



UNIVERSITY OF WASHINGTON
STD Prevention
Training Center

STI Prevention:

2019 IHS National Clinical and
Community-Based Services Conference

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Disclosures

I have nothing to disclose.

Outline

- STI Epidemiology
 - National
 - AI/AN
 - IHS

- STI Prevention
 - Test and Treat
 - Condoms
 - Partner Services

Why do we even care about STIs?

- >19 million STDs in U.S. annually
 - **Nearly 2.3 million cases of chlamydia, gonorrhea, and syphilis were diagnosed in the United States in 2017**
 - Surpassed 2016 by >200,000 cases. The fourth consecutive year of sharp increases in these STDs
- Health consequences of untreated STDs
 - Women's reproductive health
 - Untreated chlamydia or gonorrhea may lead to pelvic inflammatory disease (PID) & other consequences
 - Leading infectious cause of infertility in the U.S.
 - Trichomoniasis, BV associated with preterm delivery, low birth weight
 - Infant mortality/morbidity
 - Neonatal herpes and congenital syphilis
 - HIV transmission: identifying people who would benefit from HIV pre-exposure prophylaxis (PrEP)
- Health care cost
 - \$16.4 billion annually

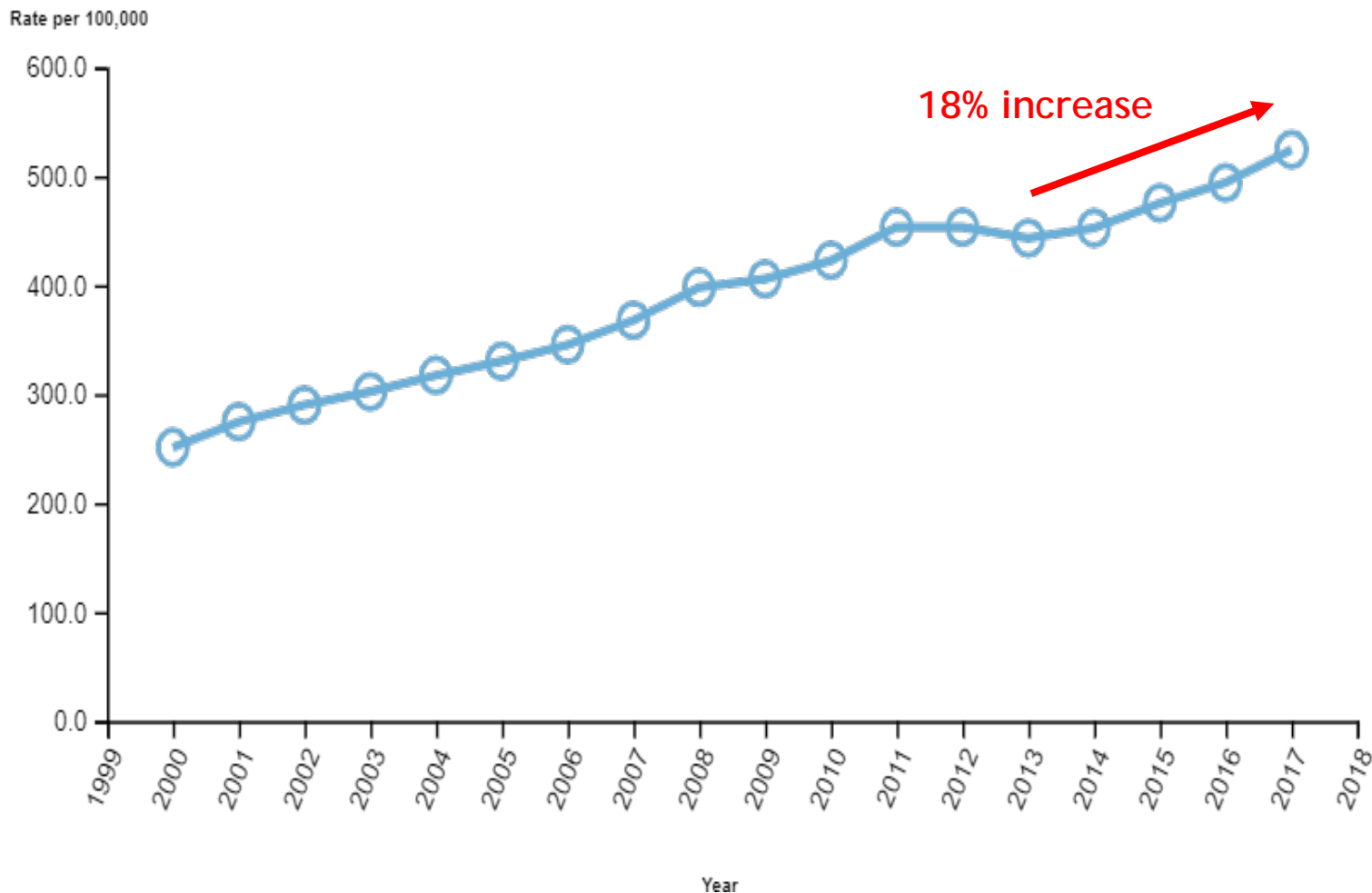


STI Epidemiology

STI Rates are Increasing Nationally

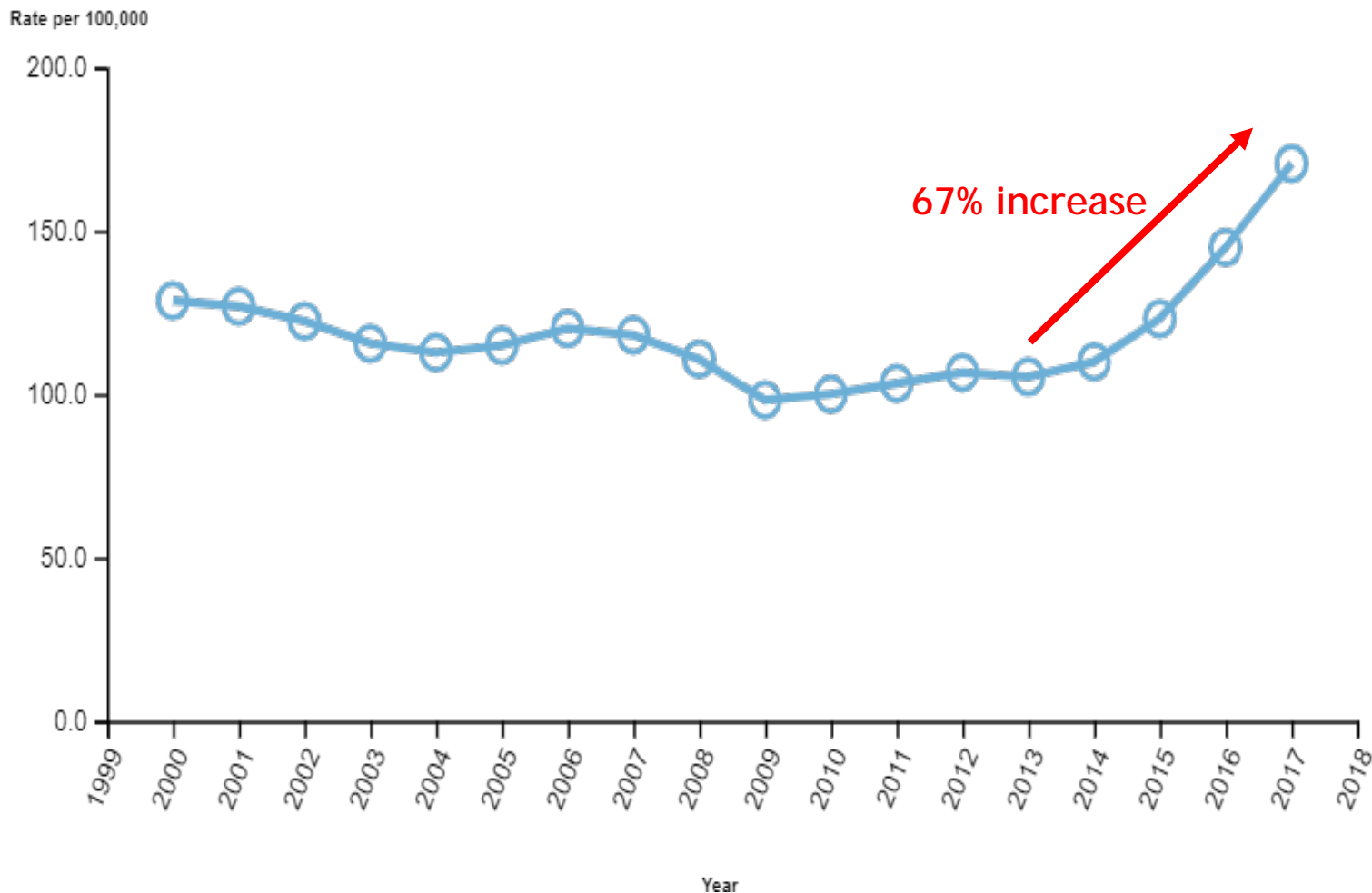
Chlamydia | 2017

All age groups | All races/ethnicities | Both sexes | United States

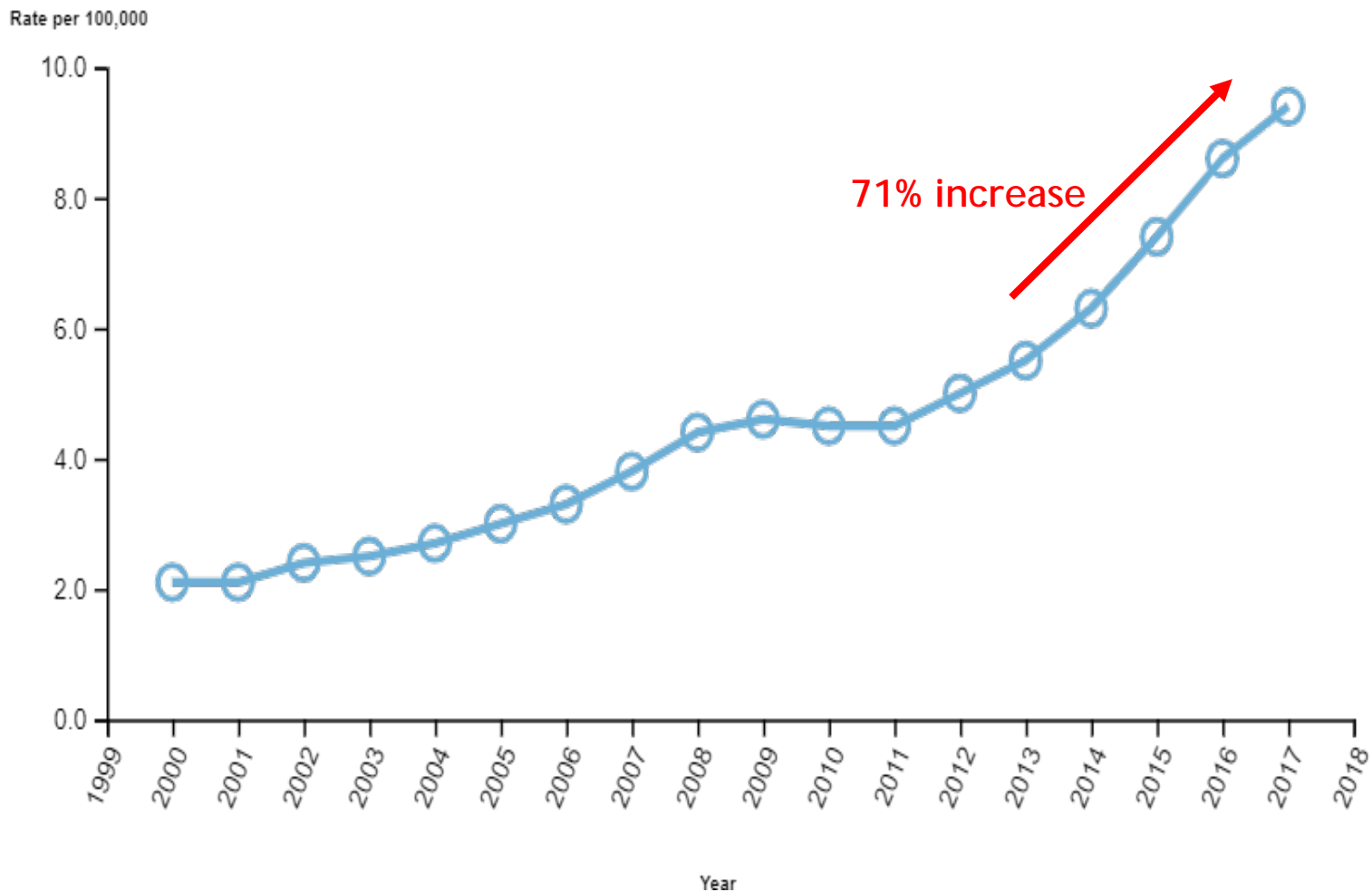


Gonorrhea | 2017

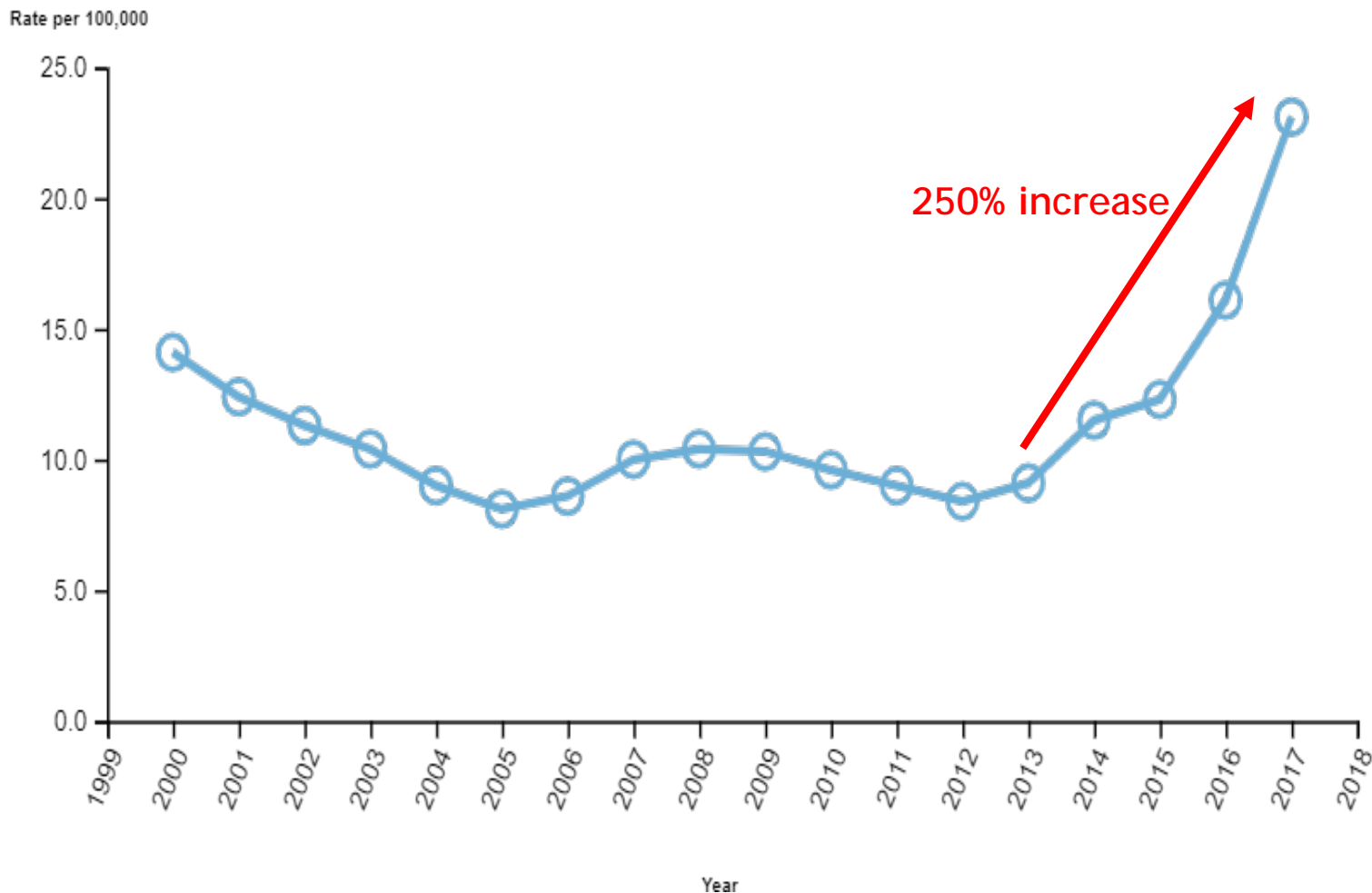
All age groups | All races/ethnicities | Both sexes | United States



Primary and Secondary Syphilis | 2017 | All age groups | All races/ethnicities | Both sexes | United States



Congenital Syphilis | 2017 | All age groups | All races/ethnicities | Both sexes | United States



At Greatest Risk

- Youth
 - Nearly 50% of STDs estimated to occur in 15-24 year olds
- Racial/ethnic minorities
 - STDs among highest of all racial/ethnic health disparities
 - African-Americans
 - Chlamydia: 5.8 times the rate among whites
 - GC: 12.4 times
 - Early syphilis: 5.6 times
- Men Who Have Sex with Men (MSM)
 - High rates of HIV co-infection



Why are STI rates increasing?

