to our agency, provide an environment for intellectual and personal growth and integrity, base all public health decisions on the highest quality scientific data that is derived openly and objectively, place the benefits to society above the benefits to our institution, and treat all persons with dignity, honesty, and respect.
2. *CDC priorities*: <http://intranet.cdc.gov/od/odweb/strategic.htm>. To achieve its mission, CDC is focused on achieving five main public health priorities:
  - Excellence in surveillance, epidemiology, and laboratory science and services
  - Support state, tribal, and local health departments
  - Improve global health
  - Advance evidence-based health policies
  - Prevent illness, injury, disability, and premature death
3. *CDC Framework for Preventing Infectious Diseases*: <http://www.cdc.gov/oid/docs/ID-Framework.pdf>. CDC's Infectious Disease Framework provides a roadmap for improving our ability to prevent known infectious diseases and to recognize and control rare, highly dangerous, and newly emerging threats, through a strengthened, adaptable, and multi-purpose U.S. public health system. Although its primary purpose is to guide CDC's infectious disease activities, the document is also designed to advance opportunities to improve the nation's health through new ideas, partnerships, technical innovations, validated tools, and evidence-based policies.
4. *Healthy People 2020*: <http://www.healthypeople.gov/>. Healthy People provides science-based, ten-year national objectives for improving the health of all Americans. For more than three decades, Healthy People has established benchmarks and monitored progress over time in order to encourage collaborations across communities and sectors, empower individuals toward making informed health decisions, and measure the impact of prevention activities. Key topic areas under NCHHSTP's purview include HIV, STD, and Immunization and Infectious Diseases (including TB and viral hepatitis).

5. *National HIV/AIDS Strategy for the United States: Updated through 2020 (NHAS)*: <https://www.aids.gov/federal-resources/national-hiv-aids-strategy/nhas-update.pdf>. President Barack Obama introduced the *National HIV/AIDS Strategy* in 2010 as a concise plan to identify a small number of high payoff action steps that need to be taken to achieve each of the President's goals for HIV prevention. The National Strategy was updated in 2015 to reflect the work accomplished and the new scientific developments since 2010. The updated strategy charts a course for collective action across the Federal government and all sectors of society to move us closer to the Strategy's vision: The United States will become a place where new HIV infections are rare and when they do occur, every person, regardless of age, gender, race/ethnicity, sexual orientation, gender identity or socio-economic circumstance, will have unfettered access to high quality, life-extending care, free from stigma and discrimination.
6. *HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis (2014–2016)*: [www.aids.gov/hepatitis/](http://www.aids.gov/hepatitis/). This updated HHS Action Plan is a comprehensive cross-agency action plan to combat viral hepatitis. It guides the actions of agencies and offices from across the Department of Health and Human Services, as well as with the Departments of Justice, Housing and Urban Development, and Veterans Affairs, to prevent new infections and improve the diagnosis, care and treatment of individuals living with viral hepatitis in the U.S.
7. *A Call For Action on the Tuberculosis Elimination Plan of the United States*: [http://www.thoracic.org/advocacy/stop-tb/Eliminate\\_TB\\_USA.pdf](http://www.thoracic.org/advocacy/stop-tb/Eliminate_TB_USA.pdf). The *Call for Action* was developed and issued by Stop TB USA in 2007, to provide an updated plan of action to implement the Institute of Medicine's report *Ending Neglect*, published in 2001. The plan reviews progress on the IOM goals and identifies areas where additional work is needed.
8. *National Prevention Strategy (NPS)*: <http://www.surgeongeneral.gov/priorities/prevention/strategy/index.html>. Released in 2011, the *NPS* guides the nation regarding means for improving health and well-being of the U.S. population. The *NPS* prioritizes prevention by integrating recommendations and actions across multiple settings to improve health and save lives. The *NPS* envisions a prevention-oriented society where all sectors recognize the value of health for individuals, families, and society and work together to achieve better health for Americans. Reproductive and sexual health, to include the prevention of HIV and STDs, is one of the seven priorities discussed in the strategy.

9. *Essential public health services* are identified by the Public Health Service in *Public Health in America* (1994). These are:

- Monitor health status to identify community health problems.
- Diagnose and investigate health problems and health hazards in the community.
- Inform, educate, and empower people about health issues.
- Mobilize community partnerships to identify and solve health problems.
- Develop policies and plans that support individual and community health efforts.
- Enforce laws and regulations that protect health and ensure safety.
- Link people with needed personal health services and ensure the provision of healthcare when otherwise unavailable.
- Ensure a competent public health and personal healthcare workforce.
- Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
- Research for new insights and innovative solutions to health problems.





## Appendix B — Indicators

### Development of the NCHHSTP Strategic Plan Indicators

To measure progress toward the goals of the NCHHSTP Strategic Plan through 2020, NCHHSTP has identified a small set of measurable indicators. These indicators were developed by a workgroup of subject matter experts across the Center. The workgroup established criteria for indicator selection, developed criteria for selecting targets, and recommended a set of indicators representing major efforts.

The indicator set is not comprehensive. The Center and its Divisions currently monitor progress on additional indicators that provide a more complete assessment of progress toward key national goals. In the future, the NCHHSTP Strategic Plan Indicators set may be amended if annual or biennial data become available to measure other important impacts, such as disparities in hepatitis B, incidence of latent TB infection, or co-infections. The indicators will be amended and updated if additional or better data become available and to reflect significant changes to other national plans.

