The National Plan to Eliminate Syphilis from the United States

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Division of STD Prevention

National Center for HIV, STD, and TB Prevention

Centers for Disease Control and Prevention

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Executive Summary

Background and Rationale

As we approach the end of the 20th century, the United States is faced with a unique opportunity to eliminate syphilis within its borders. Syphilis is easy to detect and cure, given adequate access to and utilization of care. Nationally, it is at the lowest rate ever recorded and it is confined to a very limited number of geographic areas. The last epidemic peaked in 1990, with the highest syphilis rate in 40 years. By 1998, the number of cases had declined by 86 percent. Although the national syphilis rate has declined to historic lows, syphilis remains a severe public health problem in a small number of U.S. counties. In 1998, over 50% of infectious (primary and secondary or P&S) syphilis cases were reported from only 28 (<1%) U.S. counties, the majority of which are in the South. In addition, where syphilis does persist in the U.S., it disproportionately affects African Americans living in poverty. Although the Black:White ratio for reported syphilis rates has decreased by almost one-half since the early 1990s, the 1998 P&S syphilis rate for non-Hispanic Blacks was still 34 times greater than that for non-Hispanic whites.

Elimination of syphilis would have far-reaching public health implications because it would remove two devastating consequences of the disease—increased likelihood of HIV transmission and compromised ability to have healthy babies due to spontaneous abortions, stillbirths, and congenital syphilis acquired from mothers with syphilis. In addition, more than $996 million is spent annually as a result of syphilis. Eliminating syphilis in the United States would be a landmark achievement because it would remove these direct health burdens, and it would significantly decrease one of this Nation's most glaring racial disparities in health.

The persistence of high rates of syphilis in the United States is a sentinel event identifying communities in which there is a fundamental failure of basic public health capacity to control infectious diseases and ensure reproductive health. In these areas, syphilis elimination will be the leading edge of a broader effort to begin rebuilding this capacity. Based on the repeatedly observed seven- to ten-year syphilis cycle, there is currently a narrow window of opportunity to eliminate this disease while cases are still on the decline.

Definition and Goal

At the *national level*, syphilis elimination is defined as **the absence of sustained transmission in the United States.** At the *local level*, syphilis elimination is defined as the **absence of transmission of new cases within the jurisdiction except within 90 days of report of an imported index case.** It is anticipated that these definitions will translate to ≤1,000 cases (0.4/100,000 population) of P&S syphilis reported nationally each year. *The national goal*, therefore, is **to reduce P&S syphilis cases to 1,000 or fewer and to increase the number of syphilis-free counties to 90% by 2005.**

The Plan

While many other endemic diseases such as polio, measles, and smallpox have been eliminated through widespread use of vaccines, the strategies for syphilis elimination differ from these efforts largely because there is currently no vaccine. Past experience shows that continuing current STD prevention and control efforts, alone, will not be sufficient. New strategies are also required. Combining intensified traditional approaches with innovative approaches can generate new synergy and enhance the effectiveness of syphilis elimination efforts. Furthermore, this plan will evolve over time as new lessons are learned and applied.

Five strategies are critical for eliminating syphilis from the United States. Two strategies—*strengthened community involvement and partnerships and rapid outbreak response*—will be new in many parts of the U.S. The three remaining strategies—*enhanced surveillance, expanded clinical and laboratory services, and enhanced health promotion*—have been used for syphilis control and will be intensified and expanded for syphilis elimination. Two cross-cutting strategies are key tools for evaluating and facilitating the implementation of three additional intervention strategies.

Cross Cutting Strategies

- *Enhanced surveillance*—includes complete, accurate, and timely reporting of positive syphilis tests; effective, timely, and regular data analyses; development of a framework for and implementation of syphilis surveillance; and ongoing evaluation of the amount of syphilis in a community by monitoring positive syphilis tests.
- *Strengthened community involvement and partnerships*—acknowledges and responds to the effects of racism, poverty, and other relevant social issues on the persistence of syphilis in the U.S.; develops and maintains partnerships to increase the availability of and accessibility to preventive and care services; and assures that affected communities are collaborative partners in developing, delivering, and evaluating syphilis elimination interventions.

Intervention Strategies

- *Rapid outbreak response*—includes both the development of an outbreak response plan and establishment of area-specific criteria that determine when the outbreak response plan should be implemented.
- *Expanded clinical and laboratory services*—provides accessible and timely client-centered counseling, screening, and treatment services in sites frequented by populations at risk for syphilis; and ensures high quality syphilis preventive and care services.
- *Enhanced health promotion*—includes implementation and evaluation of appropriate and effective health promotion interventions; and timely delivery of high quality, confidential, and comprehensive client-centered partner services to patients, partners, and other identified high-risk individuals.

Geographic Focus

While national in scope, the syphilis elimination initiative focuses on areas with high syphilis morbidity and those areas with potential for syphilis re-emergence. **High morbidity areas (HMAs)** are defined in this plan as areas with continuing syphilis transmission, usually signaling the need to improve preventive services and to strengthen the capacity to conduct surveillance and provide access to clinical and laboratory services. HMAs must address *all* five of the syphilis elimination strategies. **Potential re-emergence areas (PRAs)** are defined in this plan as areas that currently experience little or no syphilis transmission but that are at significant risk for syphilis reintroduction because 1) they had a history of high syphilis rates in the 1990s or more recently; 2) they are a port or border jurisdiction or are located along migrant streams; 3) they are located along drug trafficking corridors; or 4) they include groups that are disproportionately affected by syphilis (e.g. drug users, people exchanging sex for money or drugs, men who have sex with men, and minority and migrant populations that are affected by racism, high rates of unemployment, poor educational opportunities, and poverty). PRAs should focus primarily on enhanced surveillance and rapid outbreak response, including the involvement of affected communities in implementing these strategies. **Low morbidity areas** that are not PRAs will sustain the activities of a strong STD prevention program.[1]

Requirements for Success

This plan is intended to serve as a resource and blueprint for the many partners vital to the success of this effort. Eliminating syphilis in the U.S. requires the commitment, investment, and collaboration of opinion leaders as well as program managers at local, state, and national levels. Members and leaders of affected communities must be involved in designing and delivering syphilis services, and have the opportunity to share ownership in interventions that improve the health status of their communities.

Introduction

As we approach the end of the 20th century, the United States is faced with a unique opportunity to eliminate syphilis within its borders. Syphilis is easy to detect and cure, given adequate access to and utilization of care. Nationally, it is at the lowest rate ever recorded and it is confined to a very limited number of geographic areas, primarily in the southern United States. Where syphilis does persist in the U.S., it disproportionately burdens African Americans living in poverty. Syphilis elimination is not only feasible, but also can have far-reaching public health implications by removing its devastating consequences—increased likelihood of HIV transmission and spontaneous abortions, stillbirths, and multi-system disorders caused by congenital syphilis acquired from mothers with syphilis.

The persistence of high rates of syphilis in the United States, an industrialized country with one of the best health care systems in the world, is a sentinel event. It identifies communities in which there is a fundamental failure of public health capacity. Elimination of syphilis from the United States would be a landmark achievement because it would directly improve the health of many Americans and decrease one of our most glaring racial disparities in health. It would also require that we build (or rebuild), in some of our most vulnerable communities, the basic public health capacity needed to control other infectious diseases and ensure reproductive health. This plan is a national blueprint outlining the background, rationale, and strategies for eliminating syphilis in the United States.

Definition of and Goal for Syphilis Elimination

Disease *elimination* has been defined as controlling the manifestations of a disease so that it is no longer considered a public health problem.[2] Participants in the Dahlem Conference defined elimination as the "reduction to zero of the incidence of a specified disease in a defined geographic area as a result of deliberate efforts; continued intervention measures are required."[3] *Eradication* was defined as a permanent reduction to zero of the worldwide incidence of infection caused by a specific agent as a result of deliberate efforts; intervention measures are no longer needed. Eradication is not a feasible goal for syphilis at this time because high rates of syphilis are widespread in several regions of the world.

In accordance with these definitions, the Centers for Disease Control and Prevention (CDC) has defined syphilis elimination at both national and local levels. At the *national level*, syphilis elimination is defined as the **absence of sustained transmission in the United States.** At the *local level*, syphilis elimination is defined as the **absence of transmission of new cases within the jurisdiction except within 90 days of report of an imported index case.** The 90-day time period reflects approximately two generations of disease transmission and is likely to be more easily measurable than generations of spread. Timely response to imported cases is crucial. As syphilis cases decline to elimination levels, identification and containment of cases imported from other countries or U.S. jurisdictions will be essential.

It is anticipated that these definitions will translate to ≤1,000 cases (0.4/100,000 population) of primary and secondary (P&S) syphilis reported nationally each year (Appendix F). This projected national syphilis rate is comparable to rates in other industrialized countries where syphilis has been eliminated (Table 1).[4]

The national goal, therefore, is to reduce P&S syphilis cases to 1,000 or fewer and to increase the number of syphilis free counties to 90% by 2005. To achieve this goal, syphilis elimination must be given priority in STD programs in areas with high morbidity.

Table 1.
Cases and rates per 100,000 population of primary and secondary syphilis in industrialized countries.

Country	1996 Cases	1996 Rate
Canada	248	0.8
England	117	0.4
Sweden	52	0.6
Denmark	39	0.7
United States	11,387	4.3
United States, 1998	6,993	2.6
United States, 2005 goal	1,000	0.4

Background

Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. The initial, acute stage (primary syphilis), characterized by highly infectious open lesions at the site of infection, is followed by intermittent infectiousness (secondary syphilis) and latency for about six months to a year, and subsequently, a long period of latency (latent syphilis). The neurological, cardiac, and soft tissue complications (tertiary syphilis) typically arise in untreated persons after months to years of latency, although neurological complications can begin as early as the secondary stage of infection. Transmission occurs through direct contact with syphilitic lesions during vaginal, anal, or oral sex. An untreated, infected mother can transmit syphilis to her fetus at delivery, but the majority of infants are infected in utero. The risk of transmission to the baby is extremely high during the first two years after the mother's initial infection and declines to low levels after four years.

Syphilis disproportionately affects a small percentage of the population and research shows that these are often isolated groups involved in high-risk activities such as illicit drug use, exchanging sex for money or drugs, unprotected anal intercourse, and having multiple sex partners.[5] While most syphilis cases are currently acquired through heterosexual transmission, recent community outbreaks have been reported among men who have sex with men. Many of these men also were infected with HIV.[6]

Syphilis tends to persist in communities of color, particularly among African Americans living in poverty. Although the Black:White ratio in reported syphilis rates has decreased by almost one half since the early 1990s, the 1998 P&S syphilis rate for non-Hispanic Blacks (17/100,000 population) was still 34 times greater than the rate for non-Hispanic whites.[7] This differential is one of the most extreme examples of racial disparities in health status compared to most other health outcomes including AIDS (9:1), infant mortality (2.5:1), or deaths attributed to coronary heart disease (1.5:1).[8, 9, 10]

The U.S. syphilis epidemic currently affects some of the nation's most disadvantaged communities besieged by poverty, unemployment, drug addiction, low rates of health insurance, and inadequate access to primary health care.[11, 12, 13] Larger social issues often affect individual behavior, increasing risk for syphilis.[14] Consideration of the social context within which syphilis persists has not been part of previous efforts to eradicate syphilis. In addition, affected communities and the organizations that represent them were not successfully included in these efforts. Issues that are frequently linked to the persistence of syphilis and that should be considered in elimination efforts include the following:

- racism and poverty;
- sexism and homophobia;
- illegal drug use and prostitution;
- stigma associated with STDs;
- distrust of government and the legacy of Tuskegee; and
- privacy, confidentiality, and reporting bias issues.

In this context, syphilis can be described as a social disease which compels the adoption of more collaborative and comprehensive public health approaches to achieve elimination[15, 16] (Appendix I). The syphilis elimination plan can provide general insight and direction to eliminate other non-vaccine preventable diseases in which race, poverty, and other social conditions play a prominent role.

It will be important to collaborate effectively with communities affected by syphilis. Communities have been defined as reasonably circumscribed geographic areas in which there is a sense of interdependence and belonging.[17] They have also been defined by shared interests, common fate, social and political history, and cultural affinity.[18] For the purposes of this document, *affected communities* refers to neighborhoods where persons who are at behavioral risk for syphilis, as well as members of their relevant social networks, congregate, work, or reside.

Rationale

Public Health Importance

The continuing U.S. syphilis epidemic signals the failure of basic public health systems to meet the needs of some of this nation's most disadvantaged communities. In 1998, the Department of Health and Human Services announced a national initiative to eliminate racial disparities in the health status of Americans. Syphilis elimination will be a leading edge in this effort. It will strengthen public health capacity in communities in greatest need; close one of the most glaring gaps in health status in this country; and assist efforts to prevent HIV infection and improve infant health, thereby improving the overall health status of many Americans.[19]

- *Persistence of syphilis is a sentinel event.*

  In the United States and other industrialized countries, the persistence of high rates of syphilis within states or local jurisdictions must be viewed as a sentinel public health event or a diagnostic. It signals a breakdown in the basic capacity of public health programs to ensure healthy communities. In those areas, syphilis elimination efforts will be the entry point for strengthening the capacity to improve community health more broadly by enhancing control of other infectious diseases and augmenting reproductive and infant health services. Because of the implications for improving overall health status, these events should alert and motivate communities to take prompt corrective action.

- *Syphilis elimination will decrease the racial disparities in the health status of Americans.*

  African Americans disproportionately bear the syphilis burden. Elimination efforts will reduce racial disparities in syphilis by providing better access to high quality, culturally-sensitive preventive and care services. To achieve elimination, referral networks must be established to increase access to primary care, prenatal care, and other services such as drug treatment, which in turn will improve the health status of African Americans more broadly.

- *Syphilis elimination has far-reaching implications for other health conditions.*

  Elimination will improve community health status by removing one important factor that facilitates human immunodeficiency virus (HIV) transmission and by preventing spontaneous abortions, stillbirths, and multi-system disorders caused by congenital syphilis.[20, 21] A recent cost analysis found that syphilis causes a significant public health burden at a considerable cost to society. More than $966 million in direct and indirect costs is spent each year in the United States as a result of syphilis, including adult syphilis ($185.5 million), congenital syphilis ($28.5 million), and HIV attributable to syphilis ($752.2 million).[22, 23]

Biological and Epidemiological Feasibility

The current epidemiology of syphilis, combined with its basic biological characteristics, make it possible to eliminate this disease in the United States.

- *Syphilis has biological characteristics that make it vulnerable to elimination.*

  Fortunately, syphilis transmission is preventable, and infection can be diagnosed and cured with simple, inexpensive, and widely available tests and antibiotics. Furthermore, *T. pallidum* has no nonhuman reservoir, no evidence of antibiotic resistance, and a long incubation period that favors case finding and epidemiologic treatment before further transmission occurs, thereby making syphilis elimination feasible.[24, 25]

- *The time for syphilis elimination is now.*

  Based on the repeatedly observed seven- to ten-year syphilis cycle, there is a narrow window of opportunity to eliminate syphilis while cases are still on the decline. The last epidemic peak occurred in 1990, when the highest numbers of syphilis cases (50,578) and rates (20.3/100,000 population) in forty years were recorded (Figure 1). **By 1998, the number of P&S cases had declined by 86% to 6,993 and the rate, 2.6/100,000 population, was the lowest ever recorded in the United States.**[26] The national rate for congenital syphilis peaked in 1991 at 107.3/100,000 live births and decreased to 20.6/100,000 live births in 1998. It is thought that this recent decrease in syphilis cases is a result of multiple factors: focused STD prevention efforts in response to the syphilis epidemic in the early 1990s, HIV prevention activities, and changes in substance abuse patterns.

  These historically low rates of disease are complimented by an extremely focal distribution that makes syphilis uniquely vulnerable to elimination now. Most syphilis cases are geographically concentrated in Southern states (4,810 or 69% of P&S cases in 1998), and many occur in large metropolitan areas (3,523 or 50% of P&S cases in 1998). In 1998, over 50% of P&S syphilis cases were reported from 28 (<1%) U.S. counties, the majority of which are in the South. Nearly 78% (2,431) of the nation's counties reported zero cases of syphilis in 1998 (Figure 2).[27]

Figure 1.
Primary and secondary syphilis–Reported rates: United States, 1970-1998 and the Healthy People year 2000 objective.

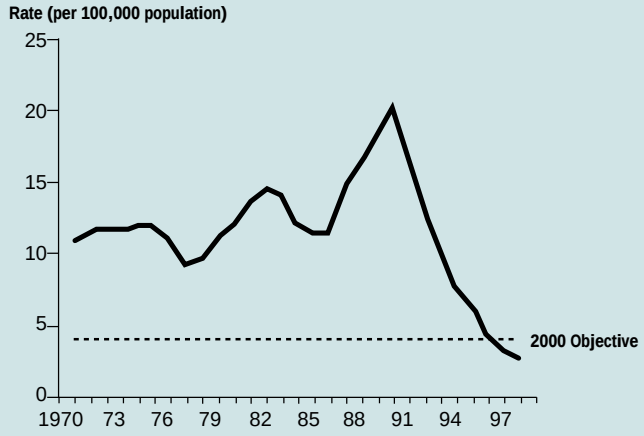

Figure 2.
Primary and secondary syphilis–Counties with rates above the Healthy People year 2000 objective and counties reporting half of new cases: United States, 1998.

*Note: 1998 P&S rate for the U.S. is 2.6 per 100,000 (HP2000 target=4.0)
Source: CDC STD Surveillance System

The Plan

Overview

Strategies for syphilis elimination have been adopted based on the deliberations at CDC's May 1998 consultation, "Developing Strategies for Syphilis Elimination in the United States" (Appendix I) and on subsequent consultations on syphilis elimination. It is assumed that this plan will evolve over time as new lessons are learned and applied. While many other endemic diseases such as polio, measles, and smallpox have been eliminated through widespread use of vaccines, the strategies for syphilis elimination differ from these efforts largely because there is currently no vaccine. In addition, the availability of a safe, effective syphilis vaccine is not anticipated by 2005. However vaccine development efforts are underway, and, stimulated by the recent sequencing of the *T. pallidum* genome, should accelerate U.S. elimination efforts into an international eradication campaign.

Continuing current STD prevention and control efforts alone will not eliminate syphilis; it also will require the development of new strategies. Combining intensified traditional approaches with innovative approaches will generate new synergy and enhance the effectiveness of syphilis elimination efforts. The two new strategies described in this plan are *rapid outbreak response* and *strengthened community involvement and partnerships.* Outbreak response has been part of STD control and prevention, but syphilis elimination will require a more urgent response to the introduction of new syphilis cases. Community involvement and partnerships are crucial and have had some success in efforts to combat other diseases, notably HIV. Previous efforts to eradicate syphilis in the 1930s and 1960s were driven primarily by the federal STD program, and they were ultimately unsuccessful, in large part because these efforts built no local infrastructure to sustain prevention and control. In addition, eradication efforts were driven by the federal STD Program and were not developed or conducted *in collaboration with* local communities. These experiences highlight the importance of involving communities and sustaining collaborative partnerships at all levels, including health and social service organizations, the public and private sectors, and affected communities.

Enhanced surveillance and *strengthened community involvement and partnerships* are cross-cutting strategies that are critical tools for evaluating and facilitating the implementation of the three specific intervention strategies: (1) *rapid outbreak response,* (2) *expanded clinical and laboratory services,* and (3) *enhanced health promotion.*

Cross-Cutting Strategies

1. *Enhanced surveillance:*

   enhance detection, monitoring, and data analysis of syphilis cases and exposed sex partners;

2. *Strengthened community involvement and partnerships:*

   work together with affected communities and organizations that represent these communities, in the health and other social service sectors, the public and private sectors, and at the local, state, and national levels, to develop and implement locally relevant syphilis elimination plans.

Intervention Strategies

1. *Rapid outbreak response:*

   expeditiously interrupt transmission as soon as syphilis cases surpass locally determined thresholds;

2. *Expanded clinical and laboratory services:*

   develop or intensify multi-level activities that promote access to and utilization of high quality care for people infected with or exposed to syphilis;

3. *Enhanced health promotion:*

   develop or intensify multi-level activities that promote preventive sexual and health care behaviors to those at risk.

Geographic Focus for Syphilis Elimination

While national in scope, the syphilis elimination initiative focuses on areas with high syphilis morbidity and those areas with greatest potential for syphilis re-emergence. For the purposes of this document, *area* refers to a geographically defined setting. Syphilis elimination activities will vary from one area to another, depending on the extent and distribution of the disease. Areas will need to decide upon priorities and base their intervention activities on the results of program and social and behavioral assessments.[A] Locally relevant activities should be guided by national standards presented in Appendices A-E.

High morbidity areas (HMAs) are defined in this plan as areas with continuing syphilis transmission at high levels, usually signaling the need to improve preventive services and to strengthen the capacity to conduct surveillance and provide access to quality clinical and laboratory services. For example, some cities or counties may contain focal areas of persistent infection. These areas must develop locally relevant interventions that assess the factors that promote sustained syphilis transmission and *must address all strategies for syphilis elimination.*

Potential re-emergence areas (PRAs) are defined in this plan as areas that currently experience little or no syphilis transmission but that are at significant risk for syphilis reintroduction. For example, some cities and counties may be considered high priority PRAs for the following reasons:

- they had a history of high syphilis rates in 1990 or more recently;
- they are a port or border jurisdiction or are located along migrant streams;
- they are located along drug trafficking corridors; or
- they include groups that are disproportionately affected by syphilis (e.g., drug users, people exchanging sex for money or drugs, men who have sex with men, and minority and migrant populations that are affected by racism, high rates of unemployment, poor educational opportunities, and poverty).

PRAs should focus primarily on enhanced surveillance and rapid outbreak response, including determination of how communities will be involved. Based upon available resources, some PRAs may also want to consider implementing the remaining strategies outlined in this plan to strengthen and sustain program quality.

