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The HIV/STD/TB/Hepatitis Program, Division of Disease Control, conducts Lunch and Learn Webinars for health care professionals in North Dakota.

Each month a new topic will be held from 12:00 p.m. to 1:00 p.m. CST on the **fourth Wednesday of the month.**

Next month's L&L :

- ▶ May 25, 2016
- ▶ Register: <http://www.ndhealth.gov/HIV/events.htm>

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For questions or comments contact:

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NORTH DAKOTA
DEPARTMENT *of* HEALTH

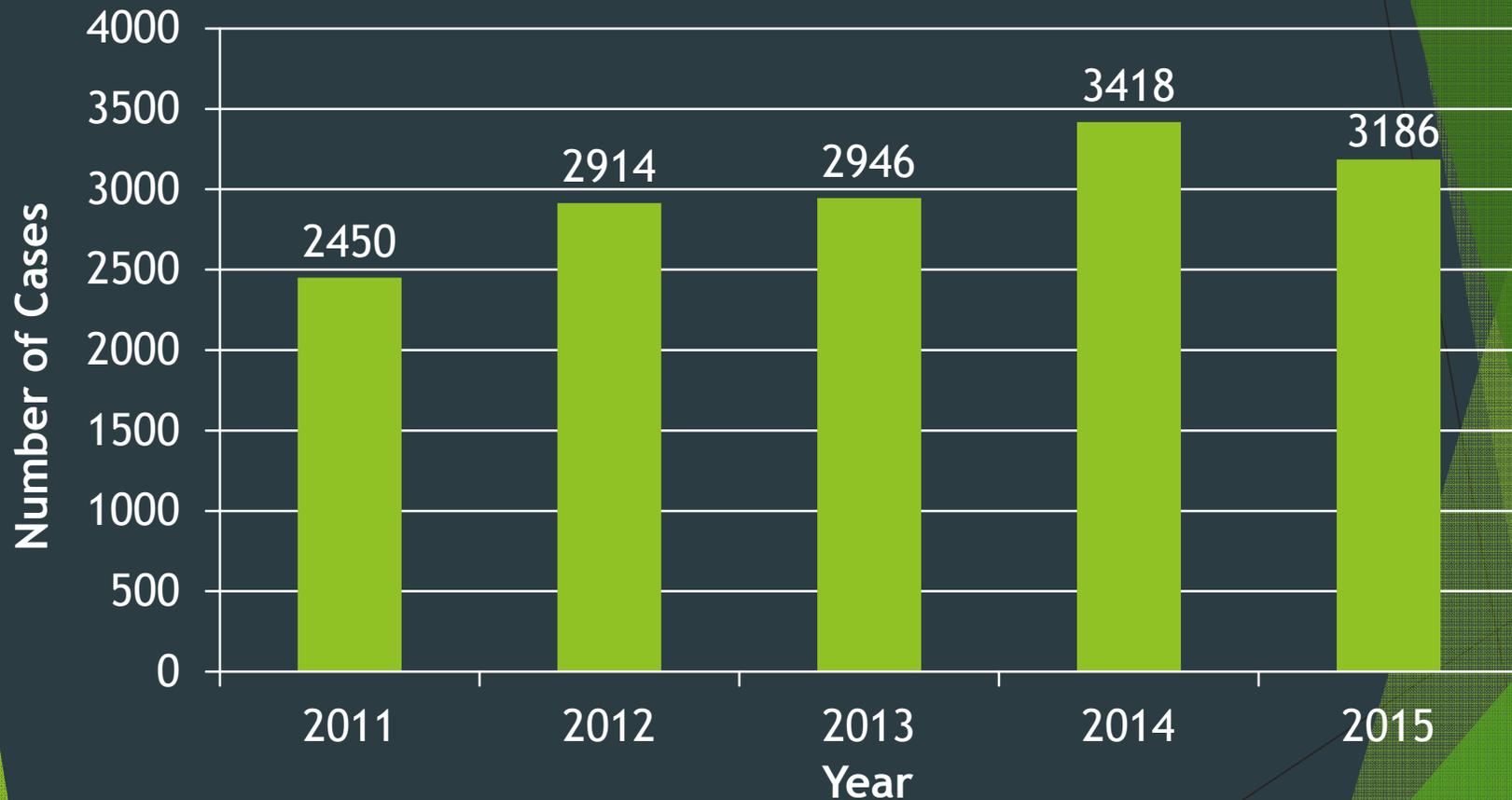
2015 ND Data and Partner Services for Chlamydia, Gonorrhea & Syphilis

Sarah Weninger, MPH & Dee Pritschet
April 27, 2016 - Lunch and Learn

Objectives

- ▶ Describe the 2015 epidemiologic profile of chlamydia, gonorrhea, syphilis and HIV in North Dakota.
- ▶ Detail the partner services follow-up procedure for a confirmed syphilis case and their sexual partners.
- ▶ Describe the proper treatment and follow-up protocol of chlamydia and gonorrhea cases.
- ▶ Describe the best practices for chlamydia and gonorrhea partner services.