#### Indicator Criteria

1. Indicator reflects one of the most important things for NCHHSTP to measure.
2. A change in the indicator can be attributed, at least in part, to NCHHSTP programs and activities.
3. The indicator represents the highest level of outcome which can reasonably be expected to be caused by the program. For example, education programs may reasonably be expected to result in behavior change.
4. The indicator promotes an honest assessment of program results.
5. The indicator is both easy to understand and concise.
6. One division or office will be responsible for reporting results.
7. Reliable data are currently available in order to establish a baseline. The baseline year may not be the same for all indicators, allowing for differences in data systems.
8. Data will continue to be available on an annual or biennial basis until at least 2020 (the end year of the plan). If there are anticipated changes to data systems, the changed systems will yield data comparable to, or better than, that used for the baseline.

## Target setting

Targets were set using rates when rates could be calculated and when they were appropriate for the given indicator. This aids in comparison across indicators.

### Options employed to set targets

- Targets are aligned with those of major national plans, especially the *National HIV/AIDS Strategy for the United States: Updated to 2020 (NHAS)*, the *HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis*, and *Healthy People 2020*
  - Targets for HIV-related indicators align with the update of the *NHAS*
  - Targets for indicators that are related to, but not identical to, other fixed plans were set in a similar manner
  - Targets for indicators that mirror other national plans may change as those plans are updated
- The remaining targets were set by NCHHSTP, and were chosen to be realistic and to require effort to achieve
  - Most often, targets were set at 5-10 percent improvement from the baseline, similar to one of the target-setting methods used for *Healthy People 2020*
  - Other targets for 2020 were set at the average performance of the top 10 percent of jurisdictions at the baseline (2013)

## Goal 1: Decrease incidence of infection with HIV, viral hepatitis, STDs, and TB

| Indicator                                                     | Current Result                                       | 2020 Target                                   |
|---------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|
| <b>1.1 Reduce rate of new diagnoses</b>                       |                                                      |                                               |
| <b>1.1 a HIV</b>                                              | 12.6/100,000 new diagnoses per population (2013)     | 9.7 new diagnoses per 100,000 population      |
| <b>1.1 b Acute hepatitis B among adults ages 19 and older</b> | 1.26 symptomatic cases per 100,000 population (2013) | 0.5 symptomatic cases per 100,000 population  |
| <b>1.1 c Acute hepatitis C</b>                                | 0.7 symptomatic cases per 100,000 population (2013)  | 0.25 symptomatic cases per 100,000 population |
| <b>1.1 d TB</b>                                               | 3.0 cases per 100,000 population (2013)              | 1.4 cases per 100,000 population              |

**Note:** Updated to reflect the *National HIV/AIDS Strategy for the United States: Updated to 2020*

### HIV

**Numerator:** Number of (unadjusted) HIV diagnoses among persons of all ages during the calendar year and reported to CDC within 18 months of the diagnosis year.

**Denominator:** Total population in the United States, not including 6 dependent areas

### Acute hepatitis B

**Numerator:** Number of acute symptomatic cases of hepatitis B among adults ages 19 and older reported in the past 12 months

**Denominator:** Total population ages 19 and older in reporting areas

### Acute hepatitis C

**Numerator:** Number of acute symptomatic hepatitis C cases reported in the past 12 months

**Denominator:** Total population in reporting areas

### TB

**Numerator:** Number of verified, counted TB cases in the United States

**Denominator:** Population in the United States

**Period of reporting:** Annual

**Data sources:** New HIV diagnoses are reported through the National HIV Surveillance System. New symptomatic cases of hepatitis B and hepatitis C are reported through the National Notifiable Disease Surveillance System (NNDSS). TB cases are reported through the National Tuberculosis Surveillance System (NTSS). Rates are calculated using several population data sources. Rates for

HIV are calculated using the U.S. Census Bureau's annual population estimates (for current estimates) and population projections (for calculating targets). Rates for viral hepatitis are calculated using the National Center for Health Statistics bridged population data file, which is based on U.S. Census data. Rates for TB are calculated using the U.S. Census's Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico (for current results), and the American Community Survey (for calculating targets).

**Alignment with other plans:** *NHAS, Healthy People 2020* (HIV-1; IID-25, IID-26, IID-29)

**Rationale and discussion:** The rate of new diagnoses is used here to assess trends in HIV infection, acute hepatitis B, acute hepatitis C, and TB.

The rate of new HIV diagnoses (12.6/100,000) represents 39,949 diagnoses. Overall, the rate of new HIV diagnoses in the U.S. has declined 33% (2002-2011) and overall number of diagnoses has declined 19% (2005-2014). The number of new HIV diagnoses attributed to heterosexual contact and injecting drug use has decreased. These gains have been offset by increases among gay, bisexual, and other men who sex with men over the decade (2005-2014) but recent diagnoses data (2010-2014) show stabilizing diagnoses in this population.

The hepatitis B and hepatitis C incidence rates reflect reported, acute, symptomatic cases. Reported cases of acute viral hepatitis represent only those relatively few infected persons who were detected, diagnosed, met a stringent surveillance case definition, and eventually reported by health departments to CDC. Consequently reported cases underestimate the true incidence of infection. However, these reports are useful in analyzing trends in infection and assessing viral hepatitis prevention and control programs, policies, and activities. Actual cases of hepatitis B are estimated to be approximately 6.5 times the number of reported cases and actual cases of hepatitis C are estimated to be approximately 13.9 times the number of reported cases.

