TOGETHER WE CAN

SEE

SYPHILIS ELIMINATION EFFORT

The National Plan *to* Eliminate Syphilis *from the* United States

Prepared by:
Division of STD Prevention
National Center for HIV, STD and TB prevention
Centers for Disease Control and Prevention
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Suggested citation

Centers for Disease Control and Prevention. Together we can. *The National Plan to Eliminate Syphilis from the United States.* Atlanta, GA: US Department of Health and Human Services, May 2006.

Obtaining copies

Copies can be obtained from the Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. 1600 Clifton Road, Mail-Stop E-02, Atlanta, Georgia 30333.

CDC Creative Services 104467

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Executive Summary

In October 1999, the Centers for Disease Control and Prevention (CDC), in collaboration with federal, state, local, and non-governmental partners, launched the National Plan to Eliminate Syphilis. In the plan, CDC identified key strategies needed for successful elimination of syphilis from the United States: expanded surveillance and outbreak response activities, rapid screening and treatment in and out of medical settings, expanded laboratory services, strengthened community involvement and agency partnerships, and enhanced health promotion.

In the six years since its establishment, numerous gains have been made in reducing disease incidence in key groups, raising professional and public awareness of syphilis, increasing financial investment into public Sexually Transmitted Disease (STD) clinic services, and building local public health and community capacity to fight this devastating disease. However, new challenges have emerged. After reaching a nadir in 2001, diagnoses of primary and secondary syphilis are again on the increase. Today, more than 60% of new infections are diagnosed in men who have sex with men (MSM).

The evolving epidemiology, changing risk groups, and social environments present challenges for elimination and STD program activities. Syphilis is now increasingly diagnosed in the private sector, raising concerns about the effectiveness of the identification and management in this setting. Public health services face increasing pressures from rising demand and decreasing financial resources. The social contexts of poverty, racism, homophobia, and socio-economic discrimination continue to drive the concentration of the disease in those with high-risk sexual behaviors, poor access to care, or both.

In reframing the future of the Syphilis Elimination Effort, CDC's vision is to create a dynamic, evidence-based and culturally competent prevention and control action plan for the elimination of syphilis from the United States. By 2010, interim elimination targets will be to reduce rates of primary and secondary syphilis in the United States to less than 2.2 per 100,000 population; congenital syphilis to fewer than 3.9 per 100,000 live births; and Black: White racial disparities to a ratio of less than 3:1. In order to achieve this, CDC will focus syphilis elimination activities in achieving three strategic goals: **Investment in and enhancement of public health services; prioritization of evidence-based**, **culturally competent interventions**; and **creating accountable services and interventions**.

For each of the three goals, CDC recommends that syphilis elimination activities be delivered in three strategic areas of focus (The 3-By-3 approach to syphilis elimination). This results in nine strategies: Surveillance, Clinical and Laboratory Services, Community Mobilization, Health care Provider Mobilization; Tailoring of Interventions; Evidence-based Action Planning, Monitoring and Evaluation; Training and Staff Development; and Research.

This plan provides a framework for continuing to deliver interventions aimed at eliminating syphilis as a public health problem in the United States. It should not be seen as a rigid blueprint for eliminating syphilis instantly. Rather, the plan provides guidance that helps local, state, and national partners to effectively focus on the problem in order to get the most important things done in the most cost-effective, ethical, and acceptable ways possible.

Further details on the strategies and recommended activities are contained in an accompanying *Syphilis Elimination Technical Appendix* (SETA).

Definitions and Abbreviations

ANC	Antenatal care clinic
CBO	Community-based organization
CLIA	Clinical Laboratory Improvement Amendments which approves a laboratory to accept and test human specimens.
CSTE	Council of State and Territorial Epidemiologists
DIS	Disease Intervention Specialist
Elimination	Controlling the manifestations of a disease so that it is no longer considered a public health problem. The absence of sustained transmission of primary and secondary syphilis in the United States. Operationally defined at the national level as fewer than 1000 cases (0.4 per 100,000 population) of reported primary and secondary syphilis cases each year
Epi-AID	CDC-sponsored onsite epidemiologic investigation which allows CDC to respond rapidly to public health problems in need of urgent attention, thereby providing an important service to state and other public health agencies; and to provide supervised training opportunities for EIS officers (and, sometimes, other CDC trainees) to actively participate in epidemiologic investigations
GPRA	Government Performance Review Act
Health Professional	Registered nurse, physicians' assistant, or physician
HIV	Human immunodeficiency virus
HMA	High syphilis morbidity area
Law	Applicable local, state, and federal statutes, regulations, and ordinances.
MTCT	Mother-to-child transmission
MSM	Men who have sex with men
P&S syphilis	Primary and secondary syphilis
NCSD	The National Coalition of STD Directors
PTC	Prevention Training Center
RRT	The Rapid Response Team, CDC-sponsored onsite syphilis elimination technical support.
SEE	Syphilis Elimination Effort
SETA	*Syphilis Elimination Technical Appendix*
STD	Sexually Transmitted Disease
Unsafe Sexual Activity	Sexual activities which are likely to transmit HIV or other STD's. These activities include but are not limited to the exchange of infected bodily fluids through unprotected anal, oral, or vaginal intercourse
VCT	Voluntary counseling and testing

PART A Introduction to the U.S. Syphilis Elimination Effort

CHAPTER 1 Introduction

Purpose

This document sets out the strategic framework and action plans to continue progress towards eliminating syphilis from the United States. The strategies and recommended activities have been developed based on available evidence, expert opinion, and lessons learned from colleagues involved in the local, state, and national implementation of the Syphilis Elimination Effort (SEE).

This plan also sets out the core values underpinning the SEE. It is intended to provide a framework within which CDC, states, and local health departments, community and relevant organizational partners will develop and deliver syphilis elimination activities that are best suited to the evolving epidemiology and to public health infrastructures.

A Syphilis Elimination Technical Appendix (SETA)[1] accompanies this plan and provides further detail on the recommended strategies, standards, and methods of evaluation. We strongly advise readers to use this companion document in preparing their annual action plans, developing local research agendas, or evaluating interventions.

How to use this document

This 2006 Syphilis Elimination Effort (SEE) plan is divided into four sections:

- Part A (Chapters 1–3) provides an introduction to the United States Syphilis Elimination Effort and outlines accomplishments and challenges to date.
- Part B (Chapters 4–7) outlines the framework and rationale for the reframing of the SEE National Plan, with the discussion of the vision, mission statement, strategic approach, and guidelines for implementing the 3-By-3 approach. A detailed consideration of the SEE recommended strategies is contained here.
- Part C (Chapters 8–10) describes the roles and responsibilities at local, state, and national levels, a timetable for implementation, and conclusions.
- The Appendices contain relevant materials for assisting public health departments in developing, implementing, and evaluating their syphilis elimination action plans.

While providing a structure for conceptualizing the strategic response to syphilis elimination, the SEE Plan is not intended to be prescriptive. On the contrary, this document places a value on identifying and delivering local syphilis elimination activities that are flexible, adaptable, and responsive to changes in the environment, organism, and population-wide sexual behavior. A prioritization process, based on an activity's feasibility, cost, and evidence of effectiveness was used to determine which activities are required and which are recommended. **Required** activities are to be given the highest priority for implementation; however, it is important to note that **Recommended** activities are also crucial for enhancing syphilis prevention and control efforts.

CHAPTER 2 The Syphilis Elimination Effort — progress to date

The National Plan to Eliminate Syphilis from the United States

The Syphilis Elimination Effort (SEE) is a collaborative effort between the Centers for Disease Control and Prevention (CDC) and a wide range of partners working in the public and private sectors at national, state, and local levels. The National Plan to Eliminate Syphilis[2] from the United States, on which the SEE is based, was launched in October 1999.

The 1999 National Plan[2] defined syphilis elimination at the national level as the absence of sustained transmission of syphilis in the United States, with an operational goal of < 1000 cases of primary and secondary (P&S) syphilis reported per year. This goal was recently refined as part of the goals developed for CDC's Government Performance Review Act (GPRA) of 1993[3] Goals (see Appendix 4), which set an interim target of 2.2 reported cases of P&S syphilis per 100,000 population by 2010.

In 1999, disease elimination (defined as "controlling the manifestations of a disease so that it is no longer considered a public health problem" or as "reduction to zero of a specified disease in a defined geographic area as a result of deliberate efforts")[4] was considered plausible for the United States because of historically low rates of infection, geographically limited disease incidence, and the availability of inexpensive and effective diagnostic tests and therapy.

The SEE was based upon the understanding that eliminating syphilis would require combining intensified traditional approaches to STD control with innovative approaches to generate new synergy and to enhance the effectiveness of syphilis elimination activities. Five strategies were recommended for eliminating syphilis from the United States.[2] Two strategies — strengthened community involvement and partnerships, and rapid outbreak response — were new to syphilis control in many parts of the United States, and three strategies — enhanced surveillance, expanded clinical and laboratory services, and enhanced health promotion — had been used for syphilis control previously and were intensified.

While national in scope, the SEE focused on areas with high syphilis morbidity and those areas with potential for syphilis re-emergence. Today, CDC disburses SEE funds directly to High Morbidity Areas (HMAs) — defined as areas with sustained syphilis transmission, usually signaling the need to improve preventive services and strengthen capacity.

Between 1999 and 2004, CDC invested in excess of $107 Million to HMAs to support infrastructure, interventions, evaluation, research, community outreach, and clinical and laboratory services. Additional investment from CDC has also been provided in the form of technical assistance, Rapid Response Team deployments, Program Assessments, Epi-AID deployments, and research and evaluation support.

Achievements to date

Reductions in disease incidence in key groups

Since 1999, there have been marked changes in the epidemiology of infectious syphilis in the U.S. (Figure 1 and Figure 2). There have been substantial reductions in diagnosed disease in women and newborn infants (congenital syphilis). Between 1991 and 2004 congenital cases declined by 92% (107.3 cases per 100,000 live births to 8.8 cases per 100,000 live births). Rates of P&S syphilis among women fell from 2.0 to 0.8 per 100,000 population.[5] Rates in African Americans fell from 14.3 to 8.9 per 100,000 population. The Black: White racial disparity, a major focus of syphilis elimination, has also markedly reduced, falling from 28.6:1 in 1999 to 5.6:1 in 2004. Despite these gains, however, overall rates of primary and secondary syphilis have been on the rise since 2001[5] presenting challenges and new opportunities for reframing our efforts.

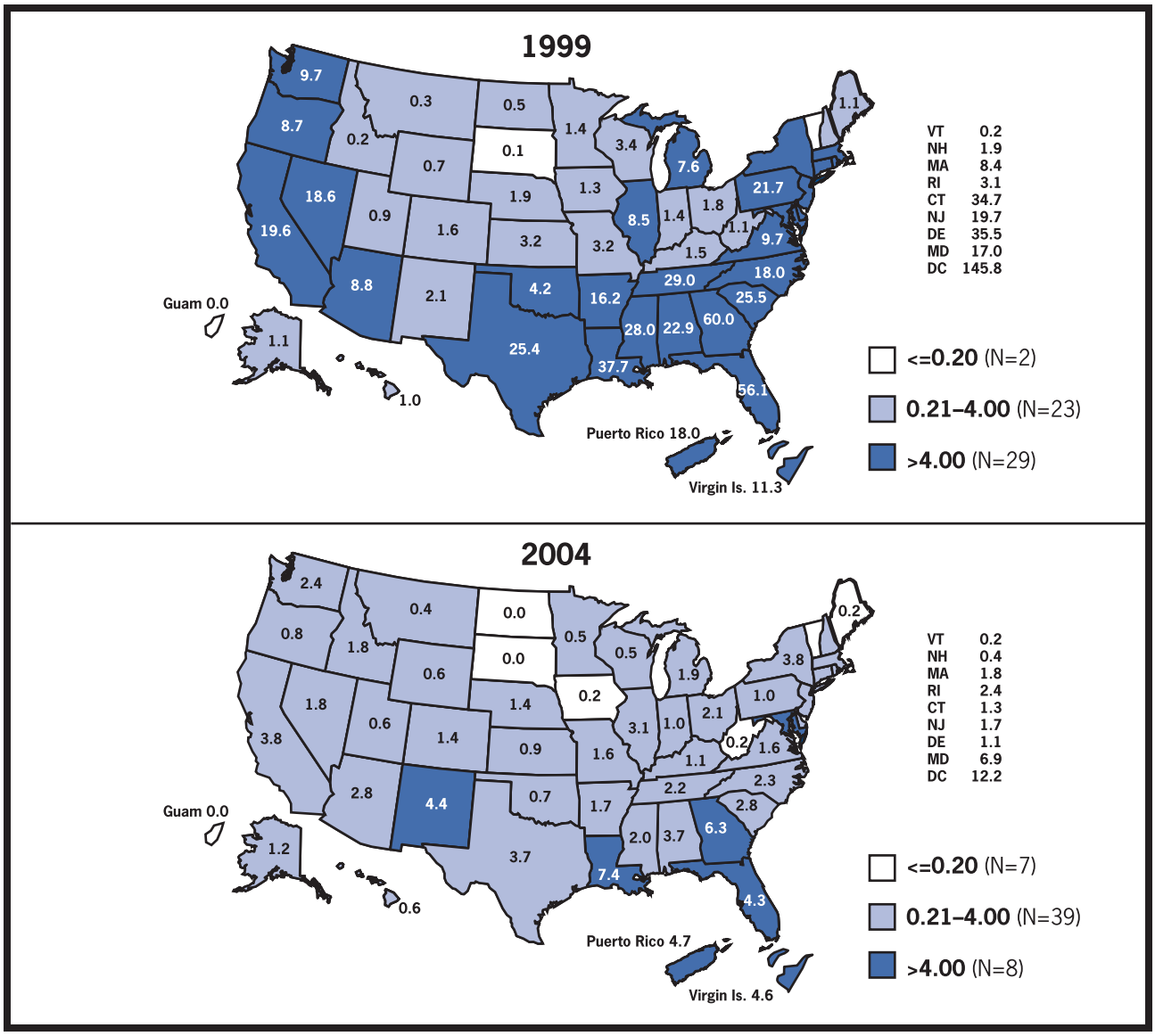


Figure 1. Reductions in reported cases of primary and secondary syphilis, United States, 1999 and 2004.

Improved partnerships with communities

To date, more than 170 community-based organizations (CBOs), agencies, and institutions have been funded to conduct local syphilis elimination activities. The CBOs represent diverse constituencies, including private health care providers, social service providers, civic organizations and community coalitions, HIV prevention and care organizations, faith-based organizations, and substance abuse treatment and prevention organizations. Community partners have provided a range of services including outreach screening and STD health education in high-risk venues, individual and group risk-reduction counseling, patient and client advocacy, and program planning.

Increased awareness about and knowledge of syphilis

National, state, and local public heath and social marketing campaigns on syphilis have increased professional and public awareness of syphilis, its complications, and prevention strategies. The 2001 Syphilis Elimination Health Communication Plan[6] provided guidance on building momentum for the 1999 SEE Plan at the national, state, and local levels. It identified the need for SEE support from three key target audiences: policymakers, health care providers and associations, and community representatives from affected communities. In 2004, the CDC's SEE community mobilization toolkit[7] provided further guidance on social marketing of the SEE, as well as resources on syphilis, including radio spots, posters, advertising campaigns.

Expanded access to STD treatment and care services

Since 1999, the additional investment in syphilis elimination has resulted in additional benefits for STD prevention and care. Syphilis elimination investment has contributed to increasing local STD prevention capacity through expansions in STD clinic staff cadre, developing the infrastructure of STD clinics, increasing the number of STD clinical sessions, and establishing outreach clinical services.[8] This increased capacity within the public health sector has helped local sites to enhance their prevention and control of syphilis and other STDs and has facilitated more robust local responses to threats such as syphilis outbreaks.

Lessons learned from the first five years of implementation of the SEE

Although no overall evaluation of the 1999 National Plan has been undertaken, key lessons relevant to programmatic implementation and strategic planning have been obtained from local SEE-funded project areas during the Syphilis Elimination Program Assessments (2003)[9] and Syphilis Elimination Listening Tour (2005).[8] Some of the key lessons include:

- **Wherever possible, integrate syphilis elimination with other STD and HIV prevention and control programs.** In many areas where gains have been made in reducing levels of endemic syphilis, the adoption of multi-disciplinary, multi-level syphilis elimination interventions and coordination have been essential to achieving success.[8]
- **Apply locally available surveillance and research data to develop evidence-based strategies.** Good surveillance is the cornerstone of disease elimination. It is essential that all locally available data, Disease Intervention Specialists (DIS) case analysis, social network analysis, surveillance, and epidemiologic research be used and applied to developing locally appropriate, acceptable, and accountable syphilis prevention interventions.
- **Local syphilis elimination activities should be flexible enough to respond to rapidly evolving epidemics.** Syphilis epidemics have changed and will evolve, affecting new groups and communities. It is vitally important that local elimination activities track and pre-empt the disease spread, and be flexible enough to meet the new challenges. This may require creating new community partnerships, reprioritizing interventions, and re-aligning available funds for areas or populations in greatest need.
- **Adopt a holistic approach to eliminating syphilis which takes into consideration the social determinants of disease transmission.** The populations affected by syphilis are ethnically, socially and culturally diverse, necessitating tailored and targeted interventions. Social contexts such as unemployment, discrimination, and substance abuse will often need to be tackled alongside the provision of high quality clinical services. Successful elimination will therefore require STD programs to create alliances with traditional and non-traditional partners within and outside of the public health sector.
- **Provide high quality STD services.** High quality STD services and good surveillance are key to syphilis elimination. Improving internal communications between DIS staff and clinical staff (in the public and private sector) was identified as an important lesson learned;[8] so too was the need to ensure adequate STD program staff training and development, and valuing, developing, and utilizing the general knowledge and skills of the STD program staff.
- **Engage and collaborate with communities and local private providers.** Collaborative partnerships in syphilis elimination, across a variety of agencies, institutions, and communities, are vital. This is especially relevant as syphilis is increasingly diagnosed outside of the public health sector. Collaborations and outreach activities can provide substantial benefit, including the building of rapport; developing strategic alliances with diverse groups; and mobilizing disenfranchised groups.
- **Understand and develop strategies for the Internet.** The Internet is a rapidly growing venue for the acquisition of sex partners.[10] There is a need to learn from, and adapt, best practices in the field with regards to engaging clients and service providers; providing skills and training to DIS and STD program staff on Internet-based syphilis prevention interventions; standardizing approaches to Internet Service Providers (ISP) and webmasters and users; and examining ways to avoid duplication of effort at state and local levels.

