

National Congenital Syphilis Crisis

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California Congenital Syphilis Elimination Summit

Oakland, CA

September 19, 2018

Disclosure

Gail Bolan, MD, has no relevant financial relationships with an entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on patients.

Outline

- › Syphilis Epidemiology
 - › Congenital Syphilis Surveillance
 - › Prenatal Screening Laws
- › Enhanced Congenital Syphilis Response
- › Recommendations for Provision of Quality STD Clinical Services





STDs hit record high in US, 2M cases reported in 2016

"Increases in STDs are a clear warning of a growing threat," Jonathan Mermin, director of CDC's National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, said in a news release. "STDs are a persistent enemy, growing in number and outpacing our ability to respond."



CDC: 3 sexually transmitted diseases hit record highs across U.S.

Los Angeles Times

STD rates hit another record high, with California near the top



C reports rise in STDs in the United States



America faces uncontrollable STD epidemic

TIME Health

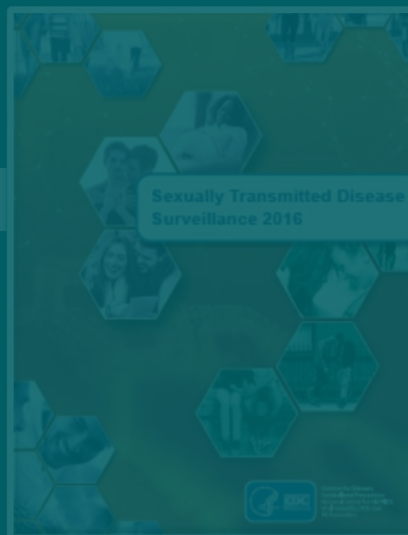
More Americans Have an STD Than Ever Before, Officials Say



5 reasons why 3 STDs are roaring back in America

The CDC found spikes in cases of syphilis, gonorrhea, and chlamydia in 2016.

USA – New STD cases "hit record high in US"



STDs Hit All-Time High in U.S.



Syphilis, Gonorrhea, Chlamydia: First Time in Decades

Daily News

Sex diseases on the rise: More than 2 million cases of STDs reported in 2016



The Washington Times

STD rates reach record high in U.S., government says



New STD cases hit a record high in the US

Annual report shows more than 2 million cases of chlamydia, gonorrhea and syphilis reported in 2016