Acute hepatitis B has been declining in incidence since 1990 mainly due to effective vaccination strategies. However, for the first time since 1990, the number of reported cases of acute hepatitis B increased in 2013, to 3,050 cases. This represented a 5.4% increase from 2012. The vast majority, 2,968, of these cases occurred among adults ages 19 and older. It may be premature to interpret the increase; continued monitoring over more years of data is warranted. The overall incidence rate for 2013 was 1.2 cases per 100,000 population (1.26 for adults ages 19 and older). After adjusting for under-ascertainment and under-reporting, an estimated 19,764 acute hepatitis B cases occurred in 2013.

After receiving reports of approximately 800–1,000 cases of acute hepatitis C each year from 2006–2010, there was a significant increase of 151.5% in reported cases of acute HCV infection from 2010 to 2013. The increase is thought to reflect both true increases in incidence and improved case ascertainment. New cases of hepatitis C infection are predominately among young persons who are white, live in non-urban areas (particularly in Eastern and Midwestern states), have a history of injection drug use, and previously used opioid agonists such as oxycodone. The overall incidence rate for 2013 was 0.7 cases per 100,000 population, an increase from 2009–2012. After adjusting for under-ascertainment and under-reporting, an estimated 29,718 new hepatitis C infections occurred in 2013.

The TB incidence rate has steadily decreased in the United States since 1993; the rate for 2014 of 3.0/100,000 is the lowest reported, however, the rate of decline has slowed as cases become more difficult to find and treat. The annual number of TB cases represents just a fraction of the persons in the U.S. who are infected with the TB bacillus. The number of persons who are latently infected with TB is estimated periodically using data from the National Health and Nutrition Examination Survey (NHANES); the current estimate, from 2011–2012, is 13.3 million persons. An estimated 5–10 percent of persons with latent TB infection will go on to develop TB disease at some point in their lifetimes. Elimination of TB in the United States therefore, requires not only diagnosis and treatment of persons with TB disease, but also diagnosis and treatment to cure of persons with latent TB infection.

**Target setting method:** Targets for HIV align with *NHAS*. Targets for acute hepatitis B and hepatitis C are aligned with those set for Healthy People 2020. The national TB program targets are based on a statistical model that uses data to find trends from 2000 through 2013. Specifically, the targets are the 90th percentile values in 2013 estimated from a quantile regression on 2000–2013 data, excluding jurisdictions with fewer than 150 cases from 2011–2013.

| Indicator                                                                  | Current Result     | 2020 Target |
|----------------------------------------------------------------------------|--------------------|-------------|
| <b>1.2 Reduce the rate of increase of primary &amp; secondary syphilis</b> | 10% (2013 v. 2012) | 5.0%        |

**Numerator:** Change in the reported primary and secondary (P&S) syphilis rate per 100,000 total U.S. population in the current year versus the prior year

**Denominator:** The rate of P&S syphilis cases per 100,000 total U.S. population

**Period of reporting:** Annual

**Data sources:** National Notifiable Disease Surveillance System, U.S. Census

**Alignment with other plans:** *Healthy People 2020 (STD-7)*

**Rationale and discussion:** This indicator assesses changes in P&S syphilis, the stages at which syphilis is most infectious. While rates of P&S syphilis have gone down in some areas, rates are increasing among men who have sex with men, particularly in urban areas.

P&S syphilis is measured using nationally notifiable STD surveillance data are collected and compiled from reports sent by the STD control programs and health departments in all 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

**Target setting method:** The target is a 50% reduction in the rate of increase over a five year period.

| Indicator                                                                                                                                                                                      | Current Result | 2019 Target |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| <b>1.3 Increase the percentage of high school students nationwide who abstained from sexual intercourse or, if currently sexually active, who used a condom during last sexual intercourse</b> | 86.3% (2013)   | 90.6%       |

**Numerator:** Number of students in grades 9–12 who never had sexual intercourse, ever had sexual intercourse but not during the past three months, or had sexual intercourse during the past three months (i.e., currently sexually active) and used a condom during last sexual intercourse

**Denominator:** Number of students in grades 9–12

**Period of reporting:** Biennial

**Data source:** National Youth Risk Behavior Survey

**Alignment with other plans:** Measures of condom use and abstinence are included in *Healthy People 2020* (FP-9.1, FP-9.2, FP-10.3, FP-10.4)

**Rationale and discussion:** Young people engage in sexual risk behaviors that can result in unintended health outcomes. For example, among U.S. high school students surveyed in 2013:

- 46.8 percent had ever had sexual intercourse
- 34.0 percent had sexual intercourse during the previous 3 months, and, of these 40.9 percent did not use a condom the last time they had sexual intercourse
- 15.0 percent had had sexual intercourse with four or more people during their life

To reduce sexual risk behaviors and related health problems among youth, schools and other youth-serving organizations can help young people adopt lifelong attitudes and behaviors that support their health and well-being—including behaviors that reduce their risk for HIV, other STDs, and unintended pregnancy. This indicator measures self-reported HIV and STD protective factors (i.e., abstinence or condom use, if sexually active) among teens. It has remained relatively stable during the past decade.

Data for this indicator are derived from the National YRBS, a survey of a nationally representative sample of students in grades in 9–12 in all regular public and private schools in the 50 states and the District of Columbia.