As syphilis elimination progresses, the definitions for HMAs and PRAs may change to reflect current syphilis morbidity trends. Some areas will change classification, and thus the intensity of syphilis elimination activities in these areas will change during the course of this effort. Throughout syphilis elimination, HMAs and PRAs must intermittently reassess gaps in their syphilis elimination plan and devise optimal strategies to address them. In addition, members of affected communities must be involved in the evaluation of syphilis elimination activities, identification of best practices, and the implementation of activities to address perceived gaps.

Low morbidity areas that are not PRAs should sustain the activities of a strong STD prevention program, as outlined in the Comprehensive STD Prevention Systems (CSPS) guidance and the CDC STD Program Operations Guidelines (POG).[28, 29] At a minimum, all areas should ensure that

1. providers report presumptive or confirmed cases of early syphilis to the health department **within one working day** of diagnosis;
2. laboratories report positive, non-treponemal tests that are quantified (by titer) **within one working day** of test result;
3. state and local health departments conduct periodic point prevalence assessments in settings where syphilis is likely to emerge or re-emerge (e.g. local jails, hospital emergency rooms); and
4. public health authorities establish a rapid outbreak response plan.

[A] Description and purpose for social and behavioral assessment is found in the "Enhanced Health Promotion" section of this document

Strategies and Objectives

As there is no vaccine available for syphilis, multiple interventions will be used to prevent and interrupt syphilis transmission by promoting preventive behavior by those at risk, improving access to and quality of care, and providing comprehensive partner services for those infected or at risk of transmitting syphilis. Success in carrying out the intervention strategies is dependent on the two cross-cutting strategies of enhanced surveillance, sustained over time, and significant community involvement and partnerships among relevant organizations.

Cross-cutting Strategies

ENHANCED SURVEILLANCE

Surveillance is the foundation for preventing and controlling all communicable diseases, and this holds true for syphilis elimination activities. Surveillance systems must be sensitive and timely to detect outbreaks, identify international and inter-jurisdictional importation of syphilis, and monitor community morbidity. Strong surveillance capacity must be assured by the State and local health departments, with the assistance of CDC, as part of an "early warning system" necessary to address emerging (and re-emerging) infectious diseases, including potential threats posed by bio-terrorism. In addition to case finding, surveillance systems can be used to assure that the appropriate diagnosis, treatment, and follow-up have been accomplished. Quality assurance should be conducted to evaluate the sensitivity, completeness, and accuracy of the surveillance system data. *Security, confidentiality, and privacy issues related to persons with syphilis are of utmost importance. Periodic reviews of surveillance systems should ensure the confidentiality of data for patients and members of their social and sexual networks.*

At a minimum, surveillance efforts must include, but are not limited to, provider- and laboratory-based reporting; routine syphilis testing and evaluation of serologic and behavioral data from populations at high risk for syphilis; and active surveillance. Active surveillance is used for discrete purposes including surveillance system evaluation, rapid case detection, and informing the community and key partners of syphilis trends. An active surveillance protocol or framework should be developed in each area so that active surveillance can be used expediently as the need arises.

Initially, improved surveillance efforts are likely to detect an increase in reported cases because successful collaborative efforts with other health and social service providers, as well as with affected communities, are likely to increase access to and utilization of screening and treatment for persons at risk for syphilis.

All areas of the country will address the following **four surveillance objectives** to realize the national goal of syphilis elimination. Specific activities for each objective are listed in Appendix A.

- **Achieve complete, accurate, timely, and confidential reporting of reactive serologic tests for and cases of syphilis**
- **Analyze syphilis data regularly, effectively, and promptly**
- **Develop a framework for active syphilis surveillance and conduct active surveillance when needed**
- **Evaluate syphilis morbidity by monitoring syphilis serologic reactivity and assessing risk behaviors**

HMAs will focus on surveillance methods that facilitate the elimination of high levels of endemic syphilis. Emphasis will be on detecting cases and partner follow-up and analyzing data to determine risk factors for sustained transmission so that effective interventions to interrupt transmission can be developed. Surveillance data will also provide a mechanism to evaluate the success of intervention strategies. HMAs should use an algorithm for the assessment of reactive tests for syphilis in populations at high risk. Surveillance will provide valuable data on risk factors for and trends among persons at high risk, as well as community-level data by which to evaluate syphilis prevention activities. Active surveillance through provider and laboratory visits should be used to evaluate the sensitivity, completeness, and accuracy of the surveillance system.

PRAs will focus on sensitive and timely detection of cases imported from outside the jurisdiction and on interruption of syphilis transmission resulting from those cases within the jurisdiction. Surveillance systems should be extremely sensitive in evaluating cases of genital ulcer disease and suspicious rash illnesses, and

in capturing all reactive laboratory reports and cases of syphilis. There should be rapid communication from providers about presumptive cases of syphilis and a rapid response for syphilis control and containment on the part of public health agencies. PRAs should use an algorithm for the assessment of reactive serologic tests in populations at high risk or in settings that could provide early warnings of syphilis transmission between persons at high risk. Active surveillance should be used for the expedient evaluation of community syphilis morbidity during outbreaks. Active surveillance for genital ulcers could be considered in PRAs in venues where patients with STDs are likely to be seen.

STRENGTHENED COMMUNITY INVOLVEMENT & PARTNERSHIPS

Given the history of syphilis in the United States, syphilis elimination efforts must acknowledge and be responsive to the legacies of distrust (e.g. Tuskegee Study), racism, and poverty in communities in which syphilis persists.[30, 31] At times, the lack of communication and understanding between communities affected by syphilis and public health institutions have impeded the success of public health interventions. Moreover, given that syphilis can be seen as a social disease, approaches that forge and build upon improved social dynamics between affected communities and public health institutions will be key.

The involvement of communities affected by syphilis can:

- facilitate more effective communication;
- restore, build, and maintain trust;
- improve access to and utilization of services;
- ensure the development of culturally competent interventions; and
- mobilize participation to develop community capacity to eliminate syphilis.[32]

A truly community-involved and -centered approach will require a number of activities that are relatively new to STD prevention and control, such as involving community members in social and behavioral needs assessments and program evaluations. Resources will be provided for communities to build local capacity to accomplish such activities. Where appropriate, activities to facilitate community involvement should build upon the rapport other public health programs (e.g. HIV, TB, immunization) have already established with community members.

As a means of promoting community involvement, community organizations that are responsive to and representative of communities, as well as persons affected by syphilis, will be recruited and invited to work in partnership with CDC and State and local health departments to design and deliver syphilis elimination efforts. For the purposes of this document, *community organizations* are those that are within reasonably circumscribed geographic areas in which there is a sense of interdependence and belonging.[33] These organizations have access to, and history and social credibility with, persons and groups affected by syphilis. They are able to provide culturally competent and relevant interventions.[34]

In addition, community coalitions will be formed with representatives from affected communities, with public and private providers, laboratories, jails, community organizations, policymakers, and with other social service agencies and institutions that serve persons at risk for syphilis.[35] For purposes of this document, *coalitions* are defined as alliances among different sectors, organizations or constituencies for a common purpose. Coalitions should both draw upon the existing strengths of the community and consider social issues that may be barriers to syphilis elimination. Not only will these coalitions encourage the provision of confidential syphilis preventive and care services, but they can also serve as a referral network to address the other challenges faced by communities with persistently high syphilis rates. One recommended way of identifying key affected community representatives and opinion leaders for community coalitions is through the use of a social and behavioral needs assessment. Conducting such assessments enable local health departments and institutions to enter into a dialogue with their clients and other members of the affected community.

Members of affected communities will be recruited, trained, and employed for local syphilis elimination activities. They will be involved in syphilis elimination efforts including the development, implementation, and evaluation of activities and interventions. To achieve syphilis elimination, citizens, including community-sanctioned leaders of affected communities, should be in-

vited to guide and participate in the design and delivery of services, allowing for their ownership of interventions that improve the health status of their communities.

HMAs will address the following **three community involvement and partnership objectives** to achieve syphilis elimination. Specific activities for each objective are listed in Appendix B.

- **Acknowledge and respond to the effects of racism, poverty, and other relevant social issues on the persistence of syphilis in the United States**
- **Develop and maintain partnerships to increase the availability of and accessibility to quality preventive and care services**
- **Assure that affected communities are collaborative partners in developing, delivering, and evaluating syphilis elimination interventions**

Intervention Strategies

RAPID OUTBREAK RESPONSE

Elimination necessitates an urgent response to any increase in disease incidence. The effectiveness of the response is obviously linked to the capacity of existing surveillance efforts, and can be enhanced by the type and quality of community involvement, as well as by partnership with other relevant health and social service providers. Syphilis elimination will require each area to have an outbreak response plan and to establish sensitive threshold syphilis incidence levels at which this plan is implemented. The outbreak response plan should describe methods and standards for the following:

1. conducting an epidemiologic, social, and behavioral assessment;
2. involving and defining the roles and responsibilities of affected communities and key organizations;
3. working with communicable disease outbreak teams; and
4. communicating and working across national, state, and local boundaries.

All areas of the country will address the following **two outbreak response objectives** to realize the national goal of syphilis elimination. Specific activities for each objective are listed in Appendix C.

- **Develop an outbreak response plan**
- **Establish area-specific criteria that determine when the outbreak response plan is to be implemented**

HMAs must contain focal outbreaks within areas of endemic syphilis. Syphilis case data must be carefully analyzed to separate focal outbreaks from a background of hyper-endemic transmission.

PRAs must rapidly detect every syphilis case imported into the area and notify the jurisdiction or country of origin with the goal of preventing or interrupting transmission. In PRAs, the response to a case of syphilis must become similar in speed and intensity to a case of bacterial meningitis, botulism, or other communicable diseases for which an immediate response is mandatory.

EXPANDED CLINICAL AND LABORATORY SERVICES

Clinical and laboratory services remain cornerstones of syphilis prevention and control. People seeking or referred for syphilis testing and treatment services must have prompt access to high quality care. Screening and treatment of hard-to-reach, high-risk individuals must take place at key provider sites and other priority venues frequented by these populations. In some cases, outreach services must be provided to increase access to and utilization of STD preventive and care services. Based upon current epidemiological data, sites deserving strong consideration for these activities include jails, drug treatment centers, community primary health care centers, and hospital emergency rooms.[36, 37] Additional sites should be identified through consultation with affected communities as well as other local health and social services providers.

Public and private providers should work together to address at the local level gaps in services, including quality and utilization of services and access to care issues. Recognition of syphilis signs and symptoms and accurate diagnosis and treatment will be necessary to identify those with syphilis and provide them with the services needed to interrupt syphilis transmission. Efforts should be made to utilize rapid, non-invasive testing methods and other diagnostic and treatment advances as they are identified through syphilis research. Periodic training and quality assurance of providers and laboratories will be critical to ensure the delivery of high quality syphilis preventive and care services. Obtaining

waivers from the Clinical Laboratory Improvement Act (CLIA) rules so that clinical sites may conduct rapid or on-site syphilis testing would assist these efforts.

HMAs will address the following **two objectives for expanded clinical and laboratory services** to achieve syphilis elimination. Specific activities for each objective are listed in Appendix D.

- **Provide accessible and timely client-centered counseling, screening, and treatment services in sites frequented by populations at risk for syphilis**
- **Ensure high quality syphilis preventive and care services**

ENHANCED HEALTH PROMOTION

In this document, *enhanced health promotion* refers to improving the combination of educational and environmental supports for healthy behaviors and conditions of living.[38] Effective health promotion interventions for syphilis elimination must be developed to prevent acquisition and transmission of syphilis, promote prompt health care-seeking and risk-reduction behavior, and facilitate the identification of sex partners and social contacts who may be infected with or at risk of acquiring syphilis.

As a prerequisite to designing interventions, social and behavioral assessments at the community level should be conducted to gain an understanding of the context in which syphilis persists and spreads in communities from the perspective of community members. Using the results of the assessments, behavioral interventions should be developed, implemented, and evaluated in collaboration with members from the affected community. It is recognized that a substantial amount of technical assistance may be required in some areas where morbidity is high. After the effectiveness of a program has been demonstrated empirically, mechanisms for technology transfer must be developed and evaluated to ensure that successful programs will be sustained.

Primary prevention activities, such as interventions to reduce risky sexual activity or increase condom use, play a critical role in syphilis elimination. These activities, as they have been carried out by HIV prevention programs, have already contributed to the current decline in syphilis rates in the U.S. Efforts should be made to educate at-risk persons about practicing safer sex behaviors (e.g., abstinence, having one sex partner, correct and consistent condom use).[39, 40] Interventions such as condom social marketing and peer-provided health education can support traditional clinical services, and should be prominent parts of STD programs in any community with sustained syphilis transmission.[41, 42]

Partner services will continue to be an effective component of syphilis prevention activities. In the context of syphilis elimination, partner services will combine aspects of both clinical and laboratory services and health promotion interventions. Traditionally, case finding and treatment of partners has been the primary goal of partner services (i.e. partner notification). The use of behavioral intervention strategies, with patients, their partners, and in some instances, their social networks, can improve prevention and treatment outcomes by promoting health care-seeking behavior and encouraging risk reduction. The elimination of syphilis from a community is dependent upon promptly identifying newly exposed and potentially infected individuals and taking steps to interrupt disease transmission. Therefore, the rapid delivery of voluntary, confidential, culturally-appropriate, client-centered[B], and science-based partner services is essential to this effort. Historically, health department STD clinics have been the primary providers of partner services. However, both public and private providers of STD clinical care, such as Medicaid managed care providers, family planning clinics, jails, and hospital emergency rooms, should seek to ensure that partner services are offered to their patients diagnosed with syphilis.

To interrupt syphilis transmission, partner services should include interviewing, counseling, and social network analysis (cluster interviewing) for both index cases and partners, as well as partner identification, and notification for examination and treatment. When appropriate, partner services should be provided, not only to those infected and their partners, but also to the larger

[B] For the purpose of this document, *client-centered partner services* incorporates an empathic orientation to the client's needs, concerns, and strengths to promote effective discussion of risks and partner elicitation (Corsini RJ and Wedding D. Current Psycho Therapies, 4th edition. F. E. Peacock Publishers, Inc.: Ithasca, Illinois, 1989.)

social network that includes those at risk for acquiring or transmitting syphilis. Some persons exposed to patients infected with syphilis have regarded traditional models of partner notification with suspicion. Therefore, it may be necessary to evaluate partner services from the perspectives of affected populations, and to adapt them so that they are more clearly understood as a necessary and beneficial part of preventive health services.

HMAs will address the following **two objectives for enhanced health promotion** to achieve syphilis elimination. Specific activities for each objective are listed in Appendix E.

- **Implement and evaluate appropriate and effective health promotion interventions**
- **Ensure the timely delivery of high quality, confidential, and comprehensive client-centered partner services to patients, partners, and other identified high-risk individuals**

Support Activities

Syphilis elimination must be built on a sustainable foundation of STD/HIV prevention programs. In addition six other support activities have been identified as essential functions for effective STD programs.[44] Their application to syphilis elimination is highlighted below. The intensity of specific support activities will vary across HMAs and PRAs based upon syphilis morbidity and proposed elimination activities.

Sustained STD/HIV prevention programs

It is an absolute prerequisite for syphilis elimination that an effective public health infrastructure be sustained and strengthened over time, particularly for STD and HIV prevention efforts. In 1988 and 1996, the Institute of Medicine clearly indicated that ". . . society must reinvest in governmental public health agencies with resources, commitments, and contributions from government, private and non-profit sectors, and substantial legal authorities, if the public's health is to improve." [45, 46]

In the case of syphilis elimination, continued investment in STD/HIV prevention programs will be crucial. The success to date in reaching low rates or elimination levels in many parts of the country is attributable to the basic, general functioning of STD and HIV prevention efforts in the United States, not exclusively to an articulated syphilis elimination effort. For example, HIV programs that have focused on increasing safer sexual practices have helped lower rates of risky sexual behaviors by homosexual/bisexual men and adolescents.[47, 48]

Syphilis elimination activities must identify and close the current gaps in STD/HIV preventive and care services that have allowed the persistence of syphilis in some communities. New free-standing syphilis elimination programs will not be built. In areas where there has been a breakdown in the public health system, the syphilis elimination activities outlined in this plan will improve capacity to address broader community health needs, particularly related to emerging infectious diseases and reproductive health.

Committed leadership and program management

Syphilis elimination is a landmark national effort that will require the commitment, investment, and collaboration of leadership and program management at the local, state, and national levels. In addition to strong support from federal agencies, syphilis elimination will require the involvement of many other partners at the local, state, and national levels, including both health and other social service organizations, the public and private sectors, and affected communities. These parties must be involved in the development, implementation, and evaluation of locally relevant, enhanced syphilis preventive and care activities, including advocacy, policy development, and research activities.

Continuous dialogue and consultation must occur both between these partners and within each agency or organization to define involvement in syphilis elimination efforts and to establish agreements that facilitate the provision of syphilis services. As syphilis elimination progresses, leaders must continue to re-evaluate their role in this effort and explore new avenues for the delivery of syphilis preventive and care services.

Leaders at the local, state, and national levels must be ambassadors for syphilis elimination by developing and implementing communication strategies that advocate with relevant policy-makers, affected communities, and opinion leaders for the importance of this initiative. They must emphasize the relationship between syphilis elimination and improvement in key areas of health, such as HIV prevention and infant health, and must communicate effectively how syphilis morbidity can be used as a diagnostic to identify public health systems that need rebuilding.

Gaining the respect and trust of communities with persistent syphilis transmission is crucial. Because syphilis preventive and care services are often delivered to disadvantaged populations, leaders of this syphilis elimination effort have an important responsibility. They must ensure moral principles and ethical standards are maintained for all activities and high quality, culturally-sensitive syphilis preventive and care services are delivered in all affected communities. Additionally, they must clearly communicate the value placed on all persons and the necessity of preserving human dignity and confidentiality in all syphilis elimination efforts.

Given that this is a major national campaign, leadership and program management must identify key personnel responsible for the coordination, management, and promotion of syphilis elimination. Additionally, leaders should identify the necessary resources, provide technical assistance and training, and evaluate regularly the progress made toward syphilis elimination objectives. *Substantial new funding is required over a number of years to accomplish syphilis elimination, while at the same time maintaining the integrity of other current, critical STD and HIV prevention activities* (Appendix H).

Communications

To gain momentum and sustain support for syphilis elimination at the national and local levels, political leaders, key opinion leaders, policy makers, organizational partners, and the public must be engaged in the effort. This calls for a comprehensive health communication plan that implements important strategies ranging from global awareness of the syphilis elimination effort to community-level strategies that assure development and delivery of effective prevention messages to groups at risk for acquiring syphilis. One of the most powerful ways to rebuild community and partner trust is to share accurate information promptly.

On the national level, a comprehensive communication plan will include, at a minimum, the use of news media and outreach to national organizational partners. These channels will be critical for reaching opinion leaders at the national level and in HMAs and PRAs, especially those that represent the African-American community. It is important to develop a strategy to identify key political and community leaders and keep them informed when important milestones are reached.

On the local level, health communications should be an integral component of a larger, community-specific plan to create and maintain strong linkages among health departments, community leaders, organizational partners, and the affected community. Communication plans should inform key partners about syphilis elimination activities. A health communication plan is particularly important during an outbreak response. Local and regional news media should be used to raise awareness about the importance of these efforts, especially among community leaders and the general public. Other local-level health communication efforts include such activities as

- engaging community leaders and others who are responsible for providing information to the community through informal communication channels;
- identifying appropriate target audiences; and
- developing and delivering effective, culturally-appropriate messages through well-recognized communication channels.

For example, posters and pamphlets placed in key community settings can help raise awareness and identify locations for syphilis testing and treatment. While health communication principles and strategies cut across community lines, each area must develop its own health communication plan based on its burden of disease and community resources. Appendix G contains an example of a step-by-step process for developing a health communication plan.

Quality Assurance

Quality assurance (QA) is a systematic approach to ensure that appropriate and effective methods and ethical standards are adhered to for all syphilis elimination activities. Through the process of QA, additional training needs and gaps may be identified. QA may involve direct observation of an activity using a checklist of proper steps for implementation, with the observation being done by an expert in a particular task, or other meaningful forms of monitoring the performance of personnel and systems. QA procedures should be developed and applied to planned syphilis elimination activities.

Many QA activities can be conducted in collaboration with community and organizational partners. Written standards and procedures specific to local needs should be developed with partners and be consistent with this syphilis elimination plan. Some relevant examples of QA for syphilis elimination include activities such as

- review sensitivity of surveillance system;
- assess outreach efforts conducted by community organizations;
- observe disease intervention specialist (DIS) syphilis interviews or field activity by first-line supervisors;
- visit collaborating agencies to assure proper screening and treatment practices;
- observe front-line public health workers responsible for partner services; and
- assess client satisfaction with partner services.

Evaluation

Evaluation of the national syphilis elimination effort, as well as each of the cross cutting and intervention strategies at the state and local levels, is necessary to assist in determining whether local efforts are successful and to assure appropriate accountability. It is important to determine success at multiple levels and from multiple perspectives, including the response to elimination efforts from affected communities and clients of STD services. Past evaluations of syphilis programs have been helpful in identifying those at highest risk, settings where high risk populations can be accessed, barriers to reaching those at risk, and effective syphilis prevention and control activities.[49, 50]

Evaluation activities are likely to include both formative and summative evaluation which are linked for measuring overall program effectiveness.[51] *Formative evaluation* is used to inform program implementation and measures process goals and objectives. As an example, formative evaluation can be used to measure the number of persons screened and treated at a community-level screening site. *Summative evaluation* involves the measurement of outcome and impact goals and objectives. In the example given above, summative evaluation would be used to measure the effect of the screening activity on an area's syphilis morbidity.