Syphilis Epidemiology



THE SACRAMENTO BEE

There is now a gonorrhea superbug and we can't get rid of it

Miami Herald



STIs are on the Rise in the United States

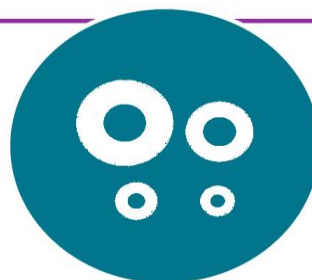
LEARN MORE AT: www.cdc.gov/std/

The STATE of STDs in the United States



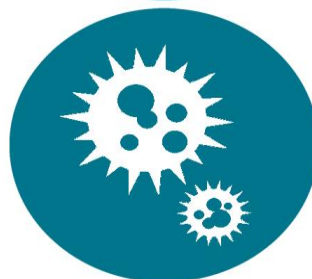
in 2017

STDs TIGHTEN THEIR GRIP
ON THE NATION'S HEALTH
AS RATES INCREASE FOR A
THIRD YEAR



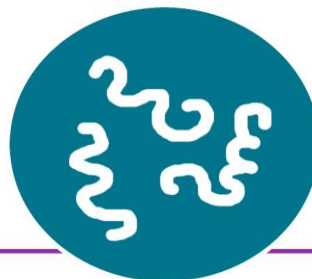
1.69 million
CASES OF CHLAMYDIA

5% increase since 2016



548,678
CASES OF GONORRHEA

17% increase since 2016



98,437
CASES OF SYPHILIS

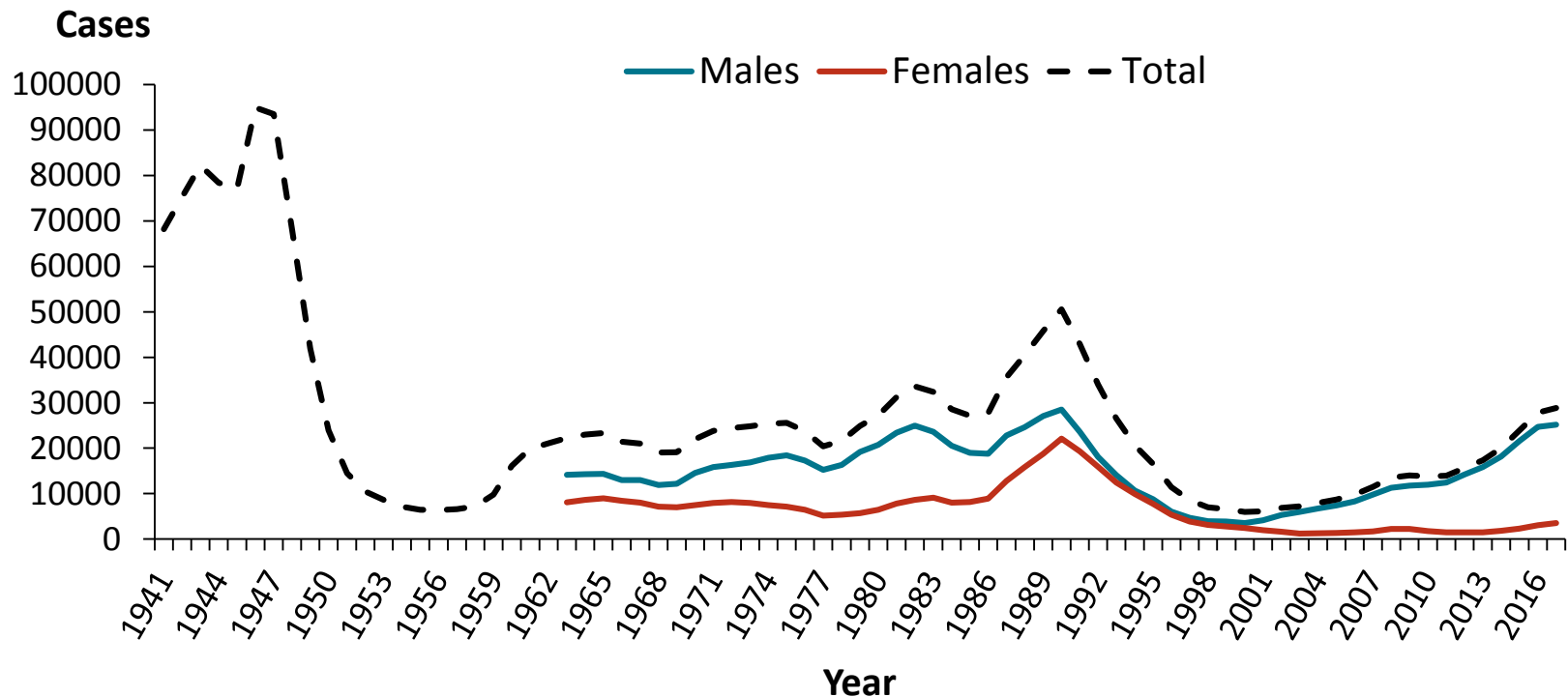
12% increase since 2016

more than **900** Congenital Syphilis Cases in 2017

44% ↑

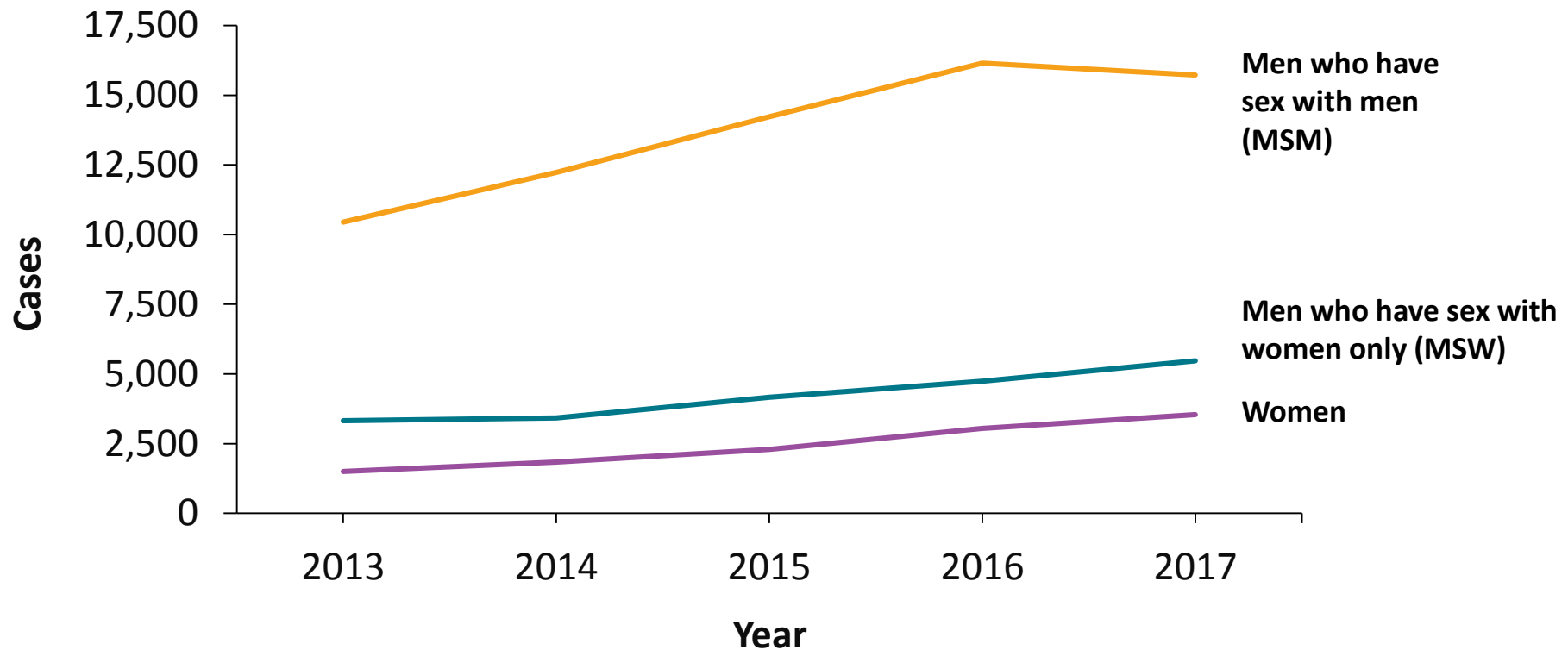
Primary and Secondary Syphilis: Reported Cases, U.S., 1941–2017*

Primary and Secondary Syphilis Cases have increased 390% since 2001



CDC estimates more than 55,000 people are infected each year

Primary and Secondary Syphilis Among MSM, MSW, and Women, 36 States*, U.S., 2013–2017†

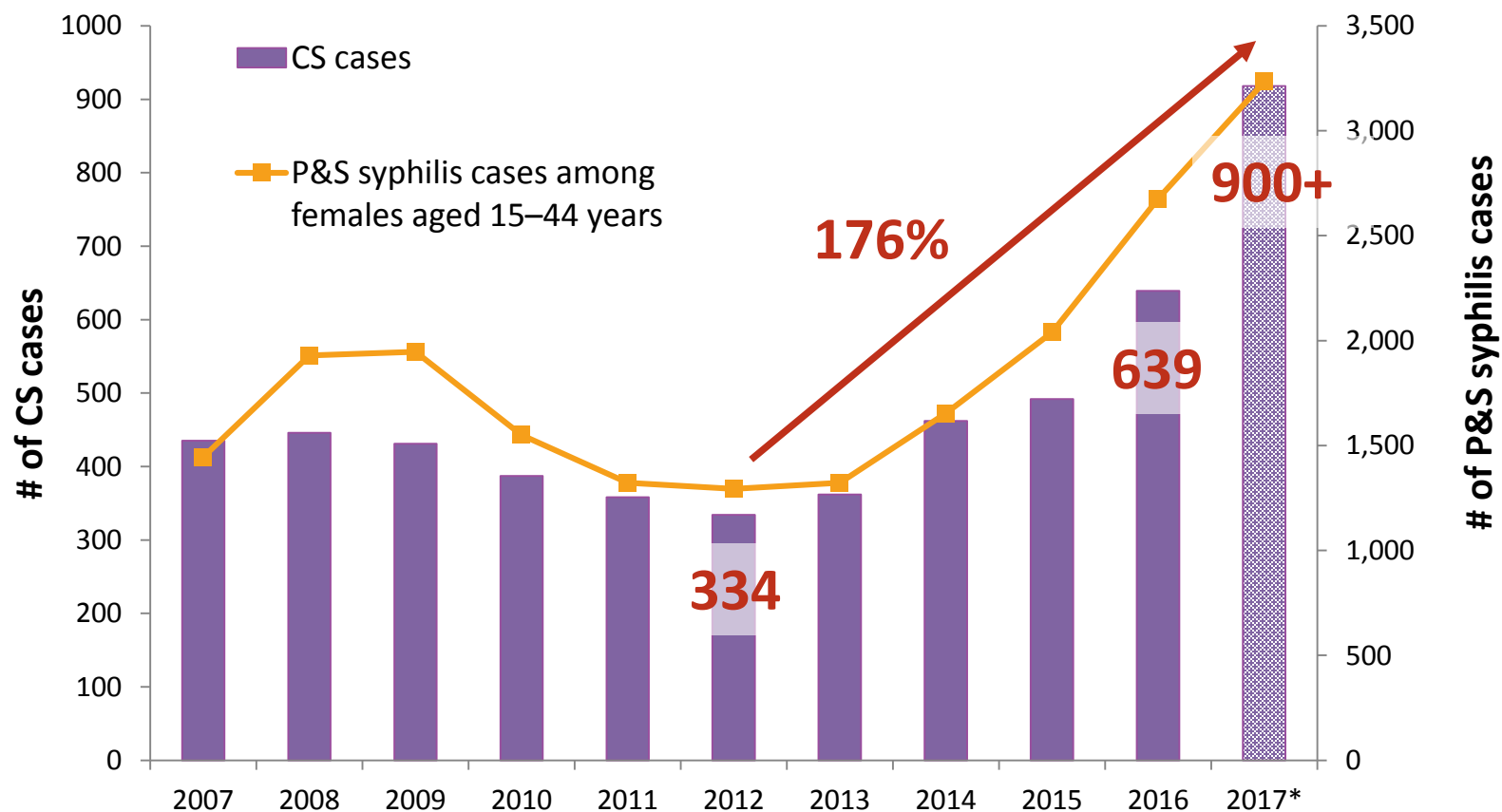


*36 states were able to classify $\geq 70\%$ of reported cases of primary and secondary syphilis as either men who have sex with men (MSM), men who have sex with women only (MSW), or women for each year during 2013–2017.

†Data for 2017 are preliminary as of 03/15/2018.