Reported Chlamydia Cases by Year North Dakota, 2011-2015



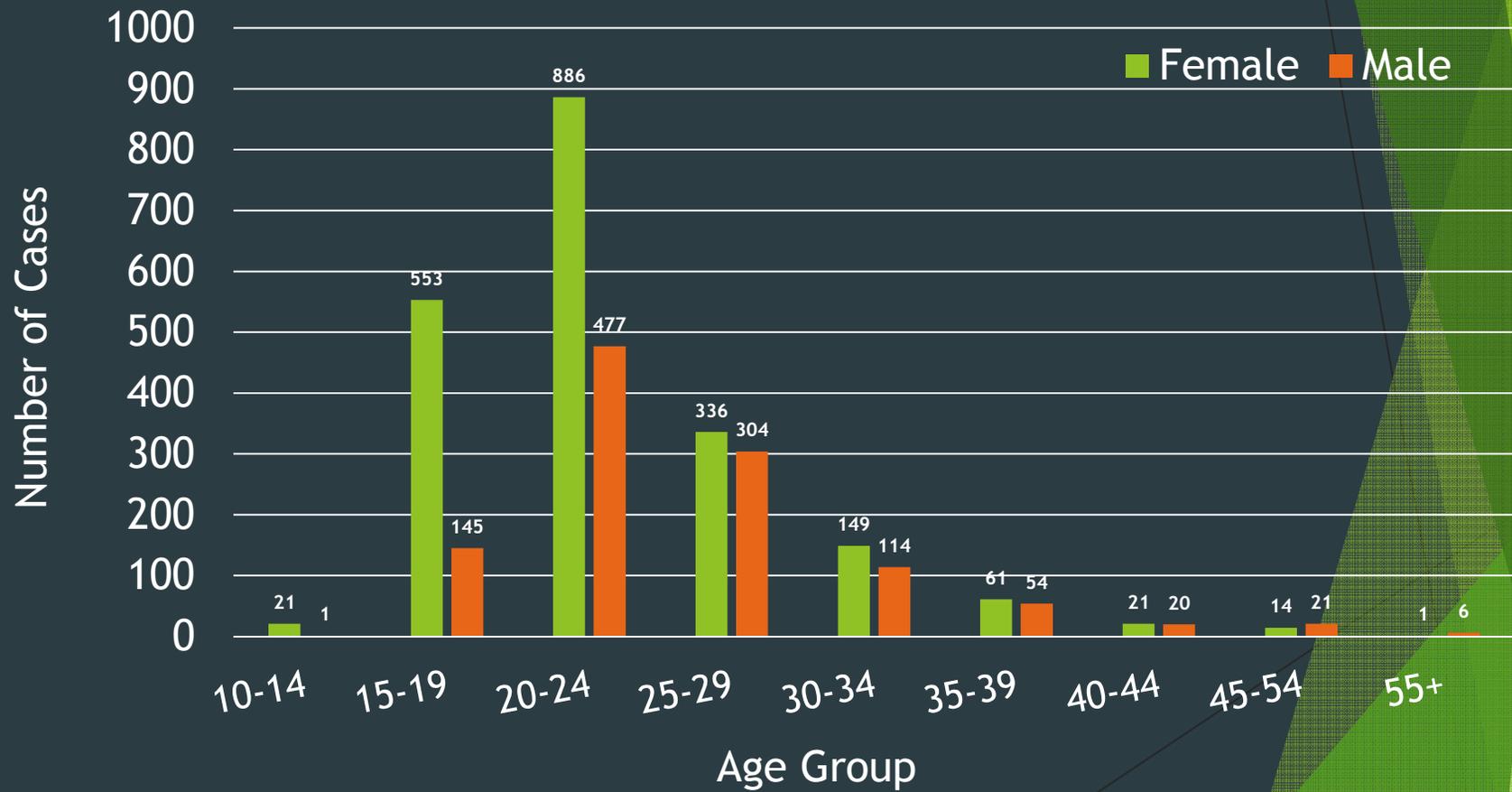
Rate of Reported Chlamydia Cases by Year North Dakota, 2011-2015



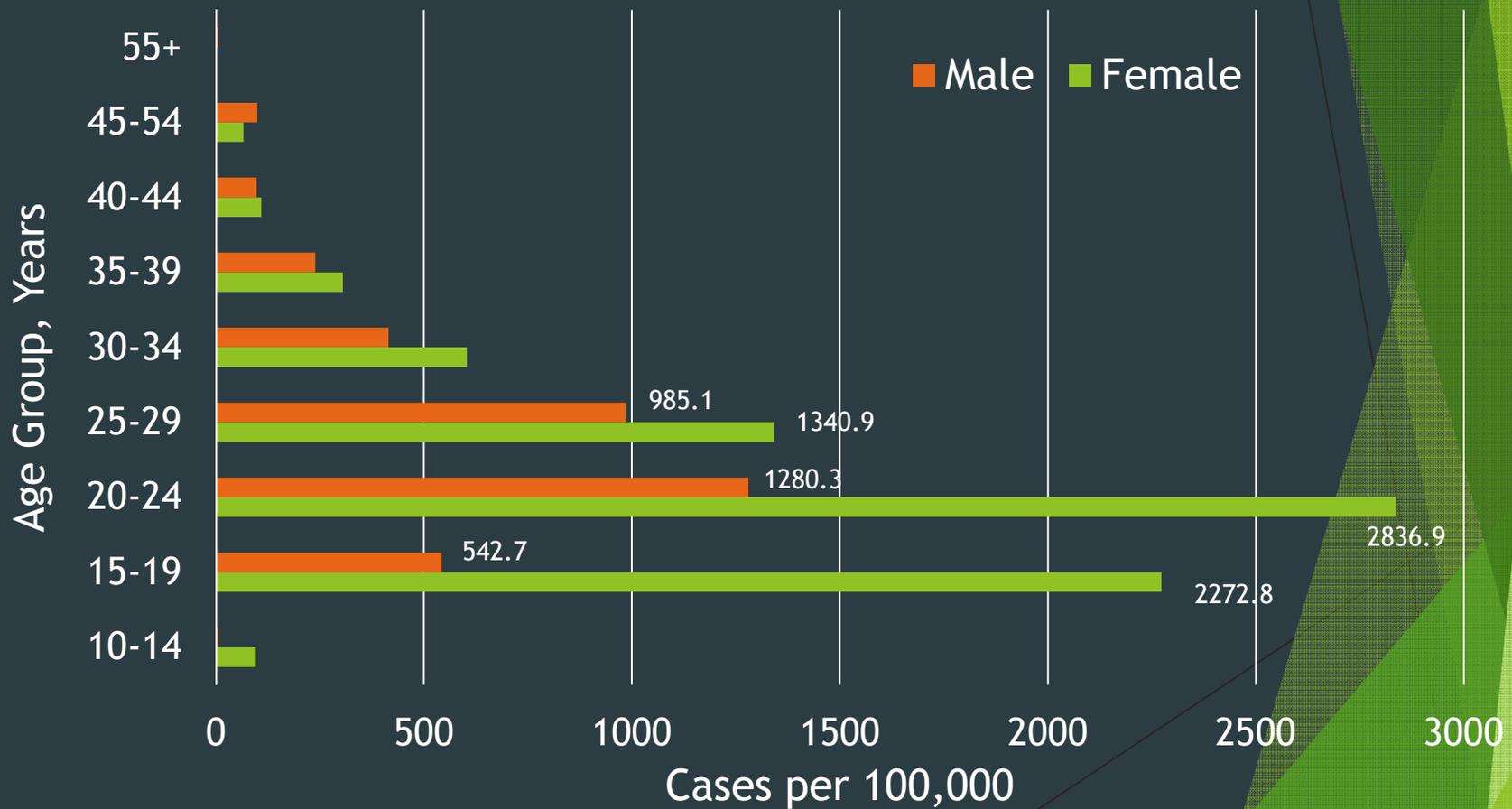
Reported Chlamydia by Gender North Dakota, 2011-2015