Appropriate and timely evaluation will identify program gaps and improve them on an ongoing basis. State and local areas should develop an evaluation plan for each strategy. In addition to quality assurance, process and outcome evaluations should be incorporated. Recommended guides to assist in developing evaluation plans include "The Practical Evaluation of Public Health Programs Workbook,"[52] MMWR "Recommended Framework of Program Evaluation in Public Health Practice,"[53] and the evaluation chapter in the CDC STD Program Operations Guidelines. Examples of evaluation activities include the following:

- evaluation of the comparative effect and acceptability of various outbreak response strategies;
- development and evaluation of approaches to technology transfer to ensure that successful syphilis interventions are sustained and widely disseminated to community organizations and other key partners; and
- evaluation of the effect and acceptability of activities for health communication, health promotion, and clinical or laboratory services.

Training

Individuals, such as public health personnel, private providers, laboratorians, and community representatives are likely to need training or re-training to develop or improve skills related to the syphilis elimination strategies. However, recognizing that resources are limited, training needs must be prioritized.

Training topics may include clinical and laboratory methods, behavioral intervention approaches, data management and analysis, community involvement techniques, social and behavioral assessment, health communication, and evaluation. Training resources include the National Network of STD/HIV Prevention Training Centers (PTC), the National Laboratory Training Network (NLTN), schools of public health, social work, medicine and nursing, as well as local HIV prevention programs.

Research

A lesson learned from the successful global smallpox eradication effort was that research must continue throughout the effort, but that the eradication or elimination effort itself should not wait upon the results of research ("learning on the run"). For syphilis elimination, each strategy has an important research agenda that requires continuing collaboration among local, state, and national partners and a clearly defined role for members of the affected community. It is also critical that a balanced national research agenda be developed and conducted with operational goals in mind. Examples of research related to syphilis elimination include the following:

- comparison of the effectiveness and cost-effectiveness of different approaches to involving communities affected by syphilis and STDs;
- examination of community-level interventions to promote changes in prevailing socio-political factors that sustain high-risk behavior and constrain access to and utilization of health care for syphilis;
- determination of which new variables might be most productive if added to syphilis case interviews and surveillance reports to aid in elimination efforts both in HMAs and PRAs and how these change over time;
- assessment of the efficacy of various approaches to partner services in diverse communities at risk for syphilis, including gay men, communities of color, migrant workers, border communities, etc.;
- examination of interventions that promote condom use and related behavior change interventions delivered and evaluated in groups most at risk for syphilis transmission in subpopulations and communities where syphilis persists;
- examination of interventions that promote timely and appropriate syphilis health care-seeking behavior;
- development of new diagnostic tests for syphilis, especially rapid, point-of-care tests that would not involve phlebotomy (e.g., oral fluids, urine, or fingerstick whole blood), and tests that would distinguish current infection from previously treated infection;
- further examination of single-dose oral regimens (such as azithromycin) that could facilitate community-based, presumptive treatment interventions; and
- development of a vaccine against *T. pallidum*

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Appendices

Appendix A: Enhanced Surveillance

Enhanced surveillance is a cross-cutting strategy designed to evaluate and direct the intervention strategies of rapid outbreak response, expanded clinical and laboratory services, and enhanced health promotion. To develop and maintain a sensitive surveillance system, the following activities will be required. Some of these activities are ongoing; others will need to be completed within a certain time frame. The development, implementation, and sustainability of these activities cannot be accomplished without an increase in local, state, and federal resources. The following recommendations are suggested national standards. Locally relevant activities and objectives may need to be developed.

1. Achieve complete, accurate, timely, and confidential reporting of serologic reactive tests for and cases of syphilis

State or local health departments will

- transmit line-listed case-extended syphilis data **weekly** to CDC through NETSS for all stages of syphilis.
- if unable to transmit line-listed, case-extended data, identify barriers to transmission and develop a plan to transmit data by **August 30, 1999**.
- evaluate **annually** surveillance systems for completeness, accuracy, sensitivity, timeliness, and quality.
- review **quarterly** NETSS system data for duplication, errors, and omissions to assure accurate reporting.
- review **annually** reporting time spans of physicians and laboratories and provide feedback to those not in compliance.
- develop a written surveillance plan **by December 31, 1999** that includes active surveillance and addresses data security and confidentiality.

Public and private providers will

- **within** one working day of diagnosis, report presumptive or confirmed cases of early syphilis to the health department.

Public and private laboratories will

- **within one working day** of test result, report positive, non-treponemal tests that are quantified (by titer).

Centers for Disease Control and Prevention (CDC) will

- coordinate meetings **every eight weeks** with HMAs and PRAs to review syphilis elimination activities.
- **when requested**, provide technical assistance in developing surveillance plans that include an active surveillance component.
- monitor **weekly** NETSS transmissions and discuss unexpected changes in morbidity with appropriate areas.
- monitor **monthly** the progress toward achieving line-listed reporting for syphilis, assess the completeness of NETSS data, and provide technical assistance to project areas when needed.

Association of Public Health Laboratories (APHL) will

- support the development of a reliable non-treponemal test for point-of-care screening that can be classified as low complexity for use where other serologic tests for syphilis are not immediately available.
- assume the responsibility for promoting and improving the quality of syphilis serology laboratory testing with the support of state public health laboratories that have regulatory oversight of clinical laboratories.

- promote immediate reporting of positive test results for syphilis to state or local health departments to ensure that reports are received **within one working day** of test result.

Council of State and Territorial Epidemiologists (CSTE) will

- ensure coordination of surveillance and other epidemiologic activities across states.

2. Analyze syphilis data regularly, effectively, and promptly

State or local health departments will

- **by July 31, 1999**, designate personnel who have the capacity to analyze syphilis case reports, prevalence assessment data, and where feasible, syphilis and HIV co-morbidity.
- develop and conduct a set of routine analyses (**monthly** for HMAs, **bi-monthly** for PRAs) for case-report data by person, place, time, and behavioral risk factors that will be useful for assessing syphilis morbidity trends, detecting outbreaks, and informing and evaluating clinical and laboratory services and health promotion activities.
- **twice a year**, compare reported cases to the syphilis reactor grid to evaluate the effectiveness and sensitivity of established guidelines for follow-up of reactive serologies.
- disseminate analysis findings **at least quarterly** to local syphilis elimination coalitions and other critical partners, provide technical assistance in interpreting data, and make recommendations to address persistent transmission in the community.

Centers for Disease Control and Prevention (CDC) will

- survey HMAs and PRAs **annually** on types of analyses they find useful in assessing syphilis morbidity trends, and, when needed, incorporate those analyses into CDC STD*MIS public domain software or other relevant software as it becomes available.
- produce descriptive analyses **quarterly** of line-listed NETSS data and disseminate the results of these analyses to project areas.
- develop software modules for STD-INFO **by September 1999**, to facilitate analysis of syphilis surveillance data.
- **twice a year**, identify and analyze other sources of useful data (e.g., Extended Case Interview data, local STD • MIS variables) that can be incorporated into core data sets or special analyses or that can be appended to NETSS as additional extended variables.
- develop an **annual** State-based supplemental surveillance report for syphilis to distribute to health organizations and key partners.
- **when requested**, provide training on analysis for state and local agencies involved in eliminating syphilis.

National Coalition of STD Directors (NCSD) will

- help develop a common data set and collection form.

3. Develop a framework for active syphilis surveillance and conduct active surveillance when needed

State or local health departments will

- **by December 31, 1999**, develop and carry out an active surveillance protocol that designates sentinel laboratories and providers and that establishes how they will be monitored regularly or as outbreaks occur.
- evaluate **annually** the effectiveness of active surveillance and revise protocols accordingly.

Centers for Disease Control and Prevention (CDC) will

- **when requested**, provide technical assistance in developing active surveillance protocols.
- evaluate **annually** the usefulness of active surveillance and make recommendations to improve surveillance capacity.

4. Evaluate syphilis morbidity by monitoring syphilis serologic reactivity and assessing risk behaviors

State or local health departments will

- identify, monitor, analyze, and evaluate the prevalence of syphilis, behavioral risk factors, and other behaviors (e.g., emergency room visits, drug treatment, arrests) of high-risk populations as a basis for designing interventions and facilitating routine screening of these populations.
- work with community partners and coalitions to select screening venues and to conduct behavioral risk assessments.

Jails, in collaboration with the health department will

- screen routinely for syphilis during intake and will refer infected persons for proper treatment if they are released before treatment occurs.

Public and private laboratories will

- assist health agencies promote routine syphilis screening in non-clinical settings such as drug treatment centers and jails.

Community organizations will

- provide assistance in identifying high-risk populations in need of syphilis screening and treatment.

Centers for Disease Control and Prevention (CDC) will

- **when requested**, provide technical assistance in identifying high-risk populations for screening and treatment.
- **by September 30, 1999,** develop, in consultation with state and local partners, a core set of behavioral and epidemiologic variables that are useful for assessing syphilis prevalence and the potential for outbreaks.

National Institute of Justice (NIJ) will

- explore how such NIJ efforts as the Arrestee Drug Abuse Monitoring Program (ADAM), and crime mapping can help identify key screening and treatment sites.

Appendix B: Strengthened Community Involvement and Partnerships

Community involvement and partnership is a cross-cutting strategy designed to facilitate the implementation of rapid outbreak response, expanded clinical and laboratory services, and enhanced health promotion interventions. To achieve an approach that includes the affected community, the following activities will be required. Some of these activities are ongoing; others will need to be completed within a certain time frame. The development, implementation, and sustainability of these activities cannot be accomplished without an increase in local, state, and federal resources. The following recommendations are suggested national standards. Locally relevant activities and objectives may need to be developed.

1. Acknowledge and respond to the effects of racism, poverty, and other relevant social issues on the persistence of syphilis in the United States

State or local health departments will

- **routinely** ensure that moral and ethical standards are maintained in all syphilis elimination activities.
- **continually** collaborate with community organizations (e.g., churches, homeless shelters, HIV community-based organizations) to assess the effects of these issues on the persistence of syphilis.
- **continually** promote discussion, particularly in the intervention planning phase, and develop specific activities to overcome barriers related to these issues.
- **by January 2000**, provide resources to community organizations to build community capacity for syphilis elimination.
- evaluate the effectiveness of efforts to overcome the barriers to syphilis elimination.

Centers for Disease Control and Prevention (CDC) will

- lead a national dialogue on these factors as they affect syphilis rates.
- **as requested**, work with State and local health departments and organizations to provide the appropriate technical assistance to reduce these barriers.

Community organizations will

- collaborate with community members, State health departments, and other stakeholders to describe major barriers to addressing socio-political factors that may affect syphilis elimination.
- assist in the implementation of the plan designed to respond to these factors.

National minority organizations will

- conduct national-level surveys, as appropriate, to assess these issues as they relate to syphilis elimination.

HIV prevention community planning groups will

- develop a system to evaluate linkages between HIV organizations and syphilis elimination initiatives within geographical areas at higher risk for both HIV and syphilis.

2. Develop and maintain partnerships to increase the availability of and accessibility to preventive and care services

State or local health departments will

- **within 9 months**, devise and implement initial effective communications channels for sharing information between organizational partners.

- **within 12 months**, develop and implement specific communications strategies to promote the importance of syphilis elimination to community leaders, policymakers, and organizational partners.
- **within 6 months**, meet and establish agreements with relevant providers in non-STD clinic settings (e.g., jails, parole and probation, drug treatment centers, HIV service providers, emergency departments, prenatal clinics, community health centers) to deliver confidential syphilis preventive and care services.
- **quarterly,** provide CDC bulleted activities for the syphilis elimination newsletter.
- identify and report **annually** improvement in the availability and accessibility of community-level prevention services for syphilis elimination and report on it **annually.**
- **within 6 months**, brief the appropriate state and local legislative bodies on syphilis elimination.
- **annually** assess and report on efforts to work with relevant partner organizations, HIV prevention programs, and community planning groups to expand services provided by community organizations to include syphilis preventive and care services.

Centers for Disease Control and Prevention (CDC) will

- **within 3 months**, develop model Memoranda of Understanding (MOU) agreements to use with non-STD clinic providers to improve the availability and accessibility of preventive and care services.
- **within 3 months**, meet and establish agreements with other CDC entities to improve the availability and accessibility of preventive and care services.
- **within 3-6 months,** meet and establish agreements with key federal agencies and national organizations to deliver syphilis preventive and care services.
- **within 6 months,** develop standards for providing accessible and available STD services.
- **within 9 months,** meet with state STD program managers and project directors to discuss the implementation of the syphilis elimination plan locally and to review progress toward accomplishing locally relevant syphilis elimination objectives.
- **within 6 months**, assist the National Coalition of STD Directors in organizing and conducting multi-state syphilis elimination workshops.
- conduct at least one conference call **every eight weeks** with HMAs and PRAs to review and refine syphilis elimination activities related to all strategies.
- **annually,** communicate objectives, particularly to HIV prevention programs and to other key providers to promote increased access to syphilis screening.
- facilitate continuing communication between organizational partners through periodic publications in *Morbidity and Mortality Weekly Report* (MMWR), in a **quarterly** CDC syphilis elimination newsletter, and via the DSTD intranet and internet websites.
- **when requested**, provide technical assistance in developing local health communication plans.
- convene an **annual** Syphilis Elimination summit that includes national non-governmental organizations, federal agencies, and other key partners to discuss progress by all parties in eliminating syphilis.
- **when requested,** participate in multi-state workshops and, when appropriate, in local syphilis elimination coalition meetings.
- **annually** evaluate the effect of CDC's agreements with key federal agencies and other national partners.
- **continually** work with other national partners to develop the capacity of health departments to become partners with community organizations and to adopt local health policies supportive of the syphilis elimination effort.

Health Resources and Services Administration (HRSA) will

- strongly recommend that their grantees inform planning councils and HIV primary care providers of syphilis elimination and work closely with State and local STD program directors in their respective areas.
- where appropriate, include STD program directors on planning councils and in advisory groups that are developing HIV care and treatment plans.

- encourage its grantees to participate in STD training activities in their local areas.

Substance Abuse and Mental Health Services Administration (SAMHSA) will

- provide a list of publically supported drug treatment and prevention programs in HMAs and PRAs.

National Institute of Justice (NIJ) will

- emphasize the importance of syphilis elimination to such criminal justice professional groups as the American Correctional Association, the American Jail Association and the National Sheriffs' Association.
- facilitate collaboration with other federal Department of Justice agencies such as the Bureau of Justice Assistance, the Corrections Program Office, Immigration and Naturalization Service, the National Institute of Corrections, and the Bureau of Justice Statistics.

National Coalition of STD Directors (NCSD) will

- develop and coordinate multi-state syphilis elimination workshops where best practices, strategies to advocate for adequate funding, and technical assistance will be discussed.

Association of Public Health Laboratories (APHL) will

- convey to policymakers and partner organizations the importance of the syphilis elimination plan in containing, reducing, and eventually eliminating syphilis from the United States.
- conduct seminars and conferences to communicate to the community and organizational partners the syphilis elimination plan and to explain our individual roles and responsibilities.
- co-sponsor and organize national meetings to discuss laboratory issues that affect the quality of health care.

American Social Health Association (ASHA) will

- advocate for syphilis elimination with policy-makers and public opinion leaders by providing information on the importance of syphilis elimination, the need for adequate funding for syphilis elimination efforts, and the critical link between syphilis and HIV.
- urge the Coalition to Fight Sexually Transmitted Diseases to adopt the elimination of syphilis as a high priority activity.
- develop and maintain relationships with other national organizations, including health care organizations, and provide information on syphilis as an indicator of other public health disparities.
- serve as a public information resource to national- and state-level syphilis conferences, meetings, and workshops.
- work closely with minority organizations to ensure the development of sensitive, non- stigmatizing materials and responses.

3. Assure that affected communities are collaborative partners in developing, delivering, and evaluating syphilis elimination interventions

State or local health departments will

- within 6 months, through a social and behavioral assessment, identify key community members who must be informed of and involved in syphilis elimination efforts.
- **within 6 to 9 months,** facilitate the development, if not already established, of local syphilis elimination or STD coalitions with representatives from affected communities and key organizations.
- **within 9 months**, develop a plan that describes how community input will be solicited and that involves persons from affected communities in developing, delivering, and evaluating syphilis elimination activities.
- **annually** assess and report on how the coalition has been involved in developing and implementing syphilis elimination activities, including a description of how community perspective was incorporated into the overall local plan.
- **annually** assess and report on the extent to which information on syphilis elimination is shared with the coalition and affected communities.
- **annually** assess and report on the infrastructure in the community to achieve syphilis elimination.

Community organizations will

- mobilize communities to participate in elimination efforts by raising awareness and providing STD information to affected communities.

Centers for Disease Control and Prevention (CDC) will

- **when requested**, provide training and technical assistance on facilitating community involvement, conducting needs assessments, implementing and evaluating syphilis elimination activities, and building community capacity.
- **annually** report on each state and local health department's progress toward involving affected communities in syphilis elimination activities.

National Coalition of STD Directors (NCSD) will

- provide assistance in involving community members and building capacity through multi-state workshops.

Public health laboratories will

- participate with National Coalition of STD Directors (NCSD) and CDC in multi-state workshops to ensure inclusion of issues related to lab technology and support, screening algorithms, interpretation of lab data, and other laboratory related issues and concerns.
- conduct tours of State Public Health Laboratories to familiarize partners, community groups and program directors with syphilis and other STD testing services, testing algorithms, and quality assurance measures that are utilized to assure reliability of test results.

Appendix C: Rapid Outbreak Response

Critical to conducting an outbreak response rapidly are both enhanced surveillance to quickly detect the outbreak, and community involvement and partnership to facilitate a comprehensive and sustained response. To rapidly detect and respond to an outbreak, the following activities will be required. Some of these activities are ongoing; others will need to be completed within a certain time frame. The development, implementation, and sustainability of these activities cannot be accomplished without an increase in local, state, and federal resources. The following recommendations are suggested national standards. Locally relevant activities and objectives may need to be developed.

1. Develop an outbreak response plan

State or local health departments will

- as soon as an outbreak is detected, **promptly** initiate meetings with the affected community to discuss a social and behavioral assessment to understand the behavioral, social, and health services causes of the outbreak.
- **within one month of the end of the outbreak**, circulate a report, after clearance, that summarizes possible causes of the outbreak and recommendations for preventing future epidemics, and will circulate that report to representatives of the affected community, to public and private providers, to non-health organizations serving populations at risk for syphilis, to CDC, to other areas, to policymakers, and to other appropriate partners.
- **within 6 months,** establish a mobile outbreak response team that will be able to work outside standard business hours, draw field serologies, facilitate clinical and laboratory services, provide technical assistance to communities experiencing an outbreak, and communicate the results of an outbreak investigation to all appropriate partners.
- **within 6 months,** recruit and involve key partners from affected communities to help develop and carry out the outbreak response plan.
- inform CDC **within one working day** of initiating an outbreak response.
- **within 12 months,** develop a communications plan that supports syphilis elimination and advocates the containment of syphilis during an outbreak response intervention.
- **as needed**, assess and modify the outbreak response plan.

Jails will

- participate in developing the outbreak response plan.

Public and private laboratories will

- assist State and local health departments in developing an outbreak response plan for containing syphilis.
- work with State and local health departments to develop mechanisms for making laboratory services immediately and conveniently available outside regular work hours as part of an outbreak response plan.

Community organizations will

- collaborate with other state and local agencies to create culturally competent clinical and laboratory services and health promotion activities, tailored to persons at higher risk for infection.
- collaborate with state and local health departments to provide technical assistance to communities experiencing an outbreak.

Centers for Disease Control and Prevention (CDC) will

- **when requested**, assist areas in **promptly** developing an epidemiologic, health services and social and behavioral profile of the affected area.

- **when requested**, provide technical assistance via telephone, e-mail, or site visit during outbreak response.
- **continually** provide technical assistance to areas developing, evaluating, and implementing their outbreak response plans.
- **when requested**, assist State and local health departments in staffing a highly mobile outbreak response team (e.g., public health advisors, EIS officers, epidemiologists, statisticians).
- **within 6 months,** develop an internal protocol for managing outbreak information.

Substance Abuse and Mental Health Services Administration (SAMHSA) will

- assure that single-state agencies and local drug treatment providers are partners in developing and implementing the outbreak response plan.

Council of State and Territorial Epidemiologists (CSTE) will

- develop, with CDC's technical assistance, a standard approach to defining and collecting information on outbreaks that would be used by all involved states and communities.

2. Establish area-specific criteria that determine when the outbreak response plan is to be implemented

State or local health departments will

- **within 6 months**, establish and **annually** review threshold syphilis incidence levels at which outbreak response plans should be implemented;
- **within 1 week** of surpassing the established threshold syphilis incidence level, initiate an outbreak response.

Centers for Disease Control and Prevention (CDC) will

- **when requested**, assist local syphilis elimination coalitions in setting area-specific syphilis incidence thresholds for outbreak response.

Council of State and Territorial Epidemiologists (CSTE) will

- work with NCSD to better define and identify when outbreaks occur, based on information collected as part of case investigations (e.g., understanding of sexual networks, linking cases to each other, etc.)

Appendix D: Expanded Clinical and Laboratory Services

Implementing and maintaining productive clinical and laboratory services should be based upon effective surveillance to set priorities and direct efforts. Community involvement and partnership with key organizations and agencies also are required. Some of the activities related to clinical and laboratory services are ongoing; others will need to be completed within a certain time frame. The development and delivery of additional intervention efforts, specifically targeting syphilis elimination, are likely to require an increase in local, state, and federal resources. The following recommendations are suggested national standards. Locally relevant activities and objectives may need to be developed.