Congenital Syphilis

Congenital Syphilis (CS) Cases and Primary and Secondary (P&S) Syphilis Cases Among Females of Reproductive Age, U.S., 2007–2017*



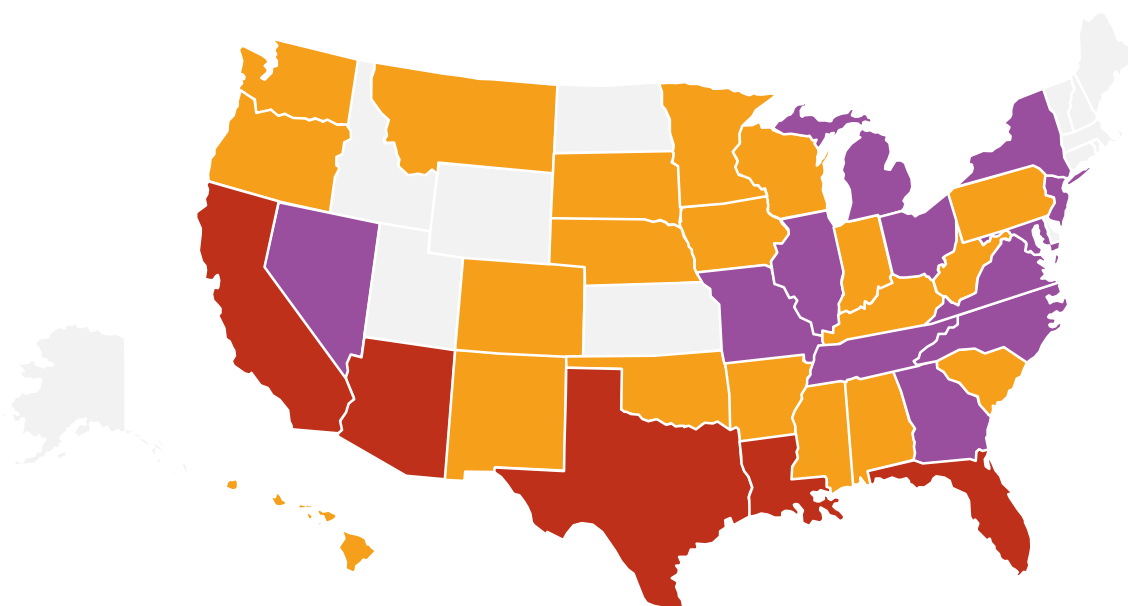
*Data for 2017 are preliminary as of 06/30/2018.

Congenital Syphilis Cases (2017)

In 2017, **5** states represented **70%** of all congenital syphilis cases in the U.S.

State	2012 Cases	2017* Cases
CA	35	281
TX	78	176
FL	37	93
LA	33	59
GA	16	23
MD	12	20
AZ	14	30
IL	23	21
OH	19	18
U.S. Total	334	918

*Congenital syphilis data are preliminary as of July 2018



0 reported CS cases

1-9 reported CS cases

10-29 reported CS cases

≥30 reported CS cases

CONGENITAL SYPHILIS

Confirmed Surveillance Case Definition

Demonstration of *T. pallidum* by

- Darkfield microscopy of lesions, body fluids, or neonatal nasal discharge
- OR —————
- PCR or other equivalent direct molecular methods of lesions, placenta, umbilical cord, or autopsy material
- OR —————
- Immunohistochemistry or special stains (e.g., silver staining) of specimens from lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material

CONGENITAL SYPHILIS

Probable Surveillance Case Definition

A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant

————— OR —————

An infant or child who has a reactive non-treponemal test for syphilis (VDRL, RPR, or equivalent serologic methods) AND any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive CSF VDRL test
- In a nontraumatic lumbar puncture, an elevated CSF leukocyte count or protein (without other cause)

*Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment Guidelines, appropriate for stage of infection, initiated 30 or more days before delivery

CONGENITAL SYPHILIS

Syphilitic Stillbirth Surveillance Case Definition

A fetal death that occurs after a 20-week gestation or in which the fetus weighs >500 g

————— **AND** —————

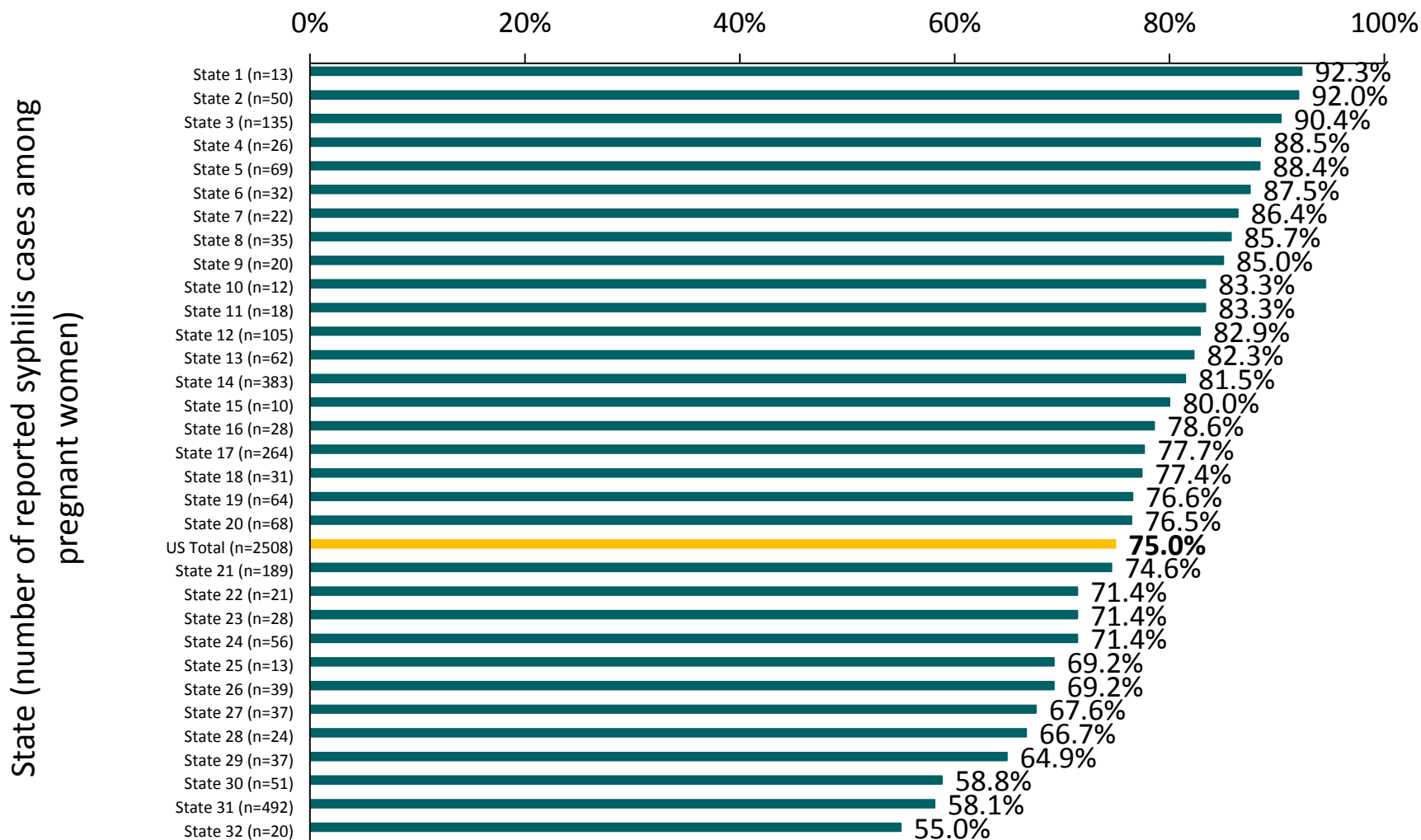
The mother had untreated or inadequately treated* syphilis at delivery

*Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment Guidelines, appropriate for stage of infection, initiated 30 or more days before delivery