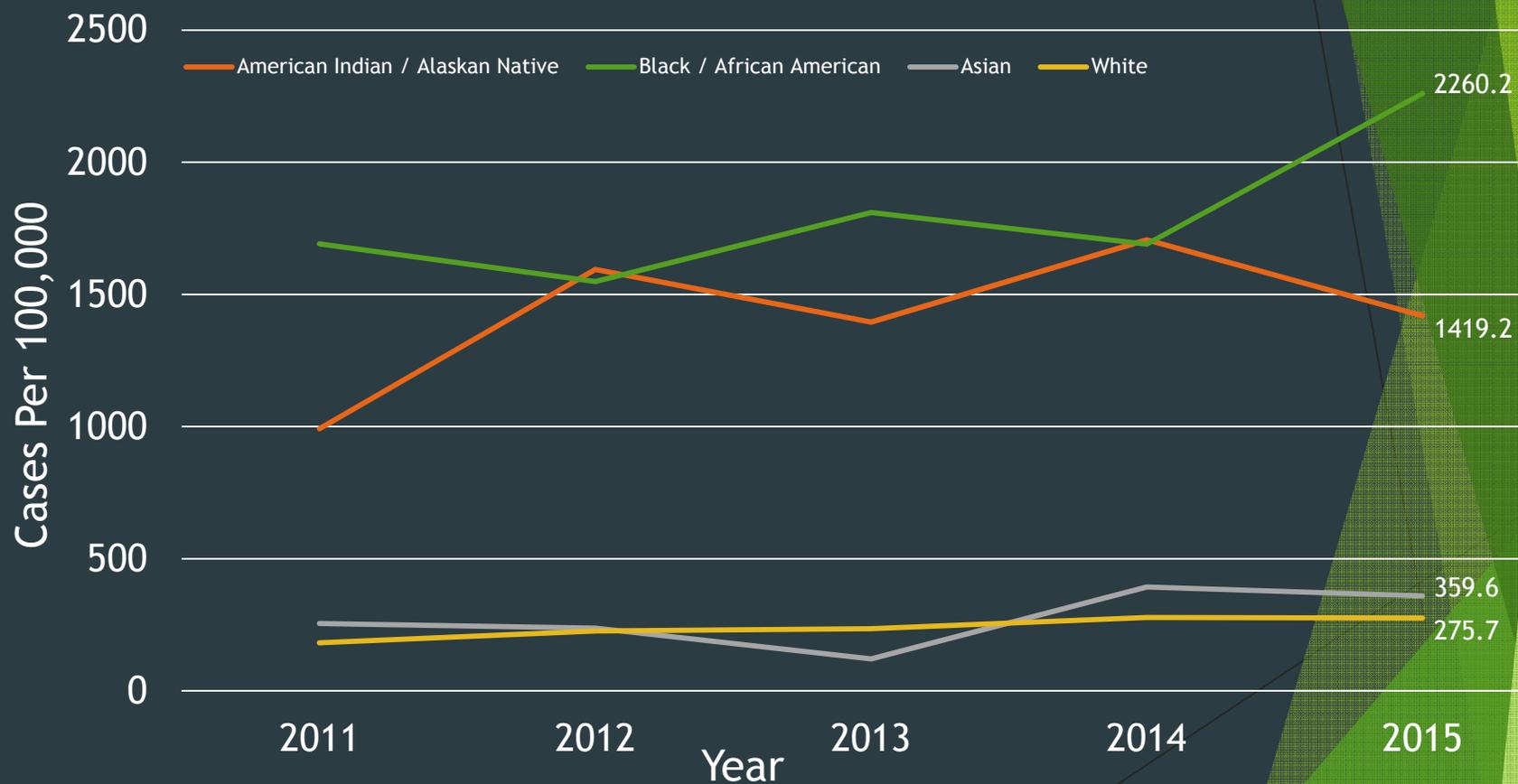
Reported Cases of Chlamydia by Age Group North Dakota, 2015



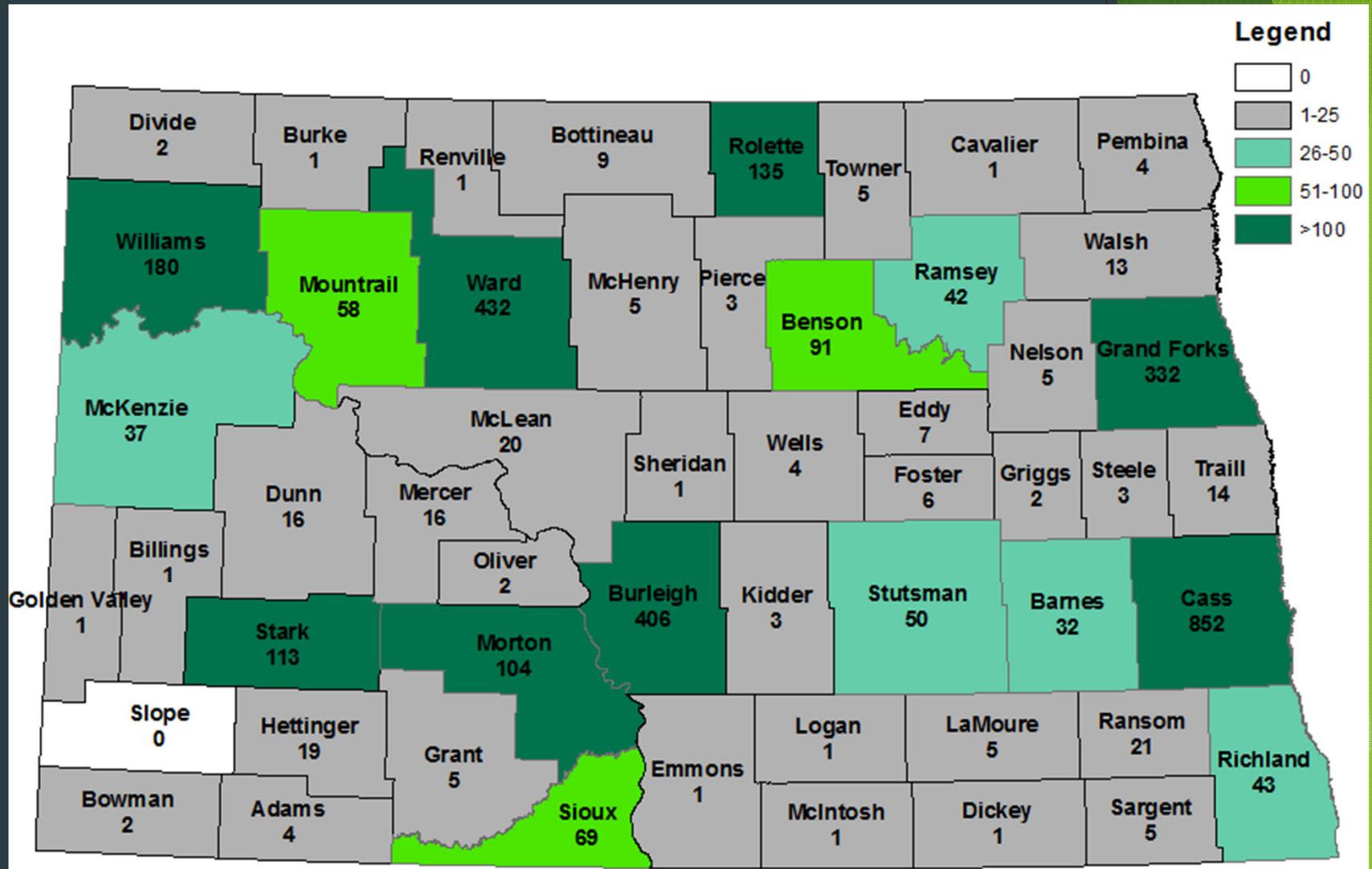
Chlamydia Rates by Age Group North Dakota, 2015