**Target setting method:** The target is set at a 5 percent improvement above the 2013 baseline. This target will be challenging, as performance is already high and has changed little during the past decade.

## Goal 2: Decrease morbidity and mortality from HIV, viral hepatitis, STDs, and TB

| Indicator                | Current Result                                                    | 2020 Target                                                |
|--------------------------|-------------------------------------------------------------------|------------------------------------------------------------|
| <b>2.1 Reduce deaths</b> |                                                                   |                                                            |
| <b>2.1.a HIV</b>         | 18.0 deaths per 1,000 persons with diagnosed HIV infection (2012) | 15.5 deaths per 1,000 persons with diagnosed HIV infection |
| <b>2.1.b Hepatitis B</b> | 1,873 (2013)                                                      | 1,754                                                      |
| <b>2.1.c Hepatitis C</b> | 19,368 (2013)                                                     | 16,370                                                     |

**Note:** Updated to reflect the *National HIV/AIDS Strategy for the United States: Updated to 2020*

### HIV

**Numerator:** Estimated number of deaths during a calendar year among persons aged 13 years and older with diagnosed HIV infection

**Denominator:** Estimated total number of persons diagnosed with HIV infection, aged 13 years and older, at the end of the previous year plus the number of persons, aged 13 years and older, with newly diagnosed infection in the year of the deaths. The rate is measured per 1,000 persons diagnosed with HIV infection.

### Hepatitis B

**Numerator:** Estimated deaths among persons with hepatitis B listed as the cause of death or underlying cause of death

### Hepatitis C

**Numerator:** Estimated deaths among persons with hepatitis C listed as the cause of death or underlying cause of death

**Period of reporting:** Annual

**Data sources:** National HIV Surveillance System (NHSS), National Vital Statistics System

**Alignment with other plans:** *NHAS, HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis*

**Rationale and discussion:** An estimated 1.2 million Americans are living with HIV. Reducing all-cause mortality among persons living with HIV is an indicator in NHAS. This indicator reflects the overall quality of HIV medical care received, such that sustained delivery of high quality care should lead to greater reductions in death rates for persons living with HIV infection.



Approximately 3 million Americans are currently infected with the hepatitis C virus, and deaths due to hepatitis C have been increasing. From 2007 through 2013, the estimated number of deaths in the United States due to hepatitis C increased from 15,106 to 19,368. Without substantial public health interventions, this trend is expected to continue. Therapies are available that cure hepatitis C in more than 90 percent of persons who complete treatment. However, approximately 49 percent of people infected with hepatitis C are unaware of their infection and even fewer are receiving appropriate care and treatment. This low level of awareness contributes to the increasing numbers of hepatitis C-related deaths.

HIV data are from the National HIV Surveillance System and are age-adjusted. All-cause mortality, rather than HIV-related mortality, was measured given limitations in ascertainment and completeness of reporting cause of death due to HIV infection in vital statistics.

Viral hepatitis data are from from CDC’s National Vital Statistics System and reflect those deaths for which hepatitis B or hepatitis C is listed as the underlying cause of death or one of the multiple causes of death.

**Target setting method:** Targets for HIV align with updates to NHAS. Viral hepatitis targets are based on a reduction in forecasted increases in hepatitis B and hepatitis C deaths.

| Indicator                                                                                                                                                                      | Current Result | 2020 Target |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| <b>2.2 Increase the percentage of HIV-diagnosed persons aged 13 years and older whose most recent HIV viral load test in the past 12 months showed that HIV was suppressed</b> | 50.1% (2012)   | 80%         |

**Note:** Updated to reflect the *National HIV/AIDS Strategy for the United States: Updated to 2020*

**Numerator:** Number of persons aged 13 years and older with diagnosed HIV infection whose most recent viral load test in the past 12 months showed that HIV viral load was <200 copies/mL

**Denominator:** Number of persons aged 13 years or older with HIV infection in the United States

**Period of reporting:** Annual

**Data sources:** National HIV Surveillance System (NHSS)

**Alignment with other plans:** *NHAS, Healthy People 2020 (HIV-22)*

**Rationale and discussion:** Viral suppression is the primary goal of HIV medical care and treatment. All persons diagnosed with HIV should receive ongoing HIV medical care and antiretroviral therapy. Successful antiretroviral treatment suppresses HIV viral load to undetectable or fewer than 200 copies/mL. Persons living with HIV whose virus is suppressed can have a life expectancy comparable to that of people in the general population. Viral suppression also prevents new HIV infections. HIV-diagnosed persons who achieve viral suppression have a much lower risk of transmitting HIV to others.

NHSS data were used to provide the number of persons who had been diagnosed with HIV in the United States and were alive at the end of the calendar year. The number of states with data included for this indicator is limited and the states included for analysis may vary from year to year. However, the number of states contributing data is expected to increase over time as more will have complete reporting of CD4 and viral load test results to CDC.