CHAPTER 3 Syphilis Elimination—challenges and opportunities

The epidemiology of syphilis represents a dynamic interaction between behavior, biology, and the effectiveness of public health interventions.[11,12] In this section, we highlight some of the key challenges facing the successful implementation of the SEE at national, state and local levels. In reframing the future of the SEE, it is important that due consideration be given to identifying, understanding and tackling these challenges while concomitantly seeking opportunities for enhancing the capacity of STD programs to respond effectively.

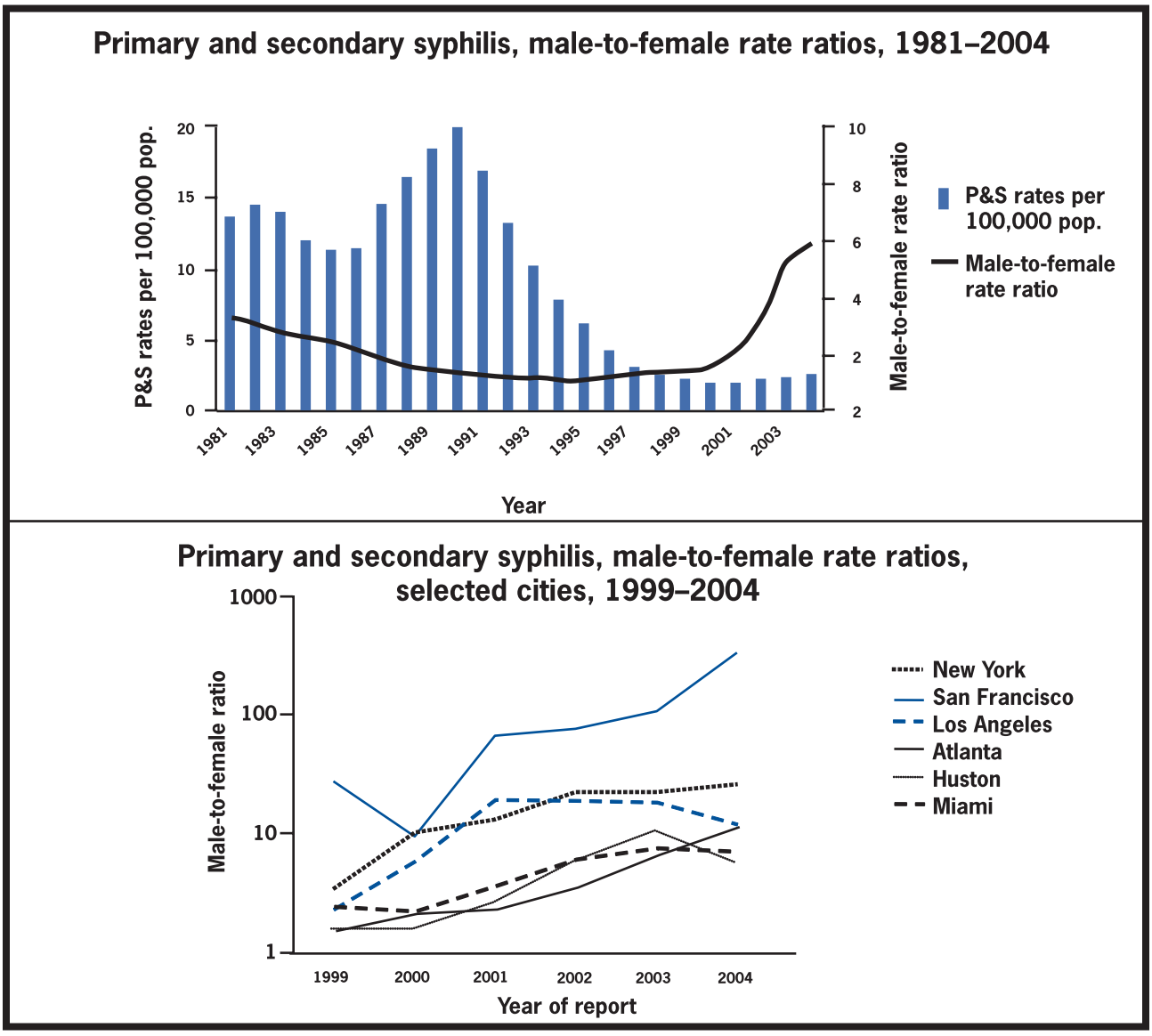


Figure 2. Recent trends in the epidemiology of primary and secondary syphilis in the United States.

Behavior

Men who have sex with men

The recent resurgence of syphilis and other STDs in men who have sex with men (MSM) (see Figure 2) presents new challenges to syphilis elimination.[13] By 2004, more than 60% of new diagnoses of P&S syphilis were estimated to occur in MSM, with HIV-positive MSM bearing a disproportionate burden of disease.[5] Disease rates are now highest in MSM aged 35–39 years, and while the majority of diagnoses of disease are in White non-Hispanic men, recent increases have been marked in African American men. A recent study found that approximately 20% of P&S syphilis infections in MSM are believed to have been acquired through unprotected oro-genital intercourse.[14]

The rising incidence of syphilis in MSM is in part attributable to recent increases in high-risk sexual behavior. High rates of new sex partner acquisition and partner change rates with rises in unprotected penetrative sex have been documented across the United States. The reasons for the increases are complex, however HIV sero-sorting, safer sex fatigue, recreational drug use (especially crystal methamphetamine), and HIV treatment optimism[13] combined with expansions in venues and networks that facilitate risky behaviors, have been identified among the major driving factors.[13] All this has occurred within the context of homophobia and discrimination being experienced by many MSM. Successful syphilis elimination will require an acknowledgement of the multi-faceted risk factors and will ensure that prevention interventions are holistic and are occurring on many fronts.

Heterosexuals

Although the incidence of syphilis in heterosexual women and men has been declining in recent years (Figure 3), there are early signs that this trend may be reversing[5], and increased vigilance will be needed to avoid a resurgence of disease. The risk factors for disease transmission between heterosexuals in the past — drug use (crack cocaine), prostitution, socio-economic deprivation, and poor access to curative services[15] — remain relevant today. Anecdotal reports suggest that crystal methamphetamine may be contributing to rises in disease incidence in heterosexuals[8], however, further work will be required to confirm and quantify its contribution. Although a potential threat, evidence regarding bridging between MSM and heterosexual populations is scant. Similarly, the Internet has not yet been implicated as a major determinant of syphilis transmission in heterosexuals; and vigilance will be required on this issue.

Drug addiction and usage

Recreational drug use and abuse fuel high-risk sexual behaviors act as co-factors for disease transmission[16,17] and, where lifestyles have become disrupted, require access to appropriate rehabilitation and drug treatment services. Crack cocaine use was a cofactor for syphilis transmission in the early 1990s[16], and remain factors for disease spread among poor urban heterosexuals. Today, crystal methamphetamine use is an established cofactor for syphilis acquisition in MSM.[18] In many states, there are insufficient drug treatment services, especially in rural areas, where most social services are under-funded and under-staffed.

Biology

Azithromycin resistance

Although *Treponema pallidum* remains fully susceptible to penicillin, recent studies have demonstrated and confirmed a point mutation within the 23S ribosomal RNA (rRNA) gene, at a ribosomal site targeted by macrolides. For example, among syphilis lesions being tested for this point mutation, the positivity was between 22 and 56 percent from San Francisco, 11 percent in Baltimore, 13 percent from Seattle, and 88 percent from Dublin, Ireland. No prospective study of humans treated for early syphilis with azithromycin has yet examined the influence of the 23S rRNA mutation in *T. pallidum* on treatment outcomes. It remains unclear whether *T. pallidum* containing this mutation represents a single clone spread extensively within sexual networks in North America and Ireland or multiple strains that emerged independently. It is also unclear whether selective pressure from macrolide use for syphilis or other conditions may have contributed to the emergence of macrolide-resistant *T. pallidum*.

Syphilis and HIV interaction

HIV/AIDS is a major public health concern and more than a million people are estimated to be living with HIV infection in the United States, approximately 25% of whom remain undiagnosed.[19] Syphilis enhances HIV transmission and acquisition, and HIV infection influences the natural history and clinical progression of syphilis.[20] Among MSM, a substantial

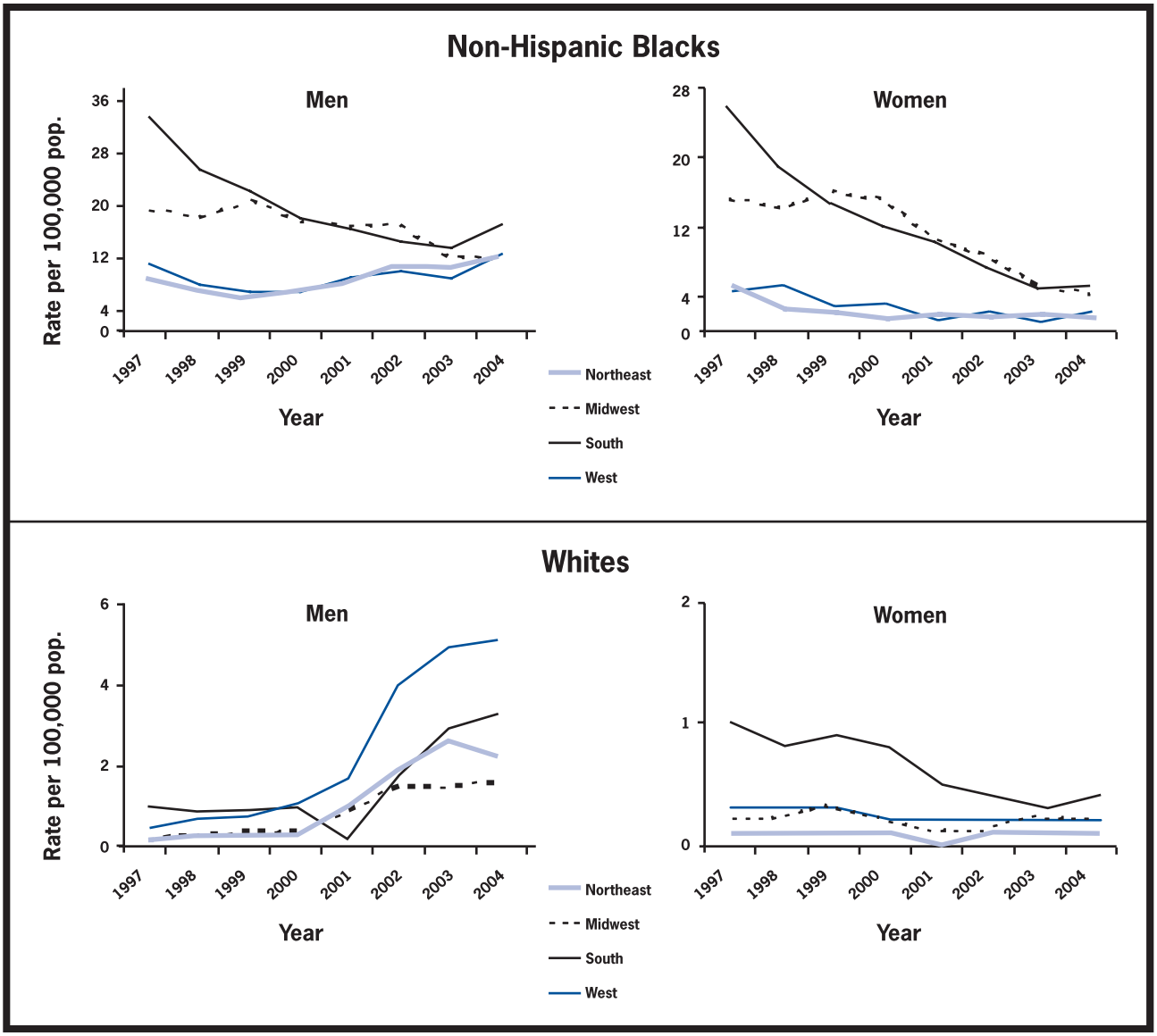


Figure 3. Trends in primary and secondary syphilis among non-Hispanic Blacks and Whites by geographic region and gender, United States 1997–2004.

proportion of men with incident syphilis infection are also HIV positive, reflecting both high risk sexual behaviors within this group, as well as participation in sexual networks which facilitate disease transmission. Within many local health departments, the separation of STD and HIV programs limits routine integration of prevention interventions. For example, interventions to expand HIV testing uptake in order to reduce undiagnosed prevalent HIV infections do not always permit opportunities for concomitant syphilis testing. Efforts to prevent syphilis benefit HIV prevention efforts. Opportunities to combine syphilis testing with HIV testing should be sought and encouraged, especially for population sub-groups at risk for both infections.

Public health services

Clinical services. Improving access to high quality syphilis diagnostic and treatment services has always been a core strategy for syphilis elimination.[2] However, in many parts of the country, providing quality clinical services to populations at risk is becoming increasingly difficult. Disinvestment in local STD programs, loss of experienced program staff, or deployment of clinic staff to support non-STD activities all have a negative impact on local capacity to treat infected individuals or to contact and notify exposed sex partners. In many rural areas, with large geographical distances, transportation for economically disadvantaged persons is a significant barrier to accessing health care.

Private sector burden of disease

As syphilis is now increasingly diagnosed in the private sector[4], effective public-private partnerships with jointly agreed clinical management protocols will be required. Private practitioners in high incidence areas need to be aware of their public health roles and responsibilities in STD control (e.g., accurate disease staging, appropriate therapy, disease reporting, and patient participation in partner services), and may require proactive training and support to ensure that high quality services and practices are maintained.

Partner services

Effective partner services, in public and private sector settings, are essential for good disease control. However, in many areas, Disease Intervention Specialists (DIS) staff members have not been able to keep abreast of the rapidly changing social contexts for syphilis transmission or the demands of dealing with different patient groups and their expectations.[8] For example, DIS staff members in some STD programs lack access to computers, any standardized guidance on Internet interventions, or the skills to intervene effectively with MSM populations.[8] Consideration should also be given to re-evaluating partner notification (PN) methods for syphilis to determine the relative effectiveness of PN strategies and to ensure that enhanced methods are implemented.

Laboratory services

The inability to cultivate *Treponema pallidum* on artificial media, problems related to the microscopic diagnosis of the disease and long periods of unapparent infection have resulted in serologic tests remaining the most frequent means of establishing a diagnosis of syphilis.[21] In addition, these tests are the only means whereby responses to therapy can be monitored. There is an urgent need to modernize syphilis diagnostic techniques with the development of both rapid treponemal and non-treponemal (point-of-care) tests. New opportunities for combining syphilis testing in traditional as well as non-traditional sites would be facilitated, as well as testing for syphilis alongside HIV. Studies in Europe have highlighted the potential benefits of utilizing oral fluid assays as an adjunct to outreach screening[22]; however, further research is needed to validate the performance of these new tools. Partnerships between CDC, the Food and Drug Administration (FDA), and National Institutes of Health (NIH) are required to determine the most appropriate course of action to facilitate licensing of such tests in the United States.

Implications for reframing future efforts

Poverty and lack of education provide ample opportunity for the reseeding and resurgence of syphilis in the poor, especially historically underserved minority and migrant communities.[12] High quality health services, while crucial, are only one of the determinants of health, and most health gain will come from going upstream to focus on those factors such as employment, housing and quality of living environments, social relationships, and education that are the main determinants of health in populations.

In reframing the future directions of the syphilis elimination effort, we must continue to acknowledge that reducing syphilis, and creating healthy societies and individuals largely results from actions outside the public health sector. Nevertheless, the public health sector has a key role to play in creating alliances with a wide range of stakeholders and in developing, implementing and evaluating disease control interventions in a variety of settings.

Over the next decade, clear opportunities for improving the implementation of syphilis elimination activities exist and include:

- Reframing the SEE to meet the challenge of newly emergent populations at risk, especially men who have sex with men.
- Improving the performance of existing effective interventions through the development of appropriate measures, collaboration between stakeholders and focusing on early diagnosis and treatment.
- Improving program planning and accountability so that scarce funds are directed to support interventions based on evidence, and ensuring that these efforts are monitored and evaluated to ensure optimum implementation.
- Disseminating research, surveillance data, and other evidence to support decision-making.
- Improving relationships with state, local and national multi-professional groups.
- Supporting professional development and training in methods for enhancing local syphilis elimination efforts.

PART B Mission, Goals and Strategies

CHAPTER 4 Mission, goals and strategies

Mission

The mission of the Syphilis Elimination Effort (SEE) is to promote health and quality of life by preventing, controlling, and eliminating endemic transmission of syphilis from the United States.