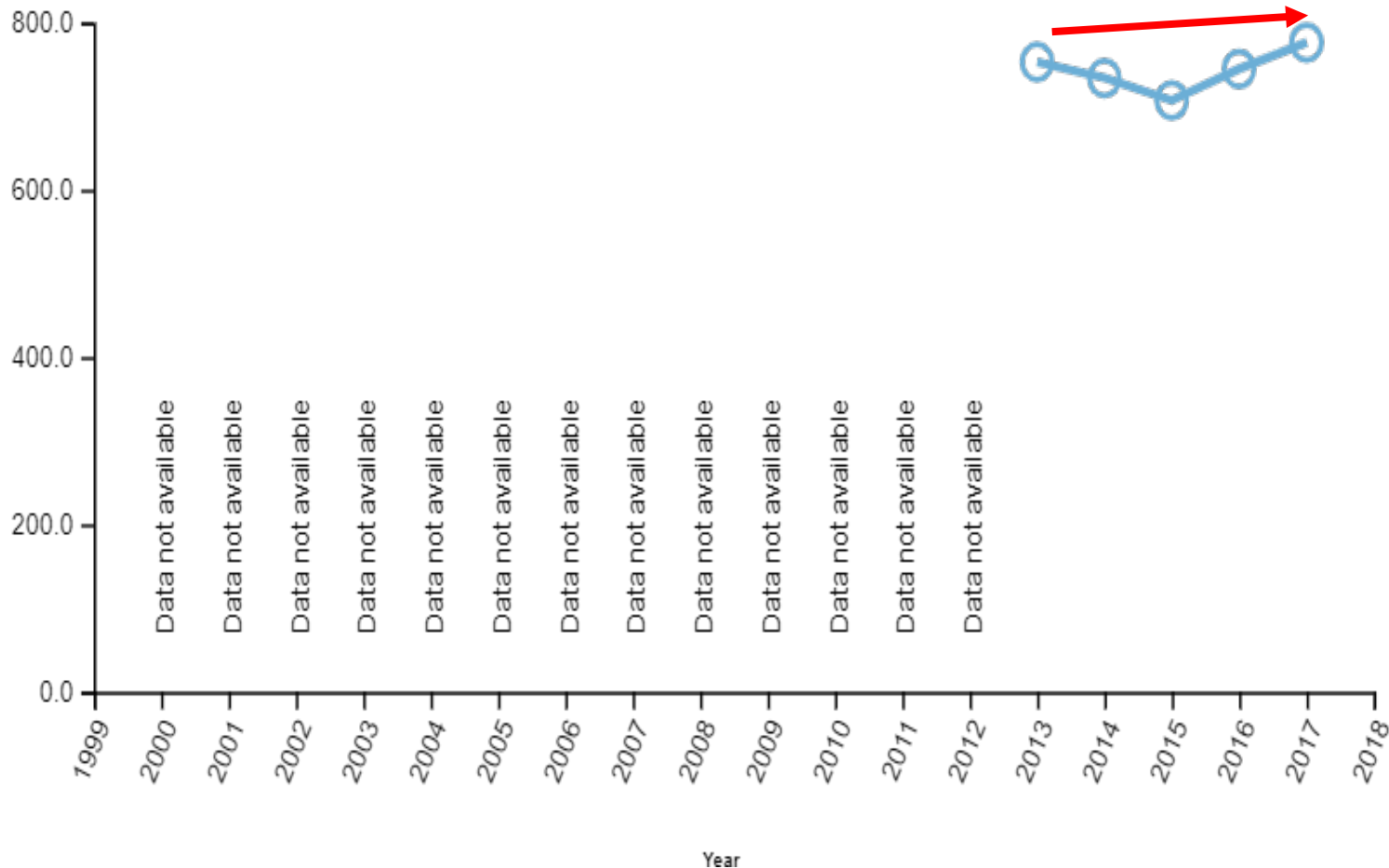
- **Decreased condom use** – especially among MSM
 - Impact of this is still debated
- **Opioid epidemic** – use of non-prescription opioids is associated with increased condomless sex
- **Funding** – 40% drop in STD prevention purchasing power from 2003 to 2018

American Indian/Alaska Native STI Data

Chlamydia | 2017

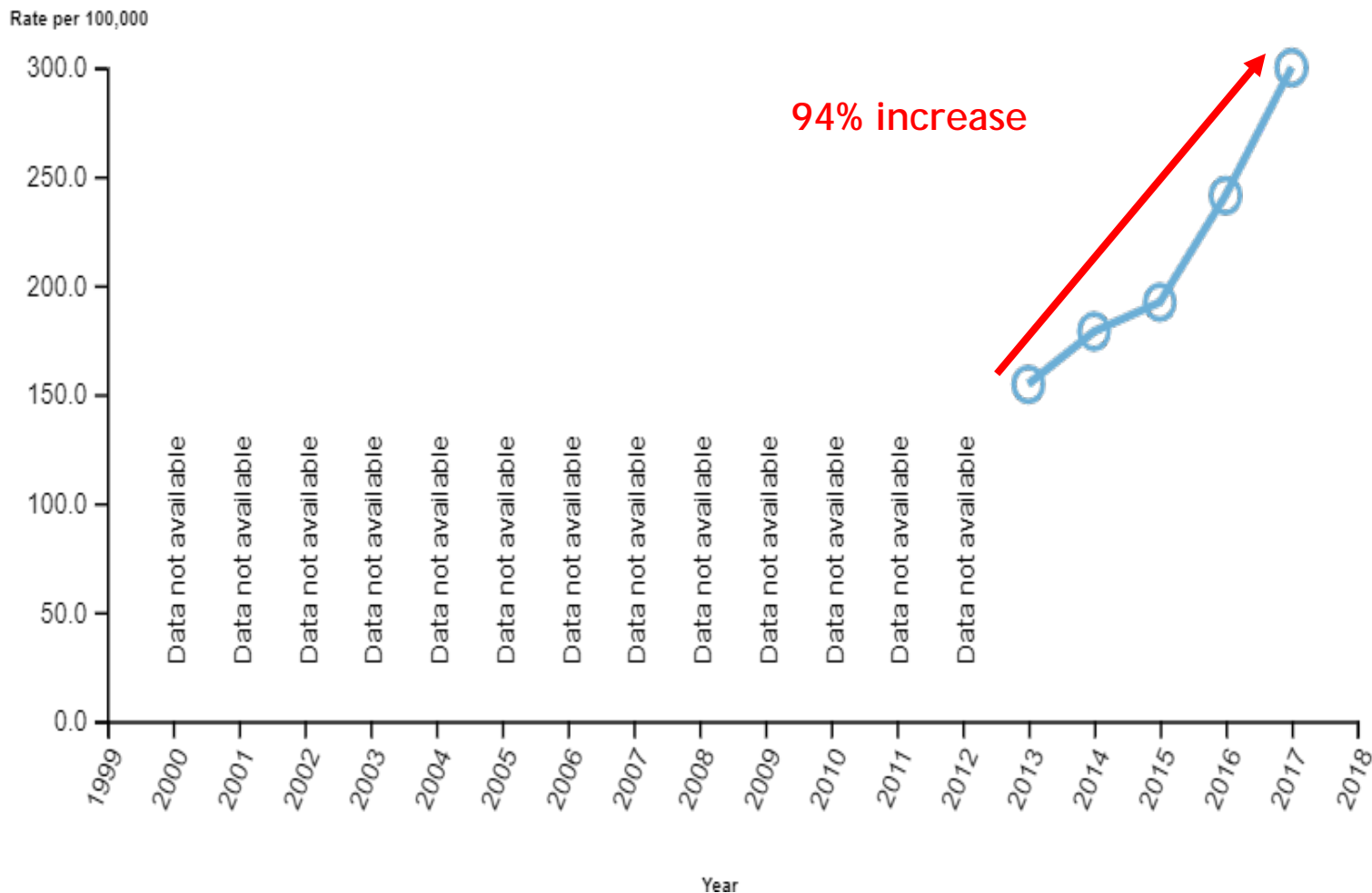
All age groups | American Indian/Alaska Native | Both sexes | United States