**Target setting method:** Targets align with updates to *NHAS*.

| Indicator                                                                                                           | Current Result | 2020 Target |
|---------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| <b>2.3 Increase the proportion of gonorrhea-infected patients treated with a CDC-recommended antibiotic regimen</b> | 80.8% (2012)   | 90%         |

**Numerator:** Weighted, population-based estimate of the total number of gonorrhea cases documented with appropriate antimicrobial treatment (consistent with CDC recommendations)

**Denominator:** Total number of gonorrhea cases diagnosed and reported

**Period of reporting:** Annual

**Data source:** STD Surveillance Network (SSuN)

**Alignment with other plans:** N/A

**Rationale and Methods:** *Neisseria gonorrhea* has developed resistance to nearly all drugs used to treat it. Prompt treatment with an effective antibiotic regimen is necessary to cure infected persons and prevent further development and spread of drug resistant infections. This indicator assesses the proportion of cases that receive treatment according to CDC’s latest recommendations.

Data for this indicator are derived from the SSuN, a collaborative network comprised of state and local STD surveillance units following enhanced STD surveillance protocols. SSuN jurisdictions identify a random sample of gonorrhea cases reported for enhanced follow-up which includes administration of a standardized patient interview to collect demographic, behavioral, and other patient characteristics and collection of demographic and clinical information from the provider, including complete ascertainment of treatment.

**Target setting method:** The target reflects a 10% improvement over baseline.

| Indicator                                                                     | Current Result  | 2020 Target |
|-------------------------------------------------------------------------------|-----------------|-------------|
| <b>2.4 Increase the percentage of people who are aware of their infection</b> |                 |             |
| <b>2.4.a HIV</b>                                                              | 87.2% (2012)    | 90%         |
| <b>2.4.b Hepatitis B</b>                                                      | 33% (2009)      | 66%         |
| <b>2.4.c Hepatitis C</b>                                                      | 49% (2002-2011) | 66%         |

**Note:** Updated to reflect the *National HIV/AIDS Strategy for the United States: Updated to 2020*

### HIV

**Numerator:** Number of persons aged 13 years and older diagnosed HIV infection

**Denominator:** Estimated number of persons aged 13 years and older living with HIV infection (diagnosed or undiagnosed)

### Hepatitis B

**Numerator:** Number of respondents who indicate they were aware they had hepatitis B prior to laboratory testing

**Denominator:** Number of respondents whose laboratory test results are positive for hepatitis B

### Hepatitis C

**Numerator:** Number of respondents who indicate they were aware they had hepatitis C prior to laboratory testing

**Denominator:** Number of respondents whose laboratory test results are positive for hepatitis C

**Period of reporting:** HIV: Annual; hepatitis B and hepatitis C: Annual estimates produced from pooled data

**Data source:** HIV: National HIV Surveillance System (NHSS); hepatitis B and hepatitis C: the National Health and Nutrition Examination Survey (NHANES)

**Alignment with other plans:** *National Prevention Strategy, NHAS, HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis (2014–2016), Healthy People 2020 (HIV-13, IID-27)*

**Rationale and discussion:** Persons with HIV, hepatitis B, or hepatitis C may live for years without being aware of their infection. Knowledge of infection status is a critical first step to medical care, treatment, and prevention of transmission to others. Persons who are living with undiagnosed infection cannot benefit from effective care and treatments and are at increased risk of disease progression and transmission to others. CDC and the U.S. Preventive Services Task Force (USPSTF) have issued screening recommendations for HIV, hepatitis B and hepatitis C.

HIV surveillance data for adults and adolescents (aged 13 years and older) from the 50 states and the District of Columbia were used to estimate HIV prevalence. These data were used to estimate HIV prevalence (the total number of people living with HIV) in an extended back-calculation model that considers the estimated annual number of HIV diagnoses, stage of disease at diagnosis, and the number of deaths among persons with HIV infection. The number of people living with HIV infection who are unaware of their infection is calculated by subtracting the number of people living with diagnosed HIV infection from the overall HIV prevalence estimate. This estimate is based on HIV diagnoses, not individual awareness of HIV status. Some people who were diagnosed with HIV may be unaware of their HIV status because they did not receive their test results.

Data for hepatitis B and C come from NHANES, a nationally representative survey of the non-institutionalized population of the United States. It is limited in that it excludes incarcerated individuals, who are disproportionately affected by hepatitis C. Survey participants are interviewed and asked whether they are infected with the hepatitis B or hepatitis C viruses. Subsequent to the interview, blood samples are drawn for a series of laboratory tests, including tests for hepatitis B and hepatitis C.

**Target setting method:** Targets for HIV have been set to align with updates to *NHAS*. Targets for hepatitis B and hepatitis C were chosen to align with the *HHS Action Plan for the Prevention, Care and Treatment of Viral Hepatitis (2014–2016)*.

| Indicator                                                                                                               | Current Result | 2020 Target |
|-------------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| <b>2.5 Increase the percentage of sexually experienced high school students nationwide who have been tested for HIV</b> | 22.4% (2013)   | 24.6%       |

**Numerator:** Number of students in grades 9–12 who ever had sexual intercourse (i.e., sexually experienced) and had been tested for HIV, not including tests done when donating blood

**Denominator:** Number of students in grades 9–12 who ever had sexual intercourse (i.e., sexually experienced)

**Period of reporting:** Biennial

**Data source:** National Youth Risk Behavior Survey

**Alignment with other plans:** N/A

**Rationale and discussion:** HIV testing is an integral part of the *NHAS* and routine testing is one of the most important strategies recommended for reducing the spread of HIV and improving the health outcomes for those already infected. CDC and the USPSTF recommend HIV screening of sexually active adults and adolescents. However, screening of sexually active adolescents has been low. HIV-infected adolescents are likely to have recently acquired their infection. CDC aims to increase HIV testing among sexually active youth, and has included referral and linkage to HIV testing services as a component of its HIV school health programs.