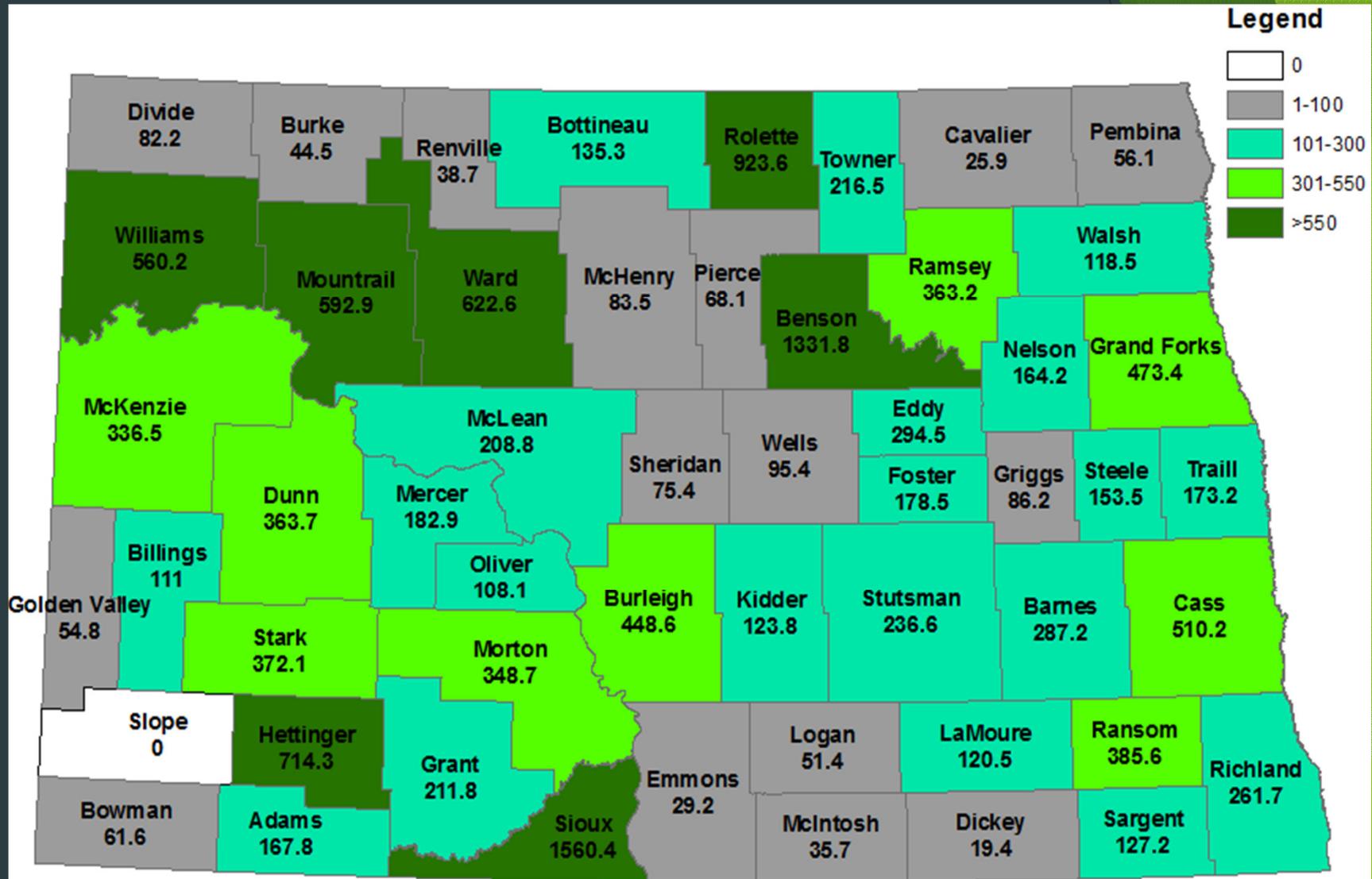
Chlamydia Rates by Race/Ethnicity North Dakota, 2011 - 2015