Rate per 100,000

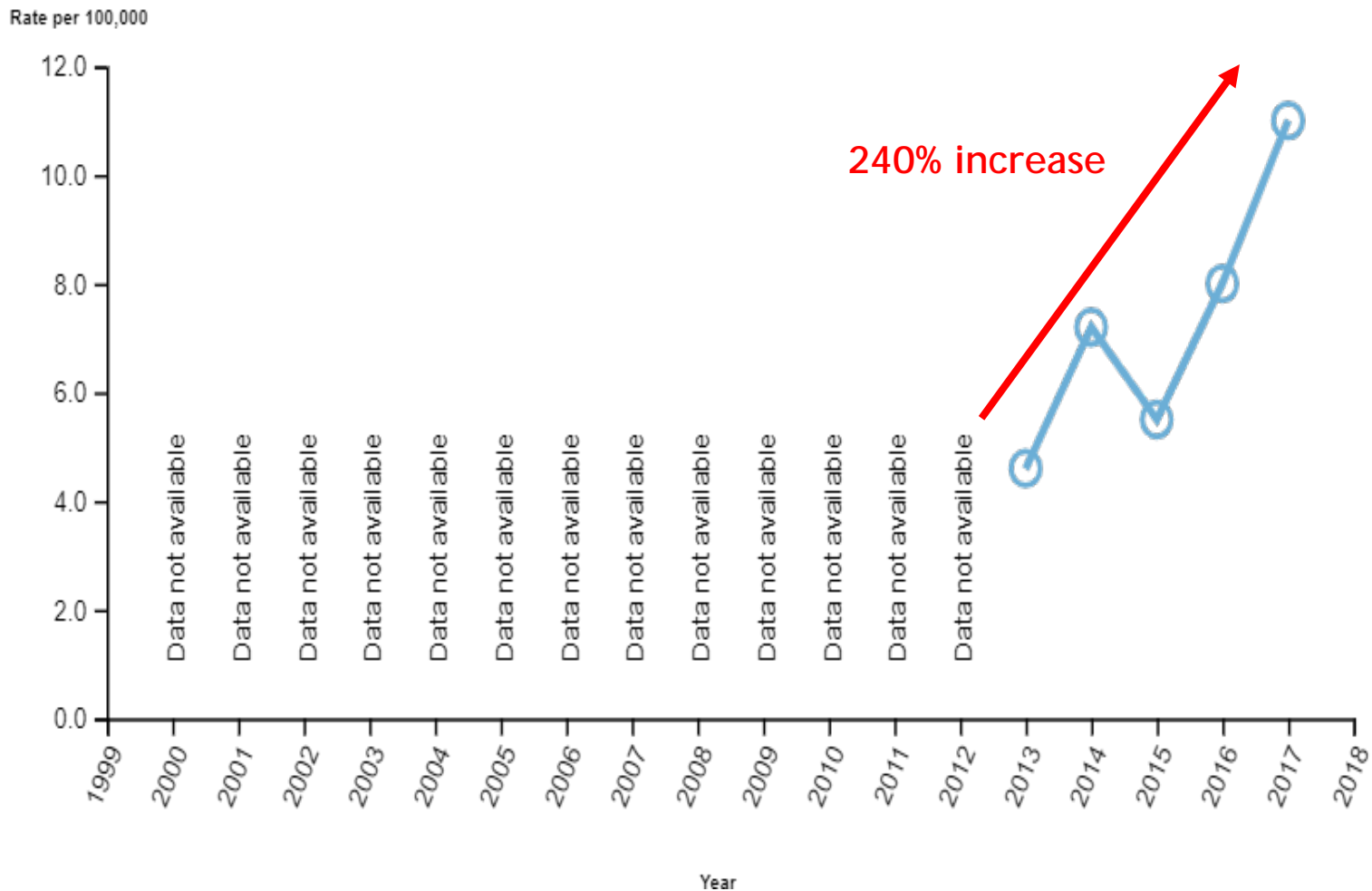


Gonorrhea | 2017

All age groups | American Indian/Alaska Native | Both sexes | United States

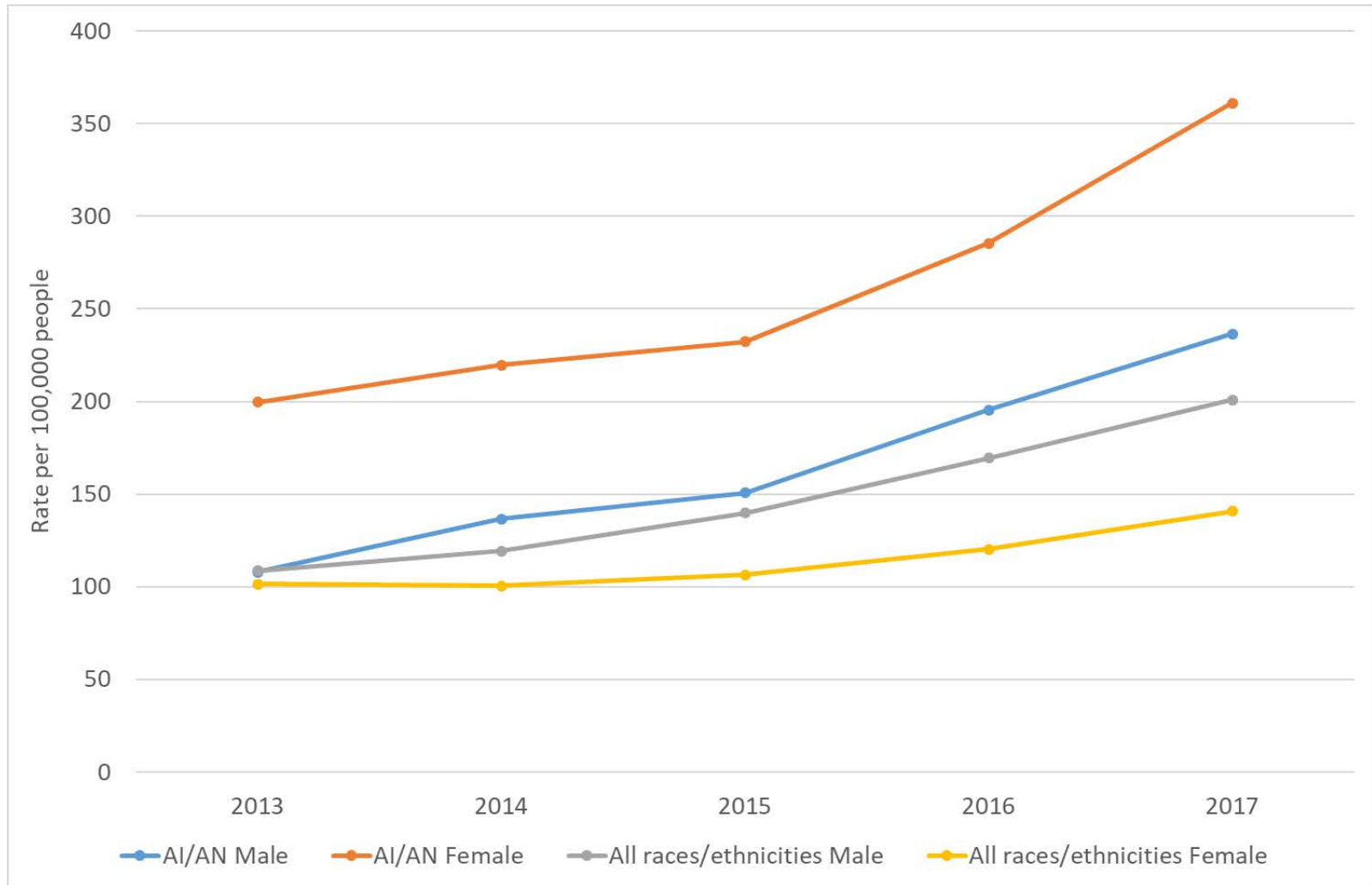


Primary and Secondary Syphilis | 2017 | All age groups | American Indian/Alaska Native | Both sexes | United States