In collaboration with partners within and outside CDC, the SEE provides national leadership for syphilis prevention, research and surveillance, and the development and testing of effective biomedical and behavioral interventions to reduce syphilis transmission in the United States. In so doing, the SEE plan guides the development, implementation, and evaluation of evidence-based prevention programs serving persons affected by, or at risk for, syphilis infection.

Vision

The vision of the Syphilis Elimination Effort is to create and implement a dynamic, evidence-based, culturally competent prevention and control strategy for syphilis in the United States.

- **Dynamic.** Recent trends in syphilis in the United States reflect the dynamic interplay between biological features of the organism, high-risk sexual behaviors between individuals, and the effectiveness of our prevention programs. It is essential that the SEE maintains the ability to rapidly respond to the evolving epidemiology.
- **Evidence-based.** Evidence-based public health interventions demand that programs and policies be developed, implemented, and evaluated through application of principles of scientific reasoning, including systematic uses of data and information systems and appropriate use of behavioral science theory and program planning models.
- **Culturally competent.** Cultural competence is the integration and transformation of knowledge about individuals and groups of people into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of services; thereby producing better outcomes. [23,24]

Core Values

The Syphilis Elimination Effort is built upon CDC's core values of accountability, respect, and integrity.

- **Accountability.** As stewards of public trust and public funds, the SEE is a decisive and compassionate intervention in service to the people's health. CDC will ensure that SEE-related research and services are based on sound science and meet real public needs to achieve our public health goals.
- **Respect.** The SEE respects and understands our interdependence with all people throughout the United States, treating them and their contributions with dignity and valuing individual and cultural diversity.
- **Integrity.** The SEE and its partners will be honest and ethical in all that they do. The SEE will prize scientific integrity and professional excellence.

Goals

To provide a clear sense of direction, CDC recommends three key goals for eliminating syphilis from the United States:

- **Investment in, and enhancement of, public health services and interventions.** Public health services will achieve excellence in the diagnosis and management of syphilis, partner services, and reporting of syphilis and its adverse outcomes, especially for those at greatest risk of health disparities.
- **Prioritization of evidence-based, culturally competent interventions.** Public health services will improve the acceptability and appropriateness of their response to syphilis epidemics and enhance their advocacy base through the creation of productive

and proactive partnerships with external stakeholders.

- **Accountable services and interventions.** Public health services will improve the effectiveness of their interventions by improving accountability for their planning, implementation, and evaluation.

CDC is committed to achieving true improvements in people's health. To do this, the agency has defined specific health impact goals to prioritize and focus its work and investments and to measure progress. The Syphilis Elimination Effort is particularly relevant to achieving CDC Goals related to Healthy People in Every Stage of Life, and Healthy People in Healthy Places*, as well as to the overarching Healthy People 2010 goal of eliminating health disparities.

Targets

Disease elimination involves controlling the manifestations of a disease so that it is no longer considered a public health problem. In the 1999 plan,[2] syphilis elimination at the national level was operationally defined as fewer than 1000 cases of primary and secondary syphilis cases per annum occurring in the mainland United States. Although the definition of syphilis elimination remains the same, interim targets for syphilis elimination for 2010 have been identified in the 2006 plan and provide a pathway for continued progress toward elimination. CDC's Government Performance Review Act (GPRA) goals for syphilis elimination have been defined (see Appendix 4), and provide a framework for our national targets. They are:

- To reduce primary and secondary syphilis cases to a rate of 2.2 per 100,000 population with a rate of 4.2 per 100,000 among men and 0.38 per 100,000 among women by 2010.
- To reduce the incidence of congenital syphilis to 3.9 per 100,000 live births by 2010.
- To reduce the black: white ratio of primary and secondary syphilis to 3:1 by 2010.

The 1999 Syphilis Elimination National Plan defined elimination at the local level as the absence of transmission of new cases within the jurisdiction, except within 90 days of report of an imported index case. However, local elimination targets were not set for specific jurisdictions. In reframing the future of the syphilis elimination effort, CDC will encourage local target setting to be undertaken as part of the development of local evidence-based action plans.

The 3-By-3 approach to Syphilis Elimination

The Syphilis Elimination Effort (SEE) Plan will focus on a shared vision, goals, and core strategies in order to provide a coherent and consistent framework for coordinating activities. In this regard, the SEE Plan calls for implementing evidence-based and culturally competent activities. Each of the three syphilis elimination goals: Investment in public health services; delivering prioritized, culturally competent interventions; and increasing accountability of services and interventions has three recommended strategic areas of focus (see Table 1). **This is the 3-By-3 approach to syphilis elimination.** These strategies are interrelated (e.g., enhancing SEE interventions will require evaluation).

The 3-By-3 approach differs from, but is complementary to, the 1999 plan[2] by streamlining the elimination goals and expanding the SEE strategies to include provider mobilization, training, research, monitoring, and evaluation. Effective outbreak response, a key strategy in the 1999 plan[2], will form part of the recommended activities for investment in public health services.

* Healthy People in Every Stage of Life — all people, and especially those at greater risk of health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life. Healthy People in Healthy Places — the places where people live, work, learn, and play will protect and promote their health and safety, especially those at greater risk of health disparities. This includes Healthy Communities and Health Care Settings.

Syphilis Elimination Goal	Syphilis Elimination Strategies
1. **Investment in, and enhancement of, public health services and interventions.** Public health services will achieve excellence in the diagnosis, management and reporting of syphilis and its adverse outcomes, especially those at greatest risk of health disparities.	1. Improve and enhance syphilis surveillance and outbreak response 2. Improve and quality assure clinical and partner services 3. Improve and quality assure laboratory services
2. **Prioritization of evidence-based, culturally competent interventions.** Public health services will improve the advocacy, acceptability and appropriateness of their response to syphilis epidemics through the creation of productive and proactive partnerships with external stakeholders.	1. Mobilization of affected communities 2. Tailoring intervention strategies for affected populations 3. Mobilization of, and creating alliances with health care providers
3. **Accountable services and interventions.** Public health services will improve the effectiveness of their interventions by improving accountability for their planning, implementation, and evaluation.	1. Training and staff development 2. Evidence-based action planning, monitoring, and evaluation 3. Research and development

Table 1. The 3-By-3 approach to Syphilis Elimination in the United States.

The SEE logic model

A global logic model for the 2006 Syphilis Elimination Effort (illustrating the 3-By-3 approach) is contained in Appendix 1. A logic model is a picture of how a program works. It identifies program components and shows how they relate to each other. Logic models can benefit program planning by:

1. Building understanding of and clarity about a program for stakeholders;
2. Identifying resources needed for a program;
3. Identifying the sequence of activities that should be implemented and how the program will attain the expected results;
4. Identifying where the barriers to the implementation and achieving of the expected outcomes might be; and
5. Serving as a basis for monitoring and evaluation.

Chapters 5–7 in this document provide additional details on the three main Syphilis Elimination goals, strategic areas of focus, and recommended activities at local, state, and national levels. Appendix 2 provides further information on the standards for the recommended activities; the level of evidence to support them; and an indication of how they may be prioritized at the local level. In addition, the SEE Technical Appendix offers extensive detail on all of the required and recommended strategies and activities. **It is not intended that state and local health departments will implement all of the recommended activities.** Rather, sites should see these activities as a compendium of effective or promising interventions from which their local syphilis elimination responses may be drawn.

Implementing the 3-By-3 approach to Syphilis Elimination

The 3-By-3 approach to Syphilis Elimination outlines the goals, strategies, and activities recommended for effective prevention and control of syphilis in the United States (see Figure 4). However, a step-wise implementation of the approach is recommended in which:

1. Available local epidemiologic and surveillance data are combined with;
2. Self-assessment and collaborative partnering with stakeholders to produce; and
3. An evidence-based action plan which can be prospectively monitored and evaluated for progress.

Guiding principles

A number of key principles will be used by the CDC to inform the implementation of the 3-By-3 approach to syphilis elimination. These include:

- All project areas (even those with low incidence) will have some role to play in syphilis elimination.
- The unit of monitoring and implementation of the SEE is the project area.
- The SEE thresholds will be set at the project area level, which are predominantly states. However, the threshold for project areas which are cities (e.g., Los Angeles, Chicago) will be different from thresholds for states.
- Project areas in need of intensive syphilis elimination support will be able to develop an evidence-based action plan using recommended strategies and activities outlined in this report.

Baseline — Syphilis preparedness

As most counties will have little or no syphilis, it is imperative that CDC, state and local partners remain vigilant and maintain a high index of monitoring and surveillance to ensure that disease incidence remains low and that new infections be readily identified and treated. Effective syphilis preparedness suggests that local jurisdictions have appropriate **outbreak plans** in place to deal with unexpected increases in disease incidence above baseline levels.

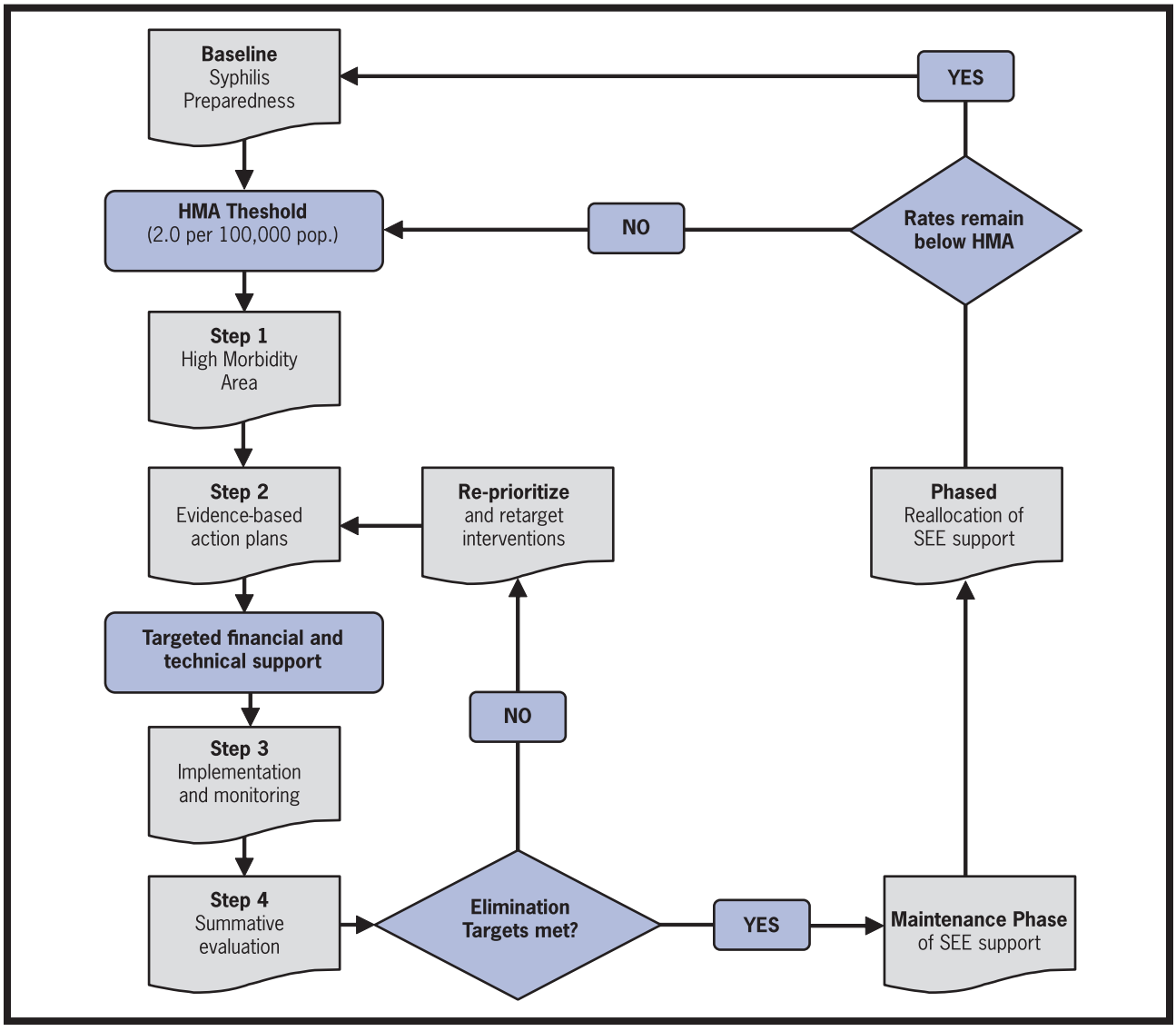


Figure 4. Implementing the 3-By-3 approach to Syphilis Elimination in the United States.

Step 1 — HMA designation

There will be clear guidelines for identifying project areas in need of federal investment and support for syphilis elimination. A standard definition of a **High Morbidity Areas (HMAs) threshold (2.0 per 100,000 population)**, based on a specific disease rate, will be used.

Step 2 — Evidence-based action planning

Once the HMA threshold is crossed, project areas will become eligible for a syphilis elimination assessment to determine what financial or human resource investment (for example Epi-AID or RRT) would be most useful. The assessment should determine the nature of the epidemic and the distribution and quality of existing public health infrastructures. The assessment should result in the development of a mutually agreed upon **evidence-based action plan** for reducing syphilis rates to below 1.0 per 100,000 within a 3–5 year period.

Step 3 — Implementation and monitoring

Once CDC and the project area have agreed on the evidence-based action plan, appropriate resources (financial or human, or both) will be disbursed or deployed. CDC will provide assistance to local sites in the prioritization, implementation, and tailoring of their interventions. This will be in addition to local investment in syphilis elimination activities (e.g., realignment of resources and staff). Proactive monitoring and evaluation support will be given to HMAs to ensure that their goals and set objectives are being met and that the evidence-based activities are being delivered as promised.

Step 4 — Summative evaluation

Finally, a summative evaluation of the local SEE program, using **standardized criteria and assessment tools**, will be undertaken in the final year of funding. This will determine whether investments should continue or may be reduced or withdrawn. In an era of limited funds, it is unlikely that project areas will be able to hold onto funds indefinitely, as resources may need to be shifted to areas with greater burdens of disease.

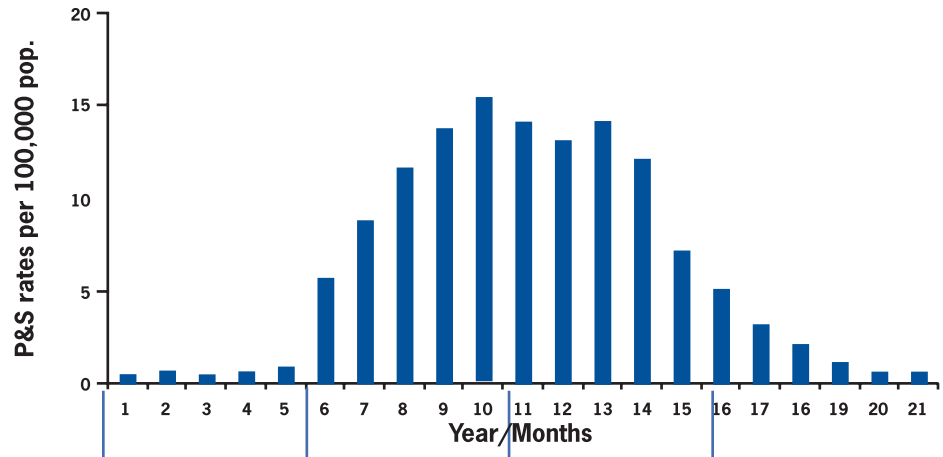
Phased reallocation of resources

When the elimination objectives are met, then the project area will begin discussions with CDC about the manner and timing for the reallocation of SEE-specific targeted funds. As one of the lessons learned from previous syphilis elimination efforts is to avoid sudden withdrawal of investment, this phase will most likely involve a 2-year maintenance period with level funding, followed by phased reductions in funding to within 30% of initial investment.

Re-prioritization and retargeting of interventions

Existing project areas that receive Syphilis Elimination funding and fail to meet their elimination targets will be required to identify **the most important weakness** in their programs and submit evidence-based action plans towards addressing these within a given time period. They will then continue with steps 3 and 4.

It is not the intention that all activities are relevant or appropriate for all types of syphilis epidemics and it is vitally important that local sites are able to use their surveillance data to refine the application of the syphilis elimination activities. One suggestion for prioritizing interventions is by understanding the epidemic phase, and applying appropriate intervention strategies dependent upon the epidemic phase.[25] Figure 5 illustrates a potential method for prioritizing interventions based upon the epidemic phase.



SEE Strategies	Low Endemic	Outbreak	Hyperepidemic	Decline
Surveillance and outbreak response	++	+++	+++	++
Clinical and PN services	+	+++	+++	++
Laboratory services	+	+++	+++	++
Mobilization of affected communities	-	+++	+++	++
Tailoring intervention strategies	-	++	++	+
Mobilization of organizational partners	-	+++	+++	+
Training and staff development	+	+++	++	+
Evidence based action planning, monitoring and evaluation	+	+++	+++	++
Research and development	-	++	++	-

- Optional + Recommended ++Highly recommended +++ Essential

Figure 5. Prioritizing SEE interventions based on epidemic phase, an example.

CHAPTER 5 Syphilis Elimination Goal I: Investment in, and enhancement of, public health services

Syphilis prevention and control activities predominantly take place within the context of health services including STD, Infectious Disease, Public Health Community, HIV, Outreach or other services. The success of the Syphilis Elimination Effort (SEE) will therefore reflect the levels of investment and support provided to these structures and the professionals that work within them. From this point, effective partnerships with other agencies and communities can be developed. Investment in and enhancement of public health services will also require that due attention be paid to proper action planning, monitoring and evaluation, and an ongoing program of research and development.

