STIs in Native American Populations: Changing the Story

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Center for Disease Control and Prevention

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Disclosure for Jill Huppert

- I have no relevant financial relationships with the manufacturer(s) of commercial services discussed in this CME activity.

- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
Objectives

- Describe current disparities in STIs comparing Native American* to non-native populations in the USA, with a focus on adolescents, women and infants.
- Understand the context and factors that contribute to these disparities
- Become aware of resources and strategies to address STIs in populations at risk

Native American = American Indian / Alaskan Native (AI/AN)
Ratio of AI/AN: White for reportable infectious diseases, MMWR January 2016
STI vs. STD

- Sexually Transmitted Diseases (STDs)
  - A *disease* is a particular abnormal, pathological condition that affects part or all of a person

- Sexually Transmitted Infections (STIs)
  - Pathogens, asymptomatic infections

- Critical to US Public Health - *notifiable*

- CDC estimates nearly 20 million new STIs annually
  - Chlamydia
  - Gonorrhea
  - Syphilis
# Focus on 3 Critical STIs

<table>
<thead>
<tr>
<th></th>
<th>Chlamydia</th>
<th>Gonorrhea</th>
<th>P&amp;S Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of annual cases (2013)</strong></td>
<td>1,402,000</td>
<td>330,000</td>
<td>17,535</td>
</tr>
<tr>
<td><strong>Gender affected</strong></td>
<td>F&gt;M</td>
<td>F=M</td>
<td>M&gt;F</td>
</tr>
<tr>
<td><strong>Symptoms present</strong></td>
<td>5-10%</td>
<td>50-70%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Serious outcomes if untreated</strong></td>
<td>Pelvic inflammatory disease, preterm labor, neonatal conjunctivitis, pneumonia</td>
<td>Same as Chlamydia plus disseminated disease</td>
<td>Neurologic impairment, Congenital infection and still birth</td>
</tr>
<tr>
<td><strong>Special Features</strong></td>
<td>Underreported</td>
<td>Geographic concentration Southeast USA, Emerging drug resistance</td>
<td>Linked to MSM and HIV transmission</td>
</tr>
</tbody>
</table>
STI Disparities by Race/Ethnicity

- Race/Ethnicity trends are reported using USA Surveillance data
- Limits of this dataset:
  - Client must have access to health care
  - Provider screening/testing patterns vary
  - Positive test must be reported
    - 50% of asymptomatic cases may go unreported
    - Medical records not linked to public health
  - Race/ethnicity often missing
    - 10-26% of Chlamydia and gonorrhea cases are missing race
Chlamydia—Rates by Race/Ethnicity, United States, 2008–2012

Rate (per 100,000 population)

Year

2008 2009 2010 2011 2012

Black

American Indians/Alaska Natives

Hispanics

Whites

Multirace

Native Hawaiian and Other Pacific Islanders

Asians/Pacific Islanders

4x Higher than white

Chlamydia—Rates by Age and Sex, United States, 2012

**Men**

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>15.6</td>
</tr>
<tr>
<td>15-19</td>
<td>1350.4</td>
</tr>
<tr>
<td>20-24</td>
<td>774.8</td>
</tr>
<tr>
<td>25-29</td>
<td>721.7</td>
</tr>
<tr>
<td>30-34</td>
<td>369.7</td>
</tr>
<tr>
<td>35-39</td>
<td>187.2</td>
</tr>
<tr>
<td>40-44</td>
<td>110.8</td>
</tr>
<tr>
<td>45-54</td>
<td>51.5</td>
</tr>
<tr>
<td>55-64</td>
<td>15.2</td>
</tr>
<tr>
<td>65+</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>262.6</td>
</tr>
</tbody>
</table>

**Women**

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>125.3</td>
</tr>
<tr>
<td>15-19</td>
<td>3291.5</td>
</tr>
<tr>
<td>20-24</td>
<td>3695.5</td>
</tr>
<tr>
<td>25-29</td>
<td>1388.4</td>
</tr>
<tr>
<td>30-34</td>
<td>582.7</td>
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<tr>
<td>35-39</td>
<td>257.4</td>
</tr>
<tr>
<td>40-44</td>
<td>115.8</td>
</tr>
<tr>
<td>45-54</td>
<td>39.5</td>
</tr>
<tr>
<td>55-64</td>
<td>11.0</td>
</tr>
<tr>
<td>65+</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>643.3</td>
</tr>
</tbody>
</table>

Similar for all race/ethnicity groups
Gonorrhea—Rates by Race/Ethnicity, United States, 2008–2012

Rate (per 100,000 population)

Blacks

American Indians/Alaska Natives

4x Higher than white

NHOPi† = Native Hawaiian and Other Pacific Islanders.