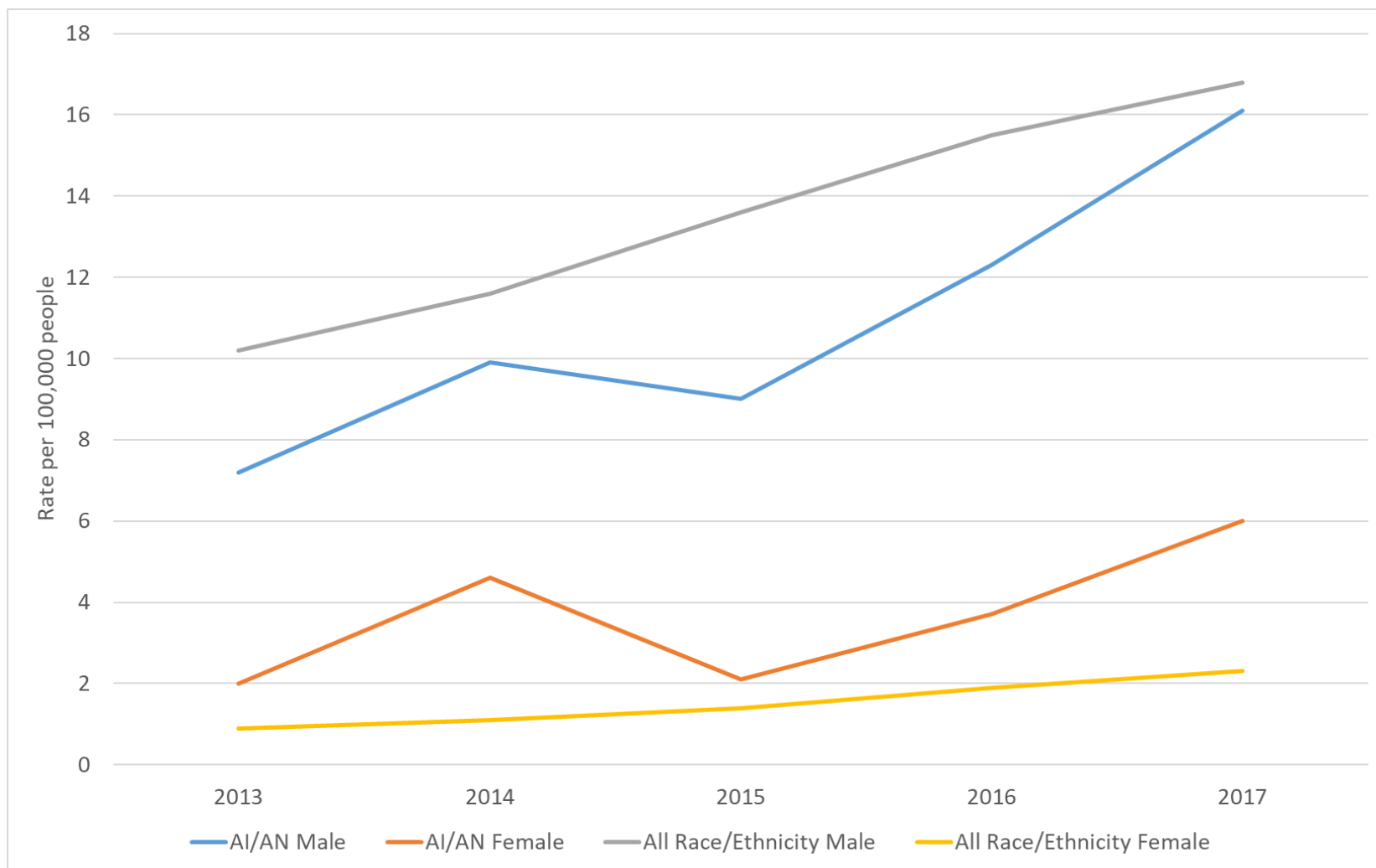


There are important differences in the AI/AN epidemic

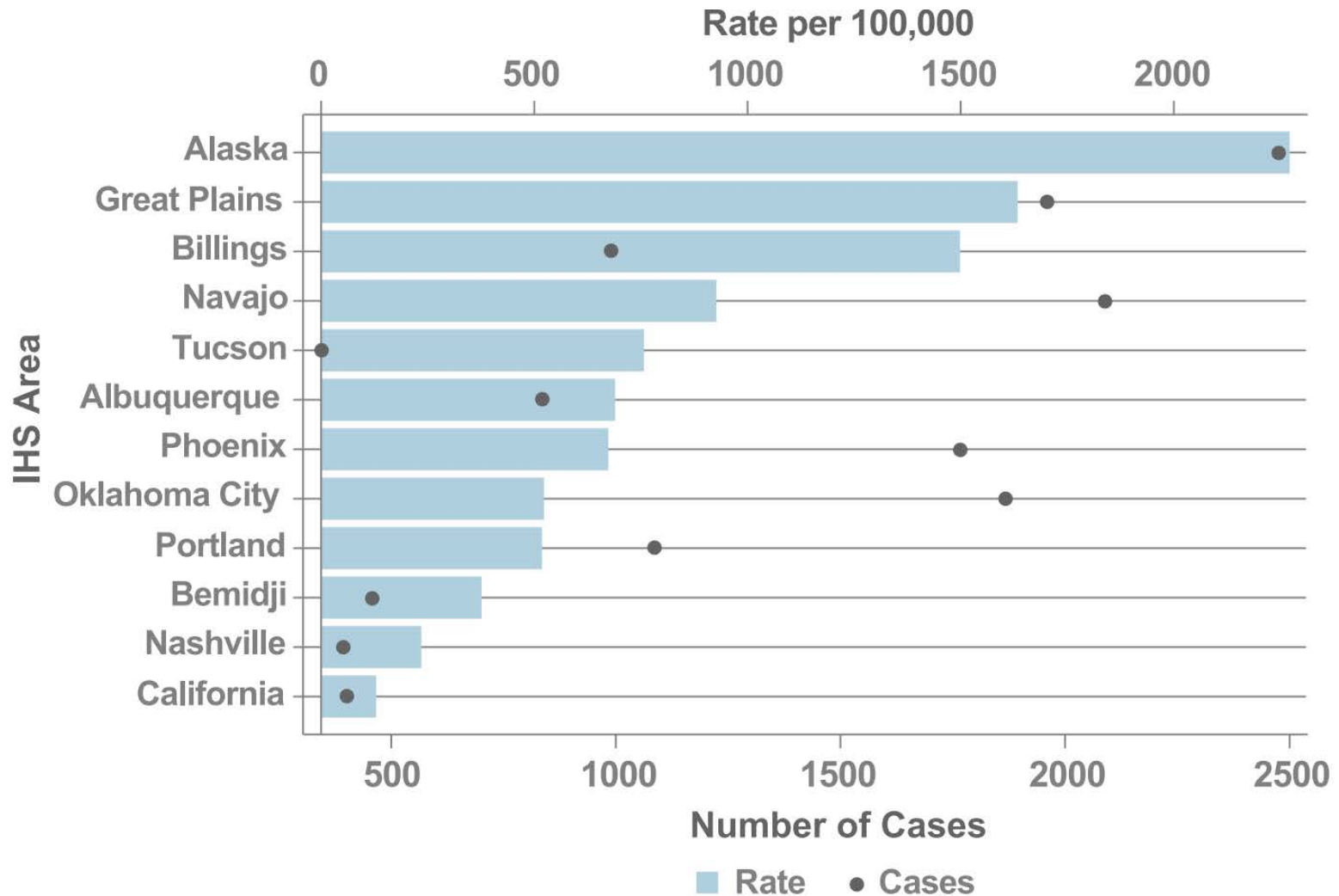
Gonorrhea Rates by Race/Ethnicity and Sex



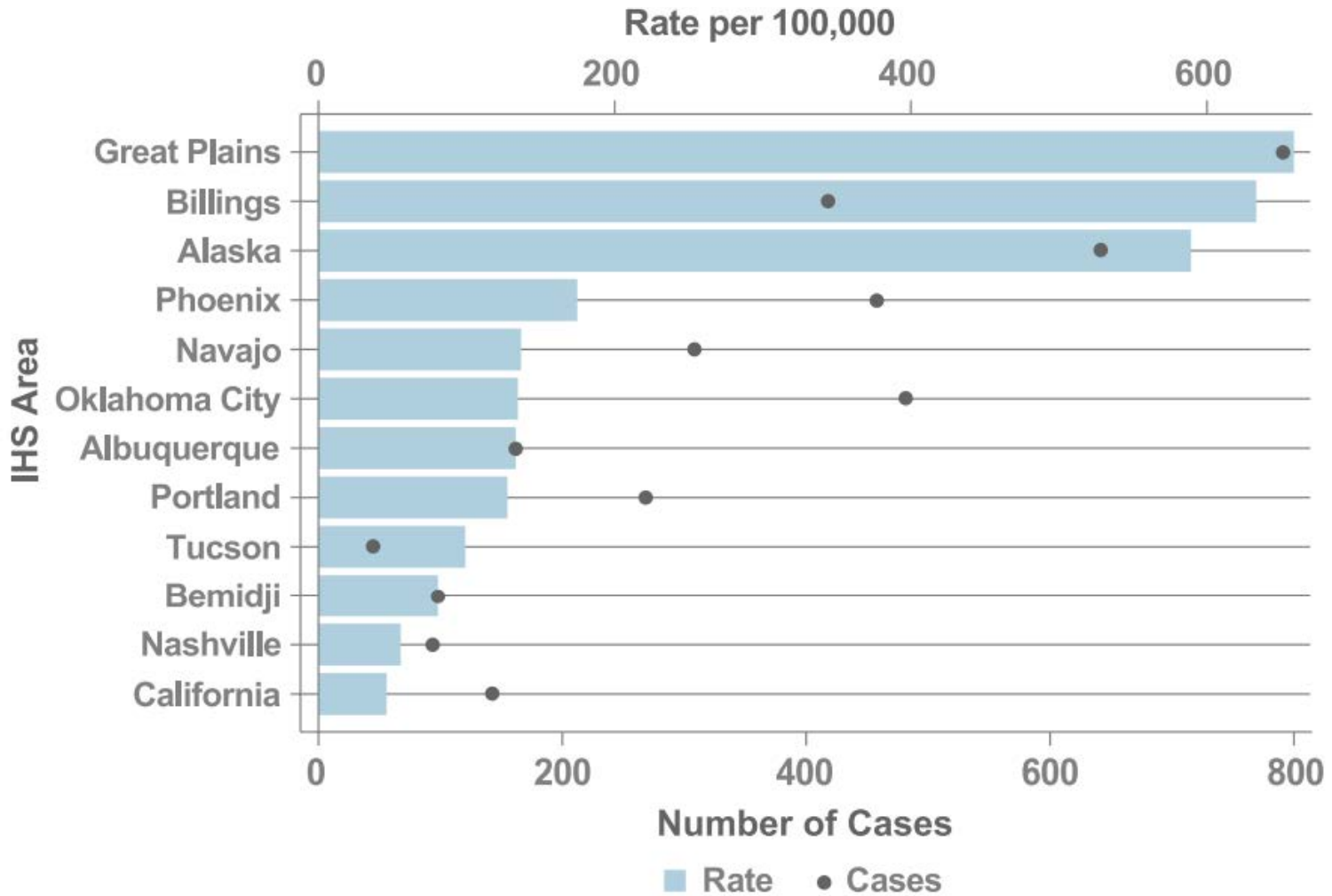
Primary and Secondary Syphilis by Race/Ethnicity and Sex