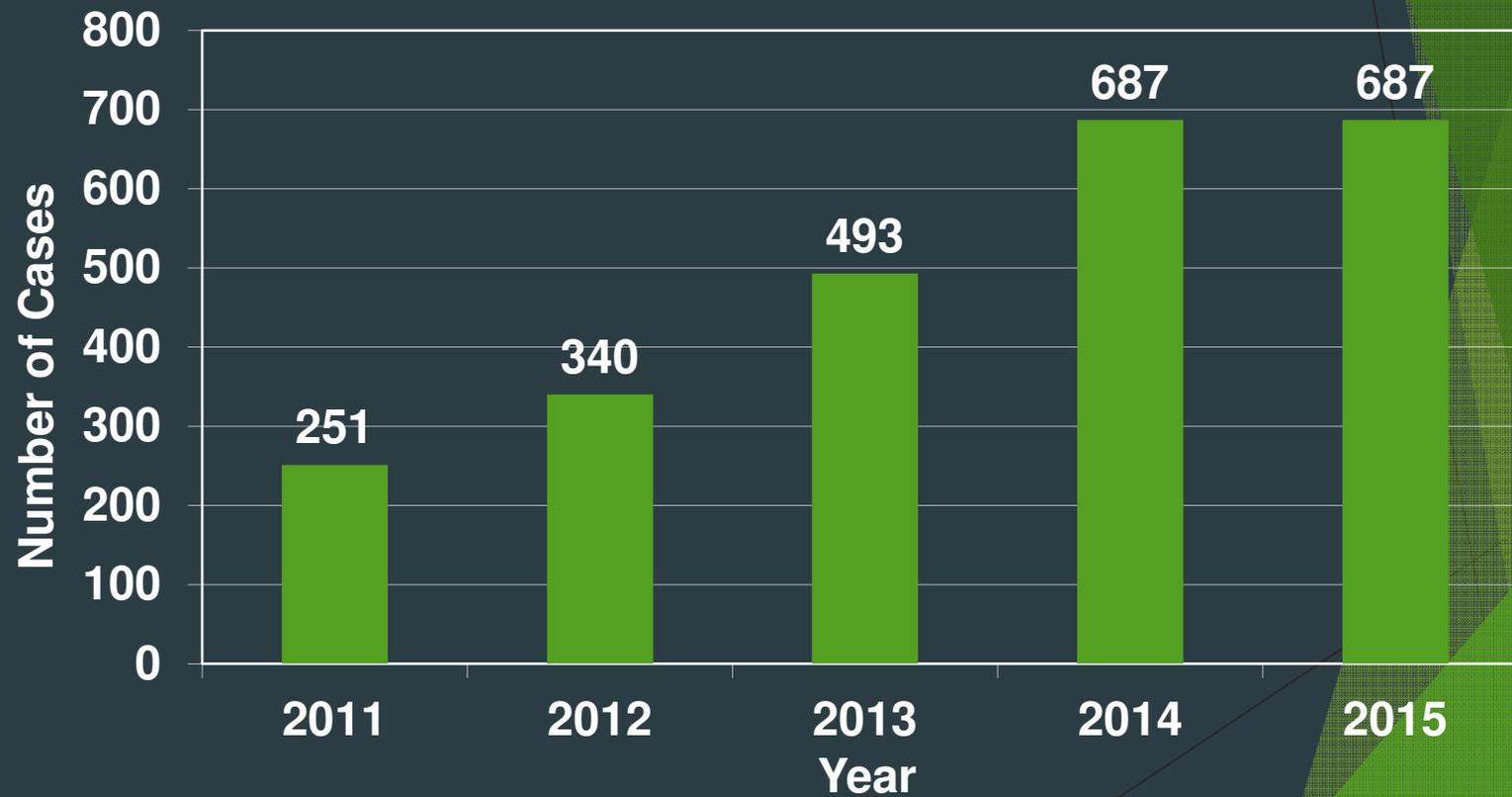
Chlamydia Cases by County, 2015



Chlamydia Rates by County, 2015



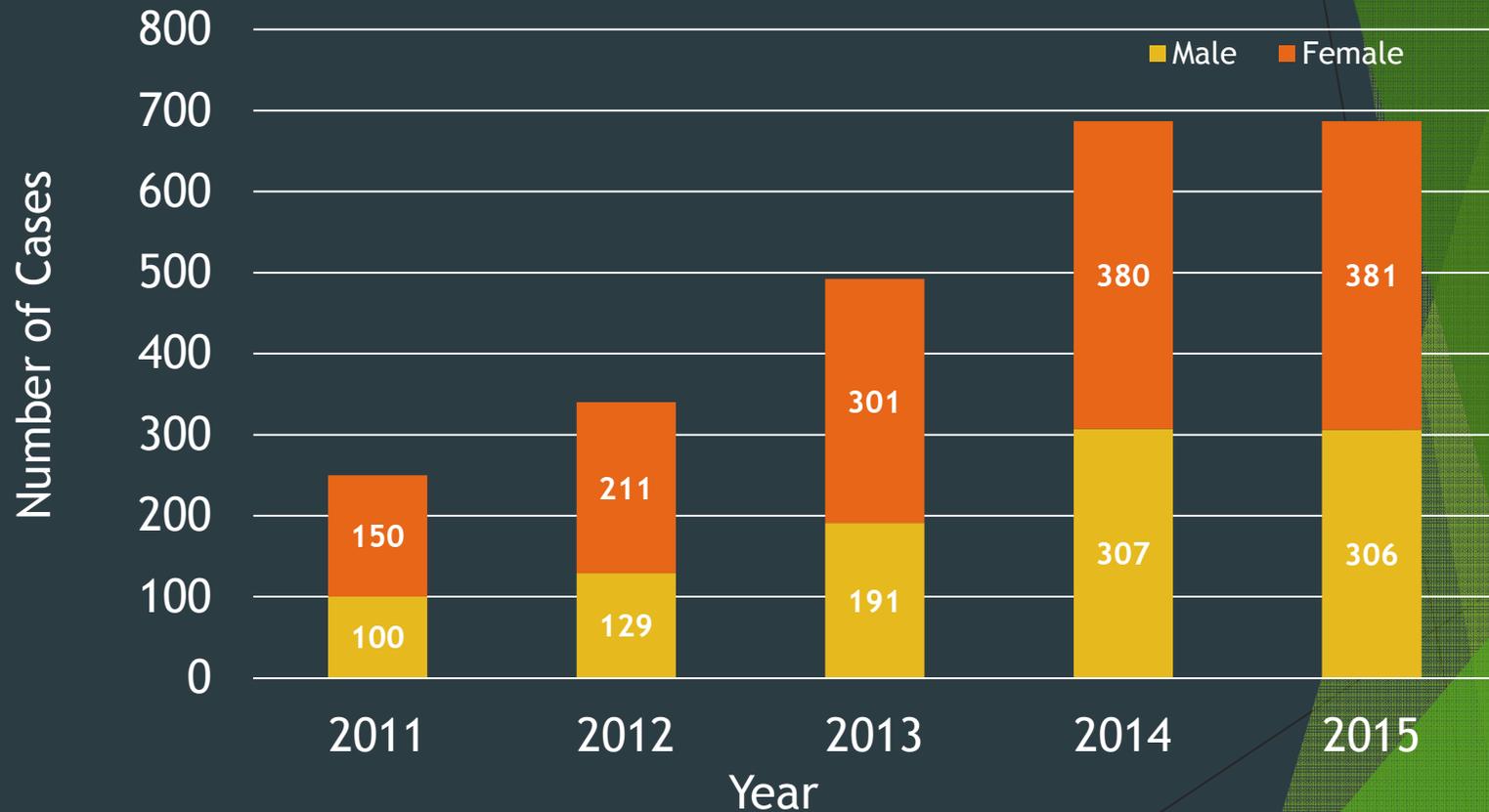
Reported Gonorrhea Cases by Year North Dakota, 2011-2015



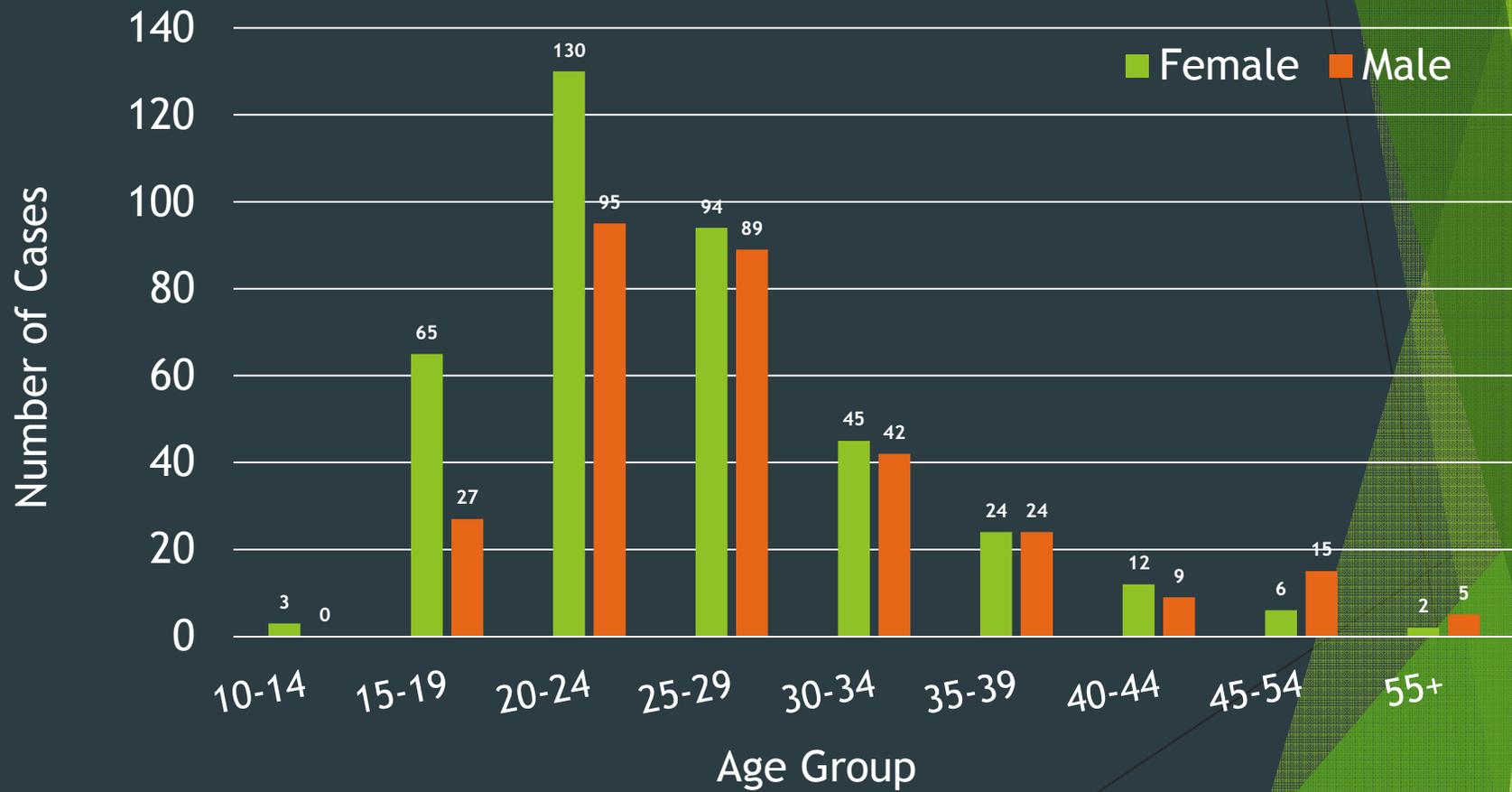
Rate of Reported Gonorrhea Cases by Year North Dakota, 2011-2015