Gonorrhea—Rates by Age and Sex, United States, 2012

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>25.3</td>
</tr>
<tr>
<td>15-19</td>
<td>521.2</td>
</tr>
<tr>
<td>20-24</td>
<td>578.5</td>
</tr>
<tr>
<td>25-29</td>
<td>254.1</td>
</tr>
<tr>
<td>30-34</td>
<td>121.6</td>
</tr>
<tr>
<td>35-39</td>
<td>57.7</td>
</tr>
<tr>
<td>40-44</td>
<td>29.2</td>
</tr>
<tr>
<td>45-54</td>
<td>11.4</td>
</tr>
<tr>
<td>55-64</td>
<td>3.0</td>
</tr>
<tr>
<td>65+</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>108.7</td>
</tr>
</tbody>
</table>

For Men:
- Rate: 462.8
- Total: 105.8

For Women:
- Rate: 25.3
- Total: 108.7
Primary and Secondary Syphilis—Rates by Race/Ethnicity, United States, 2008–2012

Rate (per 100,000 population)

Year

2008 2009 2010 2011 2012

Blacks

Native Hawaiian and Other Pacific Islanders

Hispanics

American Indians/Alaska Natives

Whites

Asians/Pacific Islanders

Multirace

* AI/AN = American Indians/Alaska Natives; NHOPI = Native Hawaiian and Other Pacific Islanders.

Primary and Secondary Syphilis—Rates by Age and Sex, United States, 2012

<table>
<thead>
<tr>
<th>Age</th>
<th>Rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>0.0</td>
</tr>
<tr>
<td>15-19</td>
<td>2.3</td>
</tr>
<tr>
<td>20-24</td>
<td>3.9</td>
</tr>
<tr>
<td>25-29</td>
<td>2.5</td>
</tr>
<tr>
<td>30-34</td>
<td>1.8</td>
</tr>
<tr>
<td>35-39</td>
<td>1.2</td>
</tr>
<tr>
<td>40-44</td>
<td>0.7</td>
</tr>
<tr>
<td>45-54</td>
<td>0.6</td>
</tr>
<tr>
<td>55-64</td>
<td>0.1</td>
</tr>
<tr>
<td>65+</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Men:
- 25.3
- 24.5
- 19.7
- 14.8
- 14.8
- 10.5
- 3.2
- 0.7
- 9.3

Women:
- 14.8
- 12.7
- 2.3
- 3.9
- 2.5
- 1.8
- 1.2
- 0.7
- 0.6
- 0.1
- 0.0
- 0.9
Congenital Syphilis—Infants—Rates by Year of Birth and Mother’s Race/Ethnicity, United States, 2003—2012

Rate (per 100,000 live births)

- AI/AN*
- Asians/Pacific Islanders
- Blacks
- Hispanics
- Whites

**Year**


* AI/AN= American Indians/Alaska Natives.

**NOTE:** National Center for Health Statistics bridged race categories are presented to allow the display of data across several years. Cases missing maternal race/ethnicity information were excluded (< 1% of cases).
STIs and HIV

• Testing & treatment of STIs can be effective in preventing the spread of HIV

• Persons infected with STIs are at 2 - 5 times more likely than uninfected persons to acquire HIV

• Persons infected with HIV who have an STI are 2-3 times more likely to transmit HIV than other HIV-infected persons

• Not related to behavior
• Biologic factors
  – Syphilis > gonorrhea > chlamydia
STI Trends by Indian Health Service (IHS) areas

- 556 recognized tribes
- 2.1 million people
- 12 service areas
- Federal and Tribal Health care units

Aberdeen 139,580

TOTAL IHS SERVICE POPULATION FOR CY 2014: 2,124,823

SOURCE: Division of Program Statistics, OPHS
STIs remain a priority among AI/AN

Alaska Remains #1 Chlamydia State

Syphilis Outbreak Among American Indians

--- Arizona, 2007--2009

Alaska Gonorrhea Outbreak Continues,
Officials Say Fight Is Uphill Battle

Addressing Increases in Gonorrhea Diagnoses
in South Dakota: A Collaboration between
the State, IHS, Tribes, and CDC

South Dakota
Department of Health
 Warns of Syphilis
Outbreak
More to the story: Context for STIs for AI/AN populations

- Availability
- Accessibility
- Acceptability

Geography
Economic status
Awareness
Stigma

Risk taking behaviors
Trust
Knowledge

Health Care
Community
Individual
Heterosexual Syphilis Outbreak in North and South Dakota

There is an ongoing heterosexual syphilis outbreak in North and South Dakota. This is an acute outbreak with approximately 65% of all cases staged as primary or secondary syphilis. Of particular concern, there was recently an infant born to an untreated mother. This infant was identified as the first case of congenital syphilis that South Dakota has had in decades.
Multi-State Outbreak Syphilis
January 1, 2013 - May 7, 2014

Cases by Month & Stage

Number of Cases

- Primary
- Secondary
- Early Latent
- Unknown Duration
- Late Latent
- Congenital
- Unknown Stage
North Dakota Identifies Major Syphilis Outbreak

Health officials in North Dakota say there has been a significant increase in syphilis cases since 2009.