The first goal of the United States Syphilis Elimination Effort is that public health services will achieve excellence in the diagnosis and management of syphilis, partner services, and reporting of syphilis and its adverse outcomes, especially for those at greatest risk of health disparities.

In order to achieve this goal, the SEE will recommend activities in three key strategic areas for intervention. These are:

1. Improve and enhance syphilis surveillance and outbreak response;
2. Improve and assure quality of clinical and partner services; and
3. Improve and assure quality of laboratory services.

Improve and enhance syphilis surveillance and outbreak response

Surveillance

Surveillance is defined as the systematic and ongoing collection, analysis, interpretation and dissemination of data to inform public health action. Surveillance is the foundation for preventing and controlling all communicable diseases and this holds true for syphilis.[26] Strong surveillance capacity must be in place in order to characterize the epidemic, direct or inform programmatic efforts, inform research, tailor interventions to the populations at risk, and monitor and evaluate their effects.

The primary surveillance approach for syphilis is through nationally notifiable disease reporting of incident cases. Syphilis monitoring at local, state, and national levels can be used to determine disease burden and trends, and identify populations with high rates of infection. Additionally, syphilis data should be used to assess the yield of specific screening activities by identifying new cases detected in relation to the number of screening tests performed.

Key recommended **surveillance activities** for elimination of syphilis include:

SEE Activity 1. State and local health departments will collect and report gender of sex partners/ sexuality data to CDC by end-2006.

SEE Activity 2. State and local health departments should quarterly assess case report data for duplications, errors, and omissions and annually assess for accuracy, completeness and sensitivity, promptness, validity and quality.

SEE Activity 3. CDC, state, and local health departments will promote routine and regular (at least quarterly) analysis of their epidemiologic data on syphilis.

SEE Activity 4. State health departments should provide epidemiology training and capacity building to STD program staff.

SEE Activity 5. State and local health departments should adopt CDC/ Council of State and Territorial Epidemiologists syphilis surveillance case definitions.

SEE Activity 6. CDC, state and local health departments will encourage and monitor (quarterly basis) syphilis reporting from public and private providers.

SEE Activity 7. State and local health departments will use reactor grids to prioritize follow up of syphilis cases. These should be evaluated annually or more frequently if the local epidemiology changes.

SEE Activity 8. CDC, state and local health departments should use syphilis prevalence monitoring to determine changes over time and assess impact of prevention interventions.

Syphilis outbreak response

In 2005, over 75% of counties in the United States reported no syphilis, and the majority of others had comparatively low incidence rates in comparison to other STDs and infectious diseases. Nevertheless, all jurisdictions have a role to play in ensuring that disease rates be monitored and that all efforts be made to reduce them over time. This is the basic function of a disease control program.

In low or zero incidence areas or population subgroups, the reemergence of syphilis may be heralded by rapid growth in disease incidence, partially driven by exposure of a population to a new pathogen, but also due to the lag between disease introduction and clinical recognition and response. It is crucial that these sites rapidly detect every case of syphilis and notify the jurisdiction or county of origin. The response to a case in these settings should be similar in speed and intensity to a case of bacterial meningitis, botulism, or other communicable disease for which an immediate response is mandatory.[2]

The 1999 Plan recommended that all areas of the country develop an outbreak response plan and establish area-specific criteria that determine when the outbreak response plan is to be implemented. State and local health departments should ensure that outbreak identification and response plans be in place to effectively identify, diagnose, manage, and report rapid increases in syphilis. In this regard, syphilis preparedness and outbreak response forms part of an essential component of preventing and controlling syphilis.

Key recommended **syphilis outbreak response** activities for elimination of syphilis include:

SEE Activity 9. All state and local health departments will develop a Syphilis Outbreak Response Plan. This should be reviewed and updated if necessary, on an annual basis.

SEE Activity 10. All state and local health departments should develop area-specific criteria that determine when the outbreak response plan is to be implemented. This should be reviewed and updated if necessary, on an annual basis.

Improve and assure the quality of clinical and partner services

Clinical services

Although a substantial proportion of STD clinical services in the United States are being performed by private providers, dedicated public STD clinics continue to play an important role in providing low or no cost clinical care for individuals who cannot afford private health care or who prefer to access a specialty clinic for confidential services. However, public dedicated STD clinics face many challenges in providing easily accessible and high-quality care due to inefficient patient flow, inadequate staffing, and other operational factors. Increasingly, private providers provide more of the STD services in the United States, although the screening, treatment, and patient follow up according to recommended standards are less than optimal.

Clinical services for syphilis include early access to care, accurate diagnosis and staging, appropriate treatment, patient counseling, partner management, and follow-up. Prompt quality clinical management of individuals diagnosed with or exposed to infectious syphilis is a fundamental component for the prevention and control of syphilis and is a joint responsibility between health departments and providers. Because syphilis is an easily treatable bacterial infection, effective clinical care is an important factor in interrupting transmission.

Key recommended **clinical activities** for the elimination of syphilis include:

SEE Activity 11. State and local health departments should document the number of

clients turned away and the length of wait times (for an appointment or to be seen once in the clinic) at public STD clinics.

SEE Activity 12. State and local health departments should assess and increase the proportion of local health departments that have relationships with non-traditional health care providers (e.g., community centers, outreach clinics etc.) where at-risk populations seek services.

SEE Activity 13. State and local health departments should monitor and work towards increasing the proportion of STD clinic attenders, and those found to have an STD, who receive a screening test for syphilis according to recognized standards.

SEE Activity 14. CDC, in partnership with the National Coalition of STD Directors (NCSD) and state and local health departments, should develop and implement a quality assurance tool for clinic use to ensure that key activities are implemented according to recognized standards.

SEE Activity 15. State and local health departments should document the number of syphilis tests performed annually in sentinel public and private laboratories and measure the time for reporting results to providers and health departments.

SEE Activity 16. State and local health departments should monitor and work towards increasing the proportion of pregnant females screened for syphilis during prenatal health care visits, according to recognized standards and state statutes.

SEE Activity 17. In geographic locations where transmission is primarily in MSM populations, state and local health departments should monitor and work towards increasing the proportion of clients screened routinely for syphilis by HIV care providers.

SEE Activity 18. In geographic locations where transmission is primarily in heterosexual populations, state and local health departments should monitor and work towards increasing the proportion of arrestees/inmates screened and treated for syphilis in local jails, with an emphasis on women.

Partner services

Partner notification (PN) for syphilis is the process by which sex partners of an individual diagnosed with early syphilis are identified, contacted, and notified of their exposure, and offered appropriate clinical services to reduce their risk of infection or onward transmission of the disease; and to identify unnamed partners or persons with symptoms of syphilis. PN is therefore a key strategy to control syphilis through reducing the proportion of infected persons in the population. PN provides a more efficient syphilis prevention strategy, compared to screening and treating the entire population, as it focuses upon persons more likely than others to be infected with syphilis.

Published studies[1] on the effectiveness of partner notification confirm that:

1. Provider referral is more effective than patient referral;
2. Social network approaches can enhance the effectiveness of PN activities;
3. Community involvement in partner notification, e.g., DIS trained interviewers or placing DIS in community settings can enhance PN outcomes; and
4. Newer techniques (e.g., enhanced interviewing, peer-driven cluster referral and Internet PN) provide additional strategies for enhancing PN responses, although the data are still to be thoroughly evaluated.

Key recommended **partner services** activities for elimination of syphilis include:

SEE Activity 19. State and local health departments should apply optimum interviewing techniques (see the *Syphilis Elimination Technical Appendix*) to maximize the number of partners elicited and partners initiated.

SEE Activity 20. State and local health departments should use the geographic and socio-demographic concentration of syphilis to inform the best locations for DIS for immediate case-interviewing and partner follow up.

SEE Activity 21. State and local health departments should communicate and collaborate with other parties interested in partner notification for the elimination of syphilis (for example CBOs, private providers, jails).

Improve and assure the quality of laboratory services

High quality laboratory services are essential for an enhanced response for syphilis elimination. While recently developed molecular diagnostic tests have frequently replaced darkfield microscopy to detect *T. pallidum* in suspected primary and secondary syphilis lesions; and molecular typing techniques have provided a better understanding of the epidemiology of the disease, serologic testing remains the most frequent method for diagnosis of the disease. Currently available serologic tests for syphilis are either **non-treponemal**/reagin-based tests (e.g., the RPR and VDRL tests) or **treponemal** tests (e.g., the FTA-ABS, TPPA, and ELISA tests). Traditionally, the relatively inexpensive non-treponemal tests have been used as initial screening tests. Quantitatively, these tests are also used to assess the efficacy of therapy. Thus, after successful treatment of early syphilis, the titer of positive non-treponemal tests should fall and eventually become negative. However, successful treatment of later stages of the disease may result in persistence of positive antibody titers. Unfortunately, non-treponemal tests lack specificity, and therefore traditionally, sera that have proved reactive by these screening tests have been confirmed to be truly positive by re-testing with a more specific, but relatively expensive treponemal test.

In low prevalence settings, such as in the United States, an alternative testing strategy has been proposed whereby a treponemal test is used for initial screening and the non-treponemal test is used as the 'confirmatory' test that also provides a better indicator of activity of disease. This approach is particularly attractive in two situations. Firstly, in laboratories with a very high throughput of specimens and where automation would favor an ELISA-based screening platform, and secondly, in resource-poor settings where a point-of-care (rapid) test would facilitate provision of treatment at the initial clinic visit.[27] It should be noted that, for surveillance purposes, the use of treponemal antibody tests alone should be discouraged, since a significant decrease in the prevalence of treponemal antibodies in the population will take several decades, even following successful disease interventions.

Key recommended **laboratory services** activities for elimination of syphilis include:

SEE Activity 22. CDC and its partners will update the Manual of Tests for Syphilis by the end of 2006. In addition, CDC will produce and disseminate widely, policy guidance on the use and interpretation of results of treponemal tests when used as screening tests.

SEE Activity 23. CDC and its partners will undertake research and evaluation of point-of-care tests for implementation in the United States within the next 5 years.

SEE Activity 24. CDC will establish a network of regional laboratories to facilitate PCR testing for syphilis.

SEE Activity 25. CDC should fund demonstration projects to examine the utility and acceptability of typing and sub-typing methods for *T pallidum* in outbreak situations.

CHAPTER 6 Syphilis Elimination Goal II: Prioritization of culturally competent interventions

In an era of competing pressures on public health resources, the implementation of syphilis elimination activities should be prioritized, taking into consideration all available local, regional, and national data on syphilis epidemics to identify which interventions are the most effective; where they should be targeted; and how they can provide the greatest public health gain. Prioritization can make resources go further. However, it will require active, systematic, and expert reviews of surveillance and research data by those involved in syphilis prevention and control at local and national levels.

Prioritization of our effort and interventions will also require that we appropriately tailor and target our interventions. The history of syphilis in the United States dictates that the syphilis elimination efforts must acknowledge and be responsive to the legacies of distrust (e.g., Tuskegee Study), racism, marginalization of certain populations, and poverty in communities in which syphilis persists. More recently, the increasing disease incidence in men who have sex with men has required the establishment of new partnerships with communities and groups. In looking to the future, it is essential that the Syphilis Elimination Effort includes mechanisms by which strategic partnerships with affected communities can be readily established and developed as the epidemic evolves.

The second goal of the Syphilis Elimination Effort is to improve public health services through advocacy, acceptability, and appropriateness of the public health response to syphilis epidemics by prioritizing and delivering evidence-based and culturally competent interventions in partnership with external stakeholders and affected communities.

In prioritizing culturally competent interventions, the SEE promotes three key strategies for implementation of key activities. These are:

1. Mobilization of affected communities;
2. Tailoring intervention strategies for affected populations; and
3. Mobilization of and creating alliances with organizational partners.

Mobilization of affected communities

Community mobilization

The current U.S. epidemic of infectious syphilis disproportionately affects disadvantaged ethnic minority communities and men who have sex with men. The persons most at risk for infectious syphilis are often also socially marginalized and frequently distrusting of government authorities such as health departments.[28] In the 1999 National Plan to Eliminate Syphilis from the United States, effective community participation was discussed as an essential feature of the cross-cutting strategy, Community Involvement and Organizational Partnerships.[29] It was described as a means of:

1. Facilitating communication between affected communities and STD programs;
2. Restoring, building, and maintaining trust;
3. Improving access to and use of STD services;
4. Improving the cultural competence of interventions; and
5. Mobilizing community-based efforts to sustain syphilis elimination activities over time.[30]

Community mobilization is an essential component of community and public health programs.[31] However, it is also a concept that has been defined

in a variety of ways; reflecting varying degrees of community or client power in relationship to external institutions.[32] Moreover, the definition of community varies and is not always bound by geography, but often entails cultural identity and experiences[33] (e.g., Gay men, Hip-Hop youth). Successful community participation in public health efforts is best achieved when affected community members collaborate in equal partnership with health professionals to determine health goals, implement interventions, and evaluate outcomes.

In 2005, CDC launched a Syphilis Elimination Effort (SEE) Community Mobilization Toolkit[34] to give state and local health departments the tools to reach out and build coalitions and alliances needed to mobilize specific target audiences. Target-specific materials in the kit provide resources to increase local awareness, visibility, and salience of the syphilis elimination program. The kit provides guidance and the necessary tools for involving, mobilizing, and sustaining community efforts not only for syphilis, but for a variety of public health issues.

Key recommended **community mobilization** activities for elimination of syphilis include:

SEE Activity 26. State and local health departments will ensure ongoing monitoring of surveillance data in order to track evolution in local epidemics and inform appropriate community partnerships.

SEE Activity 27. CDC, state and local health departments should distribute and adapt recommendations contained in the CDC SEE Community Mobilization tool-kit.

SEE Activity 28. In designated high morbidity areas (HMAs), state and local health departments will establish meaningful community participation in local SEE efforts. This should be evaluated on a regular basis.

SEE Activity 29. HMAs receiving CDC SEE funding will disburse between 15% to 30% of SEE- dedicated funds to support relevant CBO-led activities. The funding level will be determined by epidemic phase and existing CBO infrastructure and capacity.

SEE Activity 30. State and local health departments will ensure that local data are reviewed regularly with community partners, and used to inform community-driven prevention efforts.

Tailoring intervention strategies for affected populations

Black and ethnic minorities

Tailored interventions for ethnic minorities are needed in the 2006 Syphilis Elimination Plan to address the needs of specific ethnic minorities who are currently disproportionately affected by syphilis (i.e., African Americans and Latinos), as well as to address possible morbidity in ethnic minorities that have low or potentially under-documented and/or misclassified syphilis morbidity (e.g., Asian-Pacific Islanders and Native Americans).[35]

Tailored interventions attempt to facilitate risk-reductive change by identifying and utilizing the characteristics that are distinct to the targeted topic, context, or population as part of the intervention strategies. Interventions can be tailored to address a specific issue, such as tailoring the Popular Opinion Leader (POL) model for HIV prevention to address syphilis prevention by creating syphilis prevention messages. Interventions can also be tailored to address a specific population. Using the POL example again, the model was originally tested with Gay men, but it can be and has been tailored for women.

Recommended activities for **tailoring syphilis elimination** interventions include:

SEE Activity 31. CDC, state, and local health departments should enhance national, state, and local prevention efforts, by tailoring interventions for ethnic minorities that are disproportionately affected by syphilis.

SEE Activity 32. State and local health departments should provide cultural sensitivity training for publicly funded SE staff and other interested service providers on a regular basis (e.g., annually).

SEE Activity 33. CDC will work in partnership with state and local health departments to undertake assessments of health-care seeking; health care access; partner services; and screening for ethnic minority populations affected by syphilis to inform the development or tailoring of culturally appropriate interventions.

SEE Activity 34. State and local health departments and CBOs should incorporate assessment data into tailored intervention

development and prevention intervention planning.

SEE Activity 35. State and local health departments should identify key local stakeholders to establish inter-agency alliances, collaborations, and partnerships to enhance syphilis elimination interventions.

Men who have sex with men (MSM)

Men who have sex with men are at increased risk for acquiring STDs, and bear a disproportionate burden of STD in the population.[36,37] The reasons are multi-faceted: some MSM report higher numbers of lifetime sex partners; higher rates of partner change and partner acquisition rates than heterosexuals; and STD prevalence in MSM population exceeds that of the general population.[38,39] In addition, recent concerns have been expressed about the increases in sexual risk behaviors of MSM being driven by recreational drug use and abuse, poor mental health, discrimination, and quantitative and qualitative changes in the sexual market place (venues facilitating sex partner acquisition, including the Internet).[38,40,41]

With an excess of 60% of P&S syphilis diagnoses currently occurring among MSM, it is essential that the SEE be made relevant, appropriate, and acceptable to this population. This is especially important as many MSM may also be HIV-positive or dealing with a range of adverse health and social issues. One strategy for framing the message is promoting syphilis prevention as part of an overall sexual health strategy for MSM. This approach may be facilitated by combining HIV, syphilis and hepatitis B interventions for MSM in public, private, and outreach provider services, particularly in HIV health care settings. An alternative approach is to consider the elimination of syphilis as an issue of "health rights" for MSM. Whatever the approach, it is important that community mobilization occur alongside effective public and private health service responses for an effective approach.