This indicator describes the percentage of sexually experienced high school students who have been tested for HIV. HIV testing has not increased or decreased since 2005 (when it was first measured), and remains low. There has been no change between 2011 and 2013.

2005 – 20.2 percent

2007 – 22.3 percent

2009 – 22.6 percent

2011 – 22.2 percent

2013 – 22.4 percent

Data for this indicator are derived from the YRBS, a survey of a nationally representative sample of students in grades in 9–12 in all regular public and private schools in the 50 states and the District of Columbia.

**Target setting method:** The target is a ten percent improvement above baseline.

| Indicator                                                                                                                                                             | Current Result | 2020 Target |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| <b>2.6 Increase the percentage of STD clinic visits in which patients who are diagnosed with an acute STD and are not known to be HIV infected are tested for HIV</b> | 72% in 2012    | 79%         |

**Numerator:** Number of visits by persons diagnosed with an acute STD at an STD clinic, who are not known to be HIV coinfecting, in which HIV testing is performed

**Denominator:** Number of visits by persons diagnosed with an acute STD at an STD clinic, who are not known to be HIV coinfecting

**Period of reporting:** Annual

**Data source:** STD Surveillance Network (SSuN)

**Alignment with other plans:** N/A

**Rationale and discussion:** HIV and STDs share common risks and modes of transmission and persons diagnosed with STDs are at greatly increased risk of HIV infection. CDC recommends that all persons seeking evaluation or care for STDs be screened for HIV. While data are not available to assess uptake of this recommendation in all healthcare settings, CDC does monitor provision of HIV testing for persons diagnosed with an acute STD in STD clinics operated by health departments. In 2011, 19 percent (462,671) of CDC-funded HIV tests in healthcare settings were conducted in STD clinics. STD clinics accounted for 25.8 percent of newly identified, confirmed HIV diagnoses. Over the prior 4 years, the proportions of persons diagnosed with an STD in an STD clinic who were also screened for HIV increased by seven percent.

Data for this indicator are derived from the SSuN, a collaborative network comprised of state and local STD surveillance units following enhanced STD surveillance protocols.

**Target setting method:** The target reflects a 10 percent improvement over baseline.

| Indicator                                                                                                                        | Current Results           | 2020 Target        |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------|
| <b>2.7 Increase the percentage of young sexually active females who were screened for <i>Chlamydia trachomatis</i> infection</b> | Women 16–20: 45.1%        | Women 16–20: 49.6% |
|                                                                                                                                  | Women 21–24: 53.2% (2013) | Women 21–24: 58.5% |

**Numerator:** Women in the eligible population with at least one chlamydia test during the year being measured

**Denominator:** The eligible population (sexually active enrolled women 16–24 years of age as of 12/31 of the measurement year)

**Period of reporting:** Annual

**Data source:** National Committee for Quality Assurance (NCQA)'s Healthcare Effectiveness Data and Information Set (HEDIS)

**Alignment with other plans:** *National Prevention Strategy, Healthy People 2020 (STD-3 and STD-4)*

**Rationale and discussion:** Young women have the highest rates of Chlamydia, and if untreated, can suffer serious reproductive health complications such as pelvic inflammatory disease, infertility and ectopic pregnancy. CDC and the USPSTF have both recommended annual chlamydia screening for sexually active young women.

This indicator is assessed through data reported to the NCQA's HEDIS and reflects young women seen in managed care and preferred provider organizations. The size of the sexually active population is defined through administrative claims data. To be included, women may not have any more than one gap of  $\geq 45$  days in coverage. In HEDIS, separate measures are reported for Medicaid, commercial PPO, and commercial HMO plans, for age groups 16–20, 21–24, and 16–24.

**Target setting method:** The target reflects a 10 percent improvement over baseline.

### Goal 3: Decrease health disparities across groups affected by HIV, viral hepatitis, STDs and TB

| Indicator                                                                                                         | Current Result                                                                                                                                                                                                               | 2020 Target                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3.1 Reduce the rate of new diagnoses among racial/ethnic populations with rates above the national average</b> |                                                                                                                                                                                                                              |                                                                                                                                                                                                                             |
| <b>3.1a Estimated rate of new HIV diagnoses</b><br><br><b>(national rate: 12.6/100,000 in 2013)</b>               | Black or African American: 46.0/100,000<br><br>Hispanic or Latino: 16.3/100,000                                                                                                                                              | Black or African American: 37.0/100,000<br><br>Hispanic or Latino: 10.1/100,000                                                                                                                                             |
| <b>3.1b Reported rate of TB</b><br><br><b>(national rate: 3.0/100,000 in 2013)</b>                                | Asian: 18.7/100,000<br><br>Native Hawaiian or Other Pacific Islander: 11.3/100,000<br><br>Hispanic or Latino: 5.0/100,000<br><br>Black or African American: 5.4/100,000<br><br>American Indian or Alaska Native: 5.4/100,000 | Asian: 15.2/100,000<br><br>Native Hawaiian or Other Pacific Islander: 5.5/100,000<br><br>Hispanic or Latino: 2.1/100,000<br><br>Black or African American: 2.9/100,000<br><br>American Indian or Alaska Native: 2.6/100,000 |