BY TODD HEYWOOD JUNE 16 2014 4:11 AM ET

Health officials in North and South Dakota are raising alarms about a significant syphilis outbreak identified in the two, sparsely populated states. In January 2013, officials in the two states identified a cluster of syphilis cases centered on the Standing Rock Indian Reservation, which straddles both states.

Since then, the Billings Gazette reports, 82 cases in the two states have been identified. Unlike most syphilis outbreaks in the US, however, this outbreak is effecting heterosexuals. The majority of new syphilis infections in the US are reported in men who have sex with men. The CDC reports that in 2012, 75 percent of cases of syphilis identified in the US were among men who have sex with men.

Infection with syphilis has been identified as a co-factor in HIV infections. Being infected with syphilis can increase the risk of transmission of HIV two to five fold, according to the federal government. Infection with both syphilis, which is an easily treatable bacterial infection, and HIV causes an increase in HIV viral load.

The Billings Gazette also reported that North Dakota had seen a 225 percent increase in gonorrhea cases since 2009.

Tags: Sex & Dating, HIV testing
Figure 15. Gonorrhea — Rates of Reported Cases by County, United States, 2013
Youth bear disproportionate share of STIs

Americans ages 15-24 make up just 27% of the sexually active population but account for 50% of the 20M new STIs in the U.S. each year.

Young people account for a substantial proportion of new STIs:

- **Gonorrhea**: 70%
  - Total Infections: 820,000
  - (all ages)
- **Chlamydia**: 63%
  - 2.9 million
- **HPV**: 49%
  - 14.1 million
- **Genital Herpes**: 45%
  - 776,000
- **HIV**: 26%
  - 47,500
  - *Ages 13-24*
- **Syphilis**: 20%
  - 55,400

Unique factors place youth at risk for STIs:

- **Insufficient Screening**: Many young women don't receive the chlamydia screening CDC recommends.
- **Confidentiality Concerns**: Many are reluctant to disclose risk behaviors to doctors.
- **Biology**: Young women's bodies are biologically more susceptible to STIs.
- **Lack of Access to Healthcare**: Youth often lack insurance or transportation needed to access prevention services.
- **Multiple Sex Partners**: Many young people have multiple partners, which increases STI risk.
Sexual Health Context for AI/AN Youth

- 15-19 birth rate
- Sex in High School - Female
- Sex in High School - Male
- OCP use

Legend:
- Blue: AI/AN
- Green: Other
Health Impact Pyramid

- **Socioeconomic Factors**
  - Decrease poverty & inequality and improve education & housing - community
  - Immunization - structural or community
  - Ubiquitous condom availability
  - Changing the Context To Make Individuals’ Default Decisions Healthy
  - Long-lasting Protective Interventions
    - Clinical Interventions
      - Counseling & Education
        - Individual Behavioral counseling to reduce STD/HIV
        - STD Testing and Treatment

Frieden T. AJPH 2010
Structural Interventions

- **Systems Change**
  - STD/HIV/HCV Policy & Protocols

- **Health Information Technology**
  - Electronic Health Records
    - Clinical reminders

- **Quality Improvement**
  - Quality Improvement Project (QIP)

  *To promote sexual health and wellness for clients by effectively disseminating and implementing programs and policies from a socio-ecological framework*
**Structural Intervention examples**

A. EHR clinical tools may increase STD/HIV screening opportunities
   - Results from one IHS facility following deployment of clinical reminders:
     - annual chlamydia screening among women ≤25 increased from 56 to 200 unique patients,
     - HIV testing increased from 250 to 1340 unique patients aged 13-64.

B. Technical assistance, in partnership with tribes, can influence local morbidity
   - IHS Tucson Area experienced an 84.3% decline in P&S syphilis between 2007 and 2011 following a CDC sponsored response in the region (2007).
Community Interventions

- **Awareness**
  - Get Yourself Tested (GYT) Campaign

- **Innovative Approaches**
  - Technology/Social Media
    - WeRNative (http://www.wernative.org/)
    - It’s Your Game (https://sph.uth.edu/iyg/)
    - Iknowmine (http://www.iknowmine.org/)

- **Special populations focused initiatives**
  - Venue-based Screening
    - School-based Screening
    - Jail-based screening

- **Advocacy Tools**
  - Tribal HIV/STD Advocacy Kit & Policy Guide
Tribal HIV/STD Advocacy Kit & Policy Guide

Rationale for Promoting Holistic Sexual Health and Wellbeing

Rates of HIV/STD, teen pregnancy, and sexual violence are disproportionately high among AI/AN teens and young adults ages 15-24 years old. These conditions can cause a range of physical, mental, and social consequences, including pain, infertility, cancer, and death. These outcomes impact not only the health of the individual, but the wellbeing of the Tribe as a whole.