Key recommended activities for **controlling syphilis in MSM** include:

SEE Activity 36. CDC, state, and local health departments will collect and report data on gender of sexual partners/ sexual preference of syphilis index patients.

SEE Activity 37. State and local health departments should develop and use Internet-based interventions in order to increase partner notification efficacy, MSM engagement, and participation in SEE activities.

SEE Activity 38. State and local health departments will employ provider outreach, education and mobilization to raise awareness, encourage reporting, and improve effectiveness and quality of clinical management; including establishing systems to promptly respond to clinical and prevention questions from providers.

SEE Activity 39. In designated high morbidity areas (HMAs), state and local health departments should facilitate concomitant annual syphilis testing for sexually active HIV positive MSM.

SEE Activity 40. State and local health departments should enhance access to syphilis screening through improving access to STD care facilities (e.g., extended operating times, MSM clinical sessions etc.).

SEE Activity 41. State and local health departments should enhance syphilis education and sexual health promotion with MSM within STD clinics and the community.

SEE Activity 42. State and local health departments should undertake outreach syphilis screening for MSM in bathhouses, bookstores, when there are demonstrated links to ongoing disease transmission or where the intervention is combined with other health interventions (e.g., hepatitis B vaccination, HIV testing).

SEE Activity 43. State and local health departments will create partnerships with local drug treatment centers and programs and will clarify pathways for treatment and rehabilitation for recreational drug use.

Mobilizing health care providers

The provision of STD care and prevention services has historically resided at publicly funded STD clinics. However, a significant shift toward private practice began taking place in the 1990s, necessitating links between public health clinics and the physicians in community-based practices. According to the 1992 National Health and Social Life Survey, almost half of the respondents who had ever had an STD sought care in a private practice setting.[42] About 24%

received STD care in a community health center clinic, emergency room, family planning clinic or other health care facility. Therefore, involvement of all of the health care providers (HCPs) as specified above, practicing in public and private settings is critical for the success of the Syphilis Elimination Effort.

Historically, the term "health care provider" has referred exclusively to the physician as provider. However, the number of mid-level clinicians (nurses, nurse practitioners and physician assistants) who provide health care in various health care settings has been rising steadily. Their growing role in the management of patients has been shown to be cost-effective, providing greater efficiency in the delivery of care. This will likely yield benefits in terms of patient education and support, as well as greater patient adherence to treatment regimens.[43]

Mobilization of health care providers will therefore be a key responsibility of state and local health departments in their response to syphilis epidemics. Such mobilization will require the building of relationships and alliances with key stakeholders in the community and supporting innovative practices which result in identification or improved management of syphilis. Examples of mobilization include: sharing epidemiologic data; hosting joint or open educational events regarding recognition, diagnosis, and management of syphilis; provider visitations by DIS; providing an accountable system to promptly respond to clinical and prevention provider questions; developing cooperative agreements to facilitate patient access, referral or partner notification; and including practitioners in social marketing interventions.

Recommended activities for eliminating syphilis through **provider mobilization** include:

SEE Activity 44. State and local health departments should designate a health department liaison for provider outreach for ongoing SEE efforts.

SEE Activity 45. CDC, state and local health departments should provide in-service training and technical assistance to private health care providers (including physicians, practice nurses etc.)

SEE Activity 46. State and local health departments should develop Memoranda of Understanding (MOA) with specific providers or CBOs (seeing a high number of syphilis cases) in order to clarify procedures for diagnosis, partner notification, and reporting.

SEE Activity 47. State and local health departments should develop and widely disseminate policies and protocols for syphilis diagnosis and care in hospitals, emergency rooms, corrections facilities and other settings (e.g., web-based health alerts or newsletters).

SEE Activity 48. CDC, state and local health departments should provide easy access to reliable and up to date syphilis data for their respective SEE stakeholders.

Mobilization and creation of alliances with organizational partners

Alliances between different organizational partners are a key method for enhancing public health services. Potential partners include jails, community organizations, policymakers, other social service agencies, and institutions that serve persons at risk for syphilis. In principle, alliances to enhance syphilis elimination should broadly engage local partners to: gain a wider understanding of how health improvement can be achieved; ensure better coordination between local health and environment services; increase local capacity and abilities in public health skills; develop local health promotion capacity in conjunction with local health promotion specialists; facilitate a network for sharing health and environment information; and support communities in action to improve health, living conditions, and life chances.

Local areas should urgently consider the case for establishing **organizational partnerships** (e.g., partnerships with community health centers or AIDS Service Organizations) for syphilis elimination. This would contribute a public health dimension to the statutory and other responsibilities which local health departments already carry for community planning and for delivering a wide range of health services to the public. Local health departments should convene partnerships of local interests, drawn from various local stakeholders, including voluntary and private sectors, and local businesses and employers.

Community health centers

Partnerships should also be considered with community health centers, which include all the diverse public and non-profit organizations and programs that receive federal funding under section 330 of the Public Health Service (PHS) Act, as amended by the Health Centers Consolidated Act of 1996 (P.L. 104-299) and the Safety Net Amendments of 2002. Health centers are characterized by five essential elements:

1. They are located in or serve a high need community;
2. They provide comprehensive primary care services as well as supportive services;
3. Their services are available to all residents of their service areas, with fees adjusted upon patients' ability to pay;
4. They are governed by a community board with a majority of members being health center patients; and
5. They meet a range of performance and accountability requirements regarding their administrative, clinical, and financial operations.

Starting in 2002, a five-year, $780 million Initiative for Health Centers was launched aimed at creating new or expanded access points and enabling the Health Center Programs to reach an additional 6.1 million patients by the end of Fiscal Year 2006. The goal is to strengthen the health care safety net for those most in need, many of whom may be at risk for syphilis. For further information about these centers, local programs should visit http://bphc.hrsa.gov/chc.

Screening and treatment in jails

The term 'corrections' is usually used to describe a confinement facility administered by a federal, state, county, or city law enforcement agency. Jails are intended for persons that have been detained pending adjudication, or persons committed after adjudication, usually those committed for sentences of a year or less.[44] STD prevalence is estimated to be higher in persons in jail facilities than in the general population. Arrestees are at high risk for STD infection because of: substance abuse, high-risk sexual behaviors, multiple sex partners, including commercial sex work, and limited access to health care.

Untreated syphilis often moves from the community, through correction settings, and back to the community. Jails generally have a very rapid turnover of detainees; the average stay may be as short as 48 hours. It is estimated that between 25% and 50% of all detainees spend less than 24 hours in a lock-up facility.[44] As a general rule, jails serve as temporary holding facilities that release individuals back into the community, often without any concerted effort to detect asymptomatic infected persons or provide treatment. Therefore, to reach the highest number of these high risk persons, establishing rapid screening and treatment programs in the intake/booking areas of jails is an important SEE strategy. Such programs are feasible and effective.[45,46] The Institute of Medicine report, "The Hidden Epidemic," recommended providing STD services in prisons, jails, and juvenile facilities as part of a comprehensive STD prevention program. Rapid STD testing and treatment in jails is especially important for STD control in the community, especially in the context of predominantly heterosexual transmission, and may be critical for the success of syphilis elimination.[47]

The strategy for controlling of syphilis in **jail populations** in the United States prioritizes the following activities:

SEE Activity 18. In geographic locations where transmission is primarily in heterosexual populations, state and local health departments should monitor and work towards increasing the proportion of arrestees/inmates screened and treated for syphilis in local jails, with an emphasis on women. Periodic point prevalence surveillance in areas with predominantly MSM epidemics may also be warranted.

SEE Activity 49. State and local health departments should establish or maintain effective partnerships with jails as a community-based setting for case-finding, disease surveillance, treatment, and research.

SEE Activity 50. State and local health departments will collect jail-based syphilis morbidity and behavioral data.

SEE Activity 51. State and local health departments will work to improve information management systems and data sharing capabilities.

SEE Activity 52. CDC, state and local health departments should provide cross-training experiences for public health and detention staff.

SEE Activity 53. State and local health departments should assign STD program staff to jails to complement and support screening and treatment activity where indicated.

Screening in antenatal clinics

Pregnant women who are infected with syphilis can transmit the infection to the fetus, causing congenital syphilis (CS) with serious adverse outcomes of the pregnancy in at least 50% of the cases. Elimination of congenital syphilis would contribute importantly to reduction of lost pregnancies, preterm/low birth-weight infants, and prenatal death. Although numbers and rates of CS have been declining in the United States, there remains a danger of a resurgence should syphilis recur among heterosexual populations. Yet, unlike many neonatal infections, this is a preventable disease which could be eliminated through effective antenatal screening and treatment of infected pregnant women.

A further reduction in CS is feasible with a relatively simple set of existing interventions focusing on the care of mothers and newborns. The building blocks for CS prevention in the United States are already in place: policy guidelines for universal antenatal syphilis screening; levels of antenatal attendance are high; screening tests are low-cost; and treatment with penicillin is inexpensive. The overarching goal should therefore be the elimination of CS as a public health problem in the United States, with the specific goal of prevention of mother-to-child transmission of syphilis through reduction of prevalence of syphilis in pregnant women. In addition, local jurisdictions should undertake regular audits to identify missed opportunities for diagnosing congenital syphilis as part of their quality improvement activities.

The strategy for elimination of **congenital syphilis** from the United States prioritizes four activities:

SEE Activity 54. CDC, state and local health departments should maintain activities to ensure sustained political commitment and advocacy for congenital syphilis elimination (e.g., mobilizing organizational partners).

SEE Activity 55. CDC, state and local health departments will work to increase access to, and quality of mother and child health services, ensuring that all pregnant women are adequately screened and treated, and decreasing the frequency of missed opportunities for screening women outside mother and child care.

SEE Activity 56. State and local health departments will ensure screening and treatment of all pregnant women for syphilis, using recommended diagnostic algorithms for the detection of syphilis.

SEE Activity 57. CDC, state and local health departments will undertake congenital syphilis relevant surveillance, monitoring and evaluation activities, including improving surveillance systems, developing performance measures, and strengthening monitoring and evaluation systems.

CHAPTER 7 Syphilis Elimination Goal III: Accountable services and interventions

The creation of a dynamic, evidence-based, and culturally competent prevention and control plan for syphilis requires attention to effective implementation, monitoring, and evaluation. This should be seen as part of a systematic approach to ensure that appropriate and effective methods and ethical standards are adhered to for all syphilis elimination activities. Colleagues involved in syphilis elimination at local, state and national levels should have the training and re-training to develop or improve their relevant skills.

The third goal of the Syphilis Elimination Effort is to improve the public health services' response to syphilis epidemics by improving the effectiveness of interventions through enhanced accountability in the planning, implementation, and evaluation of interventions.

To improve the implementation of the syphilis elimination effort, three main strategies will be required. These are:

1. Training and staff development;
2. Evidence-based program planning, monitoring, and evaluation; and
3. Research and development.

Training and staff development

Training is defined in the *Program Operations Guidelines for STD Prevention* (POG)[48] as a set of activities designed to develop specific skill levels of workers who are required to perform various public health activities. Training is not only necessary for establishing skills; it is an ongoing process necessary for the maintenance and enhancement of skills. The Institute of Medicine's *Future of Public Heath*[49] cites the continuing evolution of public health as justification for the constant need to update and enhance the knowledge and skills of those involved in public health.

The 1999 National Plan to Eliminate Syphilis specifically addressed training, and identified a number of persons involved in syphilis elimination activities who may have need for training, including health department personnel, private providers, laboratorians, and community representatives.[50] The 1999 plan also identified specific topics for training, including clinical and laboratory methods, behavioral intervention approaches, data management and analysis, community involvement techniques, social and behavioral assessment, health communication, and evaluation.

Training is needed today to improve syphilis elimination efforts for professionals working in both the public and private sectors. In this regard, the STD/HIV Prevention Training Centers (PTCs) are likely play a substantial role in ensuring that opportunities are available for public and private practitioners to avail themselves of high quality training opportunities.

The plan for elimination of syphilis in the United States prioritizes the following **training and staff development** activities:

SEE Activity 58. CDC and state and local health departments should undertake routine and regular assessment of program staff training needs.

SEE Activity 59. CDC, in partnership with NCSD and PTCs should identify training opportunities for private practitioners relevant to syphilis elimination.

SEE Activity 60. CDC and state and local health departments will work together to identify nationally and locally available training opportunities and resources.

SEE Activity 61. State and local health departments will ensure adequate training of supervisors to support local SEE activities.

SEE Activity 62. State and local health departments should assign one or more management staff to be accountable for training and staff development for syphilis elimination activities.

SEE Activity 63. CDC in partnership with NCSD, state and local health departments will provide technical assistance for the development, use, and monitoring and evaluation of syphilis elimination evidence-based action plans.

Evidence-based action planning, monitoring, and evaluation

Evidence-based program planning

An action plan states specifically what steps or tasks will be accomplished to achieve defined set objectives. It includes a schedule with deadlines for significant actions, resources necessary to achieve the objective, and methods to measure the objectives.[51,52,53] Evidence-based action planning is essential for changing those practices which may limit the success of local syphilis elimination activities.

Evidence-based action planning is key to lending credibility to an organization; ensuring attention to details in the planning process; understanding what is and isn't possible for the organization to do; and enhancing efficiency. Evidence-based action planning also saves time, energy, and resources in the long run, and increases the chances that people will do what needs to be done. The better local syphilis elimination interventions are planned, managed, and monitored the more successful they are likely to be.

With respect to evidence-based action planning, the plan for elimination of syphilis from the United States will prioritize the following activities for **evidence-based action planning**:

SEE Activity 63. CDC in partnership with NCSD, state and local health departments will provide technical assistance for the development, use, and monitoring and evaluation of syphilis elimination evidence-based action plans.

SEE Activity 64. CDC will request complete evidence-based action plans from all HMAs from FY 2008 onwards.

SEE Activity 65. State and local health departments will develop syphilis elimination action plans that are supported by surveillance or research evidence, and integrated into the performance of SE coordinators and local action teams.

SEE Activity 66. CDC, in partnership with state and local health departments, will use a standard format for local syphilis elimination evidence-based action plans by December 2008.

SEE Activity 67. State and local health departments should ensure that their local syphilis elimination action plans are shared locally and are widely available for review by stakeholders.

Monitoring and evaluation

Monitoring involves assessing and documenting program procedures to assure that activities have been performed appropriately and are contributing to the success of the program. Monitoring is often focused on developing information systems to provide data on processes and outcomes.

Program evaluation is essential to monitor and improve planning and management.[54] Program evaluation is a systematic way to improve and account for actions. It answers the questions, "why?" or "why not?" It relies on a collaborative process to identify priorities and commit to addressing shortcomings. Evaluation is only worthwhile if results are used to improve program outcomes. There are two types of evaluation. Outcome evaluation determines whether the activities result in changes in the target population (e.g., increased knowledge, decreased disease). Process evaluation determines whether activities are implemented as intended.

CDC Performance Measures

Performance measures (or indicators) are quantifiable information that provides insight into the yield or effect of a particular element of an STD prevention program. Performance measures can be important tools for program management. They allow programs to monitor progress toward specified outcomes, they facilitate the comparison of programmatic

efforts over time, and they encourage project areas to implement and document "best practices". The current performance measures encourage programs to focus on those activities over which they may exert influence (e.g., chlamydia screening at juvenile detention facilities), in contrast to those they can directly control (e.g., partner services in publicly funded sites). These measures are heavily focused on syphilis activities, with two linked to surveillance, four to partner services, and three to screening. They should play an important role in monitoring program performance for syphilis elimination. Over time, the systematic evaluation of performance measures will allow for refinement and the establishment of new measures to meet national, state, and local prevention program needs and will facilitate program improvement. For further information on the current CDC Division of STD Prevention Performance measures, please see www.cdc.gov/std.

With respect to **program monitoring and evaluation**, the plan for elimination of syphilis from the United States prioritizes the following activities:

SEE Activity 68. CDC, state and local health departments will prioritize risk groups and interventions for syphilis elimination.

SEE Activity 69. CDC, in partnership with its stakeholders, will provide explicit requirements, recommendations and standards for syphilis elimination activities at all levels in the plan.

SEE Activity 70. CDC, in partnership with state and local health departments, will routinely monitor syphilis elimination activities to ensure that standards are met and that priorities are being addressed.

SEE Activity 71. CDC, state and local health departments will share findings of evaluation activities at all levels. CDC, through the syphilis elimination coordination, will identify and make explicit, mechanisms to facilitate sharing of this information.

Research and development

Research strategies frame the scientific questions associated with important health and epidemiologic issues and delineate the research needs and relative priorities required to address those questions. SEE relevant research should focus on developing indicators and studies that allow an improved understanding of the social, behavioral, economic, biomedical, and cultural determinants of syphilis epidemics and prevention interventions.

The SEE Research Strategy should highlight significant information gaps in each of the above areas, prioritize the research needs, and propose advisory guidelines indicating how available resources can be used to advance scientific knowledge and influence social and environmental factors that contribute to syphilis prevalence and severity.

The SEE **research strategy** focuses on four key activities:

SEE Activity 72. CDC working in partnership with SEE partners will deliver broadly applicable tools and methods for syphilis diagnosis, prevention, and control.

SEE Activity 73. CDC and its SEE partners will develop and share syphilis prevention and diagnostic technologies and approaches.

SEE Activity 74. CDC and its SEE partners will evaluate the effectiveness and cost-effectiveness of selected syphilis prevention interventions.

SEE Activity 75. CDC and its SEE partners will conduct research to address economic, social, and behavioral determinants and consequences of syphilis epidemics and prevention.