## Estimated rates of new HIV diagnoses

**Numerator:** Number of (unadjusted) HIV diagnoses during the calendar year and reported to CDC within 18 months of the diagnoses year for Black or African American and Hispanic or Latino populations

**Denominator:** Population estimates for Black or African American and Hispanic or Latino persons

## Reported rates of TB

**Numerator:** Number of verified counted TB cases in the United States among Asians, Blacks or African Americans, Hispanics or Latinos, Native Hawaiians or Other Pacific Islanders, and American Indians or Alaska Natives

**Denominator:** Population estimates for Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, and American Indian or Alaska Native

**Period of reporting:** Annual

**Data sources:** New HIV diagnoses are reported through the National HIV Surveillance System. TB cases are reported through the National Tuberculosis Surveillance System (NTSS). HIV rates are calculated using the U.S. Census Bureau's annual population estimates. TB rates are calculated using the U.S. Census Bureau's National Population Estimates (for current results) and the American Community Survey (for calculating targets).

**Alignment with other plans:** *NHAS*

**Rationale and discussion:** The infections addressed by NCHHSTP are not equally spread across the population; racial and ethnic minority populations are often disproportionately affected. Contributing factors include social and environmental determinants, including poor access to health care, stigma, discrimination, homophobia, low educational attainment, immigration status, and poverty. This indicator will be used to assess progress in reducing racial/ethnic disparities for HIV and TB.

**Target setting method:** Targets have been established for all racial/ethnic subpopulations with rates above the national average. Targets for HIV were set in accordance with *NHAS* using a 25% reduction from 2010 baseline diagnosis rates for each group. The TB targets are based on a statistical model that uses data to find trends from 2000 through 2013. Specifically, the targets are the 90th centile values in 2013 estimated from a quantile regression on 2000–2013 data, excluding jurisdictions reported less than an average of 50 total cases per year from 2011–2013. Jurisdictions with respective racial/ethnic population below 500,000 persons, and which reported fewer than an average of 1 case per year in the respective racial/ethnic population from 2011–2013 are also excluded.

| Indicator                                                        | Current Results                                                    | 2020 Target                                                  |
|------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------|
| <b>3.2 Reduce new HIV infections among high-risk populations</b> | Gay and bisexual men:<br>23.0/100,000 (2013)                       | Gay and bisexual men:<br>17.4/100,000                        |
| Gay and bisexual men                                             | Young Black gay and bisexual men:<br>119.1/100,000 (2013)          | Young Black gay and bisexual men:<br>93.0/100,000            |
| Young Black or African American gay and bisexual men             | Black females:<br>1.4/100,000 (2013)                               | Black females:<br>1.4/100,000                                |
| Black or African American females                                | People living in the southern United States:<br>0.4/100,000 (2013) | People living in the southern United States:<br>0.28/100,000 |
| People living in the southern U.S.                               |                                                                    |                                                              |

### Gay and bisexual men

**Numerator:** Number of (unadjusted) HIV diagnoses during the calendar year and reported to CDC for gay and bisexual men

**Denominator:** Population estimates for all gay and bisexual men in the 50 states and the District of Columbia

### Young Black African American gay and bisexual men

**Numerator:** Number of (unadjusted) HIV diagnoses during the calendar year and reported to CDC within 18 months of the diagnosis year for young Black or African American gay and bisexual men

**Denominator:** Population size estimates for young Black or African American gay and bisexual men in the 50 states and the District of Columbia

### Black or African American females

**Numerator:** Number of (unadjusted) HIV diagnoses during the calendar year and reported to CDC within 18 months of the diagnosis year for Black or African American females

**Denominator:** Population estimate of Black or African American females in the 50 states and the District of Columbia

### People living in the southern United States

**Numerator:** Number of (unadjusted) HIV diagnoses during the calendar year and reported to CDC within 18 months of the diagnosis year for persons living in the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia

**Denominator:** Estimated population of the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia

**Period of reporting:** Annual

**Data sources:** National Notifiable Diseases Surveillance System (NNDSS), U.S. Census, and Purcell DW, Johnson CH, Lansky A, Prejean J, Stein R, Denning P, Gaul Z, Weinstock H, Su J, Crepaz N. Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. *Open AIDS Journal* 2012; 6 (Suppl 1:M4):98-107

**Alignment with other plans:** *Healthy People 2020* (HIV-6, HIV-7)

**Rationale and discussion:** HIV is not spread evenly across the United States population. New HIV diagnoses are increasing among men who have sex with men, particularly young Black or African American gay and bisexual men. Black or African American women account for 64 percent of new diagnoses among women. Finally, differences in diagnosis rates vary considerably by region, with the largest rates of new infections occurring in the southern United States. This indicator sets targets for reductions in the ratio of the disparity rates for these disproportionately affected groups.

Diagnosis rates for each sub-population were calculated using the unadjusted number of diagnoses reported to CDC within 18 months of the diagnosis year. These numbers were then divided by the appropriate US census population and multiplied by 100,000. Disparity rates were then calculated by subtracting the diagnosis rate for the overall population from the diagnosis rate for the specific sub-population. The diagnosis disparity ratio was calculated as the ratio of the diagnosis disparity rate to the overall rate. The diagnosis disparity ratio is the measure being used to monitor changes in disparities for each sub-population.