1. Provide accessible and timely client-centered counseling, screening, and treatment services in sites frequented by populations at risk for syphilis

State or local health departments will

- measure **monthly** the number of patients who are not seen the same day they are seeking services in STD clinics.
- **within 6 months**, develop an instrument that assesses the delivery of STD services in the public and private sectors and in health and other social service organizations to identify gaps in syphilis preventive and care services.
- **within 9 months,** develop a plan to implement syphilis screening programs in non- traditional settings with a high prevalence of syphilis (e.g., jails, drug treatment centers, homeless shelters, emergency departments, prenatal clinics, community health centers).
- **within 6 months,** survey members of the affected community to assess their perceptions of access to and utilization of STD services.
- **within 18 months**, expand access to services in STD clinics so that at least 90% of patients will be seen on the same day they seek services.
- **continually** seek to assure that all providers comply with the most current professional STD screening guidelines.
- **as needed,** assure availability of appropriate STD-related health care training for clinics, laboratories, and community organizations.

Jails, in collaboration with health departments will

- **routinely** screen for syphilis and treat if necessary, at intake.
- assess and report **annually** on the number of persons who are processed but who are not screened during intake or who are not seen within 14 days of admission.
- implement and evaluate a strategy for post-release syphilis follow-up and care services.

Public and private laboratories will

- participate with state and local health departments to ensure the availability of appropriate STD-related health care training for laboratorians and clinicians.

Community organizations will

- serve as a referral source for public and other primary care sites for persons residing in affected communities.

Centers for Disease Control and Prevention (CDC) will

- meet **annually** with key personnel of national organizations that work with specific groups (e.g., HIV positive persons, pregnant women, homeless persons, substance abusers, migrants, inmates) to discuss

syphilis elimination and to develop a plan for promoting and implementing enhanced syphilis prevention and screening services.

- **when invited and as appropriate,** participate in local meetings of providers from local agencies (e.g., HIV CBOs, corrections, drug treatment centers, prenatal care clinics, homeless services) to develop a plan for promoting and implementing enhanced syphilis prevention and screening services.
- **by December 31, 1999,** modify the regulations for the Clinical Laboratory Improvement Act (CLIA) to exempt rapid syphilis testing.
- **when requested**, provide technical assistance in developing and implementing appropriate health services.
- **when requested**, assist State and local health departments in developing a practical protocol to assess access to STD clinical care.

National Institutes of Health will

- support research on the development of non-invasive, saliva-based diagnostic tests for syphilis and non-invasive, single-dose therapy for early syphilis.
- intensify support for syphilis vaccine development.

Health Resources and Services Administration (HRSA) will

- provide technical guidance related to syphilis diagnosis and treatment and management of patients with syphilis as contained in the 1998 CDC STD Treatment Guidelines and in the CDC STD Program Operations Guidelines.

Substance Abuse and Mental Health Services Administration (SAMHSA) will

- work with its single-state agencies to assure that programs funded by block grants have close ties to the local health departments so that drug treatment clients can be referred for syphilis testing.
- work with affected states to develop specific guidelines and policies that emphasize to drug treatment providers the importance of referrals for syphilis testing.

National Institute of Justice (NIJ) will

- explore the ways in which NIJ efforts such as the Arrestee Drug Abuse Monitoring Program (ADAM) and crime mapping can help identify key screening and treatment sites.

Association of Public Health Laboratories (APHL) will

- in conjunction with the State public health laboratories, cooperate with researchers in academia, industry, CDC, and other entities to develop and evaluate a rapid field test and self-collection device for syphilis serology screening.
- organize an annual conference to identify laboratory issues and to develop recommendations to resolve those issues that affect the quality, accuracy, interpretation, and application of lab test data to the diagnosis and treatment of syphilis and other STDs.
- promote the syphilis elimination plan and assist state and local health department laboratories to implement syphilis prevention and screening services.

American Social Health Association (ASHA) will

- provide gender-, language- and STD-specific services through telephone hotlines to individuals and groups at high risk for syphilis.

2. Ensure high quality syphilis preventive and care services

State or local health departments will

- **within 3 months**, assess and develop a plan to visit laboratories and providers who serve high-risk clients that includes a strategy for prioritizing who is visited, a description of how often visits are made, and basic protocols and goals for the outcomes of these visits, and report **annually** on the results of these visits.
- assess **annually** the training needs of public and private providers and provide training as indicated.
- audit **quarterly** a subset of medical records from public providers to verify that appropriate diagnoses and treatment were offered, referrals were made, and documentation is complete.

- **by December 31, 1999**, develop and implement a plan to address identified gaps in diagnosis or treatment.

Jails, in collaboration with the health department will

- evaluate syphilis preventive and care services in jails.
- train all new corrections health staff on the syphilis elimination activities and on any protocols and procedures developed between the health department and the jail.

Public and private laboratories will

- collaborate with State and local health departments to conduct routine syphilis serology screening in jails as well as at other sites where high-risk individuals are not routinely screened.

Community organizations will

- periodically review and update their referral network to assure the quality of referral services.
- collaborate with local health departments and other STD health care providers to develop and deliver accessible and acceptable syphilis screening and treatment services, and to promote utilization of services by persons at risk for infection.

Centers for Disease Control and Prevention (CDC) will

- **within 9 months**, help develop measures of local health department capacity to conduct syphilis elimination programs and shape interventions to strengthen that capacity through its National Public Health Performance Standards Program.
- **as requested**, help develop and deliver training needed for local and state STD staff in community health assessment, strategies for working with communities, and related competencies through its Public Health Training Network.
- **within 9 months**, help develop a strategy to strengthen laboratory quality assurance and the provision of appropriate diagnostic and treatment services.
- collaborate with the National Institute of Corrections to develop a curriculum for training corrections health personnel on syphilis prevention, testing, treatment, and management.

National Institute of Justice (NIJ) will

- explore the possibility of NIH/CDC joint evaluations of syphilis services for those under criminal justice supervision.

National Coalition of STD Directors (NCSD) will

- promote quality services at all levels by conducting a series of workshops and advocating for syphilis elimination.
- survey membership for training needs and advise on the development of training resources.

Association of Public Health Laboratories (APHL) will

- in conjunction with the National Laboratory Training Network, develop and deliver the training needed to perform reliable syphilis serology screening and interpretation of test results to enhance the quality of syphilis preventive and care services.
- develop a strategy to strengthen laboratory quality assurance and provision of appropriate diagnostic follow-up services.
- train staff members in protocols and procedures for use by screening facilities for syphilis testing, treatment, or elimination.

American Social Health Association (ASHA) will

- develop and provide informative materials that encourage behaviors that limit transmission of syphilis and that promote screening and treatment.
- develop and provide targeted informational materials that are culturally sensitive and speak effectively to target audiences.
- develop and implement media strategies that encourage safe sexual practices and screening and treatment.

Appendix E: Enhanced Health Promotion

Effective, culturally appropriate health promotion interventions should be guided by a strong surveillance system. As is true for outbreak response and clinical and laboratory services, community involvement and partnership with relevant organizations and agencies are essential. Some of the activities related health promotion are ongoing; others will need to be completed within a certain time frame. The design and delivery of additional interventions specific to syphilis elimination will require an increase in local, state, and federal resources. The following recommendations are suggested national standards. Locally relevant activities and objectives may need to be developed.

1. Implement and evaluate appropriate and effective health promotion interventions

State or local health departments will

- **within 6 months**, establish partnerships with affected communities to assess the social and behavioral context of syphilis transmission (e.g., Rapid Ethnographic Community Assessment Process, [RECAP]) and identify locally relevant problems related to syphilis and community strengths and resources.
- **within one year,** develop a forum that provides members of the affected community with a means to discuss syphilis elimination with the health department.
- **within one year,** identify and assess high-risk audiences that should be targeted, effective communications channels that can reach these populations, including the utilization of state and local media, and messages that promote syphilis prevention and treatment.
- **within one year,** select and implement specific health communication and health promotion intervention strategies to promote syphilis prevention (e.g., distribution of condoms at no charge) and health care-seeking behavior in locally identified high-risk groups.
- **within 18 months,** work with affected communities to develop and implement appropriate behavioral interventions for syphilis elimination based on the findings of social and behavioral assessments.
- **annually** monitor progress and effectiveness of syphilis elimination behavioral interventions.

Jails, in collaboration with the health department will

- develop, implement, and evaluate appropriate behavioral interventions, including risk- reduction and health promotion informational materials to prevent syphilis.

Community organizations will

- serve as a source of STD information to persons in affected communities.
- collaborate with and provide technical assistance to state and local health departments to assure effective community-level behavioral interventions.
- help select and implement specific behavior change interventions to promote syphilis prevention and treatment in locally identified high-risk groups.

Centers for Disease Control and Prevention (CDC) will

- **upon request**, provide social and behavioral needs assessment training (e.g., RECAP, community development) and technical assistance within one year to all HMAs and will provide the training to all other areas within two years if locally feasible and appropriate.

- **within 6 months**, revise the Introduction to STD Intervention (ISTDI) curriculum to reflect a client-centered approach to disease intervention, consistent with HIV prevention partner services guidelines and training.
- **when requested**, provide training in socio-sexual network interviewing and analysis
- **continually** assist in developing appropriate health promotion interventions.
- **within 9 months**, through the Division of Adolescent and School Health (DASH), develop a protocol that would enable areas experiencing an outbreak in adolescents to 1) collect and use social and behavioral assessment data about adolescents at risk for syphilis; 2) identify and collaborate with organizations serving adolescents at risk for syphilis; and 3) implement programs promoting risk reduction and health care seeking behaviors to adolescents at risk for syphilis.

American Social Health Association (ASHA) will

- implement and evaluate low-cost media strategies to encourage safe sexual practices and to encourage screening and treatment.
- develop and evaluate informational materials that are culturally sensitive.
- provide technical assistance to State and local health departments and community organizations on communication issues between health care providers and target population.

2. Ensure the timely delivery of high quality, confidential, and comprehensive client-centered partner services to patients, partners, and other identified high-risk individuals

State or local health departments will

- using the CDC STD Program Operations Guidelines as recommended national standards, establish, maintain, and improve compliance through **monthly** analyses with local standards for the qualitative performance of early syphilis interviewing, socio-sexual network interviewing (cluster interviewing) and analysis, and for the field follow-up of investigative priorities.
- ensure that each person with a case of early syphilis, identified in both public and private settings, is interviewed **within one working day** of receipt of lab or morbidity report. Cases that fail to meet this standard will be reviewed to determine the reasons for noncompliance.
- re-interview each person who is an early syphilis case from whom no locatable contacts have been elicited or for whom there is no identified source candidate **within one working day** of determination. Cases that fail to meet this standard will be reviewed to determine reasons for noncompliance.
- through direct observation of performance, ensure that each early syphilis interview and socio-sexual network interview or re-interview meets local qualitative performance standards and yields disease intervention results, or produces prompt remedial action to ensure that standards subsequently will be met.
- ensure that an attempt is made to personally contact each sex partner and other high-risk individual (cluster) initiated for field investigation **within one working day** of assignment, unless precluded by reasonable circumstances. Such cases and circumstances will be documented.
- ensure that each investigated sex partner and cluster initiated is investigated in accordance with local qualitative performance standards, unless precluded by reasonable circumstances.
- ensure personal contact with each high-titer reactor **within one working day** of assignment and resolve these cases according to local standards, unless precluded by reasonable circumstances.
- assure that incoming out-of-jurisdiction syphilis field investigations are assigned the same level of urgency as field investigations initiated locally.
- make condoms readily available and provide information on correct condom use and other prevention measures to sex partners and other identified high-risk individuals elicited from anyone with a case of early syphilis.

- conduct training to ensure that confidentiality is maintained while providing partner services.

Community organizations will

- collaborate with local health departments to augment existing partner services through community outreach.

Centers for Disease Control and Prevention (CDC) will

- monitor the progress toward the activities of partner services and will address identified problems with appropriate technical assistance and training.
- identify federal personnel to provide increased or sustained support for partner services in HMAs.

Appendix F:
Primary & Secondary Syphilis Projections Through 2005

Purpose

The purpose of this appendix is to illustrate a possible trend toward achievement of the national goal for syphilis elimination of 1,000 or fewer cases per year by 2005, which would subsequently be maintained at that level or lower.

History

There is a cyclical history of syphilis in the United States, with peaks in cases occurring every eight to ten years. The last peak occurred in 1990 with 50,578 P&S syphilis cases reported. Since that peak year, cases have dropped to an estimated 6,993 cases in 1998.

Methods

Model parameters were estimated by examining past trends in syphilis incidence rates. These parameters were used to illustrate possible future trends in syphilis both with and without elimination efforts. These estimates were derived from a time-series analysis of reported syphilis cases in the United States from 1971 to 1998. This method focused only on the past numbers of syphilis cases rather than using explanatory variables to make forecasts.[1] It is important to note that these projections are based on a method of extrapolation which is unable to account for potential future changes in any of the many factors which affect syphilis rates. These forecasted syphilis rates are provided to illustrate how syphilis incidence might change over time, based on a number of assumptions. However, because these assumptions are subject to uncertainty and change over time, the actual number of future syphilis cases might vary significantly from these estimates.

In the first model (model 1), the annual number of syphilis cases is a function of a constant term and the number of cases in each of the two previous years. Additionally, the model allows for recent trends to vary from historical trends by including a dummy variable for years 1994-1998.

The projections of model 2 are based on the parameter estimates of model 1, with an additional assumption that a national syphilis elimination program would reduce annual syphilis incidence by 33% per year. In other words, the model predicts how many cases there would be (based on syphilis cases in 1971-1998 with an additional emphasis on recent years), and then reduces this estimated number of cases by 33%.

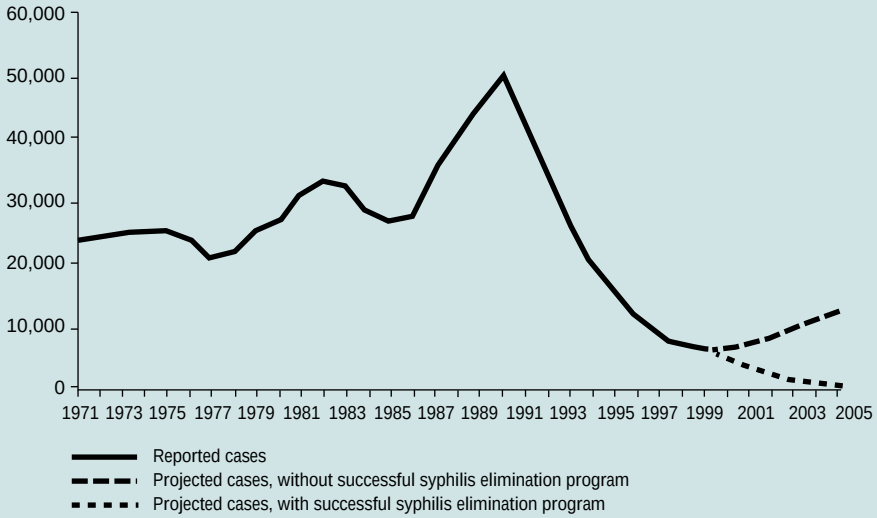
The models examined past syphilis cases suggesting that the number of reported syphilis cases declined by an average of 16.2% per year from 1993 to 1998, after controlling for cyclical trends in syphilis incidence. While the actual annual rate of decline in syphilis cases is greater than 16.2%, the models suggested that cyclical trends in syphilis incidence accounted for part of this decline.

The projections of model 1 assume that this recent trend (16.2% annual reduction) will continue. The reason this assumption does not lead to an annual reduction in projected cases of exactly 16.2% is that the model also incorporates cyclical trends that suggest syphilis cases will increase in the next few years, just as they have done in the past after several years of decline.

[1] Kennedy P. A. Guide to Economics, 2nd Ed. Cambridge, MIT Press, 1985, 203–211

Table 1.
Primary and Secondary Syphilis Case Projections Through 2005[2]

Year	Model 1: adjusted for recent trends, assumes current level of STD prevention activities through 2005	Model 2: same as model 1 except an additional 33% annual reduction in syphilis incidence (because of syphilis elimination) is assumed for 2000-2005
1998 (actual)	6,993	6,993
1999	6,490	6,490
2000	6,710	4,824
2001	7,483	3,190
2002	8,673	2,074
2003	10,091	1,432
2004	11,474	1,102
2005	12,545	963



The projections of model 2 are based on the same assumptions of model 1, except that a national syphilis elimination effort is assumed to reduce annual syphilis cases by 33% (after adjusting for cyclical and recent trends), beginning in the year 2000. Again, the reason this assumption does not lead to an annual reduction in projected cases of exactly 33% is that the model also incorporates cyclical and recent trends.

[2] For illustration only; actual future incidence may vary greatly from these estimates, as described in the methods section.

Appendix G:
Elements of a Health Communication Plan

This appendix provides an example of the essential elements of a health communication plan. Plans will vary based on the local epidemiology, the community, and other key partners involved in syphilis elimination efforts.

What is meant by a health communication plan?

A working definition of health communications is *the study and use of communication strategies to inform and influence individual and community decisions that enhance health*. Health communications should be considered a tool by which one can address program goals and objectives. Therefore, a health communication plan would set up the steps to use communications strategies to accomplish program goals and objectives. Health communication strategies are not primarily intended to change individual behaviors, though they can contribute to such behavior change. However, they can influence the conditions under which positive behavior change is more likely to occur.

To develop a health communication plan, at a minimum, the following steps should be taken:

1. **Identify overall program goals.** This is an activity you should undertake for your whole program.
2. **Identify overall program objectives**. This also is an activity you should undertake for your whole program.
3. **Of the program objectives, identify which might benefit from health communications. Based on these chosen program objectives, determine health communication objectives.** Note that all program objectives will not necessarily benefit from health communication strategies. You might best think about these from the perspective of what a State or local health department is best positioned to do, which would probably mean setting population-level rather than individual-level health communication objectives. For example, an appropriate communications objective might be *to raise community leaders' awareness of the significance of the STD problem in XX state*. A less appropriate communications objective might be *to increase condom use by adolescents.*
4. **Identify target audience for communications objectives**. This step will probably take place most naturally in conjunction with step 3. While there will likely be more than one potential target audience, you will probably want to prioritize your audiences and choose the highest one. (Examples of target audiences: Policymakers, community leaders, non-STD public health leaders, non-governmental organizations that serve at-risk populations, etc.)
5. **Identify candidate strategies that are best suited to communication objectives and that will reach the target audience.** Example of a strategy: Influence key community leaders who have not paid attention to STDs to recognize the importance of why Medicaid managed care contracts must contain certain components to support STD prevention.
6. **Conduct a needs assessment** that determines which of these strategies are currently being addressed, what the gaps in current efforts are, and what strategies are not being addressed at all.
7. **Based on gaps, define key health communication strategies you will pursue.**
8. **Choose tools you will use to carry out strategies.** See list below.
9. **Establish a system for evaluating effect of health communication strategies in meeting objectives.**

Examples of health communication tools

Media

The most obvious tool that most people think about is media. This is a potentially powerful way to reach large numbers of people with your message. The term "media" typically includes radio, television, and print media (magazines and newspapers). Media are most effective when used strategically. Used in isolation, a single medium's effects are likely to be minimal.[3]

Building Partnerships

Developing working relationships with non-governmental organizations as well as with governmental entities not specifically focused on STDs is a very important avenue for spreading STD prevention messages and publicizing goals. Other partners can reach audiences often inaccessible to health departments. Also, populations which a health department may want to target may not trust or have confidence in the health department, but do respond to other organizations they are associated with. Partners can be critical vehicles both for funneling information and giving new voice to your messages. They can be important also in establishing community-level, grass-roots support for STD prevention—a gap that exists in most parts of the country.

Building Relationships with Community Leaders and Policymakers

Those who have influence in a community can be critical in establishing an environment receptive to STD prevention programs and productive of increased resources.

Information Development and Dissemination

Developing or distributing information on any aspect of STDs can contribute to informing those to whom you are able to distribute it. It is critical that the information be appropriately written for the targeted populations. Depending on your audience, examples of what might be developed are talking points on some aspect of an STD topic; informational brochures or fact sheets on particular aspects of STDs; how to answer "hard questions"; etc. There may also be existing materials that you could use for this purpose. (e.g., STD Treatment Guidelines or subsequent products; STD state profiles; CDC Fact Sheets on particular diseases; etc.).

Contests

Contests are sometimes useful ways to get messages to the public and to get public attention. Prizes can motivate participation and raise awareness about an issue. A classic example of a contest might be drawings or paintings for an STD prevention poster or other publicity media.

Drama, Songs, and Music

These media can enhance larger campaigns and might be promoted as contests for local writers and composers.

Internet Outreach

The Internet has become an increasingly more popular way to reach large numbers of people. If you or organizations you work with have a website, it could be used for informing a large public. For example, in conjunction with a major article on STDs in the *St. Louis Post Dispatch*, an interactive forum was set up on the Internet allowing people to ask a doctor questions about sexual health. This was part of a larger set of health communication activities that evolved around the *Dispatch* article.

Paid Advertisements

If you have resources, strategically placed, paid advertisements can be used as part of a set of health communication activities.

[3] *Media Advocacy* is an example of strategic use of media that also requires building partnerships. *Media Advocacy* is the strategic use of mass media for advancing a social or policy initiative. Initially, the goal of media advocacy must be determined. Then a story needs to be developed based on facts and values and made meaningful to a clearly defined target audience so that it can attract attention and precipitate specific action. (Wallack et al., 1993)

Selected References for Health Communications

Wallack L & Dorfman L. Media Advocacy: A Strategy for Advancing Policy and Promoting Health. *Health Ed Q* 23 (3):293-317, 1996.