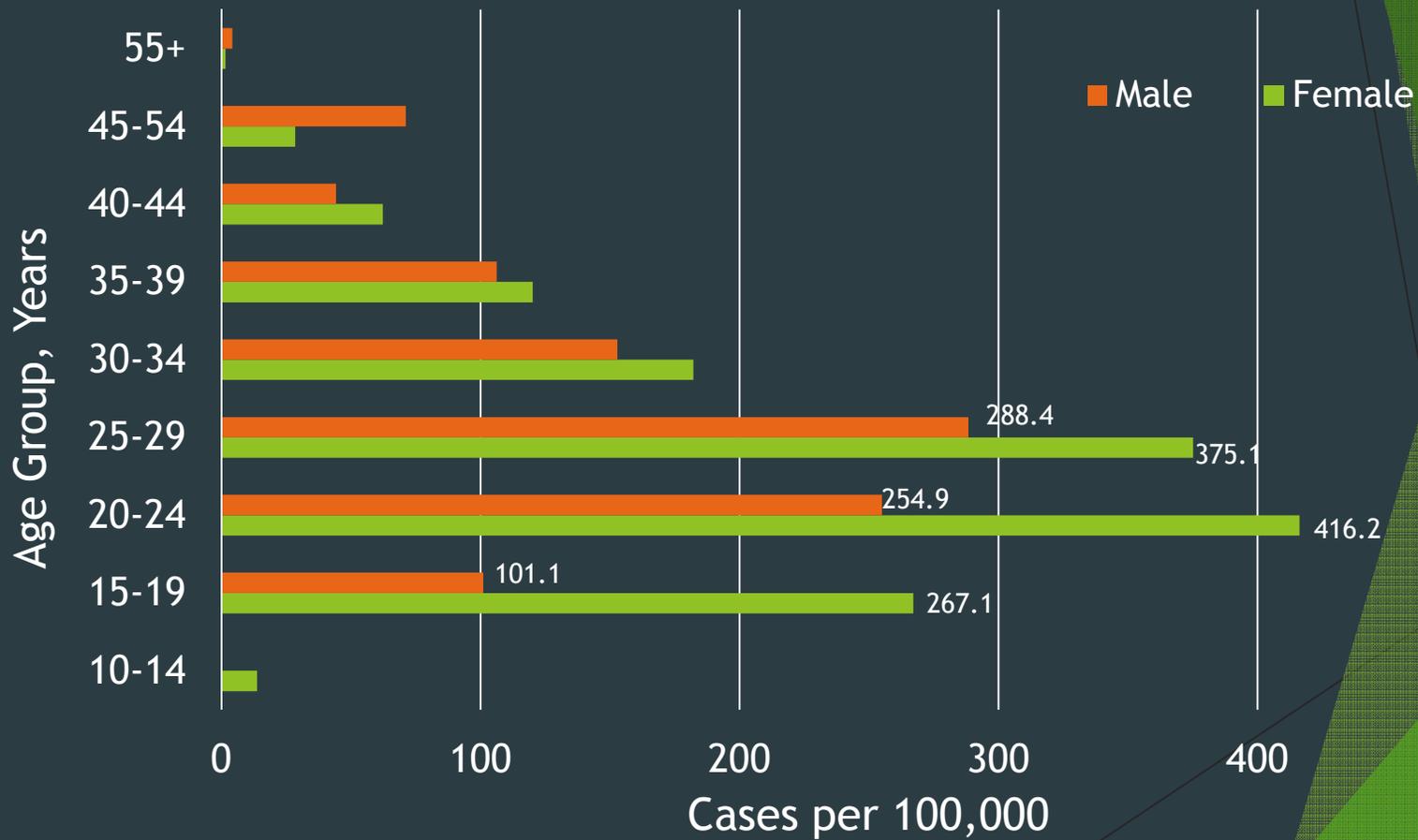
Reported Gonorrhea by Gender North Dakota, 2011-2015