Congenital Syphilis Surveillance Case Definitions and Clinical Diagnoses

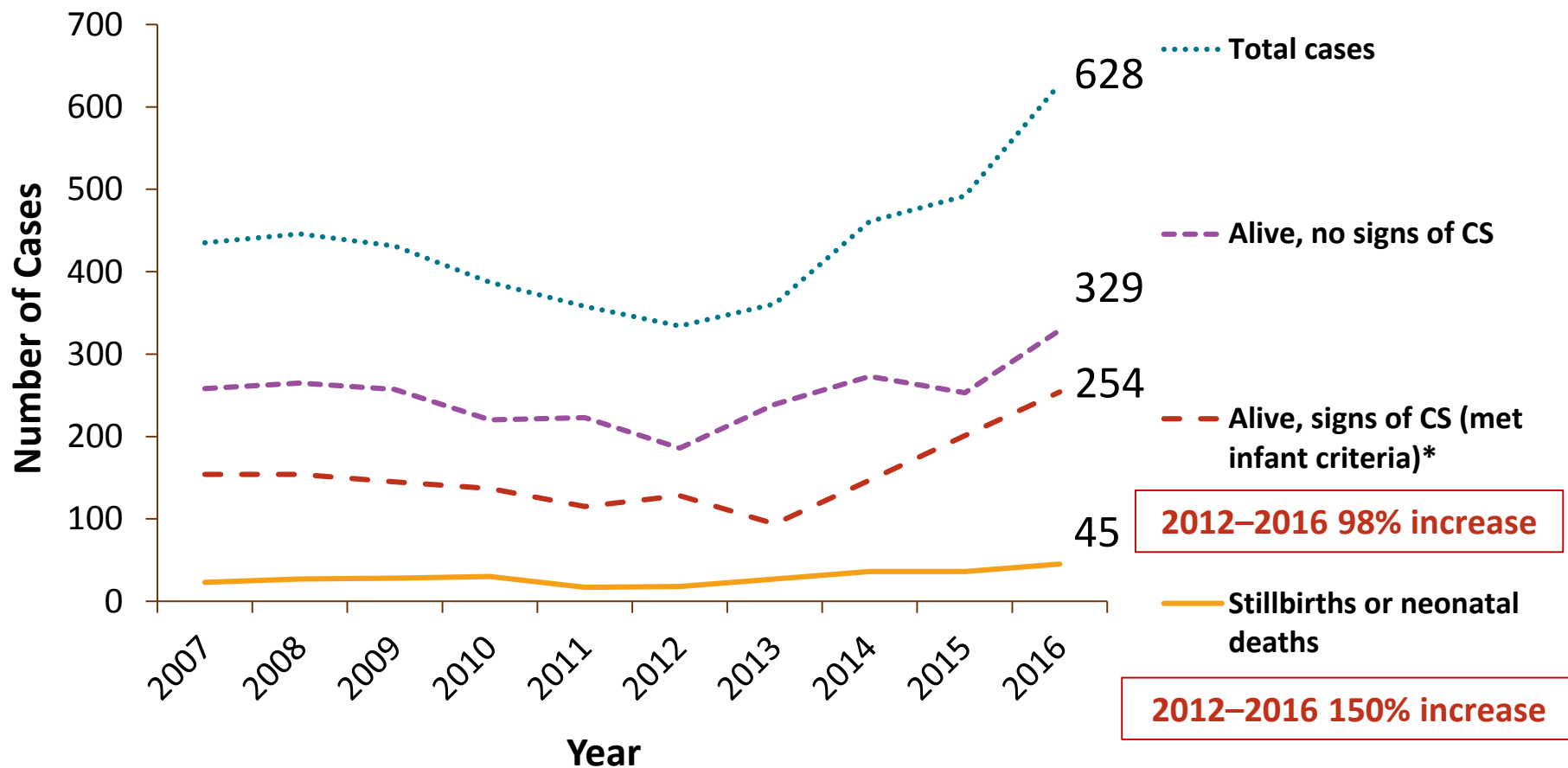
- A surveillance case of congenital syphilis may not match a clinical case
- Surveillance case definitions maximize sensitivity and specificity and rarely count all cases
- Differences are related to:
 - A serum quantitative nontreponemal titer that is 4-fold higher than the mother's titer
 - Interpretation of the CSF WBCs and protein results
 - Interpretation of adequate treatment of a mother who is serofast after treatment of syphilis before the pregnancy

Estimated Proportion of Potential Congenital Syphilis Cases Averted by State*, 2016



* Among states with at least 10 reported cases of syphilis among pregnant women

Reported Congenital Syphilis Cases by Vital Status and Presence of Signs of Infection—United States, 2007–2016



*includes laboratory, x-ray, and physical findings consistent with congenital syphilis infection

Factors Associated with Congenital Syphilis Cases:

Mothers of Reported Congenital Syphilis Cases (n=628), US, 2016

Missed Prevention Opportunities	%	N
Prenatal Care: Received late or no prenatal care	34%	215
Screening: Received prenatal care, but not screened in time	8%	51
Treatment: Positive initial screening test, but inadequate treatment	18%	111
Re-screening: Negative initial screening test, but later infected	16%	101
Other	8%	48
Missing Data: Unknown/inadequate testing or treatment data	16%	102

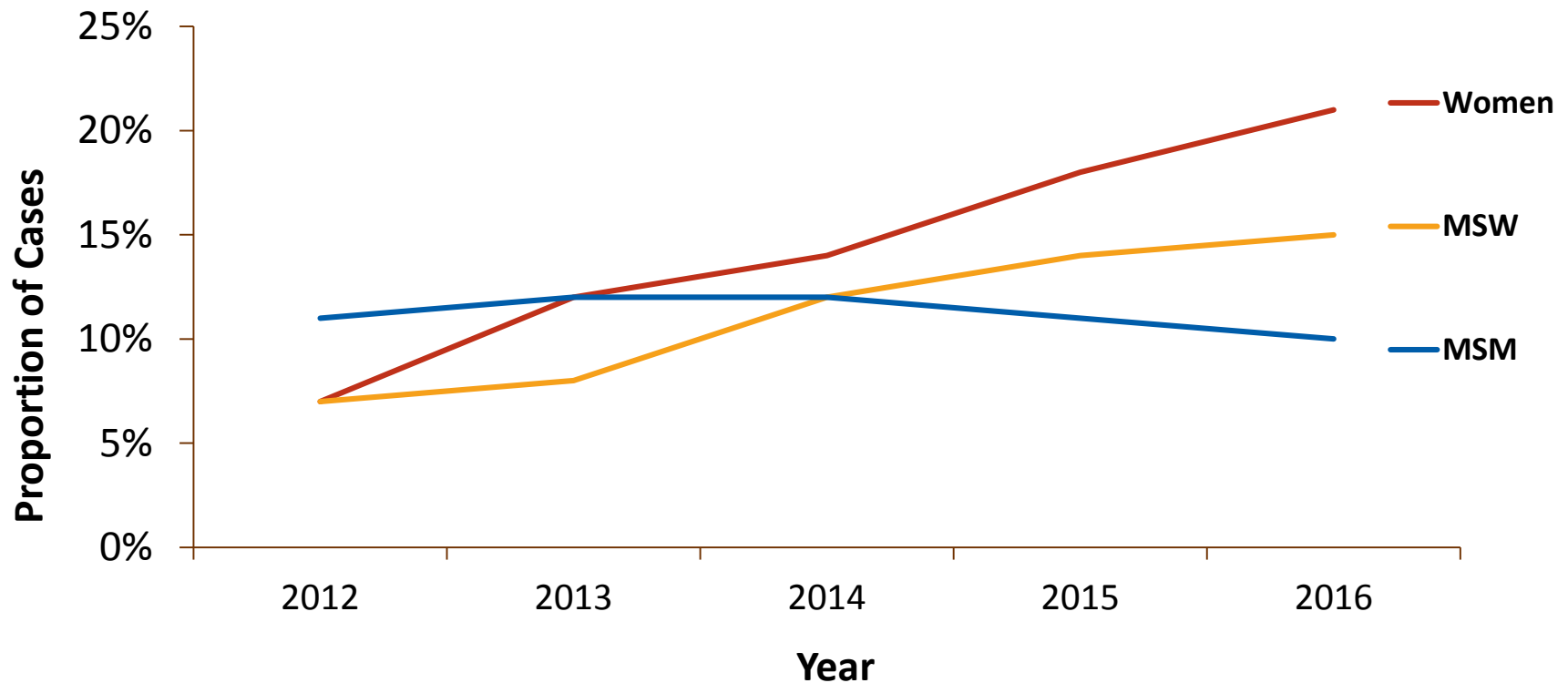
Some Reasons for Increasing STD Rates

- Socioeconomic factors
- Substance use disorders
- Access to care
- Infrastructure reduction
- Lack of awareness by providers and communities
- Community trust
- Confidentiality concerns
- Prevalence within sexual networks