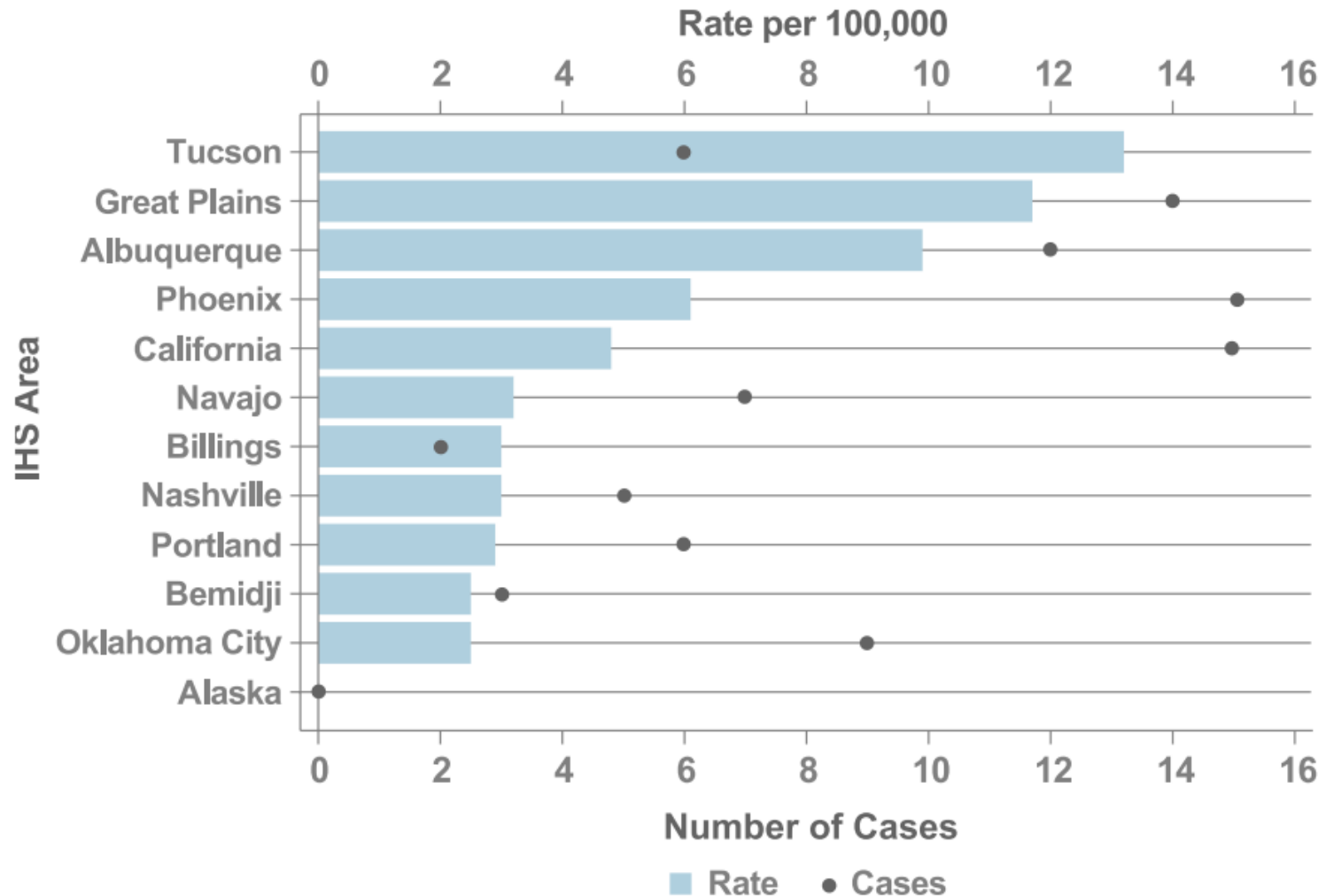
Chlamydia Rates by IHS area, 2015



Gonorrhea rates by IHS area, 2015



Primary and Secondary Syphilis rates by IHS area, 2015





Context is Everything: Drivers of the STI epidemic

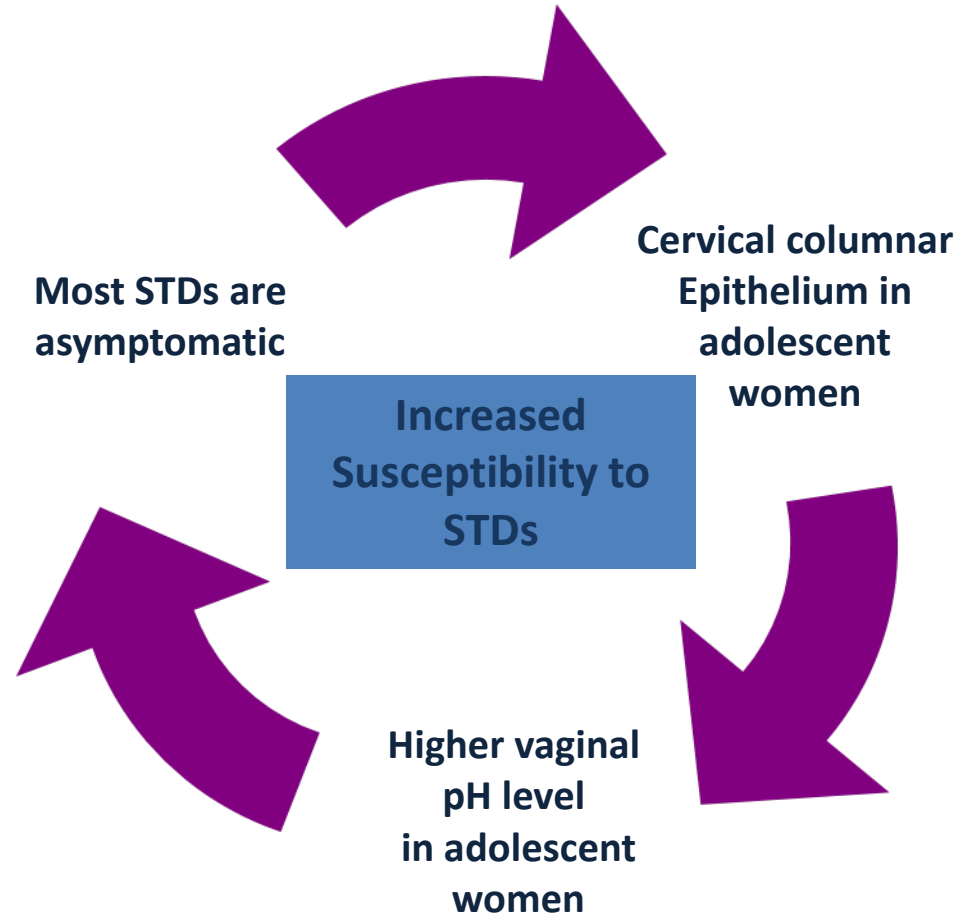
STI Risk Drivers

- Population Factors
- Biological/Physical Factors
- Social Determinates/Syndemics

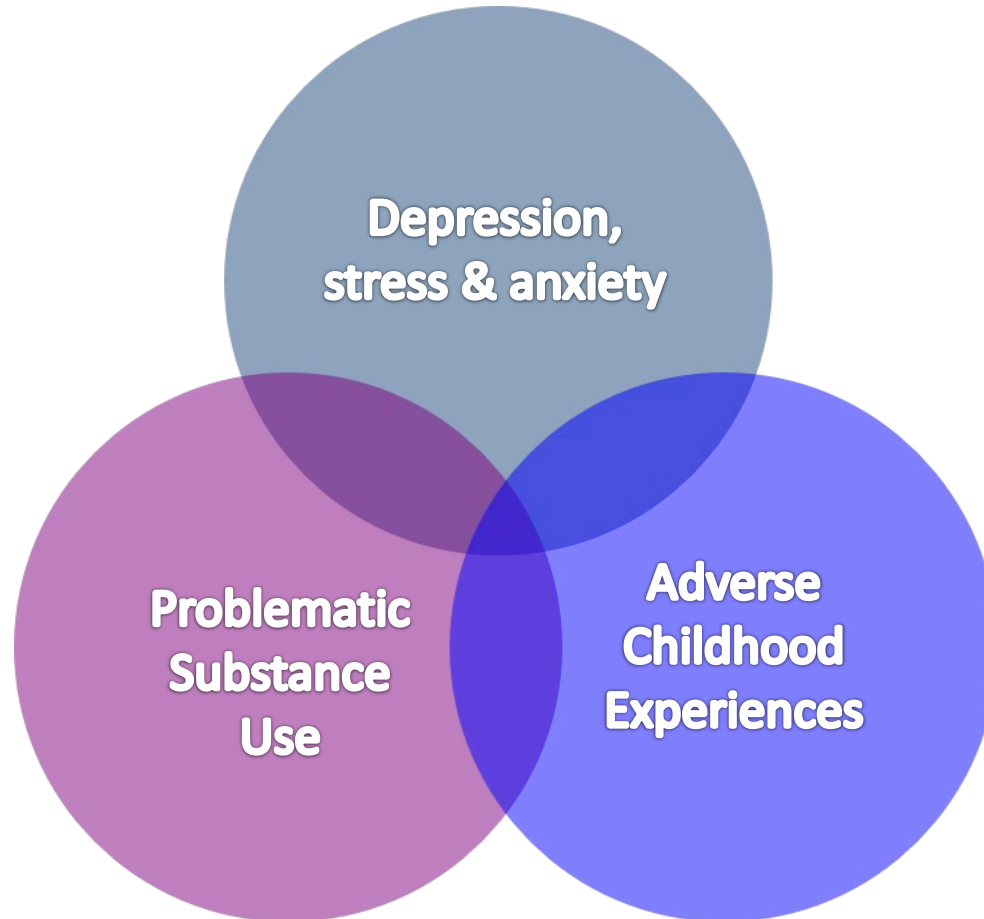
Population Factors

- AI/AN population is younger than the overall population
 - Median age 2018 33.5yrs as compared to 38.1yrs

Biological/Physiological Factors



Social Determinants



STDs and Intimate Partner Violence



More than one-third (38.8%) of adolescent girls tested for STI/HIV have experienced dating violence.

Depression, IPV, and STIs

Women with symptoms of depression and a history of IPV were

19 TIMES

more likely to have been treated for an STI in the past year.

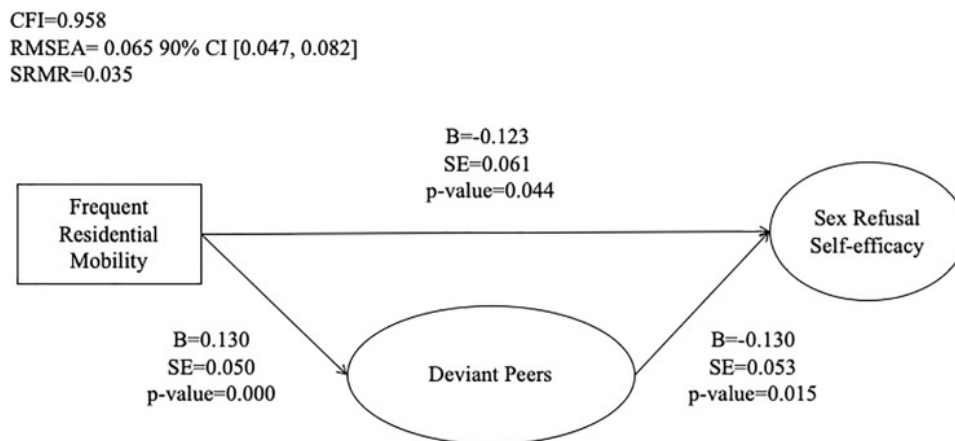


American Indian/Alaska Native Youth have high prevalence of risk behaviors

- Merged data from Youth Risk Behavior Survey in 2007 and 2009
 - CDC supported, voluntary, school-based study of 9th through 12th graders
- 14.2% of AI/AN youth reported Dating Violence
- 11.6% reported forced sex or sex they did not want
- 8.3% reported sexual debut before age 13

Residential mobility and indication of sexual risk

- Frequent residential mobility is associated with
 - Early sexual experience, multiple sexual partners, teen pregnancy
- Wiconi Teca Waste Study conducted in a Northern Plains American Indian Reservation
- 22.9% experienced high residential mobility (moving ≥ 2 in 12mos)
- This occurs in the context of generations of high residential mobility (much of it involuntary)



Do Sexual Risk Behaviors Explain the Race Gap?