PART C Implementing the 3-By-3 Approach to Syphilis Elimination

CHAPTER 8 Roles and responsibilities for Syphilis Elimination and next steps

Roles and responsibilities for Syphilis Elimination

This section describes the range of possible national, state, and local partners in the Syphilis Elimination Effort and their potential contribution to improving health and reducing the incidence of syphilis in the United States. Although the SEE is not likely to enlist a large group of partners at the outset, best practice suggests that it is better to start with a core group and build alliances over time. The core partners are likely to include state and local health departments, representatives from the public and private sectors, private health care providers, and other relevant organizations (e.g., local corrections, community health centers).

Centers for Disease Control

The CDC has a vital role in implementing high quality response to the Syphilis Elimination Effort, in addition to its prime responsibility for protecting the public's health. CDC will:

- Act as an agent for health gain through the Syphilis Elimination Effort.
- Provide advice on the design and implementation of syphilis prevention, screening and treatment programs.
- Provide financial and human resources to support and enhance state and local responses to eliminating syphilis within their jurisdictions when indicated.
- Analyze and report on the epidemiology of syphilis and its adverse outcomes.
- Establish national research priorities for syphilis prevention and control.
- Support staff training and development.
- Promote collaboration between STD and HIV agencies and providers.
- Monitor SEE action plans and progress reports from HMAs.

State and local health departments

State and local public health departments, often in collaboration with institutional and community partners, provide comprehensive community services which protect health and prevent disease and in many respects will form the center for coordination and implementation of Syphilis Elimination Efforts within states and counties. It is reasonable for local Syphilis Elimination Efforts to be led by health departments, as these agencies are generally responsible for providing cohesive public health services including the provision of high quality STD services, partner services, treatment for STDs, jail screening and treatment, secondary prevention counseling services, and liaison with private and voluntary sector agencies.

To assist in this leadership function we recommend that **all** health departments identify a **Syphilis Elimination Effort coordinator** to help coordinate and manage the range of local syphilis prevention and control activities and to be seen as a natural point of focus for the effort. Specifically however, state and local health departments will:

- Develop annual action plans incorporating the 3-By-3 approach to Syphilis Elimination and the recommended strategies and activities.
- Identify funds to support local Syphilis Elimination activities, commensurate to disease epidemiology and local prioritization of resources.
- Create local organizational partnerships for Syphilis Elimination.

- Support community action to improve health, including liaison with community and privates sector partners.
- Provide equitable access to health care.
- Act as an advocate for health gain through the Syphilis Elimination effort.
- Provide advice on the design and implementation of syphilis prevention, screening and treatment programs.
- Analyze and report on the local epidemiology of syphilis and its adverse outcomes.
- Support local staff training and development.
- Promote local collaboration and joint planning between STD and HIV agencies and providers.

Organizational partners

Organizational partners have a vital role in eliminating syphilis through social and economic development and through the provision of health and community care services. Faith-based and other community groups are often well placed to understand the contexts and circumstances affecting local people for improved services and the barriers to change. Community groups should therefore be considered as core partners for Syphilis Elimination. The local Syphilis Elimination effort should involve such groups on local interventions and seek their view when developing annual action plans.

Next steps

The SEE coordination team

The Syphilis Elimination Effort coordinating team at the Centers for Disease Control and Prevention was established in 2005. A cross-Divisional work group with representation from each of the Division of STD Prevention branches meets on a weekly basis to review progress in the SEE and to guide strategic planning and implementation. A national network of Syphilis Elimination Coordinators will be established with an initial focus on streamlining staff training and development to enhance SEE implementation.

Within one year

Standardized templates for preparing evidence-based action plans and undertaking interim monitoring and summative evaluations will be produced by CDC by December 2006. The Syphilis Elimination Effort Technical Appendix will be published by CDC by June 2006. Also a Syphilis Elimination Research and Development Strategy for the United States will be prepared by CDC by December 2006.

Within two years

CDC will develop and disseminate to state and local health departments a template outbreak response plan by June 2007. All SEE funded High Morbidity Areas will be asked to submit annual evidence-based action plans for their Syphilis Elimination activities.

CHAPTER 9 Conclusion

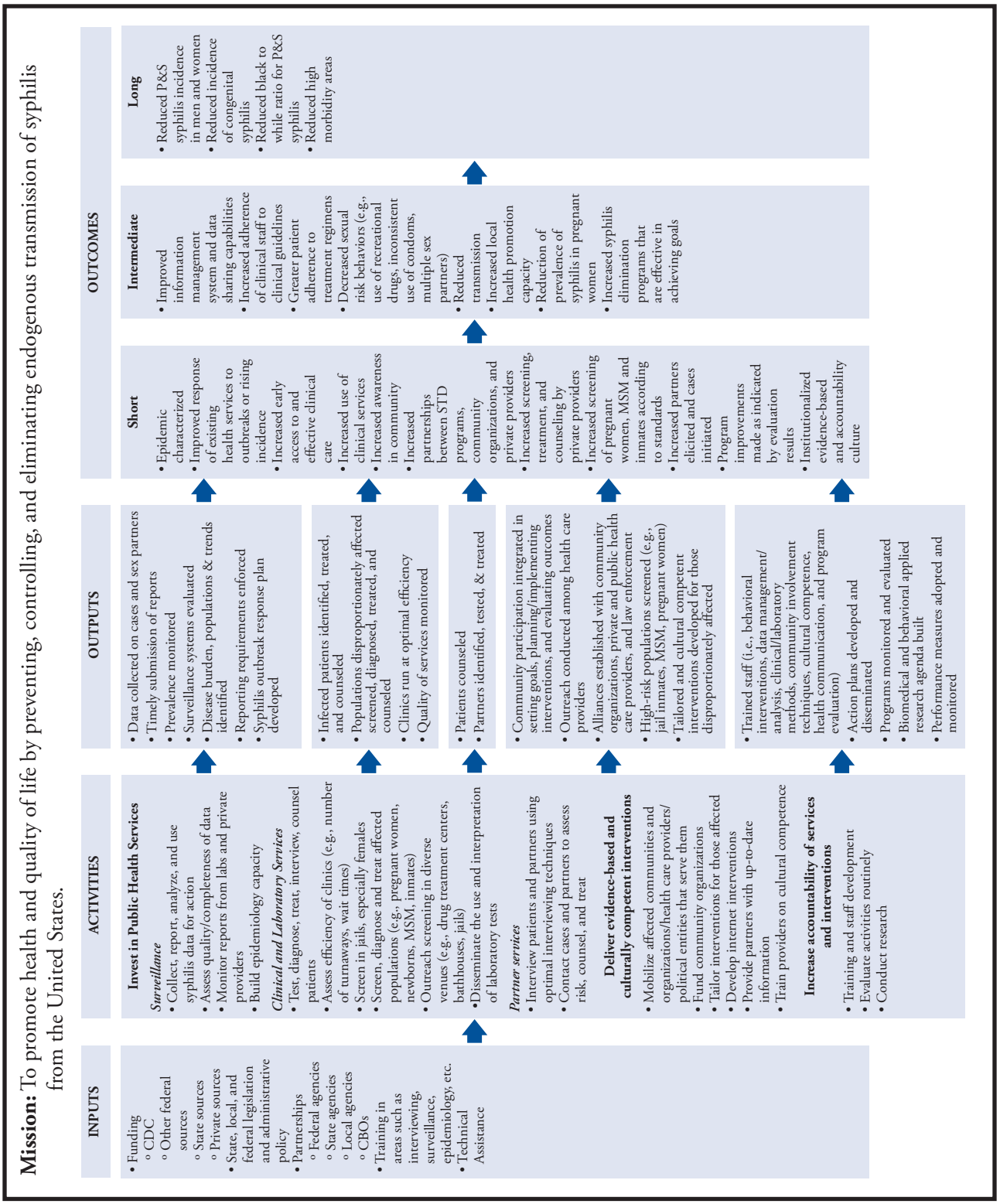
This plan provides a framework for continuing to deliver interventions aimed at eliminating syphilis as a public health problem in the United States. It should not be seen as a rigid blueprint for eliminating syphilis overnight. Rather, in thinking about the future of the Syphilis Elimination Effort, the plan provides a path that helps us to effectively focus on the problem in order to get the most important things done in the most cost effective, ethical, and acceptable way possible.

As we enter the 21st century, the United States has made great strides in reducing the incidence of syphilis within its borders. Yet, syphilis remains a formidable foe. Nevertheless, it remains relatively easy to detect and cure given adequate access to, and utilization of, care. It remains at substantially lower rates compared to other STDs, and its localization within certain population sub-groups should make it more amenable for targeting and elimination. As the syphilis epidemic continues to evolve, we can be certain that, as we move towards our goal, syphilis may move to new communities or to return to those previously affected. Vigilance is required.

In 1999, the persistence of syphilis was said to reflect a failure in our public health capacity.[2] Today, changes in sexual behavior, driven by a number of social and economic factors, may be influencing which geographic locations, and which population sub-groups are affected by this disease. However, the benefits of elimination — improvements in health, reductions in health care costs, development of public health capacity, and reductions in racial disparities — remain the same. It is the potential of reaping these benefits that should continue to inspire our efforts.

Appendices

APPENDIX 1
SEE Global Logic Model



APPENDIX 2

Required and recommended Syphilis Elimination activities

Note:

1. For the purposes of this document, "will" denotes required activities and "should" denotes recommended activities.
2. Required activities are to be given the highest priority for implementation; however **Recommended** activities are also crucial for enhancing syphilis prevention and control efforts.
3. Activity numbers are reference numbers and will not necessarily appear in numeric sequence.
4. Grades of Activity.
   A. Strongly recommended: Good evidence, benefits substantially outweigh harms, should be prioritized.
   B. Recommend: At least fair evidence, benefits outweigh harms.
   C. Insufficient evidence: Uncertain balance of benefits and harms — lack of evidence on clinical outcomes, poor quality of existing studies, or conflicting results — may make recommendations based on other grounds.
5. Further details on the rationale and evidence for the recommended activities are contained in the *Syphilis Elimination Technical Appendix.*

GOAL I: Investment in public health services

Public health services will achieve excellence in the diagnosis, management and reporting of syphilis and its adverse outcomes, especially those at greatest risk of health disparities.

Surveillance	Standard	Rating
SEE Activity 1. State and local health departments will collect and report gender of sex partners/ sexuality data to CDC by end-2006.	• All project areas to routinely collect and report information on syphilis in MSM by end 2006	A
SEE Activity 2. State and local health departments should quarterly assess case report data for duplications, errors, and omissions and annually assess for accuracy, completeness and sensitivity, promptness, validity and quality.	• An assessment of the accuracy, completeness, sensitivity, promptness, validity, and quality of syphilis surveillance should be undertaken in accordance with Comprehensive STD Prevention Systems (CSPS) grant guidance	B
SEE Activity 3. CDC, state, and local health departments will promote routine and regular (at least quarterly) analysis of their epidemiologic data on syphilis.	• All project areas should implement the new syphilis surveillance data collection instrument by end of 2007 • HMAs should produce an annual report containing an analysis of syphilis surveillance data and summarizing local syphilis elimination interventions for stakeholders	A
SEE Activity 4. State health departments should provide epidemiology training and capacity building to STD program staff.	• Each HMA should ensure that syphilis surveillance staff has epidemiologic training and opportunities to improve training	B
SEE Activity 5. State and local health departments should adopt CDC/ Council of State and Territorial Epidemiologists syphilis surveillance case definitions.	• CDC in partnership with stakeholders to review and produce updated guidelines on syphilis case definitions by end 2007	B
SEE Activity 6. CDC, state and local health departments will encourage and monitor (quarterly basis) syphilis reporting from public and private providers.	• All high morbidity areas (HMAs) should distribute syphilis case definitions and reporting requirements to local physicians and stakeholders on a regular, and as needed, basis	A

SEE Activity 7. State and local health departments will use reactor grids to prioritize follow up of syphilis cases.	• State and local health departments should document the use of reactor-grid evaluations appropriately	B
SEE Activity 8. CDC, state and local health departments should use syphilis prevalence monitoring to determine changes over time and assess impact of prevention interventions.	• Where available, syphilis prevalence monitoring results should be reviewed on an annual basis	C

Outbreak response	Standard	Rating
SEE Activity 9. All state and local health departments will develop a Syphilis Outbreak Response Plan. This should be reviewed and updated if necessary, on an annual basis.	• All state and local health departments in HMAs should review and update their syphilis outbreak plans by end 2006 • CDC to produce a Syphilis Outbreak Plan template for use by state and local health departments by end 2007	A
SEE Activity 10. All state and local health departments should develop area-specific criteria that determine when the outbreak response plan is to be implemented. This should be reviewed and updated if necessary, on an annual basis.	• All state and local health departments in non-HMAs should review and update their syphilis outbreak plans (including area-specific thresholds) by end 2006	B

Clinical services	Standard	Rating
SEE Activity 11. State and local health departments should document the number of clients turned away and the length of wait times (for an appointment or to be seen once in the clinic) at public STD clinics.	• All HMAs should maintain monthly sentinel surveillance of access to care measures. Data should be reported in the annual (project period) grant progress report	B
SEE Activity 12. State and local health departments should assess and increase the proportion of local health departments that have relationships with non-traditional health care.	• All HMAs should describe current agreements between local health departments and non-traditional health care facilities biannually. Increase the proportion of local health with contracts yearly. Report status in future project period (annual) progress reports	B
SEE Activity 13. State and local health departments should monitor and work towards increasing the proportion of STD clinic attenders, and those found to have an STD, who receive a screening test for syphilis according to recognized standards.	• 90% of all STD clinic attenders should be screened for syphilis • >90% of STD clinic attenders diagnosed with an STD (other than syphilis) should be screened for syphilis	C
SEE Activity 14. CDC, in partnership with the National Coalition of STD Directors (NCSD) and state and local health departments, should develop and implement a quality assurance tool for clinic use to ensure that key activities are implemented according to recognized standards.	• CDC in collaboration with all HMAs to develop a clinical quality assurance tool by end 2007 • All HMAs should report status in implementing the tool in future project period (annual) progress reports [55,56,20]	B
SEE Activity 15. State and local health departments should document the number of syphilis tests performed annually in sentinel public and private laboratories and measure the time for reporting results to providers and health departments.	• All HMAs should collect and review monthly syphilis testing data on a quarterly basis • These data should be reported in project period (annual) progress reports	B
SEE Activity 16. State and local health departments should monitor and work towards increasing the proportion of pregnant females screened for syphilis during prenatal health care visits, according to recognized standards and state statutes.	• Syphilis screening in pregnancy should be done at first prenatal visit. Where indicated, additional screening may be done early in the third trimester and at delivery[57] • All HMAs should collect data monthly • These data should be reported in project period (annual) progress reports	A
SEE Activity 17. In geographic locations where transmission is primarily in MSM populations, state and local health departments should monitor and work towards increasing the proportion of clients screened routinely for syphilis by HIV care providers.	• Screening in MSM - at least annually in sexually active MSM or every 3-6 months in MSM at high risk[20] • All HMAs should collect data monthly • These data should be reported in project period (annual) progress reports	A

SEE Activity 18. In geographic locations where transmission is primarily in heterosexual populations, state and local health departments should monitor and work towards increasing the proportion of arrestees/inmates screened and treated for syphilis in local jails, with an emphasis on women.	• National guidelines recommend screening arrestees for syphilis within 14 days of incarceration[58]	A
Partner services	**Standard**	**Rating**
SEE Activity 19. State and local health departments should apply optimum interviewing techniques (see the syphilis elimination Technical Appendix) to maximize the number of partners elicited and partners initiated.	• State and local health departments in HMAs should audit the outcomes of partner notification activities for P&S syphilis on an annual basis	A
SEE Activity 20. State and local health departments should use the geographic and socio-demographic concentration of syphilis to inform the best locations for DIS for immediate case-interviewing and partner follow up.	• State and local health departments in HMAs should audit the outcomes of partner notification activities for P&S syphilis on an annual basis	B
SEE Activity 21. State and local health departments should communicate and collaborate with other parties interested in partner notification for the elimination of syphilis (for example CBOs, private providers, jails).	• State and local health departments in HMAs should audit the outcomes of partner notification activities for P&S syphilis on an annual basis	B
Laboratory services	**Standard**	**Rating**
SEE Activity 22. CDC and its partners will update the Manual of Tests for Syphilis by the end of 2006. In addition, CDC will produce and disseminate widely, policy guidance on the use and interpretation of results of treponemal tests when used as screening tests.	• Manual of tests update to be completed by end 2006 • CDC to produce policy guidance on use of treponemal tests as screening tests to be produced by end-2006	A
SEE Activity 23. CDC and its partners will undertake research and evaluation of point-of-care tests for implementation in the United States within the next 5 years.	• Strategic plan for evaluation and licensing of syphilis point of care tests to be produced by CDC by end 2006	A
SEE Activity 24. CDC will establish a network of regional laboratories to facilitate PCR testing for syphilis.	• CDC to establish regional laboratory network by end 2007	B
SEE Activity 25. CDC should fund demonstration projects to examine the utility and acceptability of typing and sub-typing methods for *T pallidum* in outbreak situations.	• CDC to work with program consultants to identify suitable areas with syphilis outbreaks to participate in this program by end 2007	B

GOAL 2: Prioritization of evidence-based, culturally competent interventions

Public health services will improve their advocacy, acceptability, and appropriateness of their response to syphilis epidemics through the creation of productive and proactive partnerships with external stakeholders.