Proportion of Primary and Secondary Syphilis Cases that Reported Meth or Heroin Use, or Sex with a PWID, 2012–2016

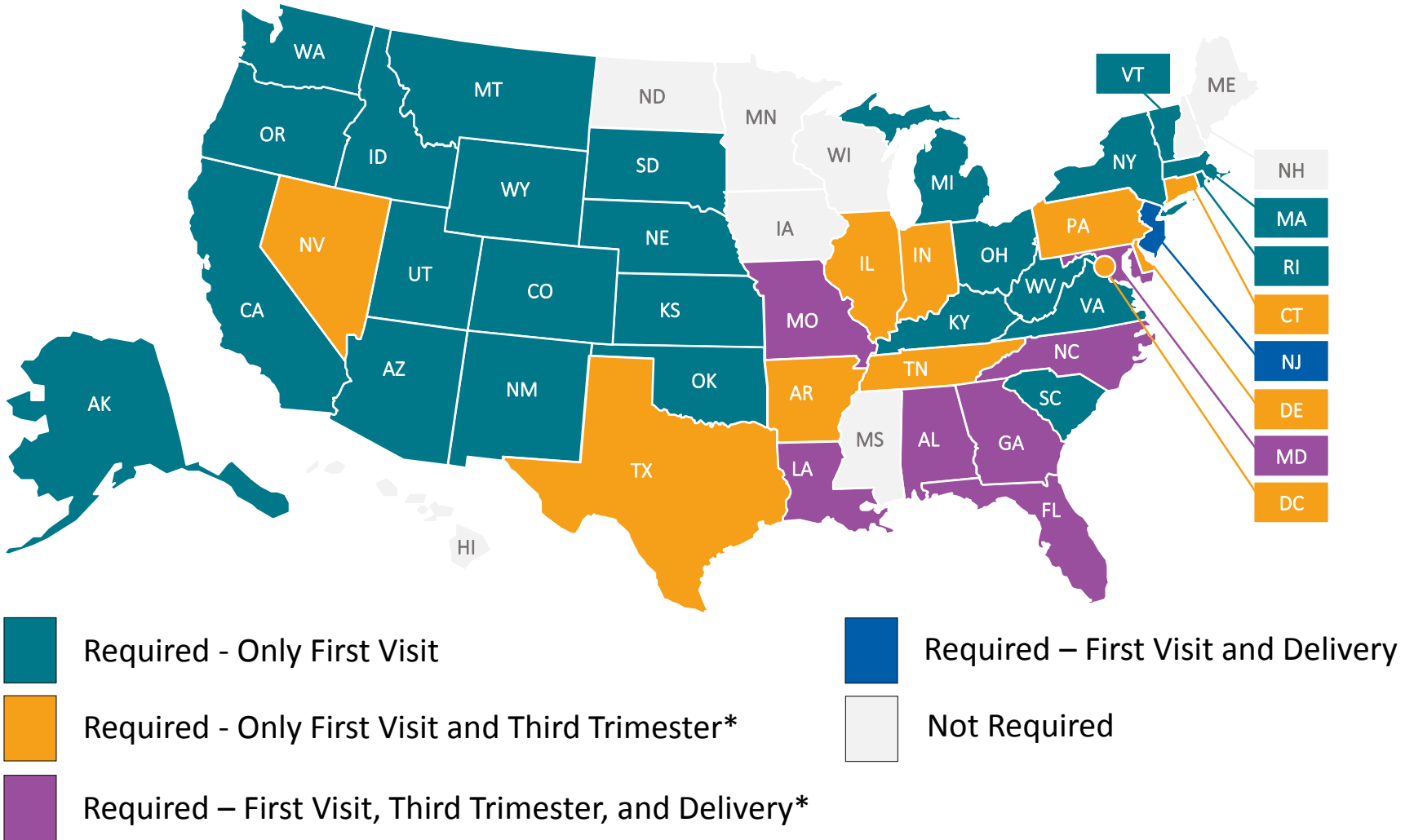
The Proportion of Female Syphilis Cases that Report Meth or Heroin Use, or Sex with a PWID, Has Tripled Since 2012



Note: Data restricted to cases with complete data on meth use, heroin use, and sex with PWID
P&S = primary and secondary; PWID = person who injects drugs;
MSW = men who have sex with women only; MSM = gay, bisexual, and other men who have sex with men

Prenatal Screening Laws

Prenatal Syphilis Screening Laws, 2016

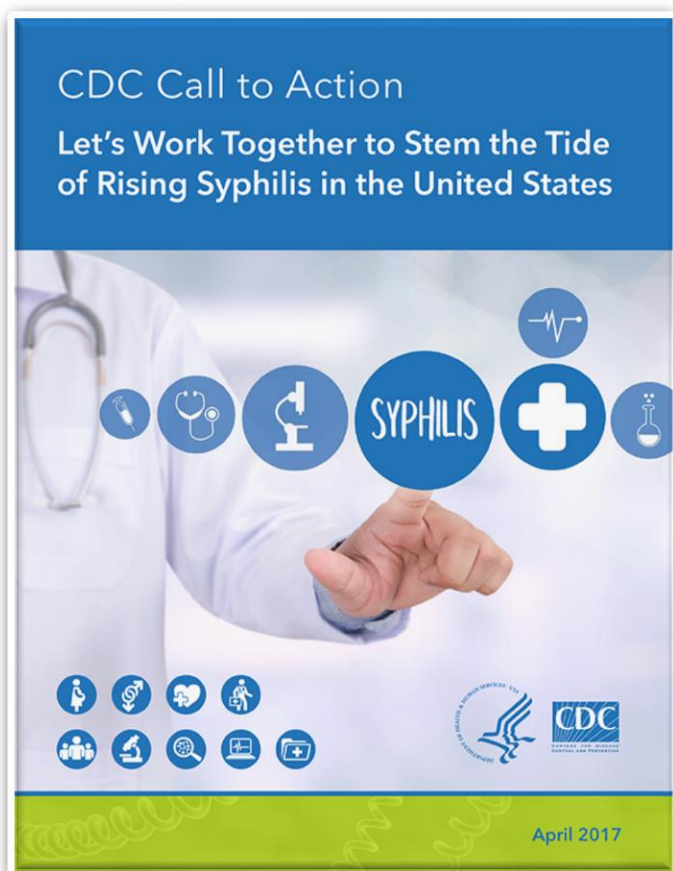


*The following states only require third trimester screening if the patient is at increased risk: Alabama, Indiana, Missouri, Pennsylvania, and Tennessee. The following states only require screening at delivery if the patient is at increased risk: Florida, Georgia, Louisiana, Maryland, and Missouri. Includes state statutes and regulations effective as of 2016