- No.

Sexual Risk Behaviors do not account for the disparity

- Wave 3 of the National Longitudinal Study of Adolescent Health
 - Nationally representative sample of 7th through 12th graders, 2001-2002
- Survey and urine sample tested for GC/CT, trichomonas
- Included 367 AI/AN (listed AI/AN identity ONLY); 7,813 white participants
- Percent of AI/AN participants with positive STI testing 2.5x greater
 - 9% v 3.6%

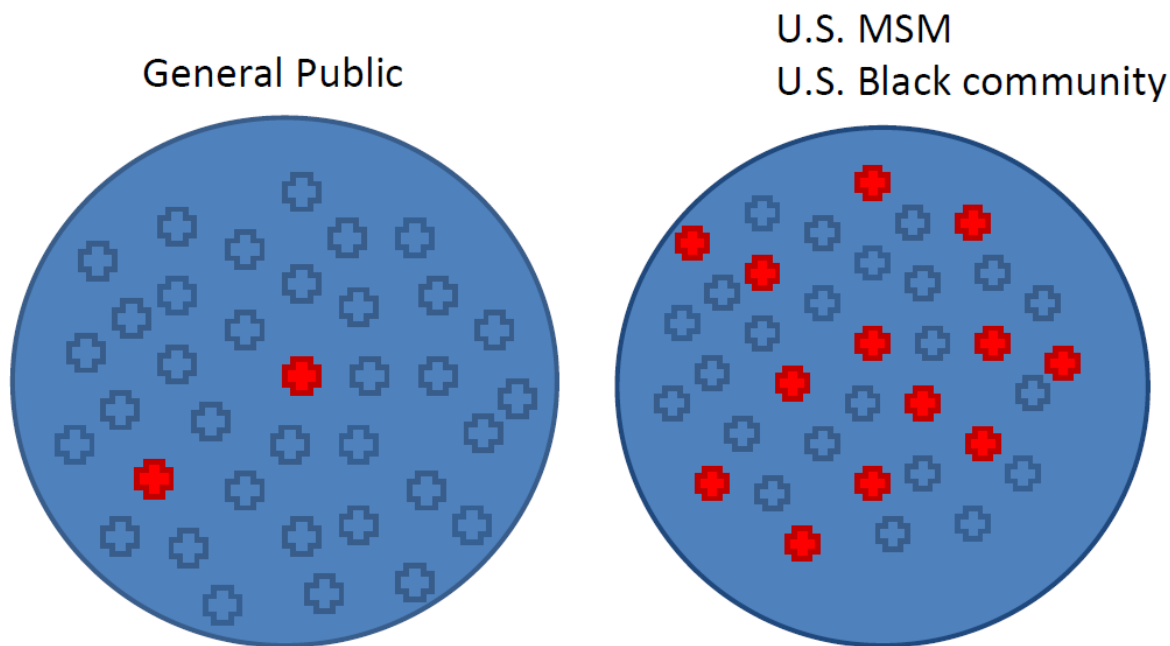
Differences in Sexual Risk Behaviors

- AI/AN youth MORE likely to have paid for sex (9.0% v 3.0%)
- NO other statistically significant differences in sexual risk behaviors
- AI/AN youth LESS likely to report binge drinking or any alcohol use

Controlling for all risk behaviors, the odds of an AI/AN youth having an STI were **2.4 times greater** than a white youth.

Greater prevalence increases transmission risk

- In general, Americans tend to have sexual partners of the same race/ethnicity



Does that mean that prevention doesn't work?

- No.



STI Prevention: Resources and Tools

Youth Education

Principles of quality sexual health education

- Non-stigmatizing
 - Gender identity/expression
 - Sexual orientation
- Culturally relevant – we ALL have sex in the context of our culture and values
- Medically Accurate
- Delivered in the context of access to care



HEALTHY NATIVE YOUTH

A one-stop-shop for educators who want to expand learning opportunities for AI/AN youth

<https://www.healthynativeyouth.org>



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

find curricula

RAISING HEALTHY NATIVE YOUTH

THROUGH CULTURALLY RELEVANT HEALTH EDUCATION

ENGAGING. RELEVANT. EFFECTIVE.

SEXUAL HEALTH CURRICULA

[GIVE US FEEDBACK](#)

[COMPARE CURRICULA](#)


VIEW:



FILTER YOUR SEARCH

FINDING THE RIGHT CURRICULA



MULTIMEDIA CIRCLE OF LIFE (MCOL)

Ages	Program Setting
Middle School	Flexible

[VIEW MORE](#)


NATIVE IT'S YOUR GAME

Ages	Program Setting
Middle School	Flexible

[VIEW MORE](#)

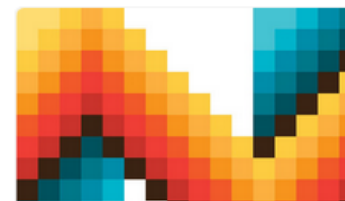
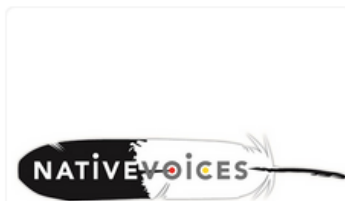

NATIVE STAND

Ages	Program Setting
High School	Flexible

[VIEW MORE](#)

To be effective, health curricula must be age-appropriate, culturally-relevant, and reflect the values and learning styles of the learners being taught. Finding curricula that meet these requirements for American Indian and Alaska Native youth can be challenging. *Healthy Native Youth* is a one-stop-shop for educators and health advocates who want to expand learning opportunities for youth.

Click on the program name to learn more about each curriculum, including intended age-group, where it can be implemented, and how much time will be required. Lesson plans, handouts, and supplemental materials are also listed there. Many include recorded videos and webinars to help prepare educators to facilitate each program. Finally, we provide information about how the program was designed or adapted, and evaluated with AI/AN youth.


[COMPARE ALL](#)

HIV/STD Prevention Evidence- and Community-Based Programming

I Know Mine

iknowmine.org

- Began in 2009
- Alaska Native **youth wellness** website
- Medically accurate information & resources for **youth, parents, providers & educators**
- Distribution of **free educational materials/resources**
- Distribution of **free condoms** to individuals & clinics
- Sex education **texting** program
- **Confidential question** service

I Want the Kit

Free at-home STI testing since 2011 in partnership with Johns Hopkins University
Mailed to anyone & anywhere in Alaska

www.iwantthekit.org

Alaska Native Sexual Health Research Findings¹

- Messages need to promote **STI/HIV testing** and **condoms**
- Messages should be delivered via the **Internet** and **schools**
- **Confidentiality** and **embarrassment** affect healthcare seeking behaviors
- **Easier access** to condoms is needed
- Adolescents have a **limited understanding of sexual health**



Native It's Your Game

A multimedia healthy relationships, sexual health and teen pregnancy prevention curriculum for Alaska Native and American Indian **middle school** students



Safe in the Village

Sexual health and healthy relationship video program for Alaska Native **high school** aged youth

¹Leston, JD, Jessen, CM and Simons BC (2012). *Alaska Native and Rural Youth' View of Sexual Health: A Focus Group Project on Sexually Transmitted Diseases, HIV/AIDS, and Unplanned Pregnancy*. American Indian/Alaska Native Mental Health Research 19(1):1-14.



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Condoms: they still work!

Condoms...they still work!



- Need increased access
- Free
- Anonymous
- Funny(?)

Test and Treat

CDC STD Screening Guidelines for Women

- Sexually active adolescents <25 years of age
 - Routine annual chlamydia and gonorrhea screening
 - Other STDs and HIV based on risk
- Women ≥25 years of age
 - STD/HIV testing based on risk
 - New sex partner, more than one sex partner, a sex partner with concurrent partners, sex partner with an STI
- Pregnant women
 - Chlamydia and Gonorrhea (<25 years of age or at-risk)
 - Retest in 3rd trimester if <25 or high-risk
 - HIV
 - Syphilis serology
 - Hep B sAg
 - Hep C (if high risk)

CDC STD Screening Guidelines: Other Populations

- Men who have sex with women only
 - No routine screening
- Men who have sex with men
 - Sexually active: annual HIV, syphilis, CT/GC at relevant sites
 - Every 3-6 months if ongoing high risk behaviors
 - Recent bacterial STI
 - Condomless anal intercourse
 - Anonymous sex partners
 - Substance use- methamphetamine
- Transgender men and women
 - No specific recommendation
 - But: can be at high risk, consider annual-q3 mo HIV, syphilis, GC/CT



Extra-genital Screening:
If You Just Check the Pee,
You'll Miss GC and CT...