Community mobilization	**Standard**	**Rating**
SEE Activity 26. State and local health departments will ensure ongoing monitoring of surveillance data in order to track evolution in local epidemics and inform appropriate community partnerships.	• All project areas should implement the new syphilis surveillance data collection instrument by end of 2007 • HMAs should produce an annual report containing an analysis of syphilis surveillance data and summarizing local syphilis elimination interventions for stakeholders	A

SEE Activity 27. CDC, state and local health departments should distribute and adapt recommendations contained in the CDC SEE Community Mobilization tool-kit.	In the annual (project period) grant progress report: • All HMAs describe community participation activities that include members of the affected communities to determine the non-governmental, community-based, health and non-health agencies, and institutions involved in the development of the syphilis elimination plan • Describe how community coalitions, advisory groups, or taskforces and other partners are involved in reviewing the epidemiology of syphilis and the social and institutional context of its persistence and designing and implementing locally relevant, syphilis prevention interventions and control services	B
SEE Activity 28. In designated high morbidity areas (HMAs), state and local health departments will establish meaningful community participation in local SEE efforts. This should be evaluated on a regular basis.	• Locally appropriate mechanisms for ensuring community participation (e.g., working groups, community forums etc.) should be identified by each HMA. This should be documented and reviewed annually	A
SEE Activity 29. HMAs receiving CDC SEE funding will disburse between 15% to 30% of SEE- dedicated funds to support relevant CBO-led activities.	As required by the CSPS grant award: • All HMAs must award 15%-30% of SE funds to community organizations that serve affected populations • All HMAs must report on activities of these funded organizations in future project period (annual) progress reports	A
SEE Activity 30. State and local health departments will ensure that local data are reviewed regularly with community partners, and used to inform community-driven prevention efforts.	• All HMAs should maintain sentinel surveillance and analysis of behaviorally high incidence persons to ensure appropriate community representation in the participatory syphilis elimination efforts	B
Ethnic minorities	**Standard**	**Rating**
SEE Activity 31. CDC, state, and local health departments should enhance national, state, and local prevention efforts, by tailoring interventions for ethnic minorities that are disproportionately affected by syphilis.	• The CDC Program Assessments Monograph should be reviewed by each HMA to determine how SEE-related prevention activities can be enhanced by end 2006 • Local intervention efforts, successes and challenges in syphilis elimination and ethnic minorities should be reviewed and documented by HMAs annually • Areas should review and consider for implementation one of the tailored interventions available through the Diffusion of Effective Behavioral Interventions (DEBI) www.effectiveinterventions.org • Training for DEBI can be provided by the National Network of STD/HIV Prevention Training Centers (PTCs) http://depts.washington.edu/nnptc/regional_centers/index.html	A
SEE Activity 32. State and local health departments should provide cultural sensitivity training for publicly funded SE staff and other interested service providers on a regular basis (e.g., annually).	• All syphilis elimination coordinators should participate in cultural sensitivity training in order to serve as a resource for their project area. This should be updated at least bi-annually	A
SEE Activity 33. CDC will work in partnership with state and local health departments to undertake assessments of health-care seeking; health care access; partner services; and screening for ethnic minority populations affected by syphilis to inform the development or tailoring of culturally appropriate interventions.	• Current sources of research and assessment data should be reviewed and new data collected to develop a representative perspective of the target communities These data should be reviewed at least annually and updated as needed	B
SEE Activity 34. State and local health departments and CBOs should incorporate assessment data into tailored intervention development and prevention intervention planning.	• Tailored local syphilis prevention interventions for ethnic minorities should be reviewed for appropriateness of the target population(s) on an annual basis	A

SEE Activity 35. State and local health departments should identify key local stakeholders to establish inter-agency alliances, collaborations, and partnerships to enhance syphilis elimination interventions.	• Locally appropriate mechanisms for ensuring community participation (e.g., working groups, community forums etc.) should be identified by each HMA. This should be documented and reviewed annually	A
Men who have sex with men	**Standard**	**Rating**
SEE Activity 3. CDC, state, and local health departments will promote routine and regular (at least quarterly) analysis of their epidemiologic data on syphilis.	• All local providers should receive notification of the emergence of syphilis outbreaks among MSM • Annual reports on syphilis in MSM in locality to be produced and distributed to all providers (private and public) in locality at least once annually. In areas with rapidly progressing epidemics a more frequent correspondence should be considered • All HMAs to identify and create partnerships with health care providers reporting substantial numbers of syphilis and HIV in MSM clients. This should be reviewed on annual basis	A
SEE Activity 28. In designated high morbidity areas (HMAs), state and local health departments will establish meaningful community participation in local SEE efforts. This should be evaluated on a regular basis.	• Locally appropriate mechanisms for ensuring community participation (e.g., working groups, community forums etc.) should be identified by each HMA. This should be documented and reviewed annually • All HMAs with MSM epidemics should have a multi-disciplinary, multi-partner workgroup on MSM and syphilis/ sexual health issues	A
SEE Activity 36. CDC, state, and local health departments will collect and report data on gender of sexual partners/ sexual preference of syphilis index patients.	• All HMAs to routinely collect information on syphilis in MSM by end 2006 • Data on MSM syphilis epidemiology and local risk factors should be reviewed on quarterly basis by the local syphilis elimination coordinator and working group (including community partners) • Annual reports on syphilis among MSM in locality to be produced and distributed to all providers (private and public) in locality at least once annually. In areas with rapidly progressing epidemics a more frequent correspondence should be considered	A
SEE Activity 37. State and local health departments should develop and use Internet-based interventions in order to increase partner notification efficacy, MSM engagement, and participation in SEE activities.	• All STD clinic staff to participate in at least 1 training session annually on cultural/gender/sexuality sensitivity training and MSM health. This should include sexuality, sexual behaviors, drug use, and other health and psychosocial issues faced by MSM • Each STD clinic should nominate 1 DIS to lead on MSM health issues. He/she should act as a liaison for local MSM providers and facilitate collaborations with ISP	A
SEE Activity 38. State and local health departments will employ provider outreach, education and mobilization to raise awareness, encourage reporting, and improve effectiveness and quality of clinical management.	• Each HMA should have at least one DIS specializing in the internet partner notification and MSM. They should be responsible for coordinating a working group on internet activities and developing annual plan of activities/ interventions with internet providers	A
SEE Activity 39. In designated high morbidity areas (HMAs), state and local health departments should facilitate concomitant annual syphilis testing for sexually active HIV positive MSM.	• All sexually active HIV+ MSM attending public treatment centers should be screened every 6 months for syphilis as part of their routine HIV care investigations. In outbreak sites this may be increased to quarterly	A
SEE Activity 40. State and local health departments should enhance access to syphilis screening through improving access to STD care facilities (e.g., extended operating times, MSM clinical sessions etc.).	• All HMAs may consider extending STD clinic services to non-traditional hours (evening and weekends) specifically targeting MSM clientele for syphilis testing. This may be combined with other sexual health interventions	A

SEE Activity 41. State and local health departments should enhance syphilis education and sexual health promotion with MSM within STD clinics and the community.	• Local sites should plan at least 1 major MSM targeted health promotion and education intervention per annum during rapid increase and hyperendemic epidemic phases. These may be new or adapted health promotion interventions	A
SEE Activity 42. State and local health departments should undertake outreach syphilis screening for MSM in bathhouses, bookstores, when there are demonstrated links to ongoing disease transmission or where the intervention is combined with other health interventions (e.g., hepatitis B vaccination, HIV testing).	• This intervention may be useful in the acute phase of an outbreak where cluster investigations may yield high number of cases. It may also be recommended as part of a community wide awareness raising and screening program	C
SEE Activity 43. State and local health departments will create partnerships with local drug treatment centers and programs and will clarify pathways for treatment and rehabilitation for recreational drug use.	• Local sites should clarify and document pathways for referral to drug treatment programs for MSM grappling with crystal methamphetamine use and addiction	B
Provider mobilization	**Standard**	**Rating**
SEE Activity 44. State and local health departments should designate a health department liaison for provider outreach for ongoing SEE efforts.	• State and local health department should ensure that local health care providers (HCPs) a) are aware of the local SEE, impact of syphilis, signs and symptoms, diagnosis, treatment, and reporting guidelines, b) take sexual history from patients, c) refer patients to the HD for partner notification • SEE Toolkit materials developed for HCPs should be disseminated by state and local health departments • Mechanisms to facilitate good communication and collaborations between HCPs and the Health Department should be identified, implemented, and reviewed annually	B
SEE Activity 45. CDC, state and local health departments should provide in-service training and technical assistance to private health care providers.	• Utilize NNPTCs • Explore the possibility of collaborations with local universities for grand rounds, seminars, and other training opportunities • Work closely with local medical associations • Familiarize relevant HD staff and HCPs with the guidelines set forth in POG	A
SEE Activity 46. State and local health departments should develop Memoranda of Understanding (MOA) with specific providers or CBOs (seeing a high number of syphilis cases) in order to clarify procedures for diagnosis, partner notification, and reporting.	• All HMAs to identify and create partnerships with health care providers reporting substantial numbers of syphilis and HIV in MSM clients. This should be reviewed on annual basis • The MOA should clearly define roles, responsibilities and should assign clear tasks to each party involved	B
SEE Activity 47. State and local health departments should develop and widely disseminate policies and protocols for syphilis diagnosis and care in hospitals, emergency rooms, corrections facilities and other settings.	• State and local health departments should utilize POG guidelines and CDC STD Treatment Guidelines to develop local policies and protocols	A
SEE Activity 48. CDC, state and local health departments should provide easy access to reliable and up to date syphilis data for their respective SEE stakeholders..	• All project areas should implement the new syphilis surveillance data collection instrument by end of 2007 • HMAs should produce an annual report containing an analysis of syphilis surveillance data and summarizing local syphilis elimination interventions for stakeholders	A
Jail-based screening	**Standard**	**Rating**
SEE Activity 18. In geographic locations where transmission is primarily in heterosexual populations, state and local health departments should monitor and work towards increasing the proportion of arrestees/inmates screened and treated for syphilis in local jails, with an emphasis on women.	• State and local health departments should establish a community/corrections leadership group that includes cross-section of jail, health, and community, private sector partners to identify needs, set priorities and facilitate communications	A

SEE Activity 49. State and local health departments should establish or maintain effective partnerships with jails as a community-based setting for case-finding, disease surveillance, treatment, and research..	• State and local health departments should develop formal MOU/MOA to formalize partnerships	B
SEE Activity 50. State and local health departments will collect jail-based syphilis morbidity and behavioral data.	Where indicated, HMAs should: • Collect venue-based syphilis case data by race, sex, age, arrest codes, and risk-factors (i.e., sexual orientation) • Review data from jail-based syphilis morbidity and arrestee risk factors reviewed on quarterly basis by project area syphilis coalition for trends and when indicated redirection of programmatic effort • Distribute annual reports to all relevant project area providers (private and public)	B
SEE Activity 51. State and local health departments will work to improve information management systems and data sharing capabilities.	• Support the use of electronic medical record systems that, while not violating a patient's privacy, enhances disease reporting and follow up • Ensure that the data system is maintained and upgraded routinely to ensure the efficient management of jail-based screening and intervention data	C
SEE Activity 52. CDC, state and local health departments should provide cross-training experiences for public health and detention staff.	• This should be done in collaboration with the CDC, the Prevention Training Centers and include the American Jail Association, the National Commission on Correctional Heath Care and the DSTD Prevention Training Centers as subject matter experts and advocacy partners	C
SEE Activity 53. State and local health departments should assign STD program staff to jails to complement and support screening and treatment activity.	• Establish and maintain collaborative data collection and reporting relationships • Support and monitor the use of CDC STD treatment guidelines, NCCHC clinical guidelines and performance standards • Establish joint public health/corrections group to address operational research, demonstration and program evaluation needs	B

Congenital syphilis	Standard	Rating
SEE Activity 54. CDC, state and local health departments should maintain activities to ensure sustained political commitment and advocacy for congenital syphilis elimination (e.g., mobilizing organizational partners).	• Locally appropriate mechanisms for ensuring community participation (e.g., working groups, community forums etc.) should be identified by each HMA. This should be documented and reviewed annually	A
SEE Activity 55. CDC, state and local health departments will work to increase access to, and quality of mother and child health services, ensuring that all pregnant women are adequately screened and treated, and decreasing the frequency of missed opportunities for screening women outside mother and child care.	• State and local health departments should utilize POG guidelines; syphilis surveillance guidelines and CDC STD Treatment Guidelines to develop local policies and protocols	A
SEE Activity 56. State and local health departments will ensure screening and treatment of all pregnant women for syphilis, using recommended diagnostic algorithms for the detection of syphilis.	• State and local health departments should utilize POG guidelines, syphilis surveillance guidelines, and CDC STD Treatment Guidelines to develop local policies and protocols	A
SEE Activity 57. CDC, state and local health departments will undertake congenital syphilis relevant surveillance, monitoring and evaluation activities, including improving surveillance systems, developing performance measures, and strengthening monitoring and evaluation systems.	• All project areas should implement the new syphilis surveillance data collection instrument by end of 2007 • HMAs should produce an annual report containing an analysis of syphilis surveillance data and summarizing local syphilis elimination interventions for stakeholders	B

GOAL 3: Accountable services and interventions

Public health services will improve the effectiveness of their interventions by improving accountability for their planning, implementation and evaluation.

Training and staff development	Standard	Rating
SEE Activity 58. CDC and state and local health departments should undertake routine and regular assessment of program staff training needs.	• CDC and project areas to use existing performance review mechanisms to identify training needs of staff related to syphilis elimination on an annual basis	B
SEE Activity 59. CDC, in partnership with NCSD and PTCs should identify training opportunities for private practitioners relevant to syphilis elimination.	• CDC to identify and disseminate training opportunities for SEE coordinators	A
SEE Activity 60. CDC and state and local health departments will work together to identify nationally and locally available training opportunities and resources.	• CDC to identify and disseminate training opportunities for SEE coordinators	A
SEE Activity 61. State and local health departments will ensure adequate training of supervisors to support local SEE activities.	• CDC to identify and disseminate training opportunities to SEE coordinators, and project areas	B
SEE Activity 62. State and local health departments should assign one or more management staff to be accountable for training and staff development.	• To be agreed upon	C

Evidence-based action planning	Standard	Rating
SEE Activity 63. CDC in partnership with NCSD, state and local health departments will provide technical assistance for the development, use, and monitoring and evaluation of syphilis elimination evidence-based action plans.	• All HMAs to develop local SEE evidence-based action plans by FY 2008	A
SEE Activity 64. CDC will request complete evidence-based action plans from all HMAs from FY 2008 onwards.	• Annual updates of local SEE evidence-based action plans to be submitted to CDC by 1 October of each year	A
SEE Activity 65. State and local health departments will develop syphilis elimination action plans that are supported by surveillance or research evidence, and integrated into the performance of SE coordinators and local action teams.	• All SEE action plan objectives should be SMART (specific, measurable, achievable, reproducible, time-limited) • Each action step or change to be sought should include the following information: º **What** actions or changes will occur º **Who** will carry out these changes º **By when** they will take place, and for how long º **What resources** (i.e., money, staff) are needed to carry out these changes º **Communication** (who should know what?)	A
SEE Activity 66. CDC, in partnership with state and local health departments, will use a standard format for local syphilis elimination evidence-based action plans by December 2008.	• Local SEE coordinators, in partnership with appropriate senior STD program managers should prepare the first draft of the SEE plan for submission to CDC	A
SEE Activity 67. State and local health departments should ensure that their local syphilis elimination action plans are shared locally and are widely available for review by stakeholders.	All HMAs should consider dissemination of their local SEE plans by at minimum 3 of the following strategies: • Copy of plan sent to PHD Board • All members of PHD receive copy of plan • Local SEE mission, vision, and value statements to be disseminated to local staff • Parts of plan published in local PHD correspondence • STD program staff trained on parts of the plan	B

Monitoring and evaluation	Standard	Rating
SEE Activity 68. CDC, state and local health departments will prioritize risk groups and interventions for syphilis elimination.	• Prioritized, evidence-based interventions to be provided by all HMAs using the action planning template by FY 2008	A
SEE Activity 69. CDC, in partnership with its stakeholders, will provide explicit requirements, recommendations and standards for syphilis elimination activities at all levels in the plan..	• Activities and recommended standards to be provided with the launch of the 2006 SEE Plan by end 2006	A
SEE Activity 70. CDC, in partnership with state and local health departments, will routinely monitor syphilis elimination activities to ensure that standards are met and that priorities are being addressed.	• SEE funded project areas to submit 6-monthly progress reports on SEE activities to CDC based upon their action plans • CDC to undertake summative evaluation of SEE support to project area during the penultimate year of funding	A
SEE Activity 71. CDC, state and local health departments will share findings of evaluation activities at all levels. CDC, through the syphilis elimination coordination, will identify and make explicit, mechanisms to facilitate sharing of this information.	• All SEE funded areas and the CDC will work together to identify key opportunities for sharing findings of SEE evaluation activities on a regular basis. These findings should be disseminated widely	B

Research and development	Standard	Rating
SEE Activity 72. CDC working in partnership with SEE partners will deliver broadly applicable tools and methods for syphilis diagnosis, prevention, and control.	• CDC with its partners to develop a syphilis elimination research plan by end 2006 to inform research and development activities in this filed	A
SEE Activity 73. CDC and its SEE partners will develop and share syphilis prevention and diagnostic technologies and approaches.	• CDC with its partners to develop a syphilis elimination research plan by end 2006 to inform research and development activities in this filed	A
SEE Activity 74. CDC and its SEE partners will evaluate the effectiveness and cost-effectiveness of selected syphilis prevention interventions.	• CDC with its partners to develop a syphilis elimination research plan by end 2006 to inform research and development activities in this filed	A
SEE Activity 75. CDC and its SEE partners will conduct research to address economic, social, and behavioral determinants and consequences of syphilis epidemics and prevention.	• CDC with its partners to develop a syphilis elimination research plan by end 2006 to inform research and development activities in this filed	A

APPENDIX 3
SEE activities by required and recommended categories

SEE required activities

SEE Activity 1. State and local health departments will collect and report gender of sex partners/ sexuality data to CDC by end-2006.