Enhanced Congenital Syphilis Response

CDC Syphilis Call to Action



- Convened **Syphilis Summit** with national experts
- Issued a **Syphilis Call to Action** that includes:
 - Congenital syphilis
 - Syphilis among MSM; and
 - Biomedical advancements for syphilis

Overall Actions to Address Syphilis

Screening and Treatment

- Underutilization of frequent syphilis screening and timely, recommended treatment for MSM and pregnant females
- Penicillin shortages and stockpiling drugs
- USPSTF recommendations for more frequent screening in special populations could facilitate reimbursement
- PrEP visits provide opportunities for screening/Rx among MSM

Partnerships

- Partnering around prenatal care access, screening and unintended pregnancy prevention
- Working with DHAP and MSM providers and communities to sync HIV and syphilis messages and interventions

Overall Actions to Address Syphilis

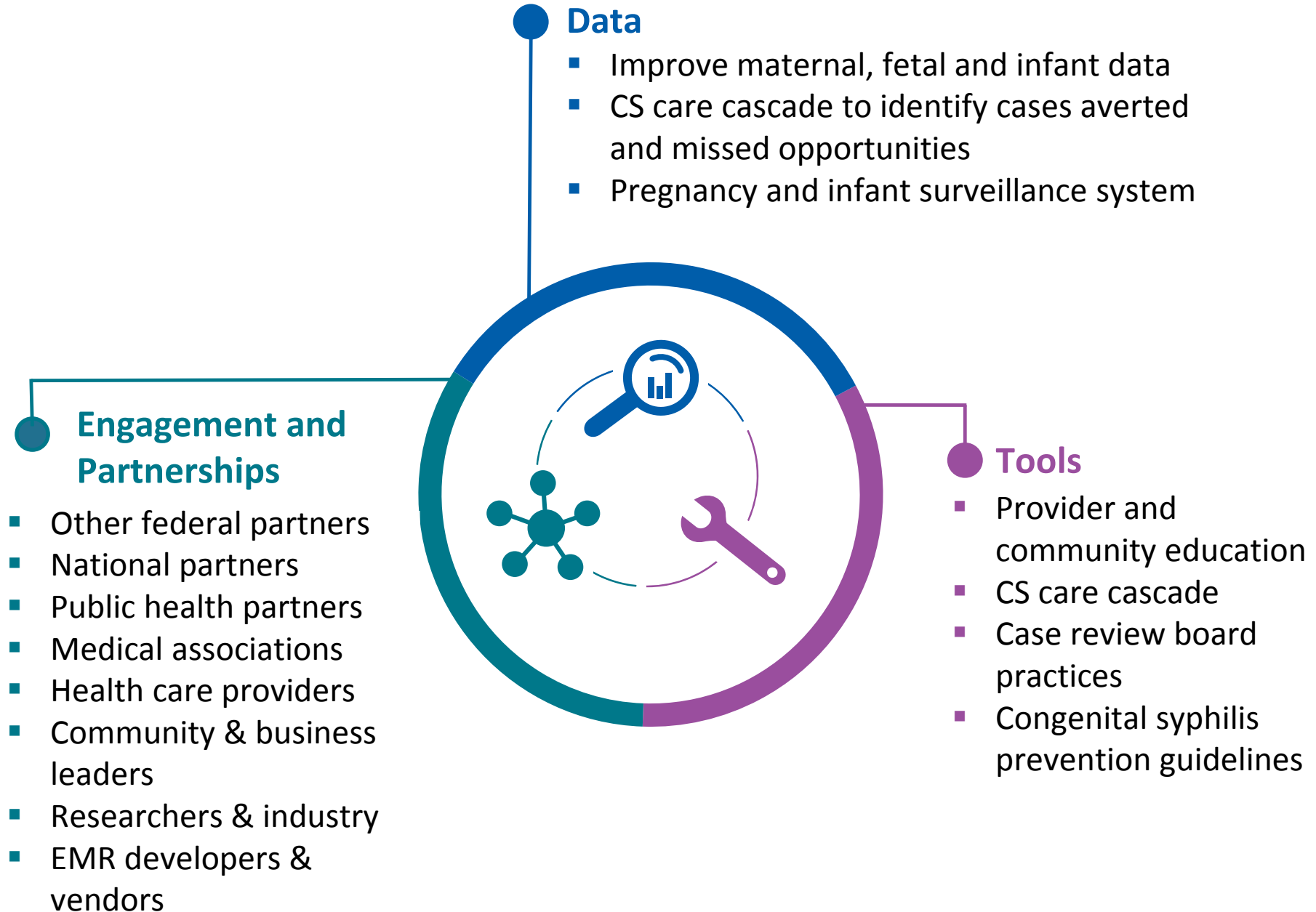
Biotechnology and Data Systems

- Creating a specimen repository to support technological developments in **diagnostics, therapeutics, and vaccines**
- Investment in **STD public health data systems** to electronically capture and integrate data is needed
- Using molecular epidemiology techniques to study **transmission dynamics** and possibility of **neuropathic strains**

Actions to Address Congenital Syphilis

- Case review with infant morbidity review board model in selected states/counties to identify missed opportunities
- Developing a CS prevention cascade
- Developing tools to assess local context of CS cases and implement high impact interventions
- Working with federal agencies (MCH, OPA, OWH, Substance use) and partner organizations (ACOG, AAP, March of Dimes)
- Enhancing maternal and CS surveillance to capture stillbirths (DRH and BD-Zika collaborative), fetal syphilis, infant morbidity and CS cases averted
- Updating Guidelines for the Prevention and Control of CS

DSTDP CS Activities



DSTDP CS Supplement to Strengthen the CS Response

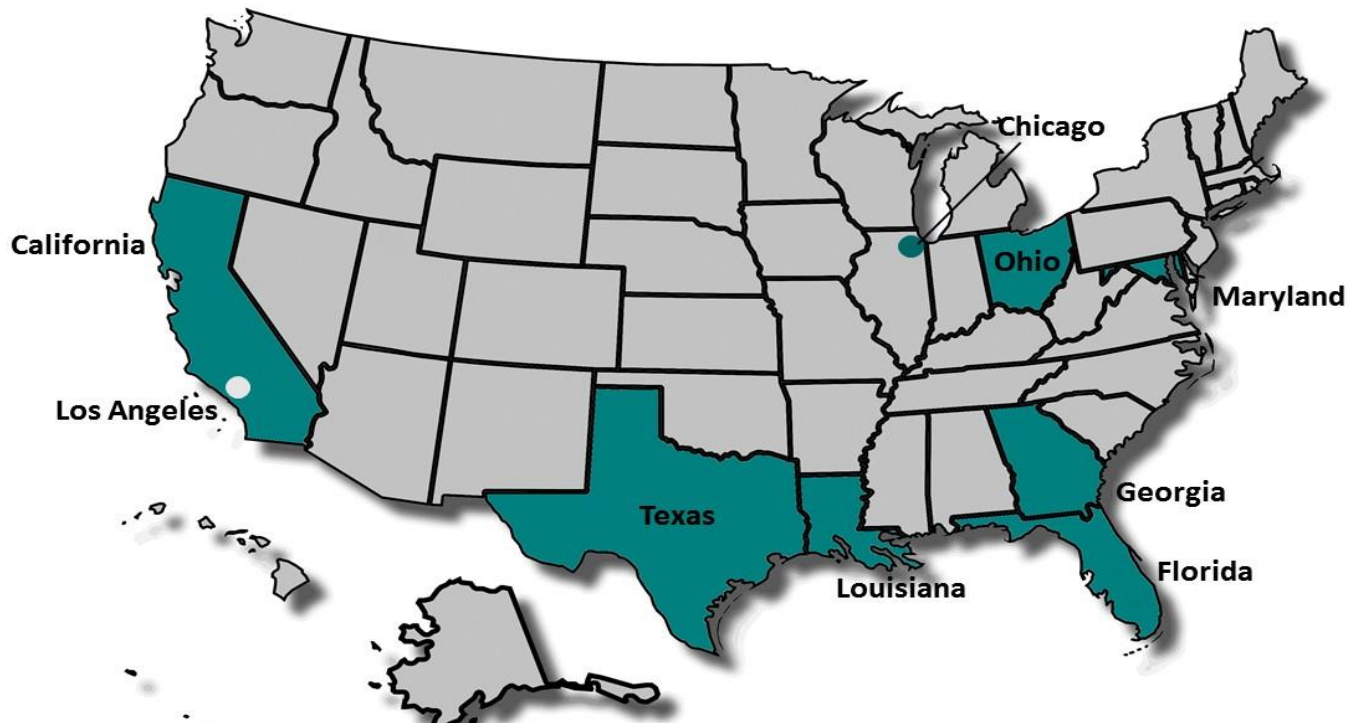
Recipients: 9 with 14 or more CS cases reported to CDC in 2015