Selected Internet Web Sites

- From National Cancer Institute, publication called: *Making Health Communications Work* website—rex.nci.hih.gov/NCI_Pub_Interface/HCPW/HOME.HTM
- From AIDSCAP's Behavior Change Communications Unit—www.fhi.org/aids/aidscap/aidspubs/handbooks/bccmedia.html

The Media & You: A Basic Survival Guide by Norman Hartman, National Public Health Information Coalition; produced by Hawaii Department of Health

Appendix H: Resources and Support Required

In its report to Congress last year, CDC estimated that $25 million in new Federal funds and 16 new FTEs (plus the retention of 30 current field staff planned for reduction) would be required annually for at least the next five years to address the nationwide syphilis elimination effort. We also indicated that, because of intervening variables, (e.g., crack cocaine epidemics, the decaying infrastructure of our inner cities), it was difficult to accurately estimate either the cost or the duration of such a focused effort. This is because for years, some areas have been severely underfunded for STD prevention, resulting in gaps in services, poor surveillance capacity, and persistent syphilis transmission. Monetary support will be needed from the Federal, State, and local levels, especially for State and local organizations in high morbidity areas, to successfully implement syphilis elimination activities. It is likely that it will take at least until 2005 to bring us to the point of elimination Nationwide; even then it will be necessary to sustain a sensitive surveillance and outbreak response system after syphilis is eliminated.

In the past year, as we have begun to focus more closely on the resource needs of such an effort, we have had significant input from our State and local partners that the original estimate of $25 million will be inadequate if we truly hope to achieve the goal of elimination. Also, it is clear that this should not be strictly a Federal initiative, and that State and local governments should be expected to share in the financial and personnel investment that will result in a much improved systems approach to syphilis elimination. To this end, as the strategies of the elimination plan have become more clear, CDC staff members have developed new cost estimates that include total additional costs for the elimination effort, and have factored in the estimated contribution of State and local governments as well. Table 2 indicates the current estimated costs for the plan. Usually the costs for STD prevention resources are shared among Federal, State and local government. Based on that distribution, the State and local government portions of these costs are estimated at 35 percent a year.

Past syphilis elimination efforts have failed as a result of failure to sustain STD-related field staff and financial resources. Thus, the success of syphilis elimination efforts will be somewhat dependent on whether the necessary monetary and personnel resources are available to carry out this initiative. Further, because of the cyclic nature of syphilis and because we have had an eight-year trend of decreases, it is essential that this funding not be phased. That is to say, to achieve elimination, all of the resources indicated as needed annually are needed now. It is critical also to recognize that as the reported infectious syphilis morbidity curve begins to drop, Federal, State and local government resources must continue unstinted. Experience has shown that premature reduction in budgets has brought increases in the number of cases and this must be avoided.

Using a standard decision tree model of the natural course of syphilis, CDC has estimated the direct medical costs of syphilis in the United States. It includes the cost of syphilis in adults, congenital syphilis, and the cost of syphilis-attributable HIV cases. The costs for adult and congenital syphilis are estimated at $213 million annually, with an additional cost of $752.2 million for syphilis-attributable HIV infection. The direct cost savings for this program for each Federal dollar spent are nearly $6 for syphilis alone and $26 when syphilis-attributable HIV infection is included.

Table 2.
Estimated resource needs (in the millions) for syphilis elimination, 1999-2003

Strategy	1999	2000	2001	2002	2003
Enhanced Surveillance	$4.3	$2.7	$2.8	$2.9	$3.0
Strengthened Community Involvement & Partnership	$14.8	$15.2	$15.7	$16.2	$16.7
Rapid Outbreak Response	$10.4	$10.7	$11.0	$11.3	$11.6
Expanded Clinical & Laboratory Services	$12.0	$10.6	$10.9	$11.2	$11.5
Enhanced Health Promotion	$9.9	$10.2	$10.5	$10.8	$11.1
Headquarters Costs	$ 5.5	$ 5.7	$ 5.8	$ 6.0	$ 6.2
Total	$56.9	$55.1	$56.7	$58.4	$60.1
State/Local portion	$19.9	$19.3	$19.8	$20.4	$21.0
Federal Portion	$37.0	$35.8	$36.9	$38.0	$39.1

Note:CDC will redirect existing STD Prevention grants to fund 30 dedicated FTE staff specifically for syphilis prevention systems development, outbreak assessment and investigation, control, and training in community intervention. These FTEs will be retained from planned reductions in the STD field staff.

Appendix I: Historic Milestones for Syphilis Elimination

In 1995, a meeting was held in Washington, D.C. to discuss the concentration of syphilis in the South. Born out of that meeting was the Innovations in Syphilis Prevention (ISP), a research program that aimed to generate new strategies for sharply reducing syphilis incidence, especially in Southern states. Health departments worked with community organizations to develop and implement appropriate and effective interventions. Preliminary findings from the ISP have shown that local assessments provide a better understanding of the circumstances surrounding the syphilis problem in the South and that locally developed interventions are effective in communities at risk for syphilis.

With morbidity still on the decline and ISP projects showing successful results in areas where syphilis had historically persisted, the idea of eliminating syphilis became a serious consideration for those in STD prevention. Several presentations were made to key leaders, including Dr. David Satcher, CDC Director at the time, and to key organizations, many of whom endorsed the concept of syphilis elimination (Table 1). In 1998, the Department of Health and Human Services wrote a report to Congress that proposed a campaign to eliminate syphilis and projected the resources required to achieve this goal. As a result, Congress earmarked $2.4 million in 1998 and $8.3 million in 1999 for syphilis elimination.

Table 1.
Selected milestones leading to the syphilis elimination initiative

1/95	Syphilis in the South Meeting, Washington, DC
7/95	"Reaching Populations Affected by Syphilis, In the South and Among African Americans," consultants meeting, Atlanta
9/95	Innovations in Syphilis Prevention Research Program initiated
5/97	Endorsement of syphilis elimination by the Council of State and Territorial Epidemiologists (CSTE)
11/97	$2.4 million received from 1998 Congressional budget for syphilis elimination
1/98	DHHS Report to Congress: Elimination of Syphilis from the United States
3/98	Endorsement of syphilis elimination by the CDC Advisory Committee on HIV and STD Prevention (ACHSP)
5/98	"Developing Strategies for Syphilis Elimination in the United States," consultants meeting, Atlanta
11/98	$8.3 million received from 1999 Congressional budget for syphilis elimination
12/98	Dr. Jeffrey Koplan, CDC Director, endorses syphilis elimination as a top priority and challenges the nation to plan for syphilis elimination, National STD Meeting, Dallas

Report to Congress

Elimination of Syphilis from the United States

Department of Health and Human Services
Centers for Disease Control and Prevention

David Satcher, M.D., Ph.D.
Director
Centers for Disease Control and Prevention

Elimination of Syphilis from the United States

Introduction

In the report accompanying the fiscal year (FY) 1998 Labor, Health and Human Services and Education and Related Agencies Appropriation Bill, the House Appropriations Committee stated:

> Currently, the United States has the highest rates of syphilis in the industrialized world, particularly in the southern portion of the United States. The syphilis problem in the United States is concentrated in approximately 37 counties across the nation. In the early 1990's, CDC convened a panel to develop a comprehensive, locally controlled syphilis elimination[4] program entitled "Syphilis in the South" to address this concentration of syphilis. The Committee requests CDC to present a report by January 1, 1998 detailing the additional investment that would be required to eradicate syphilis in the United States.

The Senate report included similar language which stated:

> The Committee requests that the CDC report to the Committee by February 1, 1998, concerning the progress made to date in eliminating syphilis, and the additional effort and investment needed over the next 5 years to eradicate this disease in the United States.

Background

Syphilis is a serious, chronic infectious disease caused by the spirochete *Treponema pallidum*. The most important early symptoms, open genital sores (ulcers), allow the Human Immunodeficiency Virus (HIV) to be transmitted much more efficiently. Recent studies suggest that heterosexual HIV transmission in the United States still largely follows the geography of the syphilis epidemic of the late 1980s and early 1990s. The bacterium that causes syphilis can also cross the placenta to kill the fetus or cause permanent neurologic damage in the baby (congenital syphilis). In American cities with syphilis outbreaks, there is a continuing high but usually under-reported impact on infant health. For example, in one Texas city recently experiencing a syphilis outbreak, nearly 2 percent of all babies of African-American women had congenital syphilis, resulting in fetal and neonatal mortality, morbidity, and costly in-hospital treatment. In 1995, in the four health districts that approximate south-central Los Angeles, almost 3 percent of live births resulted in congenital syphilis. Additionally, use of crack cocaine in the exchange of drugs for sex has been identified as a substantial contributor to the syphilis epidemics of 1988 and 1991.

As late as the 1940s, syphilis was epidemic in the United States and involved almost all socio-demographic groups. However, syphilis now has been eliminated from almost 2,300 (73 percent) U.S. counties. In 1996 more than 84 percent of primary and secondary cases were reported from only 15% of U.S. counties and half of all new cases of syphilis were concentrated in 38 (1.2 percent) U.S. counties. Urban and rural areas in the South and several major cities throughout the U.S. continue to be foci of the epidemic. Non-Hispanic, black Americans are particularly affected, with syphilis rates more than 50 times higher than among non-Hispanic white Americans. Since highly effective and inexpensive screening tests and treatment exist for syphilis, and since syphilis has been eliminated from several industrialized coun-

[4] Elimination (as opposed to eradication) is defined as absence of tranmission of new cases within the jurisdiction except when infection is introduced from outside of the jurisdiction and, when this occurs, there are no more than four generations of spread before the outbreak is controlled.

tries, it is clear that a key reason for the persistence of syphilis in the U.S. is the weakness in our public health surveillance, clinical services and client follow-up infrastructure.

In 1997, we are approaching the lowest rate of syphilis ever reported in this country. Because of this, and because the Southeastern U.S. and a few urban areas contain the majority of syphilis cases, a focused effort now could eliminate domestic transmission of syphilis in the United States. Recent history suggests that the most likely scenario if elimination is not achieved is an inevitable resurgence of epidemic syphilis, creating new waves of HIV transmission and new outbreaks of congenital syphilis in our most vulnerable populations.

Additional Effort and Investment Needed

Achieving the goal of elimination of sustained domestic transmission of syphilis in the United States will slow the epidemic of HIV/AIDS among heterosexual, minority communities and populations and improve the health of thousands of newborn children. A syphilis elimination initiative should encompass the following six components:

1. A National Task Force and National Plan to Implement and Measure Progress Toward Syphilis Elimination

A task force comprising a multidisciplinary group of experts, representatives of organizations that speak to the perspectives of minority communities, and other prevention partners will: 1) refine the concept of syphilis elimination for adult and congenital infection; 2) develop an implementation plan for the Nation; 3) provide specific, time-phased morbidity goals; 4) define methods and indicators for evaluating progress and cost-effectiveness of the interventions implemented in each geographic area and 5) develop a system for categorizing areas by their progress in meeting these goals.

2. Community Participation and Partnership Development

Syphilis diagnosis and treatment are easy and inexpensive. For communities at risk, the interaction between the involved community and public health infrastructure and the public health capacity principally determine syphilis rates. Therefore, community involvement in designing and evaluating locally relevant, enhanced prevention services and systems is an essential key to the success of any syphilis elimination initiative.

Principal among the new and existing partners that States will need to engage are representatives of communities affected by syphilis, including traditional and nontraditional organizations that can share the perspectives of marginalized African-American communities where syphilis rates are highest. Other crucial community partners include local public and private providers of medical care, including managed care organizations, prenatal care providers, drug treatment agencies, and correctional health entities, and the public health and medical research communities. Community participation in syphilis elimination activities must be closely coordinated with the HIV prevention community planning process, with maternal and child health systems, and with systems of primary care, especially those providing services to marginalized populations

3. Demonstration Projects of Enhanced Prevention Services and Systems

Demonstration projects will be funded on a competitive basis focusing on States with 1996 primary and secondary syphilis rates above the Year 2000 objective of 4 cases per 100,000, and cities/counties (including defined jurisdictions with at least 200,000 population) that are above the Year 2000 objective. The projects will focus on high morbidity communities within these areas. Each project area will design, implement, and evaluate intervention strategies based on new and existing approaches that combine community involvement, enhanced community outreach, high quality disease surveillance, and monitoring of population-based trends in risk behaviors. Identification of critical prevention opportunities (e.g., in correctional facilities and drug treatment centers, etc.), efficient delivery of effective behavioral and biomedical interventions, and assessment of both quality and coverage of prevention services will also be included. This "systems approach" to syphilis elimination will

also build sustainable prevention capacity for populations at high risk for HIV, other STDs, TB and emerging infectious diseases.

4. Enhanced Surveillance Systems

High quality surveillance data are essential to communicable disease prevention, control and eventual elimination. An improved syphilis case surveillance system would include extending screening and reporting to institutional settings where clients at high risk for syphilis are seen (e.g., correctional facilities, drug treatment centers, and hospital emergency departments) and improving the reporting, analysis and utilization of surveillance data at the local, State, and national levels. In areas with rates that have recently dropped below the Year 2000 objective, or in areas without evidence of current syphilis transmission, surveillance must be maintained to detect re-introduction and prevent subsequent dissemination and amplification of the disease. Because syphilis will remain endemic, in the short-term, elsewhere in the U.S. and the world, a successful elimination effort will translate syphilis into the category of a potential re-emerging infectious disease.

5. Outbreak Response Teams

Highly mobile technical assistance and response teams will be developed locally and deployed to key areas at risk as outbreaks are identified by the surveillance system. Team members will be assigned to priority communities for syphilis prevention/elimination activities. The multidisciplinary teams will be composed of community experts, operations and surveillance staff, disease intervention specialists, medical epidemiologists and others, as appropriate. The teams will also be available for other emerging infectious disease outbreaks that involve community assessment and response.

6. Targeted Prevention and Operations Research

Applied prevention and operations research will be critical to the development of unique and effective syphilis elimination approaches in the demonstration projects. The assessment of strategies, such as new diagnostic tests that do not require blood-drawing, oral therapies that do not require injection, behavioral outreach to ensure timely and appropriate health care, and better definition of the epidemiology of persisting infections within communities will allow prevention to move from STD clinics into communities where the battle for elimination will be won.

Investment Needed

Currently, CDC estimates it is spending $35 million per year to address syphilis prevention. It is CDC's best estimate that the elimination of syphilis will cost at least an additional $25 million per year over the next five years for a total of $125 million during the next five years. Because of intervening variables, (e.g., crack cocaine epidemics; the decaying infrastructure of our inner cities), it is difficult to project the exact duration of such a focused effort. However, the evaluation components in the national implementation plan and the demonstration projects and the data from the enhanced surveillance systems should provide the information needed to give more accurate resource estimates within three years. At this time, we believe that it is likely that it will take at least a decade to achieve elimination nationwide. At that point, sustained support for disease surveillance and outbreak response will be necessary until the disease is eliminated worldwide.

Report

"Reaching Populations Affected by Syphilis, In the South and Among African Americans"

Interdenominational Theological Center
Atlanta University Complex
Atlanta, Georgia

July 18, 1995

Prepared by Jo Valentine
Division of Sexually Transmitted Disease Prevention
National Center for HIV, STD, and TB Prevention
Centers for Disease Control and Prevention

Summary*

To seek guidance for the development of client-centered, community-involved strategies prevent and control among African Americans, the Division of Sexually Transmitted Disease Prevention (DSTDP) convened a meeting of African American external consultants and Centers for Disease Control and Prevention (CDC) staff to explore new ways to define and frame the problem of syphilis in the south among African Americans. The meeting was held on July 18, 1995 at the Interdenominational Theological Center in Atlanta, Georgia, and was moderated by an African American external consultant. This document serves as a record and analysis of the counsel from the consultants. The quotes presented here were taken from the initial notes recorded during the meeting. The document is divided into five sections: 1) Background, Purpose, and Organization of the Consultation, 2) Description of the Problem, 3) The Tuskegee Study Legacy, 4) Intervention Strategies, and 5) Conclusions.

The consultation focused on the following key areas: 1) how syphilis has been defined and addressed by the public health establishment; 2) the relative importance of syphilis to African Americans; 3) the meaning of syphilis in African American communities; 4) intervention activities to help communities address syphilis and its consequences; 5) linking syphilis prevention to HIV prevention and other public health efforts; and 6) the legacy of "the Tuskegee Study" among African American communities.

The consultants described four features of the syphilis problem among African Americans in the South: 1) inaccurate/inadequate epidemiological and research data, 2) the stigma of syphilis for African Americans, 3) competing health care and social service priorities in a dynamic political climate, and 4) morality and religion.

The consultants gave four basic recommendations to the Division of STD Prevention for achieving the prevention and control of syphilis in African American communities in the U.S. These recommendations were as follows:

1. To increase African American community participation in STD prevention and control (e.g. research design, community planning);
2. To support research and program efforts that examine epidemiological data and behavioral issues, and pursue strategies to minimize biases in these data;
3. To improve understanding of African American public perceptions of STDs and of different approaches to STD prevention; and
4. To improve understanding of the diverse strata and sub-populations within the African American population in the United States, and the social dynamics that sustain STDs in African American communities.

Meeting Participants

External Consultants

Byllye Avery, MEd, *National Black Women's Health Project, Swathmore, PA*
James Ferguson, DVM, PhD, MPH, *Tuskegee University, Tuskegee, AL*
Valerie Frazier Griffin, RNC, MS, ANP, *Delta Health Center, Mound Bayou, MS*
Veronica Hartwell, *Jackson State University, Jackson, MS*
John Hatch, PhD, *School of Public Health, University of North Carolina, Chapel Hill, NC*
Eleanor Hinton-Hoytt, PhD, *National Council of Negro Women, Washington, D.C.*
Carol Lewis, *Minority Health Professions Foundation, Atlanta, GA*
Pernessa Seele, *the Balm in Gilead, New York City, NY*
Stephen Thomas, PhD, *Emory University, Atlanta, GA*
Ossie Williams, *Fulton County Health Department, Atlanta, GA*

Centers for Disease Control and Prevention Participants

Nick Farrell, *Division of STD Prevention (DSTDP)*
Helene Gayle, MD, MPH, *National Center for HIV, STD, and TB Prevention (NCHSTP)*
David Hale, *Division of HIV/AIDS Prevention (DHAP)*
Guillermo Herrera, MD, *DSTDP*
Bill Jenkins, PhD, MPH, *DSTDP*
Rev. George LaSure, *DHAP*
Arzell Lester, *NCHSTP*
Judith Lipshutz, MPH, *DSTDP*
Mike St. Louis, MD, *DSTDP*
Dorothy Triplett, MEd, NCHSTP
Rueben Warren, DDS, MPH, DrPH, *Office of the Director, CDC*
Judith N. Wasserheit, MD, MPH, *DSTDP*

* the Summary is an expanded version of the original report's Forward.

I. Background, Purpose, and Organization of the Consultation

Despite overall declining rates of the disease, the syphilis epidemic continues to disproportionately affect African American communities in the southern region of the United States (Toomey, et. al., 1993; St. Louis, et. al., 1996). Individual risk behaviors do not adequately explain the persistence of this epidemic among African Americans in the South. Some evidence suggests the combined effects of poverty, minority ethnicity, and geographic clustering may influence the high syphilis rates (Aral, 1995). As McKinlay stated in his article, "The Promotion of Health Through Planned Sociopolitical Change: Challenges for Research and Policy", "[For] a variety of reasons, health promotion efforts need to move from the level of the individual, upstream, to aspects of the social system."

To develop and implement effective strategies to reduce the rate of primary and secondary syphilis among African Americans in the southern U.S., the Division of Sexually Transmitted Disease Prevention (DSTDP) launched the "Syphilis in the South Initiative." This broad initiative is a collaborative, federal and southern states multi-disciplinary attempt to move the current syphilis control program towards a syphilis elimination effort. As a supplementary mission and as a primary approach, the initiative is designed to further develop the new public health paradigm that brings together scientists, providers, and community members, as equal partners in the design and delivery of interventions to control and prevent disease.

To promote more client-centered, community-involved approaches, DSTDP invited African American external consultants to participate in a consultation meeting with Center for Disease Control and Prevention (CDC) staff, during which they could explore new ways to define and frame the problem of syphilis in the South among African Americans. The group was asked to consider potential intervention strategies to address the epidemic. The meeting had three main objectives:

1. To solicit information and guidance on issues related to new, community-oriented approaches to syphilis prevention, especially in the southern U.S.
2. To promote communication and develop collaborative relationships among CDC staff responsible for syphilis prevention and control and African American scientific and community leaders
3. To plan future steps in community participation and consultation on syphilis prevention

Key Questions Explored During the Meeting

- How has the problem of syphilis been defined and addressed by the public health establishment?
- What is the relative importance of syphilis to African Americans?
- What is the meaning of syphilis in African American communities?
- How do we carry out activities to help communities deal with syphilis and its consequences?
- How should syphilis prevention be linked to HIV prevention, and what other links should be forged?
- Is the Tuskegee Study an issue among African Americans?

Following a review of the key questions and traditional parliamentary procedures, the ensuing discussions were mostly unstructured. There was no formal attempt to achieve consensus around issues raised. There were no formal presentations during the meeting.

II. Description of the Problem

Meeting participants described four features of the syphilis problem among African Americans in the South: 1) inaccurate/inadequate epidemiological and research data, 2) the stigma of syphilis for African Americans, 3) competing health care and social service priorities in a dynamic political climate, and 4) morality and religion.

A. Inaccurate/Inadequate Epidemiological and Research Data

According to a number of participants, the syphilis epidemic has been traditionally described in epidemiological terms which may be inaccurate and/or inadequate. Despite this perception, participants noted that current epidemiological data should still serve as a basis for the discussion, and it was agreed that epidemiological data is an important part of describing the problem. One external consultant stated,

"We must incorporate the epi data into the discussion. Given the current political climate, we need to present syphilis as a national problem. Therefore we need a scientifically designed study to show where syphilis incidence is highest because the idea that it is highest in the South is unsubstantiated by empirical data; it is prejudice. We are guessing about syphilis incidence. We could and should do a benchmark study like the one done in Michigan on communicable diseases among working class Michiganders."

Some participants did indicate a degree of confidence in the current epidemiological data as it reflects the characteristics of those persons infected with syphilis, but there was substantial skepticism about the data among the group members. As an example, participants cited concern over bias in reporting from public health clinics. Public health clinics were described as having strong reporting systems, when compared to private providers who typically underreport. In the words of another external consultant,

"We don't criticize the existence of the government's figures, but their accuracy is not good because their statistics are derived from studies only of those who are treated in public clinics."