“Extra-genital” / “Non-genital” Screening

- Testing for STDs at any body site other than genitourinary (urethral/urine/vaginal/cervix)
- Usually refers to rectal and oropharynx
- Typically for gonorrhea and/or chlamydia only
- Recommended only for men who have sex with men (MSM)

“Extra-genital” GC/CT Infections

- Transmission
 - 30% of symptomatic gonococcal urethritis is attributable to oropharyngeal exposure¹
- HIV Transmission
 - Potentiate acquisition, even after controlling for sexual behaviors²⁻⁴
- Treatment differentials
 - Pharyngeal GC⁵
 - Ceftriaxone > Cefixime
 - Rectal CT⁶
 - Doxy >>> Azithromycin

1. Barbee et al, *STI*, 2015; 2. Vaughan, *BMC Med Res Methodol*, 2015; 3. Kelly, *AIDS Res Hum Retroviruses*, 2015; 4. Jin, *JAIDS*, 1999; 5. Moran, *STD* 1995; 6. Kong, *JAC*, 2015

Extra-genital Gonorrhea & Chlamydia

- Among MSM, high rates of extra-genital GC & CT
 - Pharyngeal GC: 9.2%¹
 - Rectal GC: 9.7%³
 - Rectal CT: 12%³

- The majority of infections are asymptomatic
 - 92% of pharyngeal GC²
 - 84 - 86% of rectal GC²

1. Kent CK. CID 2005
2. Morris, CID 2006
3. Barbee, STD 2014

Don't forget the triple dip: STD Screening for MSM



← Syphilis & HIV serology

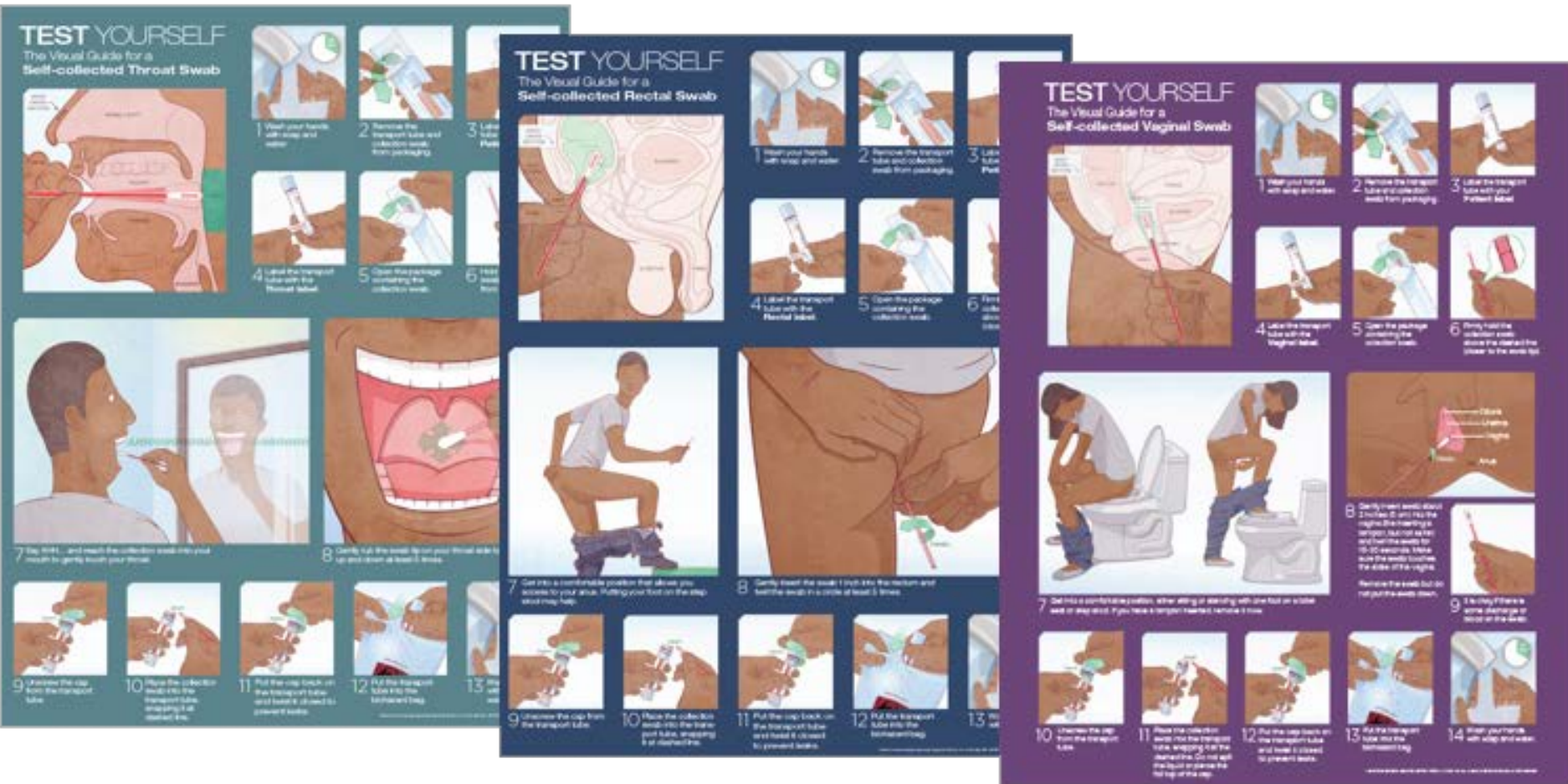
← Pharyngeal GC

← Urine GC/CT

← Rectal GC/CT

Annually for all sexually active MSM
Every 3-6 months for high-risk MSM

STI Self-Testing Program



Available in English and Spanish
 Email aradford@uw.edu for free posters for your clinic

Self-testing Increases Rates of GC/CT Screening!

	Baseline N= 1520	Intervention N= 1510	% change	p-value*
Any site GC/CT	670 (44.1%)	770 (51.0%)	+15.0%	0.001
Pharyngeal GC/CT	444 (29.2%)	586 (38.8%)	+32.0%	<0.001
Rectal GC/CT	390 (25.7%)	520 (34.4%)	+33.3%	<0.001
Urethral GC/CT	510 (33.6%)	697 (46.2%)	+36.7%	<0.001
All three sites	243 (16.0%)	466 (30.9%)	+91.8%	<0.001
Syphilis	962 (63.3%)	976 (64.6%)	+1.5%	0.456

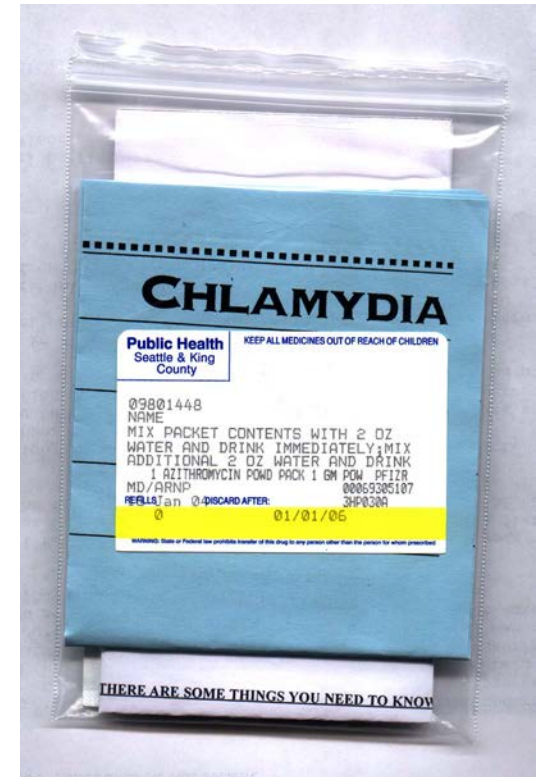
Patient-delivered partner therapy (PDPT)

- =Expedited Partner Therapy (EPT)
- Appropriate for heterosexual patients with GC/CT whose partners' treatment cannot be ensured or is unlikely
- Partners in the past 60 days are eligible
- Partners should be highly encouraged to present for ceftriaxone 250mg IM + azithromycin 1g PO

Patient Delivered Partner Therapy: An effective way to treat partners

Information provided with EPT

- Information about medications, allergies & STD
- Advice about complications and need for care (e.g. PID)
- Where to seek care



Partner Management: Key Points

- Clinical evaluation is first-line option
- **Expedited partner therapy (EPT)**
 - Safe and effective at reducing reinfection for GC, less so for CT
 - For CT exposure only: azithromycin 1 g alone
 - For GC (and CT): cefixime 400 mg + azithromycin 1 g
 - ONLY for GC/CT, not syphilis
 - Consider for trichomonas

NOT generally recommended for MSM!

5% of MSM with bacterial STI will be diagnosed with HIV



Now for the good news...
We can prevent HPV
infection!

ACIP Recommended HPV Vaccine

- Gardasil 9®
 - Types 6, 11, 16, 18, 31, 33, 45, 52, 58
 - FDA-approved for females and males 9-26 yrs.
 - Cost per dose \$133/\$193
 - 6, 11
 - Cause 90% genital warts
 - 16, 18, 31, 33, 45, 52, 58:
 - Cause 90% Cervical CA
- Quadravalent Gardasil and bivalent vaccine no longer used



HPV Vaccine Recommendations

- Routine vaccination at age 11 or 12 years*
- Recommended through age 26 for females and through age 21 for males not previously vaccinated
- Recommended for men who have sex with men and immunocompromised men (including persons with HIV infection) through age 26
- Vaccination of females is recommended with 9vHPV
 - 9VHPV contains HPV types which cause 90% of genital warts and cervical CA
- Vaccination of males is recommended with 9vHPV

* Vaccination series can be started at 9 years of age MMWR 2015;64:300-4



Summary

Take Home Points

- STIs are on the rise in the United States and among AI/AN citizens
- Risk behavior alone does NOT explain the disparity in STI rates between AI/AN youth and white youth
- Effective STI prevention is a combination of:
 - Education (sex positive, culturally relevant, non-stigmatizing)
 - Risk modification (delayed sexual debut, condom use)
 - Test and treat (destigmatize, test at all sites, treat partners)



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Thank you

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