Project Period: October 1, 2017 – December 31, 2018

Total Award Amount: \$4 million

Goals: *1) Sustainable improvements to CS-related activities*

2) Strengthen CS prevention through prospective and retrospective activities to identify opportunities for change and effective interventions



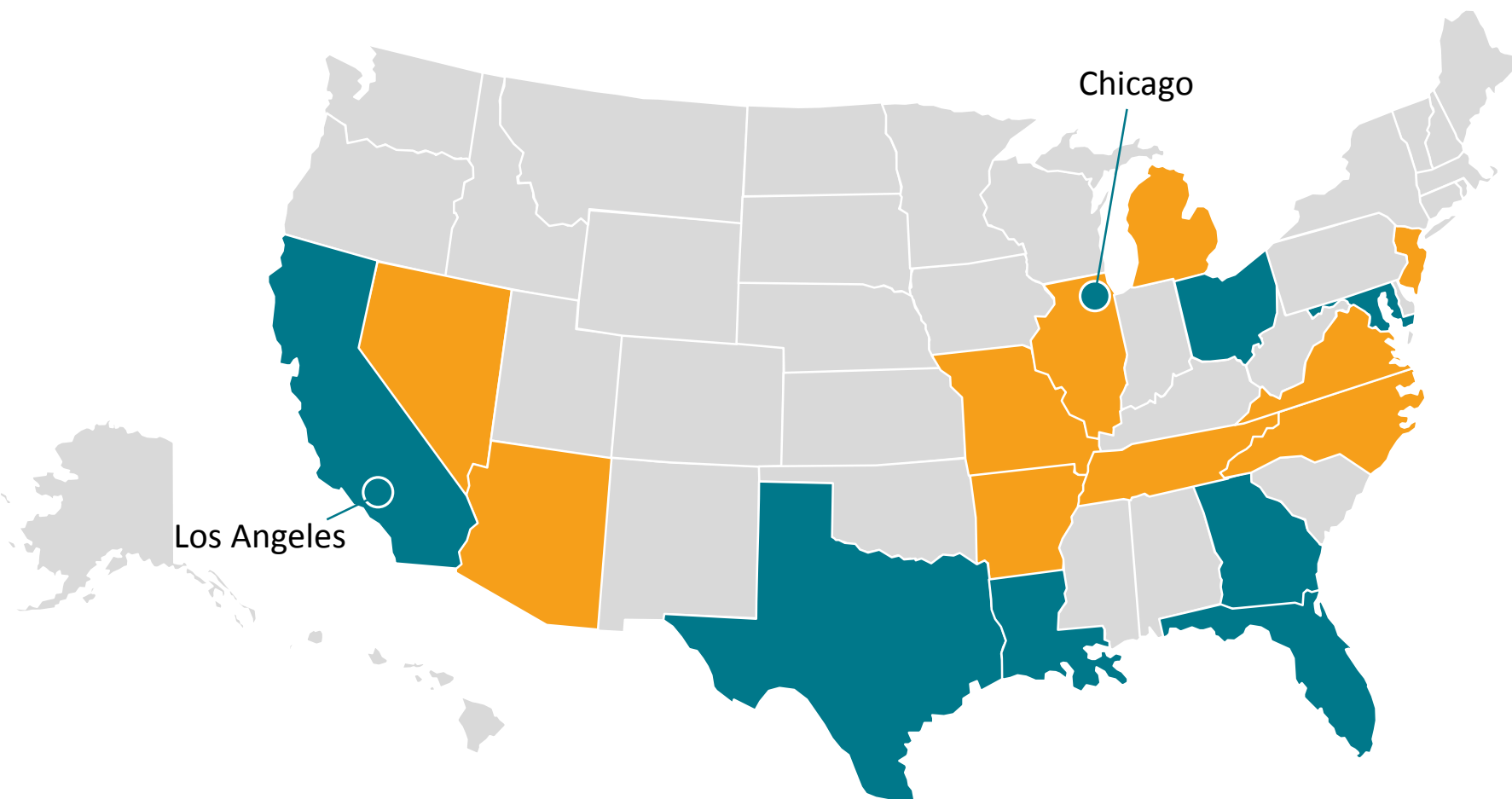
Supplement Activities

1. Improve data collection of maternal, fetal and infant epidemiologic and clinical risk factors
2. Improve ascertainment of pregnancy status among female syphilis cases
3. Strengthen CS Morbidity and Mortality Case Review Boards
4. Match syphilis surveillance data with vital statistics data
5. Strengthen partnerships with MCH & healthcare providers
6. Work with one or two local counties
7. Participate in CDC-led Special Interest Groups (SIGs)

Early Accomplishments of the CS Supplement

Surveillance	<ul style="list-style-type: none">• 4 jurisdictions have completed at least one match with vital statistics data
Disease Investigation & Intervention	<ul style="list-style-type: none">• 4 jurisdictions have established referrals to MCH-funded case management programs for follow-up of pregnant syphilis case-patients<ul style="list-style-type: none">• 1 jurisdiction established an in-house case management program• 7 jurisdictions have strengthened relationships with MCH
Promotion of CDC-Recommended Screening, Diagnosis, & Treatment	<ul style="list-style-type: none">• 7 jurisdictions have reached over 500 providers with information about female syphilis prevention and control
Promotion of Prevention & Policy	<ul style="list-style-type: none">• 4 jurisdictions have launched media campaigns to increase awareness of congenital syphilis and promote testing and screening• 1 jurisdiction has seen state legislation introduced for universal early 3rd trimester syphilis screening
Data Use for Program Improvement	<ul style="list-style-type: none">• 8 jurisdictions have convened at least one case review board (CRB)• 7 jurisdictions have created a sustainable CRB model meeting quarterly

Expanding CS Prevention and Control through STD PCHD



- CS Supplement Jurisdictions
- Additional Jurisdictions w/ 10+ Cases in 2017

Strengthening STD Prevention & Control for Health Departments (STD PCHD): Funding Core Public Health Functions for STD Prevention and Control

PS19-1901 Strengthening STD Prevention and Control for Health Departments (STD PCHD) 2019-2023



SURVEILLANCE

- Conduct chlamydia (CT) surveillance
- Conduct gonorrhea (GC) surveillance
- Conduct syphilis surveillance
- Conduct congenital syphilis (CS) surveillance
- Conduct surveillance of adverse outcomes of STDs



DISEASE INVESTIGATION AND INTERVENTION

- Respond to STD-related outbreaks
- Conduct health department disease investigation and intervention for pregnant women with syphilis and other reproductive-age women with syphilis
- Promote Expedited Partner Therapy (EPT) (where permissible) to partners of chlamydia and/or gonorrhea cases
- Conduct health department syphilis disease investigation and intervention for men with primary and secondary syphilis