SEE Activity 3. CDC, state, and local health departments will promote routine and regular (at least quarterly) analysis of their epidemiologic data on syphilis.

SEE Activity 6. CDC, state and local health departments will encourage and monitor (quarterly basis) syphilis reporting from public and private providers.

SEE Activity 7. State and local health departments will use reactor grids to prioritize follow up of syphilis cases. These should be evaluated annually or more frequently if the local epidemiology changes.

SEE Activity 9. All state and local health departments will develop a Syphilis Outbreak Response Plan. This should be reviewed and updated if necessary, on an annual basis.

SEE Activity 22. CDC and its partners will update the Manual of Tests for Syphilis by the end of 2006. In addition, CDC will produce and disseminate widely, policy guidance on the use and interpretation of results of treponemal tests when used as screening tests.

SEE Activity 23. CDC and its partners will undertake research and evaluation of point-of-care tests for implementation in the United States within the next 5 years.

SEE Activity 24. CDC will establish a network of regional laboratories to facilitate PCR testing for syphilis.

SEE Activity 26. State and local health departments will ensure ongoing monitoring of surveillance data in order to track evolution in local epidemics and inform appropriate community partnerships.

SEE Activity 28. In designated high morbidity areas (HMAs), state and local health departments will establish meaningful community participation in local SEE efforts. This should be evaluated on a regular basis.

SEE Activity 29. HMAs receiving CDC SEE funding will disburse between 15% to 30% of SEE- dedicated funds to support relevant CBO-led activities. The funding level will be determined by epidemic phase and existing CBO infrastructure and capacity.

SEE Activity 30. State and local health departments will ensure that local data are reviewed regularly with community partners, and used to inform community-driven prevention efforts

SEE Activity 33. CDC will work in partnership with state and local health departments to undertake assessments of health-care seeking; health care access; partner services; and screening for ethnic minority populations affected by syphilis to inform the development or tailoring of culturally appropriate interventions.

SEE Activity 36. CDC, state, and local health departments will collect and report data on gender of sexual partners/ sexual preference of syphilis index patients.

SEE Activity 38. State and local health departments will employ provider outreach, education and mobilization to raise awareness, encourage reporting, and improve effectiveness and quality of clinical management;

SEE Activity 43. State and local health departments will create partnerships with local drug treatment centers and programs and will clarify pathways for treatment and rehabilitation for recreational drug use.

SEE Activity 50. State and local health departments will collect jail-based syphilis morbidity and behavioral data.

SEE Activity 51. State and local health departments will work to improve information management systems and data sharing capabilities.

SEE Activity 55. CDC, state and local health departments will work to increase access to, and quality of mother and child health services, ensuring that all pregnant women are adequately screened and treated, and decreasing the frequency of missed opportunities for screening women outside mother and child care.

SEE Activity 56. State and local health departments will ensure screening and treatment of all pregnant women for syphilis, using recommended diagnostic algorithms for the detection of syphilis.

SEE Activity 57. CDC, state and local health departments will undertake congenital syphilis relevant surveillance, monitoring and evaluation activities, including improving surveillance systems, developing performance measures, and strengthening monitoring and evaluation systems.

SEE Activity 60. CDC and state and local health departments will work together to identify nationally and locally available training opportunities and resources.

SEE Activity 61. State and local health departments will ensure adequate training of supervisors to support local SEE activities.

SEE Activity 63. CDC in partnership with NCSD, state and local health departments will provide technical assistance for the development, use, and monitoring and evaluation of syphilis elimination evidence-based action plans.

SEE Activity 64. CDC will request complete evidence-based action plans from all HMAs from FY 2008 onwards.

SEE Activity 65. State and local health departments will develop syphilis elimination action plans that are supported by surveillance or research evidence, and integrated into the performance of SE coordinators and local action teams.

SEE Activity 66. CDC, in partnership with state and local health departments, will use a standard format for local syphilis elimination evidence-based action plans by December 2008.

SEE Activity 68. CDC, state and local health departments will prioritize risk groups and interventions for syphilis elimination.

SEE Activity 69. CDC, in partnership with its stakeholders, will provide explicit requirements, recommendations and standards for syphilis elimination activities at all levels in the plan.

SEE Activity 70. CDC, in partnership with state and local health departments, will routinely monitor syphilis elimination activities to ensure that standards are met and that priorities are being addressed.

SEE Activity 71. CDC, state and local health departments will share findings of evaluation activities at all levels. CDC, through the syphilis elimination coordination, will identify and make explicit, mechanisms to facilitate sharing of this information.

SEE Activity 72. CDC working in partnership with SEE partners will deliver broadly applicable tools and methods for syphilis diagnosis, prevention, and control.

SEE Activity 73. CDC and its SEE partners will develop and share syphilis prevention and diagnostic technologies and approaches.

SEE Activity 74. CDC and its SEE partners will evaluate the effectiveness and cost-effectiveness of selected syphilis prevention interventions.

SEE Activity 75. CDC and its SEE partners will conduct research to address economic, social, and behavioral determinants and consequences of syphilis epidemics and prevention.

SEE recommended activities

SEE Activity 2. State and local health departments should quarterly assess case report data for duplications, errors, and omissions and annually assess for accuracy, completeness and sensitivity, promptness, validity and quality.

SEE Activity 4. State health departments should provide epidemiology training and capacity building to STD program staff.

SEE Activity 5. State and local health departments should adopt CDC/ Council of State and Territorial Epidemiologists syphilis surveillance case definitions.

SEE Activity 8. CDC, state and local health departments should use syphilis prevalence monitoring to determine changes over time and assess impact of prevention interventions.

SEE Activity 10. All state and local health departments should develop area-specific criteria that determine when the outbreak response plan is to be implemented. This should be reviewed and updated if necessary, on an annual basis.

SEE Activity 11. State and local health departments should document the number of clients turned away and the length of wait times (for an appointment or to be seen once in the clinic) at public STD clinics.

SEE Activity 12. State and local health departments should assess and increase the proportion of local health departments that have relationships with non-traditional health care providers (e.g., community centers, outreach clinics etc.) where at-risk populations seek services.

SEE Activity 13. State and local health departments should monitor and work towards increasing the proportion of STD clinic attenders, and those found to have an STD, who receive a screening test for syphilis according to recognized standards.

SEE Activity 14. CDC, in partnership with the National Coalition of STD Directors (NCSD) and state and local health departments, should develop and implement a quality assurance tool for clinic use to ensure that key activities are implemented according to recognized standards.

SEE Activity 15. State and local health departments should document the number of syphilis tests performed annually in sentinel public and private laboratories and measure the time for reporting results to providers and health departments.

SEE Activity 16. State and local health departments should monitor and work towards increasing the proportion of pregnant females screened for syphilis during prenatal health care visits, according to recognized standards and state statutes.

SEE Activity 17. In geographic locations where transmission is primarily in MSM populations, state and local health departments should monitor and work towards increasing the proportion of clients screened routinely for syphilis by HIV care providers.

SEE Activity 18. In geographic locations where transmission is primarily in heterosexual populations, state and local health departments should monitor and work towards increasing the proportion of arrestees/inmates screened and treated for syphilis in local jails, with an emphasis on women.

SEE Activity 19. State and local health departments should apply optimum interviewing techniques (see the *Syphilis Elimination Technical Appendix*) to maximize the number of partners elicited and partners initiated.

SEE Activity 20. State and local health departments should use the geographic and socio-demographic concentration of syphilis to inform the best locations for DIS for immediate case-interviewing and partner follow up.

SEE Activity 21. State and local health departments should communicate and collaborate with other parties interested in partner notification for the elimination of syphilis (for example CBOs, private providers, jails).

SEE Activity 25. CDC should fund demonstration projects to examine the utility and acceptability of typing and sub-typing methods for T pallidum in outbreak situations.

SEE Activity 27. CDC, state and local health departments should distribute and adapt recommendations contained in the CDC SEE Community Mobilization tool-kit.

SEE Activity 31. CDC, state, and local health departments should enhance national, state, and local prevention efforts, by tailoring interventions for ethnic minorities that are disproportionately affected by syphilis.

SEE Activity 32. State and local health departments should provide cultural sensitivity training for publicly funded SE staff and other interested service providers on a regular basis (e.g., annually).

SEE Activity 34. State and local health departments and CBOs should incorporate assessment data into tailored intervention development and prevention intervention planning.

SEE Activity 35. State and local health departments should identify key local stakeholders to establish inter-agency alliances, collaborations, and partnerships to enhance syphilis elimination interventions.

SEE Activity 37. State and local health departments should develop and use Internet-based interventions in order to increase partner notification efficacy, MSM engagement, and participation in SEE activities.

SEE Activity 39. In designated high morbidity areas (HMAs), state and local health departments should facilitate concomitant annual syphilis testing for sexually active HIV positive MSM.

SEE Activity 40. State and local health departments should enhance access to syphilis screening through improving access to STD care facilities (e.g., extended operating times, MSM clinical sessions etc.).

SEE Activity 41. State and local health departments should enhance syphilis education and sexual health promotion with MSM within STD clinics and the community.

SEE Activity 42. State and local health departments should undertake outreach syphilis screening for MSM in bathhouses, bookstores, when there are demonstrated links to ongoing disease transmission or where the intervention is combined with other health interventions (e.g., hepatitis B vaccination, HIV testing).

SEE Activity 44. State and local health departments should designate a health department liaison for provider outreach for ongoing SEE efforts.

SEE Activity 45. CDC, state and local health departments should provide in-service training and technical assistance to private health care providers (including physicians, practice nurses etc.)

SEE Activity 46. State and local health departments should develop Memoranda of Understanding (MOA) with specific providers or CBOs (seeing a high number of syphilis cases) in order to clarify procedures for diagnosis, partner notification, and reporting.

SEE Activity 47. State and local health departments should develop and widely disseminate policies and protocols for syphilis diagnosis and care in hospitals, emergency rooms, corrections facilities and other settings (e.g., web-based health alerts or newsletters).

SEE Activity 48. CDC, state and local health departments should provide easy access to reliable and up to date syphilis data for their respective SEE stakeholders.

SEE Activity 49. State and local health departments should establish or maintain effective partnerships with jails as a community-based setting for case-finding, disease surveillance, treatment, and research.

SEE Activity 52. CDC, state and local health departments should provide cross-training experiences for public health and detention staff.

SEE Activity 53. State and local health departments should assign STD program staff to jails to complement and support screening and treatment activity where indicated.

SEE Activity 54. CDC, state and local health departments should maintain activities to ensure sustained political commitment and advocacy for congenital syphilis elimination (e.g., mobilizing organizational partners).

SEE Activity 58. CDC and state and local health departments should undertake routine and regular assessment of program staff training needs.

SEE Activity 59. CDC, in partnership with NCSD and PTCs should identify training opportunities for private practitioners relevant to syphilis elimination.

SEE Activity 62. State and local health departments should assign one or more management staff to be accountable for training and staff development for syphilis elimination activities.

SEE Activity 67. State and local health departments should ensure that their local syphilis elimination action plans are shared locally and are widely available for review by stakeholders.

APPENDIX 4
CDC GPRA goals for Syphilis Elimination

The Government Performance Reporting Act (GPRA) of 1993 provides for the establishment of strategic planning and performance measurement in the Federal Government, and for other purposes. The purposes of this Act are to:

1. Improve the confidence of the American people in the capability of the Federal Government, by systematically holding Federal agencies accountable for achieving program results;
2. Initiate program performance reform with a series of pilot projects in setting program goals, measuring program performance against those goals, and reporting publicly on their progress;
3. Improve Federal program effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction;
4. Help Federal managers improve service delivery, by requiring that they plan for meeting program objectives and by providing them with information about program results and service quality;
5. Improve congressional decision-making by providing more objective information on achieving statutory objectives, and on the relative effectiveness and efficiency of Federal programs and spending; and
6. Improve internal management of the Federal Government.

CDC identified key goals for the elimination of syphilis from the United States: investment in, and enhancement of, public health services and interventions, prioritization of evidence-based, culturally competent interventions, and ensuring accountable services and interventions. In the table below we illustrate the overall GRPA targets and interim annual measures for the period 2006–2010.

CDC GPRA goals for the elimination of syphilis in the United States

Baseline	Annual targets					Long-term goal
2002	2005	2006	2007	2008	2009	2010
Incidence of P&S Syphilis/100,000 population	2.4	2.5	2.5	2.4	2.3	2.2
Incidence of P&S Syphilis/100,000 population (Men)	3.8	4.5	4.5	4.4	4.3	4.2
Incidence of P&S Syphilis/100,000 population (Women)	1.1	0.58	0.53	0.47	0.43	0.38
Incidence of Congenital Syphilis/100,000 live births	10.2	6.0	5.4	4.8	4.4	3.9 (62%)
Black: white ratio of P&S syphilis	8.1	3.6:1	3.5:1	3.1:1	2.9:1	3:1 (63%)

APPENDIX 5

2004 P&S syphilis rates and threshold SEE targets for U.S. project areas

This table provides estimates of syphilis incidence (rates per 100,000 population) using the High Morbidity Area (HMA) thresholds outlined in this document. The upper HMA threshold denotes the point at which SEE funds will be disbursed to project areas. The lower HMA threshold denotes levels at which phased reductions in SEE funding should be considered. The rate of 0.4 per 100,000 equals to the SEE goal of <1000 cases of P&S syphilis per annum. "Achieved" in this table denotes areas which have met the syphilis elimination goal.

Currently funded project areas	2004 P&S cases reported	2004 rates per 100,000 population	Upper HMA threshold target of 2.0 per 100,000 pop.	Lower HMA threshold target of 1.0 per 100,000 pop.	SEE Elimination goal of 0.4 per 100,000 pop.
North Carolina	192	2.4	160	80	32
Tennessee	130	2.3	113	57	23
Texas	852	4.1	416	208	83
Baltimore	211	33.6	13	6	3
Georgia	550	6.7	164	82	33
Mississippi	59	2.1	56	28	11
Louisiana	331	7.4	89	45	18
Alabama	167	3.8	88	44	18
South Carolina	115	2.9	79	40	16
Chicago	306	10	61	31	12
Puerto Rico	200	5.3	75	38	15
Ohio	237	2.1	226	113	45
Florida	739	4.6	321	161	64
Virginia	116	1.6	(Achieved)	73	29
California	599	2.5	479	240	96
Maryland excl Baltimore	159	3.4	94	47	19
Arkansas	40	1.5	(Achieved)	27	11
Indiana	60	1	(Achieved)	(Achieved)	24
Missouri	94	1.7	(Achieved)	55	22
Arizona	157	3.1	101	51	20
Kentucky	47	1.2	(Achieved)	39	16
Oklahoma	25	0.7	(Achieved)	(Achieved)	14
Philadelphia	71	4.8	30	15	6
Wisconsin	29	0.5	(Achieved)	(Achieved)	23
Illinois ex Chicago	80	0.82	(Achieved)	(Achieved)	39
Michigan	192	1.9	202	101	40
New Jersey	150	1.8	167	83	33
Washington, D.C.	91	15.9	11	6	2
Washington	150	2.5	120	60	24
Pennsylvania (excl Phil.)	50	0.49	(Achieved)	(Achieved)	41
Oregon	29	0.8	(Achieved)	(Achieved)	15
Minnesota	25	0.5	(Achieved)	(Achieved)	20
Colorado	55	1.3	(Achieved)	42	17
Los Angeles	401	4.3	187	93	37
New York State ex NYC	108	1.02	212	106	42
New York City	607	7.5	162	81	32
Connecticut	45	1.3	69	35	14
Massachusetts	115	1.8	128	64	26
San Francisco	335	44.6	15	8	3
New Mexico	81	4.5	18	18	7
Project areas not receiving Syphilis Elimination Funding (2005)					
Alaska	8	1.3	(Achieved)	6	2
Delaware	9	1.1	(Achieved)	8	3
Hawaii	9	0.7	(Achieved)	13	5
Idaho	24	1.9	(Achieved)	13	5
Iowa	5	0.2	(Achieved)	(Achieved)	(Achieved)
Kansas	24	0.9	(Achieved)	(Achieved)	11
Maine	2	0.2	(Achieved)	(Achieved)	(Achieved)
Montana	3	0.3	(Achieved)	(Achieved)	(Achieved)
Nebraska	7	0.4	(Achieved)	(Achieved)	(Achieved)
Nevada	39	2	(Achieved)	20	8
New Hampshire	5	0.4	(Achieved)	(Achieved)	(Achieved)
North Dakota	0	0	(Achieved)	(Achieved)	(Achieved)
Rhode Island	26	2.5	21	10	5
South Dakota	0	0	(Achieved)	(Achieved)	(Achieved)
Utah	13	0.6	(Achieved)	(Achieved)	9
Vermont	1	0.2	(Achieved)	(Achieved)	(Achieved)
West Virginia	3	0.2	(Achieved)	(Achieved)	(Achieved)
Wyoming	3	0.6	(Achieved)	(Achieved)	2

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