The population estimates for gay and bisexual men and young, Black gay and bisexual men were calculated using the U.S. Census counts for males and young Black males, respectively. These numbers were multiplied by 6.9 percent, based on the population estimate reported by Purcell DW, Johnson CH, Lansky A, Prejean J, Stein R, Denning P, Gaul Z, Weinstock H, Su J, Crepaz N. Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. *Open AIDS Journal* 2012; 6 (Suppl 1:M4):98-107.

Current year data for all groups are preliminary.

**Target setting method:** Targets for HIV are aligned with *NHAS*.

| Indicator                                                                             | Current Result          | 2020 Target            |
|---------------------------------------------------------------------------------------|-------------------------|------------------------|
| <b>3.3 Reduce the number of TB cases in foreign-born persons per 100,000 per year</b> | 15.6 per 100,000 (2013) | 11.1 cases per 100,000 |

**Numerator:** Number of verified counted TB cases in foreign-born persons

**Denominator:** Population of foreign-born persons in the United States in the year of interest

**Period of reporting:** Annual

**Data sources:** The National Tuberculosis Surveillance System (NTSS), U.S. Census's Current Population Survey (for current results) and the American Community Survey (for calculating targets)

**Alignment with other plans:** N/A

**Rationale and discussion:** Persons born outside of the United States account for more than 50 percent of the new TB cases in the United States. Reducing TB incidence in this population is important to both reducing this disparity in health and to reducing TB in the United States as a whole.

Rates are derived from TB cases reported through the NTSS from the 50 states and the District of Columbia.

**Target setting method:** Targets are based on a statistical model that uses data to find trends from 2000 through 2013. Specifically, the targets are the 90th centile values in 2013 estimated from a quantile regression on 2000–2013 data, excluding jurisdictions with a foreign-born population below 500,000 persons or fewer than 150 total cases from 2011–2013.

| Indicator                                                                                                                                                                                                                   | Current Result                                                    | 2020 Target                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------|
| <b>3.4 Increase the percentage of HIV-diagnosed persons whose most recent HIV viral load test in the past 12 months showed that HIV was suppressed</b><br><br>Youth aged 13-24 years<br><br>Persons who inject drugs (PWID) | Youth aged 13-24 years:<br>38.0% (2012)<br><br>PWID: 42.8% (2012) | Youth aged 13-24 years: 80%<br><br>PWID: 80% |

### Youth 13–24 years of age

**Numerator:** Number of persons aged 13-24 years diagnosed with HIV infection whose most recent viral load test in the past 12 months showed that HIV viral load was suppressed

**Denominator:** Number of persons aged 13-24 years diagnosed with HIV infection

### Persons who inject drugs

**Numerator:** Number of persons aged 13 years and older diagnosed with HIV infection who were reported with a history of or current injecting drug use, whose most recent viral load test in the past 12 months showed that HIV viral load was suppressed

**Denominator:** Number of persons aged 13 years and older diagnosed with HIV infection who were reported with a history of or current injecting drug use

**Period of reporting:** Annual

**Data sources:** NHSS

**Alignment with other plans:** *NHAS*

**Rationale and discussion:** Viral suppression is the primary goal of HIV medical care and treatment for all persons living with HIV. Everyone who is diagnosed with HIV should receive ongoing HIV medical care and antiretroviral therapy. Successful antiretroviral treatment suppresses HIV viral load to undetectable or fewer than 200 copies /mL. Persons living with HIV whose virus is suppressed can have a life expectancy comparable to that of people in the general population. Viral suppression also prevents new HIV infections. HIV-diagnosed persons who achieve viral suppression have a much lower risk of transmitting HIV to others.

This indicator assesses viral suppression among two populations—youth and persons who inject drugs—that are disproportionately affected by HIV. By monitoring outcomes in these disproportionately affected populations, NCHHSTP can assess progress toward reducing health disparities.

NHSS data were used to estimate the number of youth or persons who inject drugs who had been diagnosed with HIV in the United States and were alive at the end of the calendar year.

**Target setting method:** Alignment with other national plans, i.e., *NHAS*. Data from 2009 were used to establish the baseline, and 2020 targets reflect 20 percent increase over the baseline, as called for in *NHAS*. Targets will be revised to reflect updates to *NHAS*, when applicable.

| Indicator                                                                                                                                         | Current Result | 2020 Target  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|
| <b>3.5 Decrease the percentage of sexual minority male high school students in major urban centers who have engaged in HIV/STD risk behaviors</b> | 34.1% (2013)   | 30.7% (2019) |

**Numerator:** Number of male students in grades 9–12 from 15 large urban school districts who had sexual contact with only males or with both males and females and who had sexual intercourse during the past three months with three or more persons, or had sexual intercourse during the past three months and did not use a condom during last sexual intercourse, or ever injected any illegal drug

**Denominator:** Number of male students in grades 9–12 from 15 large urban school districts who had sexual contact with only males or with both males and females

**Period of reporting:** Biennial

**Data source:** Local Youth Risk Behavior Surveys conducted in 15 large urban school districts

**Alignment with other plans:** N/A

**Rationale and discussion:** Nationally, young men who have sex with men have the highest rates of HIV incidence and are the only group among whom infections rates have been rising. This indicator measures risk behaviors among males who have had sexual contact with males in grades 9–12 in 15 large urban school districts. These school districts asked a question about sex of sexual contacts in their 2013 Youth Risk Behavior Survey. Additional large urban school districts will ask this question starting in 2015.

**Target setting method:** The target is a ten percent reduction from baseline.