PROMOTION OF CDC RECOMMENDATIONS

- Promote quality STD specialty care services
- Promote CDC-recommended treatment for gonorrhea and syphilis
- Promote CDC-recommended screening, diagnosis, and treatment of STDs among high priority populations



PROMOTION OF PREVENTION AND POLICY

- Promote STD prevention to the public
- Promote STD prevention and reporting to provider community
- Monitor STD-related policies and policy development



DATA USE FOR PROGRAM IMPROVEMENT

- Conduct epidemiologic analysis, translation, and dissemination
- Conduct data-driven planning, analysis, monitoring, and evaluation for program improvement

CROSS-CUTTING:

Promote STD-Related HIV Prevention

Develop, Maintain, and Leverage Partnerships

Strengthening STD Prevention & Control for Health Departments (STD PCHD)

■ Strategy Area 1: Conduct CS Surveillance

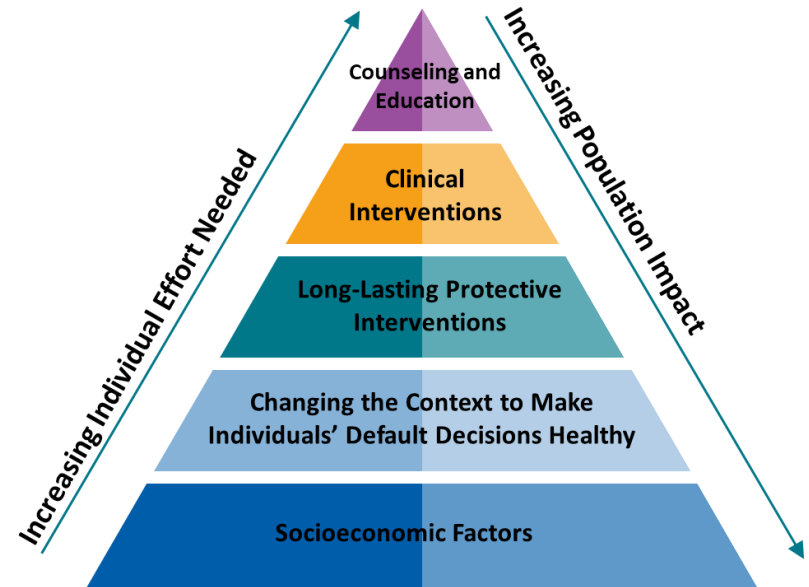
- Conduct provider and mother follow-up and review medical records of all reported CS cases
- Manage, analyze, and disseminate data on reported CS cases, ensuring capture of epidemiologic core maternal, fetal, and neonatal variables
- **10+ cases:** Improve methods to match vital statistics birth and mortality data with syphilis surveillance data
- **10+ cases:** Strengthen CS morbidity and mortality case review boards at the local and/or state level

Congenital Syphilis Prevention

Upstream Preventions

Opportunity #1: Prevent females of reproductive age from getting syphilis

Opportunity #2: Prevent unintended pregnancies among high-risk women



Downstream Prevention

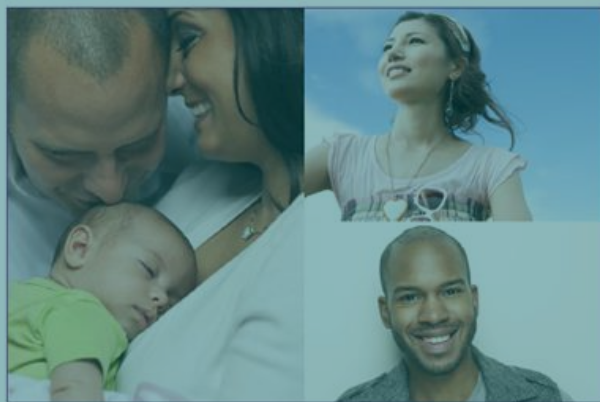
Opportunity: Prevent infected mothers from transmitting syphilis to their infants during pregnancy

Centers for Disease Control and Prevention
MMWR
Recommendations and Reports / Vol. 63 / No. 4



Providing Quality Family Planning Services

Recommendations of CDC and the U.S. Office of Population Affairs



Education Examination available at <http://www.cdc.gov/mmwr/cme/conted.html>.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Provision of STD Clinical Preventive Services Guidelines

Levels of Care: Basic & Specialized

Basic STD Care

- Recommended risk assessment
- Screening and treatment of those identified with asymptomatic infection
- Diagnosis and treatment of patients with common symptomatic infection

Specialized STD Care

- Comprehensive, confidential STD clinical services
 - Basic STD Care
 - Same day diagnostic and treatment services



Quality STD Clinical Services

- Sexual History and Physical Examination
- Prevention
- Partner Services
- Screening
- Evaluation of STD-related Conditions
- Laboratory Tests
- Treatments

Partner Services

Basic and Specialized STD Care

- The following partner services ***should be*** available as a basic and specialized STD service:
 - Guidance regarding notification and care of sex partners
 - Expedited partner therapy (where legal)

Specialized STD Care

- The following partner services ***should be*** available as a specialized STD service:
 - Interactive counseling for partner notification
 - Health Department Disease Intervention Specialist partner elicitation and follow-up
-

Screening

Basic and Specialized STD Care

- Screening and assessment for the following ***should be*** available:
 - Gonorrhea
 - Chlamydia
 - Syphilis
 - Hepatitis B
 - Hepatitis C
 - HIV
 - Cervical cancer

Specialized STD Care

- Screening and assessment for the following ***should be*** available:
 - **Trichomoniasis**
 - Screening and assessment for the following ***could be*** available:
 - **Anal cancer**
-

Sexually Transmitted Disease Surveillance 2016

STD Curriculum

1 STD Curriculum

Get from the
e-Learning Center and Prevention

Chlamydia Self-Study **NEW** Quick Reference **NEW** Question Bank **NEW**

Gonorrhea Self-Study **NEW** Quick Reference **NEW** Question Bank **NEW**

HSV Self-Study **NEW** Quick Reference **NEW** Question Bank **NEW**

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

Sexually Transmitted Diseases: Summary of 2015 CDC Treatment Guidelines

This document provides a summary of the 2015 CDC Treatment Guidelines for Sexually Transmitted Diseases (STDs). It is intended for use by healthcare providers and public health officials. The document is organized by disease and includes information on diagnosis, treatment, and prevention.

Key Highlights:

- Chlamydia:** The most common bacterial STD. Treatment includes a single dose of azithromycin or a 7-day course of doxycycline.
- Gonorrhea:** The second most common bacterial STD. Treatment includes a single dose of ceftriaxone plus azithromycin.
- HSV:** Herpes Simplex Virus. Treatment includes antiviral medications like acyclovir or valacyclovir.
- Syphilis:** A bacterial infection that can cause serious complications. Treatment includes penicillin.
- HPV:** Human Papillomavirus. Treatment focuses on managing symptoms and preventing complications.

National Coalition of STD Directors

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STD INFORMATION & RESOURCES DONATE

STD PROGRAM EVALUATION TRAININGS AND TOOLS

A self-paced, six-step e-learning course to help STD programs build capacity and conduct effective evaluation.

STD Resources

STD Resources

CDC: cdc.gov/std/default.htm

- facts sheets, guides & infographics

STD Treatment Guidelines:

www.cdc.gov/std/tg2015/default.htm

- App

NNPTCs:

www.nnptc.org

www.std.uw.edu

www.STDCCN.org

National Coalition for Sexual Health:

www.ncshguide.org/providers

www.ncshguide.org



Thank you

Questions?

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For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