A CDC staff person agreed,

"There is some over-reporting from public clinics in the data we have and there are a number of biases in the data, but syphilis surveillance and reporting is better than for gonorrhea and chlamydia."

Still, although many agreed that there was some reporting bias in the current data, there was consensus among the group that there is a problem of syphilis among African Americans in the South. One external consultant said that even if the missing data might be **"unattainable"**, he suspected that the STD rates are higher among blacks. Another external consultant supported his opinion,

"There is a problem with syphilis and blacks in the South. There's no doubt. Yes, there are many other problems, but syphilis is a problem in the South and among blacks. We now have serology that picks up people who formerly were not picked up. Reporting on whites and blacks used to skew the reporting, but there is a black, Southern problem with syphilis. Even if the figures are incorrectly reported, there are still too many blacks with syphilis."

In general, the group agreed that understanding and acknowledging the limitations of the epidemiological data was important.

In addition to epidemiological data, a number of meeting participants discussed the need for more useful research examining issues associated with syphilis transmission among African Americans. The lack of knowledge about the social organizations of African Americans was commonly regarded as a critical impediment to the public health interventions to control and prevent syphilis. One African American consultant observed,

"There is a real dearth of scientifically arrived at knowledge of the social organization of blacks in America because there is no such thing as a monolithic black community. There are socio-economic classes within black America just as there are within white America."

Another external consultant added,

"...There is a need for community surveys. There has been an assumption that the black community is everywhere the same. The definition is a political one. We don't all fit the same mold anymore than white people do."

As an example of an area where research is needed, one CDC staff person in the group offered,

"The networks of social contacts [for example in Fulton County] are not geographic, but rather are probably social. The cultural factors are nearly unknown, so we need to find out what they are and how they fit into the whole picture..."

Current research was thought to be frequently culturally insensitive by many of the meeting participants. One external consultant noted:

> **"Researchers and interviewers need to be able to talk to everybody, not just to people who are like them. Cultural sensitivity can display itself in the way that an interviewer picks up the subtle signals in, for instance, the way a respondent says "no" or "yes." There are black folks among these consultants** [here today] **who wouldn't be culturally sensitive to many other black folks. The people at this table would probably not be able to conclude a successful interview with somebody who lives in a housing project, for example."**

A CDC staff person concluded,

> **"The resources are finite, and money spent on a survey or study cannot then be spent on something else as well. Any study will have to be done by people who can elicit the type of information required. Just being black would not be enough. They will have to be able to tune into the nuances of speech and posture, and they will have to be able to ask the right questions and then understand the answers."**

B. The Stigma of Syphilis for African Americans

There was consensus among the group, that while the rates of some sexually transmitted diseases, including syphilis, are higher among African Americans than they are among other ethnic groups, it is important not to stigmatize African American communities when creating public health activities to prevent STDs. The external consultants said,

> **"…We need to wipe out syphilis without stigmatizing black people."**

> **"This** [syphilis among African Americans] **needs to be approached with caution…"**

There were those who were strongly against framing the U.S. syphilis epidemic as an African American problem. A CDC staff person of this opinion argued,

> **"If we frame the programs to focus on blacks in the south, then it will go nowhere among blacks in the south."**

As a means of reducing the stigma associated with syphilis for African Americans, there was some support for describing syphilis as a problem of low-income persons. In the words of one external consultant,

> **"…[We] need to delineate by socio-economic status instead of race since low-income whites are in the same boat with low-income blacks. I suggest de-stigmatizing syphilis as a racial problem by zeroing in on income level."**

However, there were those in the group who supported framing the syphilis epidemic as an African American problem. One CDC staff person said,

> **"People are too concerned about stigmatizing blacks and therefore the problem, which does exist, is not being addressed. We are too defensive and need to get by that and deal with the problems themselves as they really are and not as we would like them to be. This is a very complex problem and is difficult to understand. This is related to many factors; for example, black women's health is related to black men's behavior."**

An external consultant added in agreement,

> **"There is a fear about stigmatizing the black community, but we have to accept the stigma and take the heat and focus on the problem and conquer it. This situation, illuminates the complete breakdown of the whole public health infrastructure…"**

Finally in a return to the issue of research data, another CDC staff person asked the questions,

> **"…Is it** [syphilis] **associated with race? Or are there other variables that are not being collected?"**

C. Competing Health Care Priorities in a Dynamic Political Climate

Given the current fiscally conservative political climate and given the number of competing health care priorities, a number of the participants indicated that framing the problem of syphilis as a problem among African Americans could inhibit an effective governmental response to the epidemic, leading one external consultant to query,

> **"How do we adjust to the present political climate and the changes therein and still reach the populations we need to reach?"**

Others also expressed concern about securing resources to address the problem of syphilis, if it were framed as an African American problem, another consultant said,

> **"If the problem is presented as a black problem, there will never be funding for it."**

It was thought that a major part of the problem of syphilis has to do with the lack of medical care. Later in the discussion, an external consultant asked,

> **"The most important problem is [lack of] access to [medical] care. So we have to re-conceptualize the public health infrastructure so that we can provide care to all. We need visiting nurses, lay health nurses. We need the old fashioned type of public health delivery. Who makes money off of 34 million people not getting health care? What can we do to bring about systemic change?"**

A CDC staff person followed the question with the comment,

> **"We need to get accessibility and acceptability of care. Is 'Syphilis in the South' more sell-able than 'Syphilis in Blacks'? We must focus on one thing that will teach us about everything else."**

CDC's funding efforts for public health activities were described as complex but flexible. It was recognized that by law, funds must go to state and local health departments. It was also noted, that some funds have gone directly to community organizations. As a CDC staff person noted,

> **"...Before 1986, the federal government never awarded money to CBOs** [community-based organizations]**, and that has changed the whole of public health in the country. But now the winds are blowing in another direction."**

However, some of the meeting participants were of the opinion that CDC funding is not always equitable across all minority populations. One external consultant said,

> **"The gays control the CDC system [of funding]; blacks don't. How much money does CDC actually give to blacks?"**

In general, the group agreed that the Centers for Disease Control and Prevention (CDC) should assure commitment to improving the health status of minority populations in general. The group also thought that CDC would need to develop appropriate infrastructure that could adequately respond to recommendations made by this present panel. As one external consultant put it,

> **"If we are going to do public health, we need the infrastructure."**

A significant amount of discussion was devoted to prioritizing the syphilis epidemic in relationship to HIV specifically, and to other STDs in general. One consultant asked,

> **"Why do we focus on syphilis instead of on STDs in general, since you'll be treading the same path and seeking the same information whichever one you focus on?"**

A CDC staff person responded,

> **"Focusing on syphilis is not to say that other STDs are to be ignored, but in focusing on syphilis we will necessarily learn about all sorts of other related things, because the whole thing is one ball of wax."**

Another external consultant suggested linking syphilis to STDs in general, including HIV, and expanding the issue to one of human sexuality,

> **"I don't understand what it is that will not be addressed if we focus on syphilis as we have done on HIV. In dealing with churches we**

have to get them to deal with sex. If we change the focus from HIV to syphilis, we run the risk of confusing people. We need to go from HIV to STD in general, not just from HIV to syphilis. The broader issue is to get our communities to focus on the broader socio-psycho-cultural issue of human sexuality. We need to look at what we have done with HIV and extrapolate from that to something broader—for example, sex—instead of to something narrower—for example, syphilis."

Another external consultant added,

"We need to go the way of comprehensive health, but to get funding you have to deal with specific diseases because nobody every died of [a lack of] **comprehensive health. In the public mind—and we probably need a study of this—there is a difference between who gets HIV and who gets syphilis. HIV was a 'homosexual disease', whereas gonorrhea was something that was contracted by boys who were sowing their wild oats. What is STD? It may work, but it may not, so we'll probably have to focus on a specific disease, and if the epi folks say that's syphilis, then we may have to go with that."**

Finally another consultant concluded,

"The agenda has already been set, so we have to take it from there. We were invited to participate in this meeting after the agenda had already been set. The research projects are already decided on, but this panel can influence those studies still at this point. We cannot change the agenda that is already in place. We don't have to compete, but simply to get aboard the train that has already been set in motion by the whole battle against HIV. By focusing on syphilis, we will be forced to discuss things (history, the Tuskegee Study) and go ahead and open the can of worms that this will necessarily entail."

D. Morality and Religion

Among the meeting participants there was some opinion that a discussion of the syphilis problem among African Americans should also include moral and religious factors associated with sexual behavior. Early in the meeting, one external consultant implicated the entertainment industry as contributing to the syphilis epidemic. The consultant asked the group,

"The undergirding issue here is sex. Are we willing to confront the entertainment industry [regarding their role in shaping sexual mores]**? Because they are feeding syphilis. We have to talk about the psychology of sex first."**

Later, another external consultant said,

"We need to define the problem: Who are these people? We need to do surveys. The problem, however, is a spiritual one, and until and unless we re-introduce God into public life and discourse, and make it clear that there is a difference between right behavior and wrong behavior. We have to resurrect the idea that actions have consequences. We need to revive the individual conscience to the knowledge that God sees in private and punishes or rewards in public."

Still another consultant countered this comment immediately,

"It is just such ideas that have driven people out of the Church... We now have families that have been out of the Church for three generations because of sexual misbehavior 30 or 40 years ago."

However, another concluded,

"The Church is still the primary source of, and force for, social cohesion and change. Some individuals may have had unfortunate experiences [with the Church]**, but it remains central to our effort** [against STD] **because it is at the center of black community-based life. The reverend clergy need to become more aware and better informed of what these diseases are and what their consequences can be."**

III. The Tuskegee Study Legacy

Towards the latter part of the meeting, the group moved to a discussion of the Tuskegee Study and its legacy. It was suggested that including blacks in the planning stages of proposed research might help overcome the negative effects of the legacy. One external consultant asked,

> **"Does CDC really want to revisit Tuskegee, because we're going to have to start back up where we left off, namely Tuskegee, so if we want to get into this, we have to be ready for everybody—blacks included—to take responsibility for what they have done, both good and bad."**

A CDC staff person said,

> **"The United States has for years now given complete, life-long medical care to all wives, widows, and offspring of those who were directly adversely affected by the Tuskegee Study. The legacy of Tuskegee has to be overcome one person at a time. People will see that the work done now and in the future will give the Public Health Service credibility even in the light of Tuskegee, and that's all anybody can realistically hope for."**

An external consultant added,

> **"CDC cannot undo the past but must now show some sign of goodwill. If CDC does something, they will probably be forgiven, but thus far CDC has not done anything."**

During the discussion is was pointed out that CDC has never officially apologized for the Tuskegee Study. A CDC staff person commented,

> **"This is not as simple as people want to make it, like people do with racism. Racism is a very complex thing, not as simple as we like to try to make it. The experiment could not have been done without the help of the Tuskegee Institute. If blacks do not take the** [their share of] **responsibility, then such an incident could certainly happen again."**

The group identified various means for making amends for the Tuskegee Study. One suggestion was made that the endowment of a university chair in a field related to minority health would be a positive step. However, one external consultant reminded the group,

> **"Something may be done to make amends, but something needs to be done for the real, actual victims in Macon County, Alabama."**

IV. Intervention Strategies

A number of potential strategies, for addressing the public health problem of syphilis among African Americans in the south, emerged throughout the meeting. The suggestions were in four areas: 1) community participation, 2) enhanced health care services, 3) new research agendas, and 4) the role of the church. There was consensus among the group members that different African American communities would require unique approaches to the problem. One external consultant said,

> **"We don't have to use the same terminology and approach everywhere. We can approach different places in different ways. So we can pull together a group of syphilis patients and ask them what they wish they had known beforehand. We have to find out what gaps in their knowledge led to their eventual infection. We have to get down to the nitty-gritty."**

A. Community Participation

The group also thought that community participation in program development and implementation is essential. To involve communities in the identification of potential interventions, another consultant recommended,

> **"We all accept that there's a problem. The thing is that the problem with other STDs might be worse than the syphilis problem. When we do our community research, we'll ask the same questions in investigating whatever STD it may be. But if a community doesn't think something is a problem, then we have to take up their concerns before we can ever get on with addressing problems that**

we know already exist. So our approach has to be one that the public can and will support. We must be careful what words we use to describe what programs we devise. Whether and what we label the problem is not the central issue, although it will affect how the programs are accepted. The issue is to solve the problem."

B. Enhanced Health Care Services

One general strategy to resolve the problem was to move towards a more comprehensive approach to public health in African American communities, an approach which could incorporate syphilis prevention and control, while addressing other health problems such as HIV infection. One CDC staff person asked,

"How can we, if at all, superimpose STD prevention planning onto HIV prevention planning?"

To facilitate a more comprehensive approach to the problem of syphilis among African Americans, many of the meeting participants thought that the public health infrastructure would have to be re-designed, and at least one participant cited the women's health movement as an example of an organized effort that has improved health services for disadvantaged persons.

Additionally, it was recommended that returning historical public health approaches such as visiting nurses could be a suitable strategy. There was general agreement that a systemic change is needed to improve both accessibility and acceptability of care for syphilis and other STDs. As a means of increasing access to screening and treatment for person with syphilis, an external consultant said,

"We need to decentralize clinical services so that people don't have to go to clinics to get served. We have the technology to make that possible. We need a case management model for STD prevention." He also added, **"We must re-cast health communication messages. We need to have the various federal agencies enter into direct cooperative agreements with CBO's."**

C. New Research Agendas

The meeting participants recommended research in the areas of human sexuality and STD knowledge. One external consultant suggested social network analysis as a specific area of needed research for syphilis control and prevention,

"There needs to be some mapping of communities' social contacts and networks. We should not make assumptions about things that we could find out for sure through relatively low-cost studies."

Later he added,

"Tony Whitehead of the University of Maryland has devised a trans-cultural model that seeks to arrange for [the] funding agency, researcher, and community all to get their reasonable expectations met."

Returning to the issues of inaccurate epidemiological data, it was also recommended that research in the area of syphilis control and prevention among African Americans in the South needs to begin with basic epidemiology. An external consultant concerned about bias in her state's epidemiological data said,

"We cannot strategize on this issue without such information. Will CDC eventually commission a study to find out who it is that has syphilis? The [state name edited] statistics are skewed and racist so we need to do these studies ourselves. Do we need this assessment? In [state name edited], we do."

Another external consultant said,

"…There is no nationwide, scientifically designed survey [of syphilis]. If you want the facts, you have to do the study yourself."

D. The Role of the Church

The Church was identified as an important partner in syphilis control and prevention interventions for African American communities, but one external consultant reminded the group,

"The Church cannot do everything so it must do what is appropriate given its own goals and interests. We can do one or two things well. If we try to do everything, we'll ultimately be able to do nothing."

V. Conclusions

By the end of the meeting, the participants had reached consensus in several areas. Participants were in agreement that the African American population is very diverse. They also agreed that syphilis in the South poses an important public health problem among various segments of southern African American communities. CDC was cautioned to be cognizant of the potential for stigmatization associated with certain public health intervention activities. Health care should not only be accessible but also acceptable. There was also consensus for formally apologizing for the Tuskegee Study.

Meeting participants offered four general recommendations to the Division of Sexually Transmitted Disease Prevention:

1. DSTDP should increase African American community participation in STD prevention and control (e.g. research design, community planning).
2. DSTDP research and program efforts should address epidemiological data and behavioral issues, and pursue strategies to minimize biases in these data.
3. DSTDP should seek to better understand African American public perceptions of STDs and of different approaches to STD prevention.
4. DSTDP should seek to better understand the diverse strata and sub-populations within the African American population in the United States, and to understand the social dynamics that sustain STDs in African American communities.

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Meeting Report

Developing Strategies for Syphilis Elimination in the United States

Consultants' Meeting
May 12–13, 1998

Prepared by:
Jo A. Valentine, M.S.W.
Lyn Finelli, Dr. P.H.
George Schmid, M.D.
Michael E. St. Louis, M.D.

Contents

Consultants: **Chairman:** Ronald O. Valdiserri, M.D., M.P.H., Centers for Disease Control and Prevention (CDC), Atlanta, GA; **Presenters:** Geoff Garnett, Ph.D., Oxford University, Oxford, United Kingdom; Dan George, Bureau of STD Control, Tallahassee; Sheila Lukehart, Ph.D., University of Washington, School of Medicine, Seattle; David Rose, M.D., F.A.A.P., Baltimore City Health Department; Aaron Shirley, M.D., Jackson Medical Mall Foundation, Jackson, MS; Jack Spencer, CDC; Michael E. St. Louis, M.D., CDC; Gary West, M.P.A., CDC; Judith N. Wasserheit, M.D., M.P.H., CDC; **Moderators:** Lyn Finelli, Dr.Ph., CDC; George Schmid, M.D., MSc., CDC; Jo Valentine, M.S.W., CDC; **Rapporteurs:** Thomas Farley, M.D., M.P.H., Louisiana Department of Health and Hospitals, New Orleans; Kristine Moore, M.D., M.P.H., Minnesota Department of Health, Minneapolis; Reverend Edwin Sanders, Metropolitan Interdenominational Church, Nashville; **External Consultants:** Gary Allee, Health Resources and Services Administration; Gail Bolan, M.D., California Department of Human Services, Berkeley; Robert Brunham, M.D., University of Manitoba, Manitoba, Canada; Virginia Caine, M.D., Marion County Health Department, Indianapolis; Olivia Cousins, Ph.D., Health Education, Brooklyn; Brenda Crowder-Gaines, M.S.A., C.L.A., North Carolina Department of Health and Human Services, Raleigh; Marty Fortenberry, Jackson, MS; Robert Fullilove, Ed.D., Columbia University School of Public Health, New York; Mauricio Hernandez-Avila, M.D., National Institute of Public Health, Cuernavaca, Mexico; Penny Hitchcock, D.V.M., M.S., National Institute of Health, Rockville; Edwin Hook, III, M.D., The University of Alabama at Birmingham; David Johnson, Georgia State Department of Health Services, Atlanta; William Leverette, South Carolina Department of Health and Environmental Control, Columbia; Adolfo Mata, Substance Abuse and Mental Health Services Administration, Rockville; Mark Schrader, Georgia State Department of Health Services, Atlanta; David Sencer, M.D., M.P.H., Atlanta; Michael D. Shriver, National Association of People with AIDS, Washington, D.C.; Fernando Zacarias, M.D., Regional Program on AIDS, Washington, D.C.; **CDC Consultants:** Timothy Akers, M.S., Ph.D.; Sevgi Aral, Ph.D.; Kenneth Archer; Harrell Chesson; Richard Conlon, M.P.A.; Susan DeLisle, R.N., A.R.N.P., M.P.H.; Melinda Flock, M.S.P.H.; Robert A. Gunn, M.D., M.P.H.; William Jenkins, Ph.D., M.P.H.; William Kassler, M.D., M.P.H.; Karina Krane, M.P.H.; William Levine, M.D.; Yvonne Lewis; Elizabeth Macke, Ph.D.; Thomas Peterman, M.D., MSc.; Victoria Pope, Ph.D.; Russell Roegner, Ph.D; Donald Schwarz; Jerry Shirah; **Recorders:** Gabrielle O'Meara; Frankie Barnes, M.P.H.; Molly Parece; Emmett Swint, M.S.; **Support Staff:** Deborah McElroy.

Summary

Although the United States continues to experience substantially higher rates of syphilis than other industrialized countries, dramatic progress has been made in the 1990s, with a greater than 80% reduction in syphilis by 1997. On May 12-13, 1998, a multi-disciplinary group of experts met in Atlanta to discuss strategies for further improving syphilis control, and to consider the feasibility of an effort to eliminate endemic syphilis in the U. S. Discussions were structured in three parallel tracks: surveillance and outbreak response; community involvement and partnerships; and biomedical and behavioral interventions. Principal findings and recommendations from this meeting include the following:

- **Surveillance and Outbreak Response.** The principles and operating procedures for both surveillance and outbreak response should be reassessed to meet the requirements of enhanced control leading to elimination, and both must be strengthened. New approaches to surveillance, designed to prevent re-emergence should be developed and implemented in areas with epidemic potential but without persisting transmission. Local epidemiological capacity should also be strengthened, in coordination with other activities and public health infrastructure related to emerging and re-emerging infectious diseases.
- **Biomedical and Behavioral Interventions.** In areas with persisting syphilis, the mix of biomedical, behavioral, and policy interventions should be assessed and adapted to the specific epidemiologic, social, and behavioral context. Research should be intensified on prevention tools and on intervention

efficacy. Protocols for rapid social, behavioral, and epidemiologic assessment of communities should be developed and implemented. Specifically, the consultants called for research on the social determinants of persistent syphilis.

- **Community Involvement and Partnerships.** Coordinated and concerted leadership is needed at national, state, and local levels, and should include a variety of health and social service providers, as well as non-governmental partners. At all levels, the communities affected by syphilis should be equal and active partners in the development and delivery of elimination strategies. Because persons with syphilis often represent marginalized sub-populations even within high prevalence populations, public health agencies will need to make the necessary investments to establish long-term relationships with and processes to deliver services to these vulnerable sub-populations.

The consultants generally judged syphilis elimination in the U.S. to be technically feasible and a worthy goal. However they were more guarded about the ability and willingness of public health agencies, including CDC, to develop and sustain the necessary infrastructure and support services to the highest risk populations. The consultants recommended careful consideration of societal factors, including racism and discrimination based on social class, that may affect disease transmission and contribute to the persistence of syphilis. Approaches should be adopted that explicitly recognize the impact of these issues, and that avoid stigmatization of and discrimination against affected communities. Syphilis elimination should be a vehicle to strengthen the basic public health and community infrastructures that support general STD/HIV prevention and communicable disease control. These horizontal objectives should also be measured as part of the effort. A syphilis elimination effort, within the context of national STD and HIV prevention efforts and rebuilding of infrastructure to address emerging infectious diseases, must be adequately staffed and funded at the national and state levels, and should be implemented in ways that contribute to rather than detract from these broader efforts.