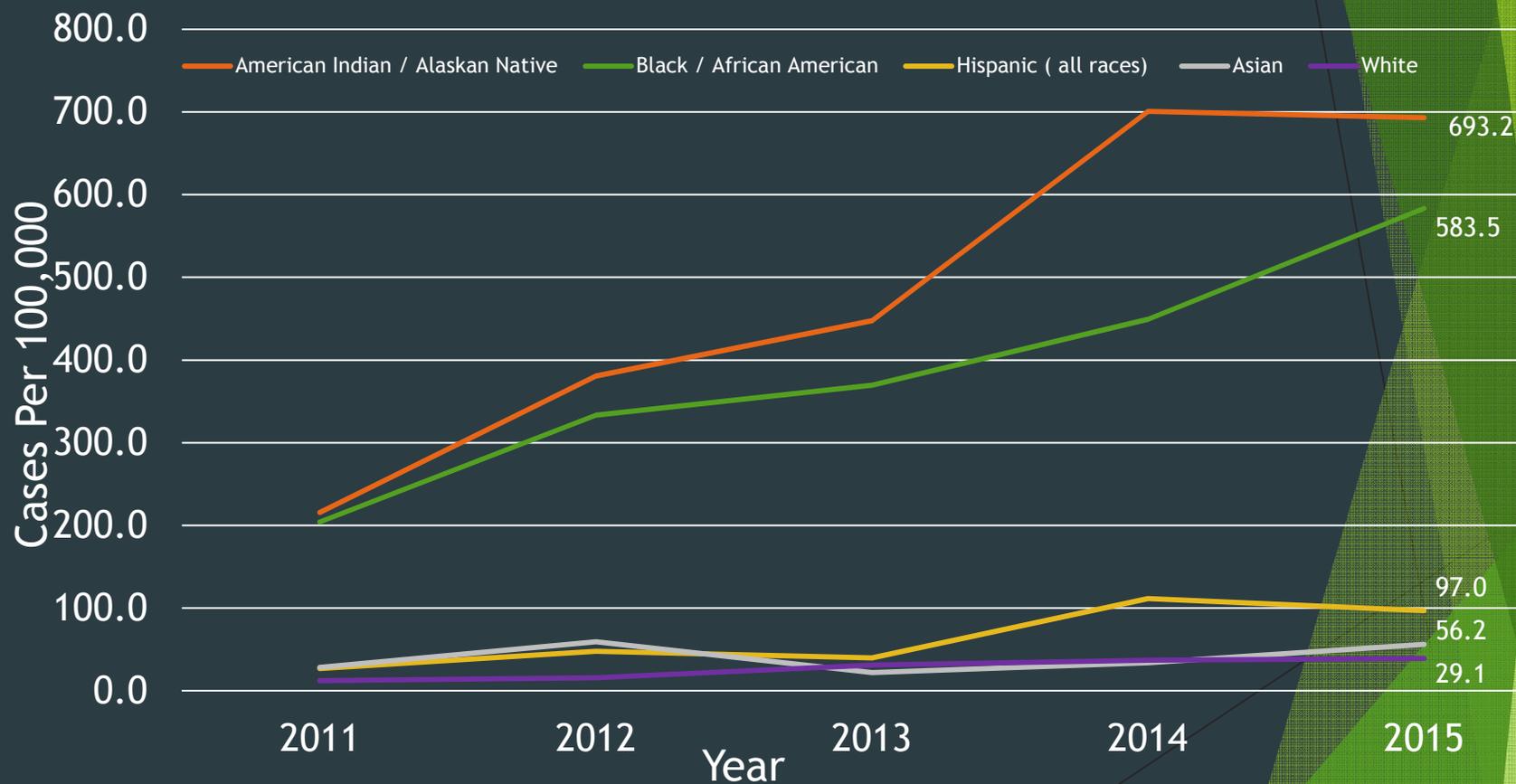
Reported Cases of Gonorrhea by Age Group North Dakota, 2015



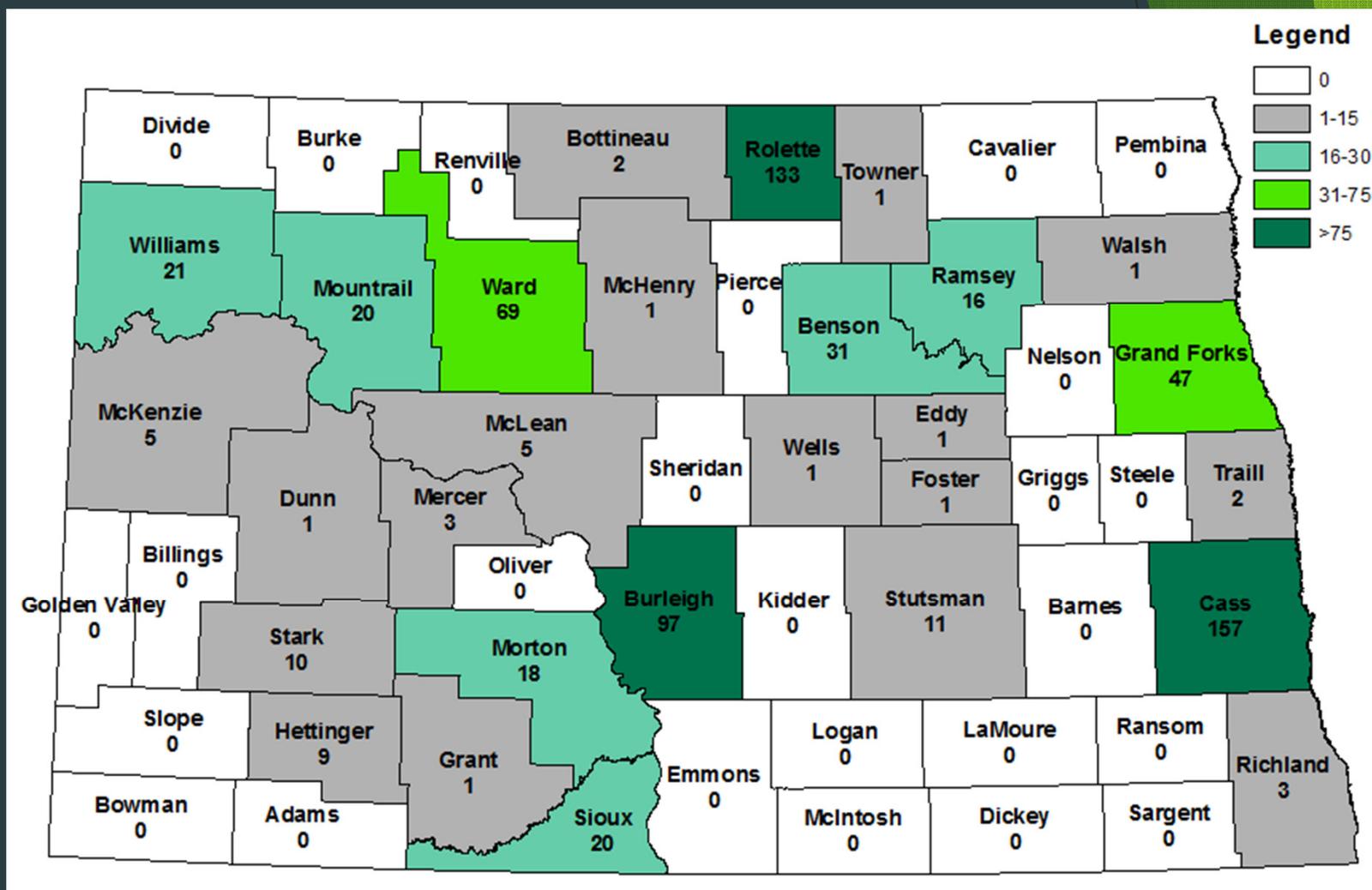
Gonorrhea Rates by Age Group North Dakota, 2015