There are many benefits to investing in HIV/STD prevention programs. Prevention programs save lives, by keeping people from becoming infected, protecting fertility, and reducing the number of people needing expensive medical treatments. The estimated lifetime cost of care and treatment for just one HIV+ person is over $200,000.7

Social Impacts

- In 2007, one-fifth of AI/AN teen girls gave birth before turning 20.8 In 2009, the birth rate for AI/AN 15–19 year olds was 55.5 per 1,000 persons, much higher than the national rate of 39.1 per 1,000 persons.4
- Chlamydia and gonorrhea rates are highest among young people 15-24 years old. Young adults represent 25% of the sexually active population, but account for almost half of all STD diagnoses. If left untreated, chlamydia and gonorrhea can lead to negative health outcomes, like pelvic inflammatory disease (PID) and even infertility.4
- AI/AN youth may be at even higher risk than other youths. In 2001, 52.3% of female Bureau of Indian Education (BIE) high school students reported having had sex, compared to 42.9% of all female high school students, and 65.5% of BIE male students reported having had sex, compared to 48.5% of all male high school students.10 Only 8.3% of BIE high school students reported using birth control pills, compared to 18.2% of high school student’s nationally.10
- Having a STD can increase your chance of contracting HIV if exposed. Research shows that those infected with STDs are 2-5 times more likely to acquire HIV when exposed through sexual contact.11
- Over 3,600 AI/ANs have been diagnosed with AIDS since the beginning of the epidemic in 1980. Many others are infected, yet have not been tested. It is estimated that one out of five Americans living with HIV do not know they are infected.12
- Learning one’s HIV status early helps prevent the spread of HIV to others and allows a person living with HIV to seek life-extending care.
Individual Interventions

- Behavioral interventions
  - RESPECT
  - https://www.effectiveinterventions.org/HighImpactPrevention/Interventions/RESPECT.aspx

- Peer-to-peer learning
  - Native STAND (Students Together Against Negative Decisions)
  - www.ncsddc.org/what-we-do/health-disparities/native-stand-curriculum
Changes you may wish to make in practice

- Improve your ability to take a sexual history
  - “Do you have any questions about sex?”
  - “Have you ever had sexual intercourse?”

- Assess your compliance with STI screening *
  - Women <age 25: annual chlamydia and gonorrhea screening
  - Pregnant women: syphilis screening

*http://www.uspreventiveservicestaskforce.org/uspsttopics.htm
Tribal Support

How CDC supports American Indian and Alaska Native communities

CDC’s tribal support activities focus on the agency’s supportive role in ensuring American Indian/Alaska Native (AI/AN) communities receive public health services that keep them safe and healthy. As a health protection agency, CDC works with partners throughout the world to save lives and protect people.

Federal-Tribal Relationship

The United States has a unique legal and political relationship with Indian tribes and a special relationship with Alaska Native entities as provided in the Constitution of the United States, treaties, and federal statutes.

CDC is committed to continuing to work with federally recognized tribal governments on a government-to-government basis, and strongly supports and respects tribal sovereignty and self-determination for tribal governments in the United States.

Who We Are

- Principal advisor to and main liaison with policy-level officials regarding AI/AN
- Principal contact for AI/AN and tribal inquiries
- Intradepartmental coordinator of CDC/ATSDR programs and policies that benefit or affect AI/AN

What We Do

- Enhance the relationship building and liaison role between CDC/ATSDR and tribes
- Develop tribal-related communication strategies
- Apply the Tribal Consultation Policy and formal government-to-government consultation
- Work with Native-serving organizations, including urban and rural Indian organizations, in the interests of Indian tribes and AI/AN
- Manage the Tribal Advisory Committee, which advises the CDC director and ATSDR administrator on policy issues and broad strategies affecting Native tribes and people
- Partner with the US Department of Health and Human Services
- Manage extramural funding supporting AI/AN communities
- Serve as subject matter expert on Native efforts

More Information

www.cdc.gov/tribal
High disease rates in Native American people are just some of the residual scars left on today’s generations.

“If you keep telling the same sad small story, you will keep living the same sad small life”

Jean Houston

The Red Road Project aims to stop telling the same sad story and start inspiring positive change.

http://www.redroadproject.com/project/
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