Introduction

Goals of the Meeting. The meeting was planned by Division of Sexually Transmitted Diseases Prevention staff in consultation with the Council of State and Territorial Epidemiologists, the National Council of STD Program Directors, and other prevention agencies and partners. Four principal goals were outlined for the meeting, and formed the basis for organizing the work sessions:

1. To develop and refine an action plan for enhanced syphilis control and elimination;
2. To develop and prioritize a list of technical issues for which guidelines are needed;
3. To discuss program capacity issues; and
4. To identify a research agenda.

Expert consultants. The consultants included researchers, program providers, and community advocates of diverse academic, professional, and cultural backgrounds.

Organization of the Meeting. Each of the consultants was assigned to one of three multi-disciplinary workgroups:

> Surveillance and Outbreak Investigation,
> Community Involvement and Partnerships, and
> Biomedical and Behavioral Interventions.

A set of central questions was determined by the meeting organizers for exploration during the individual work group sessions. These questions were related to each of the critical topic areas within the domain of each of the work groups. The questions were as follows:

1. What are the best public health methods, practices, and strategies in this domain?
2. What are the public health capacity and infrastructure issues?
3. What are the implementation and monitoring issues related to syphilis prevention and elimination?
4. What are the gaps in knowledge that will determine key research questions? and,
5. What are the elements of a CDC National Plan?

The meeting report was submitted to the consultants for initial and final reviews.

Background

Current status of syphilis prevention in the United States. Since the epidemics of acquired immune deficiency syndrome (AIDS) and human immunodeficiency virus (HIV) infection have been recognized, the U.S. has experienced substantially higher rates of syphilis than other industrialized countries. However, in the 1990's the syphilis rates have declined by more than 85%. These substantial declines have been observed across all ethnic and demographic subgroups and in all regions of the United States (MMWR Finelli 1998). We do not fully understand the reasons why reported primary and secondary syphilis rates have declined since 1990. However, at least three factors may have contributed to the recent decline in syphilis. First, after recognition of the epidemic in the 1980's, increased state and federal monetary resources were at least temporarily invested in syphilis control programs. Second, since the mid-1980's, a variety of HIV prevention activities have probably contributed to declines in all STDs, including syphilis. Third, a decline in the use of crack cocaine, and the associated bartering of sex for drugs, may have resulted in declines in syphilis. Also the positive social impact of the current U.S. economy, which has helped to reduce unemployment rates and blunt the effects of poverty in many disadvantaged communities, may be an important factor in this recent decline.

Currently there is little evidence to distinguish the relative contribution of different factors to declining rates. In addition, changes in STD control programs over the past 10 years may have affected true trends in syphilis as well as the reliability of reported syphilis cases. These changes have included large declines in numbers of federal staff who have performed and supervised partner notification, counseling, and treatment and surveillance activities. The reductions in federal staff have sometimes been compensated by local increases, but not always. It is likely that in some parts of the country under-diagnosis and under-reporting of syphilis have increased. Nevertheless, to the extent that syphilis rates have dropped to historically low levels it may be possible to delay or avert major new outbreaks if capacity for syphilis control is strengthened, especially in those areas where the potential for re-emergence is high.

Definition of and Rationale for Syphilis Elimination. Disease elimination is a specific public health strategy. It lies within the spectrum of strategies defined at one extreme by disease control to reach an acceptable or tolerable level and at the other extreme by disease eradication (MMWR, 1993 Task Force on Disease Eradication). Syphilis elimination would provisionally mean no on-going endemic transmission of the disease within a community or jurisdiction. In the current epidemiologic context of syphilis in the United States, the fundamental public health reasons for considering an elimination effort for domestic transmission of syphilis include:

1. The human and economic costs of congenital syphilis;
2. The substantial disparity in health status between African Americans and other Americans;
3. The important cofactor effect of syphilis as a facilitator of sexual transmission of HIV infection; and
4. The current epidemiologic vulnerability of syphilis.

Work Group Recommendations

I. Surveillance and Outbreak Response

Surveillance is central to eliminating syphilis and preventing its re-emergence. Surveillance systems must be sensitive and timely to readily detect outbreaks, follow syphilis epidemiology, and identify international and inter-jurisdictional importation of syphilis. Future waves of syphilis could have different epidemiologic characteristics, so that accurate and timely surveillance systems are critical for developing prompt and targeted responses to outbreaks. A sensitive and timely surveillance system also facilitates communication about syphilis epidemiology between and among the CDC and state and local partners. This can facilitate effective programmatic responses to prevent further outbreaks from occurring.

In general, the work group recommended that state and local health department staff be responsible for evaluating and strengthening their own surveillance activities, including performing surveillance data analysis, interpretation and dissemination. The consultants discussed the necessity and challenges of developing and

maintaining program capacity and expertise in syphilis epidemiology, laboratory, and clinical care in an era of declining morbidity. Syphilis Elimination activities will need to be incorporated into local surveillance systems and be based upon local epidemiology. The Division-funded Prevention and Training (PT) Centers might be enlisted to provide this expertise and training for health department staff. However, at the present time, the PT Centers do not provide training in surveillance. The work group recommended that managers of state and local surveillance systems be informed of efforts underway at CDC to integrate surveillance systems and standardize all variables and variable entries for national surveillance data.

The consultants also stated that surveillance systems should collect data to systematically assess the social context of syphilis in the affected community and the individual behavioral characteristics of affected persons, in addition to the demographic, clinical and risk factor data. Social and behavioral assessments were viewed as fundamental to a syphilis elimination plan. To assess patterns of behavior associated with the acquisition and transmission of STDs, STD programs should collect and analyze multiple sources of data, such as criminal justice data, housing data, drug use and labor statistics. These data may come from individual- and community-levels. These assessments have revealed subtle aspects of syphilis transmission dynamics in the communities where they have been performed, providing information that contributed to the development of tailored interventions to reduce syphilis and STD transmission. Rapid ethnographic methods, such as the ones developed based on the assessment model from the Innovations in Syphilis Prevention Projects, were recommended. The consultants concluded that because social and behavioral assessment and surveillance are critical to understanding the transmission and control of syphilis, social and behavioral scientists should be integral to health department surveillance teams. Most state and local health departments do not have trained staff to conduct social and behavioral assessments. At the present time, PT Centers do not provide training in this area, but might be able to also provide this training, if it were identified as a CDC priority and additional funding were provided.

The consultants observed that syphilis is a disease of *missed opportunity*, and screening and treatment of syphilis in both traditional and non-traditional health care settings was discussed. There was concern that current screening efforts are not regularly occurring in venues that would include persons at high risk for syphilis. Because emergency departments often represent the single avenue to health care for many disadvantaged persons, who may also be at risk for syphilis, screening and treatment should be provided in hospital emergency departments, particularly in high morbidity areas. Consultants from both Baltimore and St. Louis specifically recommended that the CDC support expanded screening for syphilis in the emergency department settings. Other sites deemed potentially effective for screening included jails and drug treatment centers.

It was felt that local areas should decide, based on an evaluation of local collateral benefits and linkages, whether or not their syphilis elimination program should be horizontal (within the context of the provision of comprehensive health care) or vertical (to achieve a single, specific and absolute goal) in orientation. The consultants agreed that commitment to syphilis elimination will be hard to garner unless syphilis is viewed as a threat to the local community. Political support is needed to make syphilis elimination a high priority in local areas and in the nation.

Surveillance efforts should include, but are not limited to, case-reporting, lab-based reporting, prevalence monitoring, and the collection of other social and behavioral surveillance data. All programs should have the computing capacity to analyze their own data. What follows is a list of general recommendations for three content areas: 1) surveillance in high morbidity areas, 2) surveillance in low morbidity areas, and 3) outbreak response. Although the consultants suggested a more extensive list of issues and items for discussion, the work group agreed that these three content areas were of highest priority and warranted more in-depth discussion. In light of the general program guidance, the consultants also listed specific recommendations for CDC action steps to move towards implementing the general STD program recommendations in order to achieve syphilis elimination.

SURVEILLANCE IN HIGH MORBIDITY AREAS

The goal of surveillance in high morbidity areas is to capture the burden of disease and define local epidemiology so that appropriate syphilis control and prevention activities can be improved.

1. *Syphilis Elimination activities should include laboratory-based reporting of reactive serologic tests for syphilis.*

   Local public health regulations need to specifically address laboratory-based reporting. STD programs should have policies for evaluation of laboratory reporting, including defined policies for laboratories delinquent in reporting. STD programs should also develop policies for evaluating the syphilis reactor grid.

2. *Syphilis Elimination will also require complete, accurate, and timely reporting from non-health department providers.*

   STD programs should have policies and procedures that facilitate communication with non-health department providers and evaluate reporting practices. As an example, programs will need to work more effectively with large health systems such as managed care organizations to improve reporting. In addition, STD programs should also establish mechanisms to provide non-health department providers with current syphilis epidemiological and clinical education. The PT centers could be used to provide this education.

3. *Monitoring the prevalence of reactive serologic tests for syphilis in populations routinely screened or those that are comprised of individuals at high risk in a particular community for syphilis should be performed, as a regular part of surveillance activities, to evaluate community morbidity, find cases, develop screening criteria, and identify systems failures. These assessments should be conducted in both traditional and non-traditional settings that provide access to persons at high risk for STDs.*

4. *Legislation or regulations requiring serologic screening of pregnant woman should be sought and supported.*

   In areas with persisting syphilis or with syphilis outbreaks, such policies should specifically require that all pregnant women be screened for syphilis at their first prenatal visit, at 28 weeks, and at delivery or at the time of spontaneous abortion or stillbirth. The legislation should prohibit hospital discharge of new mothers who did not receive prenatal care, prior to the review of their non-treponemal test results and provision of treatment when warranted.

5. *Every case of congenital syphilis should be evaluated.*

   Congenital syphilis cases should be evaluated for maternal demographic and behavioral characteristics, and identification of potential *missed opportunities* (e.g. contacts with AFDC, child protective services, drug treatment). STD programs should establish policies which require screening of mothers of all stillborn infants for syphilis.

SURVEILLANCE IN LOW/NO MORBIDITY AREAS

The consultants also recommended a set of objectives specific to low/no morbidity areas. The goal of surveillance in low/no morbidity areas is to be prepared to identify the re-emergence/re-introduction of syphilis.

1. *STD programs must define syphilis incidence levels at which control efforts will be intensified. Elimination suggests zero-tolerance and an energetic program response to increases in incidence.*
2. *STD programs should maintain evaluation of syphilis activities and syphilis cases using intensive team analysis and follow-up of each case when necessary.*
3. *STD programs should analyze inter-jurisdictionally and internationally imported cases and should notify the areas of origin. Treponemal sub-typing could be a useful tool in this analysis.*
4. *STD programs should evaluate the reactor grid in this era of reduced rates and should assure follow-up of reactors at high risk of early disease.*
5. *STD programs should develop communication policies for providers and evaluate provider practices on a sentinel basis.*
6. *STD programs should support legislation that requires screening of pregnant women at the first prenatal visit.*

7. *STD programs should perform prevalence assessment on a periodic basis in institutional- and community-based settings where persons at high risk for STDs can be encountered.*

OUTBREAK RESPONSE

The consultants recommended that STD programs develop outbreak response plans in accordance with local epidemiology and resources in the area. Three additional specific recommendations made by the consultants related to outbreak response were as follows:

1. *Outbreak detection should be a principal responsibility of a designated surveillance coordinator, who should be supervised by the local epidemiologist.*
2. *Technical oversight of the outbreak response should be provided by the local epidemiologist, in coordination with appropriate state officials.*
3. *The outbreak response should include: 1) epidemiologic, social, and behavioral assessment, 2) affected-community involvement, 3) a process for working together with communicable disease outbreak teams, and 4) a process for communication and working across state and local boundaries.*

CDC ACTION STEPS FOR SURVEILLANCE AND OUTBREAK RESPONSE

The consultants listed five action steps that should to be undertaken in a priority fashion by the CDC in the areas of surveillance in high and low morbidity areas and in outbreak response. These action steps are as follows:

1. *CDC should update guidelines for syphilis surveillance in accordance with national efforts to eliminate syphilis.*

   The guidelines should address:

   - laboratory-based reporting and evaluation,
   - reactor grid evaluation,
   - designing systems for prevalence monitoring,
   - collection and analysis of behavioral and social surveillance data,
   - case definitions, and
   - minimum data elements for reporting.

2. *CDC should provide technical guidance.*

   The technical guidance should address the areas of:

   - syphilis screening and diagnosis including DFA-TP in high morbidity areas,
   - communication with providers about STD detection and reporting in high and low morbidity areas,
   - evaluation of provider practices in high and low morbidity areas,
   - education of providers regarding diagnosis of GUD in high morbidity areas,
   - serologic and clinical screening in low/no morbidity areas, and
   - outbreak response, social, behavioral and community assessment, and primary prevention.

3. *CDC should collect specific process data to facilitate self-evaluation and external assessment of STD programs.*

   The process data elements should be in the areas of:

   - standards of STD care in the community in high and low morbidity areas,
   - impact of managed care on STD detection and reporting in high and low morbidity areas,
   - STD screening practices in high and low morbidity areas,
   - opportunities for STD prevalence monitoring activities in high and low morbidity areas, and
   - policies for lab-based reporting in high and low morbidity areas.

4. *CDC should develop a national plan to address the current decline in federal field staff and technical expertise in syphilis.*

   As syphilis becomes a rare disease staff designated to respond to the problem continue to be reduced. The consultants felt that the CDC should develop a plan to address this staffing situation. Elements of the plan should include, but not be limited to, an expert resource list and provision for syphilis continuing education through the PT centers.

II. Biomedical and Behavioral Interventions

As a fundamental statement of principle, the Biomedical and Behavioral Interventions work group consultants said that *interventions must be sustained*. It was held by the members that regardless of what syphilis elimination interventions are ultimately introduced, there must be a commitment to support them over time. While some interventions and activities undertaken principally for the purpose of syphilis elimination can conceivably support other ongoing public health activities, such as the prevention of other STDs and HIV, or other communicable diseases, the nature of intervention sustainability is likely to vary across communities based upon syphilis rates and programmatic needs.

The consultants also noted that because syphilis disproportionately affects African Americans, developing innovative and effective methods to actively involve African American communities in syphilis prevention and control efforts should be developed and implemented. It was recommended that an evaluation of the impact of the legacy of the Tuskegee Syphilis Study on African American confidence in the health care system, as well as the direct impact on syphilis control, be undertaken.

The work group discussions revolved around five primary issues: 1) screening, 2) diagnosis and treatment, 3) partner notification, 4) primary prevention, and 5) research leading to innovations in biomedical and behavioral interventions. In much the same fashion as Surveillance and Outbreak Response, the Biomedical and Behavioral Intervention work group members developed a list of recommended action steps that should be undertaken by the CDC.

SCREENING

Serologic screening, or screening by other means when such technology is developed, is essential to programs that attempt to eliminate syphilis. Screening detects individuals who are asymptomatically infected with *T. pallidum* and who do not seek health care. Screening and partner notification are the only ways to detect such individuals. The consultants cited jails and detention facilities, drug treatment centers, and emergency departments as three sites that are very likely to have prevalences of infection that are high enough to warrant screening programs in jurisdictions with persisting syphilis.

1. *Each community must identify the sites that are most productive based on local epidemic characteristics, and concentrate its resources on those sites.*

   Because resources are limited, screening can not be performed in all sites that might yield cases. The work group believed that the critical issue is to identify those screening sites that would have the greatest impact in a community syphilis elimination effort. National guidelines should be formulated to guide communities in determining the best sites for screening. If screening is instituted, the prevalence of disease in these sites should be monitored. Each new case of early infectious syphilis identified through such screening activities should be thoroughly investigated to identify community patterns and foci of transmission.

2. *Community-based screening programs are also potential sites for screening, but selection of the sites should be based on prevalence, as well as their acceptability to the individuals and communities.*

   Instituting syphilis screening in HIV counseling and testing sites was thought likely to be productive and an efficient use of resources, given the similar behavioral risk factors for HIV and other STDs. However, the consultants noted the relative lack of existing data to determine the success of such programs.

3. *Screening of individuals for symptoms may be an additional means of identifying individuals in those situations where serologic screening can not be performed for time, management or financial reasons.*

   This approach might offer a cost-effective means of identifying cases likely to transmit infection (primary and secondary cases) without the need to have a laboratory screening program established. Persons with symptoms of early syphilis are much more important to syphilis control and elimination than persons with latent disease.

DIAGNOSIS AND TREATMENT

Services must be readily accessible to individuals who seek care. The consultants agreed that there should be no tolerance for turning away symptomatic persons who seek care. They said that STD clinic hours should be

tailored to better suit the populations served. This is important not only for the prevention of syphilis but also for preventing other STDs. The consultants noted that discontinuing reaginic testing, due to CLIA regulations, has negatively impacted the availability of patient care in some areas. The consultants also said that providers should be trained to make services more acceptable and user-friendly. It was noted that too many STD clinic patients report being treated disrespectfully when they seek care. Work group members emphasized that STD services must be upgraded, because health department STD clinics, despite some nagging inadequacies in their makeup and function, are needed and are likely to be retained even in the current changing health care environment.

1. *Symptomatic persons should have ready access to client-friendly, quality treatment regardless of the ability to pay.*

2. *Laboratory services should be improved.*

   The ability of laboratories to perform quality testing for syphilis has frequently been found deficient. Quality assurance of syphilis testing in laboratories is needed. While some laboratories were thought to be too small or to perform tests too infrequently to be utilized for syphilis testing, others were deemed to be so inadequate that they may even need to be closed. The consultants felt that syphilis tests are better referred to laboratories capable of giving reliable results, but they also recognized the need for rapid laboratory services by less intensively trained staff in places where there might otherwise be none. In these situations, adequate training must be ensured. Stat serology must be available in settings where persons with infectious syphilis can be expected to present for care. CLIA regulation exemptions for stat RPR testing should be available in STD clinics.

3. *Education about symptoms of syphilis and other STDs should be a public health strategy in communities that are affected.*

   The consultants felt that this strategy could affect both primary prevention and health care seeking behavior. Disease intervention specialists (DIS), or their professional equivalent should interact with a variety of health care providers, beyond the public sector, to influence syphilis prevention and control.

PARTNER NOTIFICATION

Partner notification is essential to programs that attempt to eliminate syphilis. Partner notification is more important, as opposed to other means of case identification. When rates are low, aggressive partner notification efforts of the few cases that occur will be important to disease elimination. Partner notification can be used to assist in understanding the local epidemiology of syphilis in a community. Yet, in some communities, there is a perceived decline in the abilities of DIS, with resultant less effectiveness. Furthermore, current training efforts are inadequate to meet needs of current staff. In some instances, it is thought that the lower salaries for state employees, as compared to federal employees, and the resultant implications for staff morale have contributed to this perceived lack of effectiveness. In addition, front-line supervisors may not be as effective as desired, which leads to ineffective field staff. The success of partner notification efforts must be monitored to ensure quality of the intervention:

1. *Provider-based partner notification should be aggressively pursued for all cases of primary and secondary syphilis and early latent cases.*

   Partner notification should be compared to other means of case detection to maximize resource efficiency. Interviews of early syphilis patients are essential to understanding community patterns of transmission and to planning appropriate interventions. In addition, partner notification identifies social networks, and often identifies infectious cases of syphilis in high-frequency transmitting individuals. Therefore, the prevention value of partner notification goes far beyond simply treating named partners.

2. *Partner notification will need to be pursued diligently, including the development of policies and procedures to support and improve the quality of job performance of disease intervention specialists, who are primarily responsible for partner notification.*

3. *Partner notification efforts must be more effectively responsive to cases imported across jurisdictions.*

   Syphilis cases crossing U.S. borders are not always handled well by border states, although some may have effective working relationships with their adjacent non-U.S. health departments. In addition, the consultants said that cases with connections to foreign countries, in which the case originated well away from the U.S. border, are not dealt with in many cases. This lack of response may be contributing to the persistence of disease in the United States.

PRIMARY PREVENTION

Primary prevention should be a cornerstone of syphilis elimination programs. Current primary prevention efforts should be enhanced by seeking to capitalize on opportunities in other programs that address primary prevention. As an example, it was noted that drug treatment centers can provide access to persons who engage in risk behaviors for syphilis, but are not assisted to provide primary prevention services for syphilis. Community Planning Groups, though focused on HIV activities, were also cited as organizations with a great interest and enthusiasm for primary prevention. Such groups also have considerable insight into the communities that are involved in syphilis transmission.

1. *Syphilis elimination efforts should garner support/involvement from schools of public health to assist in local evaluation, prevention, and control efforts.*

   Internships dealing with syphilis prevention could enhance STD programs' abilities to respond to syphilis recurrence and to work with communities affected by other STDs or social problems that facilitate sexual risk taking behaviors.

2. *Condoms should be widely distributed to those who need them.*

   All individuals at risk of an STD should have access to condoms. They should be widely available and free at public health departments, and special efforts should be made to make them easily available in communities at especially high risk of STDs.

3. *HIV Community Planning groups should be substantively involved in syphilis elimination.*

RESEARCH LEADING TO INNOVATIONS IN BIOMEDICAL AND BEHAVIORAL INTERVENTIONS

1. *Research is needed to inform and improve syphilis screening efforts.*

   Studies should be designed and conducted to:

   - evaluate self-sampling, possibly with self-testing, in light of the forthcoming developments of saliva sampling and of a strip test (using blood) for the rapid (currently, 8 minutes) detection of antibody;
   - determine whether rapid tests deployed in the field (e.g. strip test) actually increase the rate of treatment (i.e., detection without treatment is of little value); and
   - determine the effectiveness of anonymous syphilis testing coupled with HIV testing at anonymous HIV test sites.

2. *Research is needed to evaluate and improve syphilis diagnosis and treatment.*

   The consultants recommended an extensive list of research issues and needs in the area of diagnosis and treatment. They are as follows:

   - promotion and evaluation of rapid tests for the diagnosis of ulcers;

     Dark-field examination, the only rapid test available for testing of ulcer secretions, is not highly sensitive and is not widely available, even in STD clinics;

   - promotion and evaluation of low-complexity diagnostic tests, in particular those that could be used in the field;
   - further evaluation of Azithromycin for prophylaxis/treatment of syphilis;

     Trials suggest that Azithromycin is an effective therapy for syphilis. Further definition of this would be a significant advance in comparison to benzathine penicillin (injected) or doxycycline (multiple doses required);

- evaluation of the delivery of preventive treatment in the field;

  Currently such therapy is limited to benzathine penicillin or doxycycline. If azithromycin proved effective, then the distribution of effective therapy in non-traditional settings would be facilitated;

- evaluation of the effect of antibiotic prophylaxis for known, or presumed, core transmitters of syphilis within a community;

- promotion of vaccine development;

  It was noted that disease eradication without a vaccine is historically difficult and that there has been limited promotion of a vaccine development. The extension of this national disease elimination effort to a broader international elimination effort would be greatly facilitated by an effective vaccine;

- evaluation of the effect of education for symptom recognition on early diagnosis of syphilis (e.g. health care seeking behavior);

- determination of incentives for community involvement in identifying and bringing to care persons with syphilis.

3. *Additional research is needed to evaluate and improve partner notification services.*

   Studies should be conducted to:

   - determine the consequences of partner notification to individuals and relationships;

   - determine the effectiveness of alternative approaches to partner notification that might be used. For example, incentives might be given to community outreach workers, or even community members, who refer persons with syphilis to treatment. Or, disease intervention specialist staff might be rewarded in some way for identifying and bring to treatment primary or secondary syphilis cases;

   - determine how partner notification in the private sector differs from that in the public sector.

4. *Studies should be conducted that develop prevention case-management approaches for high risk individuals.*

5. *Research should be undertaken that compares communities with high and low incidences of syphilis.*

   There was considerable discussion about, and enthusiasm for, research comparing communities with high and low rates of syphilis to determine what factors might account for, or explain, the difference, e.g., health care services, socioeconomic status. Such an effort is currently underway in Canada. Understanding the differences could lead to improved intervention strategies.

6 *Studies should be undertaken to develop tools for, and performance of rapid community assessment that facilitates community involvement in intervention efforts in high incidence communities.*

   Community participation was stressed as a vital key to the success of syphilis elimination efforts. Honesty and openness must be a prominent and visible part of the efforts. As an example, community prophylaxis and treatment programs need to be designed and reviewed at the local level (community leaders, members of the affected communities, boards of medicine/nursing/pharmacy, and associated attorneys) to determine if such programs are acceptable to the community and allowable under local law.

7. *Health services research should be conducted to evaluate the current and possible future use of community health workers.*

   Expanding their use, perhaps in a geographic nature where community health workers have responsibility for health matters of a population in a specific area, and training should be explored.

8. *Research should be done to determine the role of an intact foreskin in susceptibility to syphilis, and whether circumcision offers a viable means of intervention for either syphilis or HIV.*

9. *Research is needed to determine the role that alternative means of medication distribution may assume. Are pharmacies suited to dispense advice about STDs, provide specific referral to health care sites, or dispense medication (detriments to this latter approach were noted, e.g., inability to perform surveillance or partner notification)?*

10. *Research is needed to measure the legacy of Tuskegee on trust in the health care system, and its effect on syphilis control.*

CDC ACTION STEPS FOR BIOMEDICAL AND BEHAVIORAL INTERVENTIONS

1. *The CDC should develop screening guidelines to assist programs in determining what sites to screen and how to perform these efforts.*
2. *The CDC should perform or support an economic analysis of syphilis screening to assist not only in the formulation of screening guidelines, but also in guiding an assessment of the value of screening efforts.*
3. *The CDC should revise and provide CDC guidance on partner notification to emphasize: 1) infectious cases and prevented cases, 2) clustering when appropriate, and 3) efficiency.*
4. *The CDC should consider novel approaches to partner notification, including, but not limited to: 1) payment of a financial incentives or other to disease intervention specialists or others, who locate a case of primary or secondary syphilis, and 2) giving greater "credit" to staff when certain cases are located, e.g., high rate transmitters or infectious cases.*
5. *The CDC should develop a means of measuring access to STD health care. Although access to health care is implied as a part of the statement of principle, explicit means of measuring such access is not so clear.*
6. *The CDC should provide technical guidelines for the use of azithromycin for prophylaxis or treatment.*
7. *The CDC should develop and provide guidance for conducting program assessments to enhance the efficiency of syphilis prevention and control programs.*
8. *Effective counseling tools which prevent recurrent infections (20% of syphilis cases are repeat infections) should be developed and disseminated to local project areas.*
9. *The CDC should develop and disseminate tools and training for rapid social and behavioral assessments that facilitate involvement of affected communities in the design and delivery of interventions.*
10. *The CDC, in partnership with the National Institutes of Health, should actively support research leading to the development of an effective vaccine for syphilis.*

III. Community Involvement and Partnerships

The consultants enthusiastically called for more substantive involvement of the communities affected by syphilis in a national elimination effort. Moreover, there was strong consensus that national campaigns, alone, rarely effectively promote change at the local level, but must work in partnership with local efforts, by identifying and communicating successful practices to state and local areas. To be successful a syphilis elimination campaign will have to also involve policy makers at local, state, and federal levels.

The Community Involvement and Partnership work group developed a list of five top priority issues that they deemed critical to facilitate the achievement of syphilis elimination in the U.S. These issues included: 1) expanding and improving the STD health care provider base, 2) working with policy makers, 3) facilitating community involvement, 4) promoting a more comprehensive health care approach, and 5) developing commitment to and political will for syphilis elimination. In addition, the consultants developed a list of important partners, research leading to the promotion of community involvement and partnership development, and recommendations for CDC action steps. The consultants emphasized the need to specifically examine and understand the role of racism and discrimination based on social class in the U.S. syphilis epidemic. They felt that racism and discrimination based on socio-economic status significantly influence both interest and effort in syphilis elimination.

EXPANDING AND IMPROVING THE STD HEALTH CARE PROVIDER BASE

1. *To expand and improve the provider base, STD programs should consider providing STD treatment information to external partners, including non-traditional partners, such as pharmacists, who may have greater access to persons at risk for disease.*

   To increase its appeal to other professionals, the treatment information could be provided using a continuing education model to offer credit to external partners. In general STD programs should use intervention models that generate local commitment to the issues and build partnership. The consultants emphasized that such models should be shared with

others. HIV Community Planning was cited as an example of a useful model for partnership development and community involvement, although some consultants were cautious about applying the HIV Community Planning model to STDs, because STDs are often viewed quite differently from HIV by many community organizations and residents. Collaboration with the Community and Migrant Health Centers and the Indian Health Service was also cited as useful for expanding STD services.

2. *STD clinics should provide accessible and acceptable screening and treatment.*

   There should be a systematic approach to avoid turning away persons who seek care in the traditional STD clinic setting. Clinic staff and services must be maintained even during eras of declining resources. It was noted that reduction in staff and resources must be addressed because syphilis elimination is likely to require a substantial effort at the local, state, and federal levels. Clinic hours should be flexible to meet the needs of potential patients. Moreover, the consultants felt that STD programs should endeavor to provide outreach in settings where persons who are at risk voluntarily congregate (e.g. streets, short-stay motels, etc.)

   Cultural competency training should be provided to all providers to promote improved interactions with STD patients. In particular, the consultants emphasized the need to better address the stigma of attending an STD clinic, because that may result in clients seeking sexual health advice from uneducated or mis-informed sources. The STD health care delivery system should be changed to make STD clinic environments more patient-friendly and non-judgmental.

3. *STD programs should provide for quality assurance of STD services, ensure effective data management, and facilitate improved case reporting from private providers.*

   One suggestion for enabling this process was the publication of quarterly report cards by county in MMWR.

WORKING WITH POLICY MAKERS

1. *STD programs should identify and recruit "champions" within state legislative bodies.*

   Once these advocates are enlisted, and a relationship developed, STD program should regularly share relevant data with them and their awareness of local capacity issues. The information should be packaged in messages that are short and concise (e.g. NCSL post-cards, position papers for legislative aides). A number of the consultants felt that newly elected officials may be the most likely to adopt syphilis elimination as a policy issue.

2. *To better appeal to elected officials, STD programs should promote syphilis elimination as an important health goal by linking it to children's health and the potential for reducing overall health care costs.*

PROMOTING A "COMPREHENSIVE CARE" APPROACH

1. *Primary care providers should be able and willing to serve any patient who presents at the clinic.*

   Primary care providers should not be excused by job classification from interacting with clients, including STD patients. The consultants recommended that staff be adequately trained and required to meet a variety of patient needs. Systematically conducted needs assessments may help to identify existing gaps in services. The consultants suggested that STD screening and treatment be offered in multiple settings (e.g. emergency rooms, jails, substance abuse treatment centers, homeless shelters, and adolescent health centers).

2. *Standards of care for STD should be developed and promoted both in the public and private health care settings (e.g. managed care organizations).*

   The consultants emphasized that the public health sector should be more assertive when working with managed-care organizations. As an example, they noted that managed care providers should be strongly encouraged to provide partner notification services to their patients, and it was felt that STD programs could provide the technical assistance needed to assist managed care partners to offer this service.

3. *Lessons learned, about community involvement and partnership, from other public health efforts to provide comprehensive care (e.g. hypertension, diabetes) should be identified and replicated in a syphilis elimination campaign.*

   The consultants recommended that syphilis prevention health care be evaluated from the perspective of maternal/child health (e.g. congenital syphilis). They also said that there should be an assessment to identify health care systems failures which may be contributing to the persistence of syphilis in the U.S., and once again, they asked the question, "What is the role of racism and classism in the U.S. syphilis epidemic?"

FACILITATING COMMUNITY INVOLVEMENT

1. *External experts must truly value involvement and participation of affected communities and demonstrate a commitment to the development of reciprocal relationships among researchers, providers, and affected communities.*

   The consultants stated that concerted efforts must be made to enlist *community-defined* leaders in the elimination effort. A number of the consultants suggested that local Disease Intervention Specialists might be able to serve as community liaisons. It was believed that there should be support for the establishment of syphilis elimination coalitions to actively include and engage a variety of partners. Coalition mission statements should reflect value and commitment to mutual partnership. It was noted that funds to support coalition coordinators would have to be made available. Some consultants also recommended that public health agencies employ persons living in high prevalence neighborhoods whenever possible to help design and deliver intervention efforts.

2. *Mutual communication around syphilis elimination, and sexual health in general, should be promoted among providers and affected communities.*

   The consultants described a need for improved public information campaigns that utilize both large and small media. Information about syphilis must be distributed to educate persons about the effort. It was noted that many African American professionals are not addressing STDs or syphilis elimination, and they should be engaged in the elimination effort. Greater publicity could generate broader public interest and could work to increase availability of funds to support the effort. The consultants suggested linking with other state health task forces and community service agencies (e.g. HRSA) and utilizing their established communication networks in the effort. Many felt that linking grant requirements to community involvement would work to facilitate improved communication between and among providers and affected communities.

DEVELOPING COMMITMENT/POLITICAL WILL

1. *A campaign to eliminate syphilis will need to inspire passion.*

   The work group agreed that at present there is little passion about syphilis or syphilis elimination, or about STDs in general. It was felt that strong commitment, as well as political will, is essential to develop the kind of sustained action required to implement an elimination campaign that is national in scope. The work group reiterated that to generate this level of committed action, the U.S. syphilis epidemic must be framed in such a way that it resonates with relevant and key constituents. Members asked then, "How do we generate this passion?" The course of discussion returned the consultants to the question of , "Do we need a "face of syphilis?" about which a number of consultants expressed concern that given the potential negative influences of race and social class in the persistence of syphilis in the U.S., the "wrong face" could work to discourage and erode commitment and political will, as opposed to fostering it.

2. *STD health care providers, researchers, and advocates will need to collaborate and provide mutual technical assistance to develop commitment and political will to initiate and sustain a syphilis elimination campaign.*

   The consultants cited financial rewards, as well as professional recognition, as possible useful incentives that would promote diligence to the effort.

IMPORTANT PARTNERS

The work group also generated a list of relevant and important partners for syphilis prevention and control. The list of partners was as follows:

- private foundations to generate program support,
- state and local health coalitions,
- faith communities,
- community leaders from affected communities,
- persons from affected communities (as paid partners to sustain efforts),
- policy makers (e.g. county health officers, state legislators, legislative aides),
- minority medical associations (e.g. National Medical Association),
- local medical societies,
- school-based clinics,
- infant health care providers,
- non-profit hospitals,
- not for profit community-based organizations,
- health insurers,
- jails,
- drug treatment centers,
- community health centers,
- other federal agencies (e.g. HRSA, HUD),
- historical black colleges and universities, and
- African American fraternities and sororities.

RESEARCH LEADING TO THE PROMOTION OF COMMUNITY INVOLVEMENT AND PARTNERSHIP

1. *Research studies should be initiated and supported that seek to expand and improve STD health care.*

   The consultants identified 5 key research objectives deemed associated with the recommendation to expand and improve the STD health care services: 1) examine patient-provider interactions, 2) assess physicians compliance with reporting, 3) conduct sentinel surveillance to evaluate private source reporting, 4) measure client satisfaction with services, and 5) examine the role of racism and discrimination based on class in the U.S. syphilis epidemic.

2. *Research should be conducted to assess whether or not race and class influence policy makers' willingness to address and embrace syphilis elimination.*

   A significant number of the work group members felt that the race and socio-economic class of persons likely to be at increased risk for syphilis reduced the interest and commitment of policy makers to advocate for syphilis elimination.

3. *Multi-discipline and multi-perspective research to understand the U.S. syphilis epidemic must be conducted and must promote and allow for involvement and participation of affected communities.*

   Thorough evaluations of the impact of efforts to involve communities in syphilis prevention and control in both high and low morbidity areas were strongly recommended. The consultants also recommended that research be undertaken to develop the "face of syphilis", in much the same way that there are "faces of AIDS"with the intent to raise awareness of and social commitment to syphilis elimination. It was again emphasized that any research activity initiated in either of these areas must also examine the question of the influence of race and class in the U.S. syphilis epidemic, that, at least in part, this kind of research should be conducted by minority researchers.

4. *Research should be conducted to determine the social and political factors contributing to high syphilis rates in the U. S.*

   In particular, the consultants called for an examination of how resources are being allocated to address the epidemic of syphilis. Again they raised the concern that the race and class of persons most at risk for syphilis infection are influencing the commitment and will of policy makers and health care providers to respond to the epidemic.

CDC ACTION STEPS FOR COMMUNITY INVOLVEMENT AND PARTNERSHIPS

The consultants listed ten specific action steps that should be immediately undertaken by the CDC to address the issues of: 1) expanding and improving the STD health care provider base, 2) working with policy makers, 3) facilitating community involvement, 4) promot-

ing a more comprehensive health care approach, and 5) developing commitment to and political will for syphilis elimination. The steps are as follows:

1. *The CDC should develop and implement a comprehensive plan for the provision of relevant and timely technical assistance in program development and evaluation to local project areas and STD programs.*

2. *The CDC should make every effort to ensure that effective strategies are adopted and implemented that avoid the turning away of persons who seek STD care.*

3. *A plan to facilitate the expansion of the STD health care provider base, which would provide STD education and treatment information to traditional and non-traditional partners should be developed by the CDC and implemented.*

4. *Local medical societies, including minority medical societies, should be targeted as audiences for syphilis public information campaigns, and the CDC must seek to work in partnership with these groups to eliminate syphilis.*

5. *The CDC ought to encourage state regulatory bodies to routinely include STD standards of care in managed care programs.*

6. *The CDC should make available, to key and relevant partners, successful intervention models and support replication of these models as appropriate.*

7. *The CDC should fund and facilitate efforts to establish local and state coalitions with the objectives of promoting sexual health and eliminating syphilis.*

8. *The CDC should assist in the preparation and coordination of press releases for the general public.*

9. *The CDC should use the MMWR publication to communicate syphilis data to policy makers.*

10. *The CDC management should lead efforts to generate CDC-wide commitment to syphilis elimination.*

General Findings

Syphilis persists in a number of U.S. communities, and in others it remains in a position to re-emerge. Such persistence and re-emergence, if not checked, is likely to have major implications for continued racial disparities in the health status of Americans. Moreover, syphilis persistence and re-emergence threatens to further magnify emerging racial disparities in the HIV/AIDS epidemic.

In addition to recommendations specific to each of the work groups, some common themes and general recommendations also emerged and were highlighted in the plenary session. The consultants advised that to be successful, the national effort must be developed and translated to the local level. They emphasized that syphilis elimination plans must be tailored to local areas and communities to be relevant and effective. In each of the work groups, specific recommendations even for front-line and local staff were noted. Often these recommendations called for local providers to move beyond institutional settings and provide STD services, including surveillance, in locations not traditionally included in STD program activities. To effectively expand efforts to achieve elimination, the consultants said that STD programs will need to develop improved relations and build new and collaborative partnerships with those communities affected by syphilis. The legacy of distrust and disaffection, apparent at multiple levels and between multiple groups, was frequently cited by the consultants as a major impediment to a successful elimination campaign, and they identified a number of ways to effectively address and overcome this important barrier. Although syphilis elimination would need to be achieved primarily through a variety of local efforts, the consultants also listed important roles for state and national partners, particularly in the areas of STD and health care policy development and program-relevant research. They specifically called for the provision of leadership and technical assistance from the CDC in order to achieve syphilis elimination.

Syphilis as a Social Disease

Syphilis as a social disease was also another central theme to emerge from all three of the work groups, and was substantially reflected in the plenary discussions as well. To take on the task of eliminating syphilis, the consultants said, it is necessary to acknowledge that syphilis is first and foremost a *social disease*. In otherwise healthy individuals and communities, syphilis is a disease that is easily diagnosed and treated, and its transmission is easily interrupted. Across the work groups, the consultants recommended that the elimination of syphilis requires an identification and examination of the impact of social factors in the persistence of syphilis. The current U.S. syphilis epidemic largely affects some of the country's most disadvantaged and distressed individuals and communities, persons that are also besieged by a number of other detrimental conditions, such as: poverty, high unemployment, and inadequate educational and health care resources. Many of these same individuals and communities are further negatively impacted by racism and discrimination based on their social and economic status, factors that may indeed influence the availability, accessibility and acceptability of current STD prevention and treatment services. While the absence of syphilis does not mean that these problems do not exist, the occurrence of syphilis does, in large part, demonstrate their consequence. Even if syphilis rates continue to decline to still lower levels as a result of a stronger U.S. economy and its collateral benefits (e.g. lower unemployment rates), it is possible that syphilis could yet re-emerge in a major way if social conditions should once again deteriorate. Moreover, it is important to note that many of the communities most significantly affected by syphilis may not have fully realized the benefits of the recently prosperous economic climate.

Although the transmission of syphilis between and among sexually active persons is a direct result of individual behaviors, these larger social factors, it was asserted in the meeting, generate and support the environmental and ecological conditions that increase and intensify the risk of each individual's behavior and thereby serve to sustain the epidemic. Persistent syphilis, then, becomes an outcome of factors beyond personal behavior, and thus beyond the more limited scope of individualized interventions. While it is not the explicit role of the CDC to address socio-economic and other societal conditions at the macro level, the consultants felt that it is critical that the CDC document and describe the impact of such conditions on the public's health.

Collaborative and Comprehensive Approaches

The recognition of syphilis as a social disease compels the adoption of more collaborative and comprehensive approaches to achieve elimination, requiring biomedical, social, and behavioral interventions at the individual, group, and community levels. These approaches are likely to demand new and different tools and strategies, as well as new and equal partners in the effort. The consultants strongly emphasized the need for community-involved, community-centered programs, programs that specifically include and reflect the perspectives of persons who are at risk for the disease. They discussed efforts that entail more than the simple recruitment of affected community members as program volunteers, whose primary contributions consist of no more than endorsing the program or conducting the outreach. The consultants felt that providers and researchers have to demonstrate that they value community member participation by offering the members of affected communities opportunities to participate in the development of research questions, the allocation of resources, the delivery of services, and in the management of evaluations. To foster this level of mutuality, according to a number of consultants, historical issues such as ethnocentrism, distrust, and power dynamics will have to be addressed.

Conclusions

In general, the consultants agreed that syphilis elimination is technically feasible and advisable. Although qualified, they supported syphilis elimination as a national goal. They were adamant, however, that adequate resources need to be committed to the effort. Renewed efforts to enhance syphilis control should take advantage of the currently low disease rates and develop mechanisms to interrupt transmission. Systems will need to be developed to identify and respond rapidly to

re-emergent disease in areas presently free of syphilis. The optimal methods for improving syphilis control will vary by community, and it is possible that in communities with minimal infrastructure, ongoing transmission will be particularly intractable. The consultants cautioned that the elimination of syphilis is likely to be very difficult, due to many unknown or uncontrollable factors which could affect the likelihood of success. It is for this reason then that local control efforts need to be carefully monitored, and plans for appropriate technical assistance and capacity-building be developed and implemented.

Finally, while the consultants agreed with the concept of a national task force to lead the elimination effort, they emphasized that the effort could not be successful without state and local leadership. They also strongly recommended that communication about syphilis elimination, as a national goal and the strategies to achieve it, at all levels, be carefully considered so as to not lead to further stigmatization of the disproportionately affected populations and their communities, but rather serve to increase the health and social status of those affected by this disease.