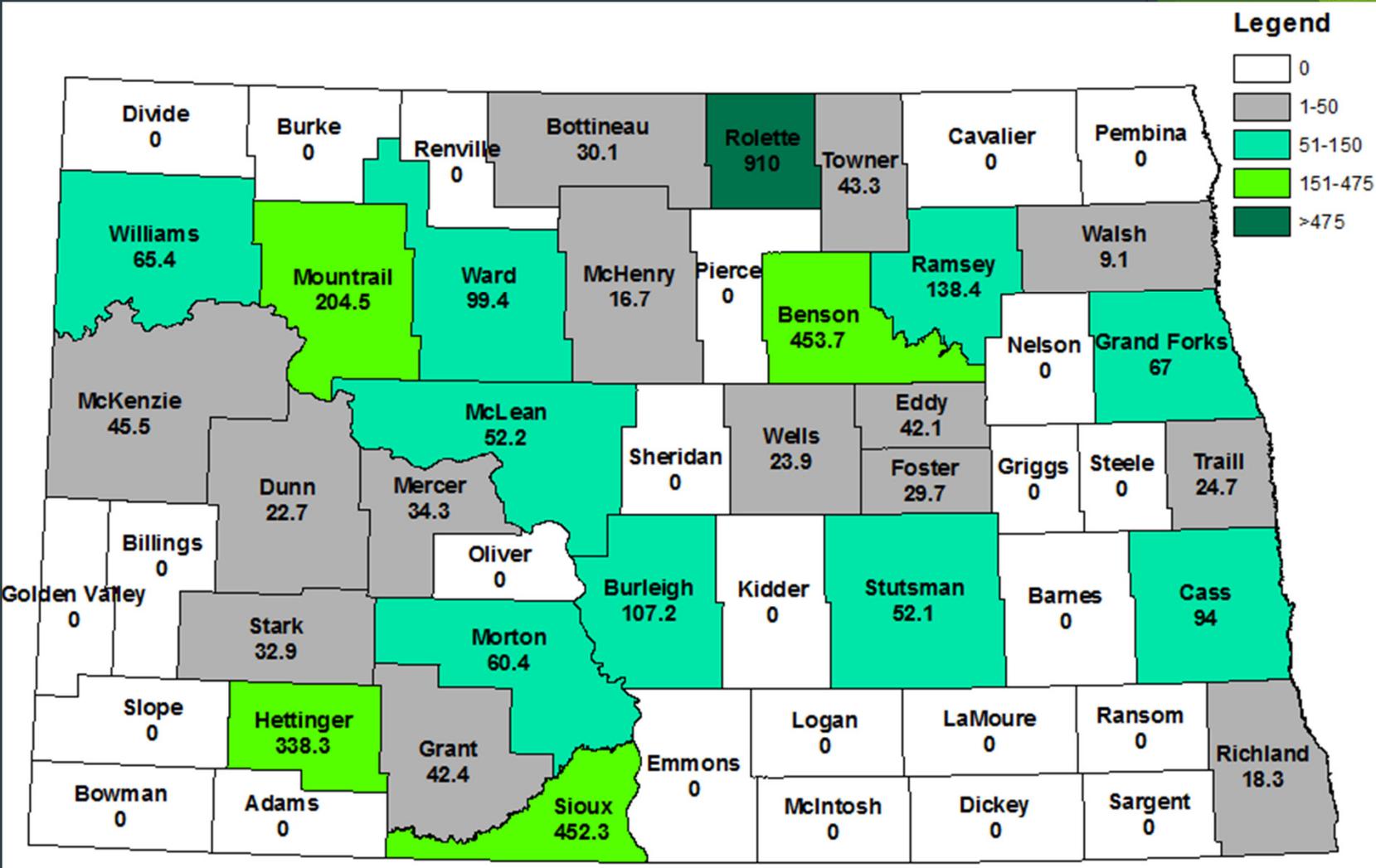
Gonorrhea Rates by Race/Ethnicity North Dakota, 2011 - 2015



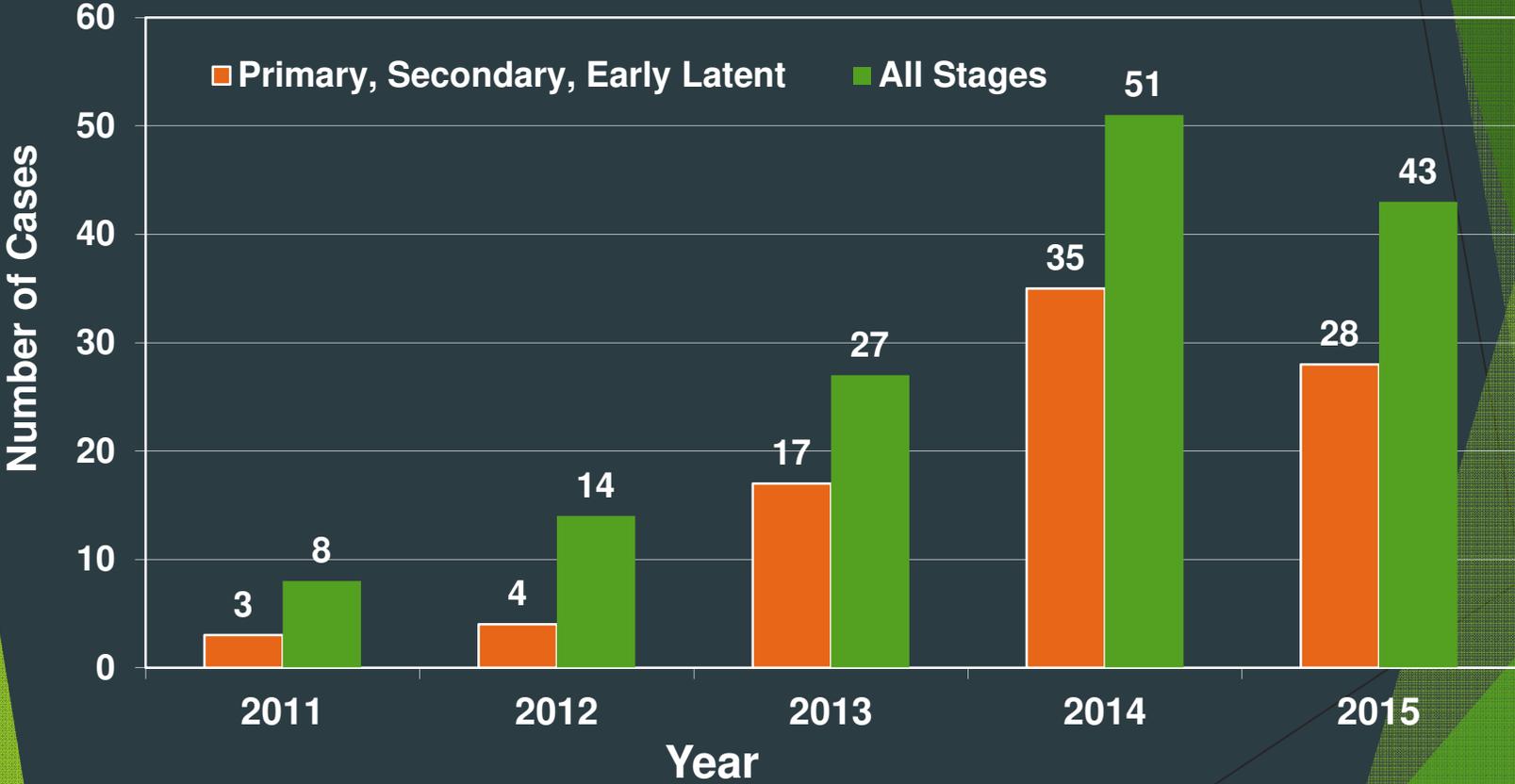
Gonorrhea Cases by County, 2015



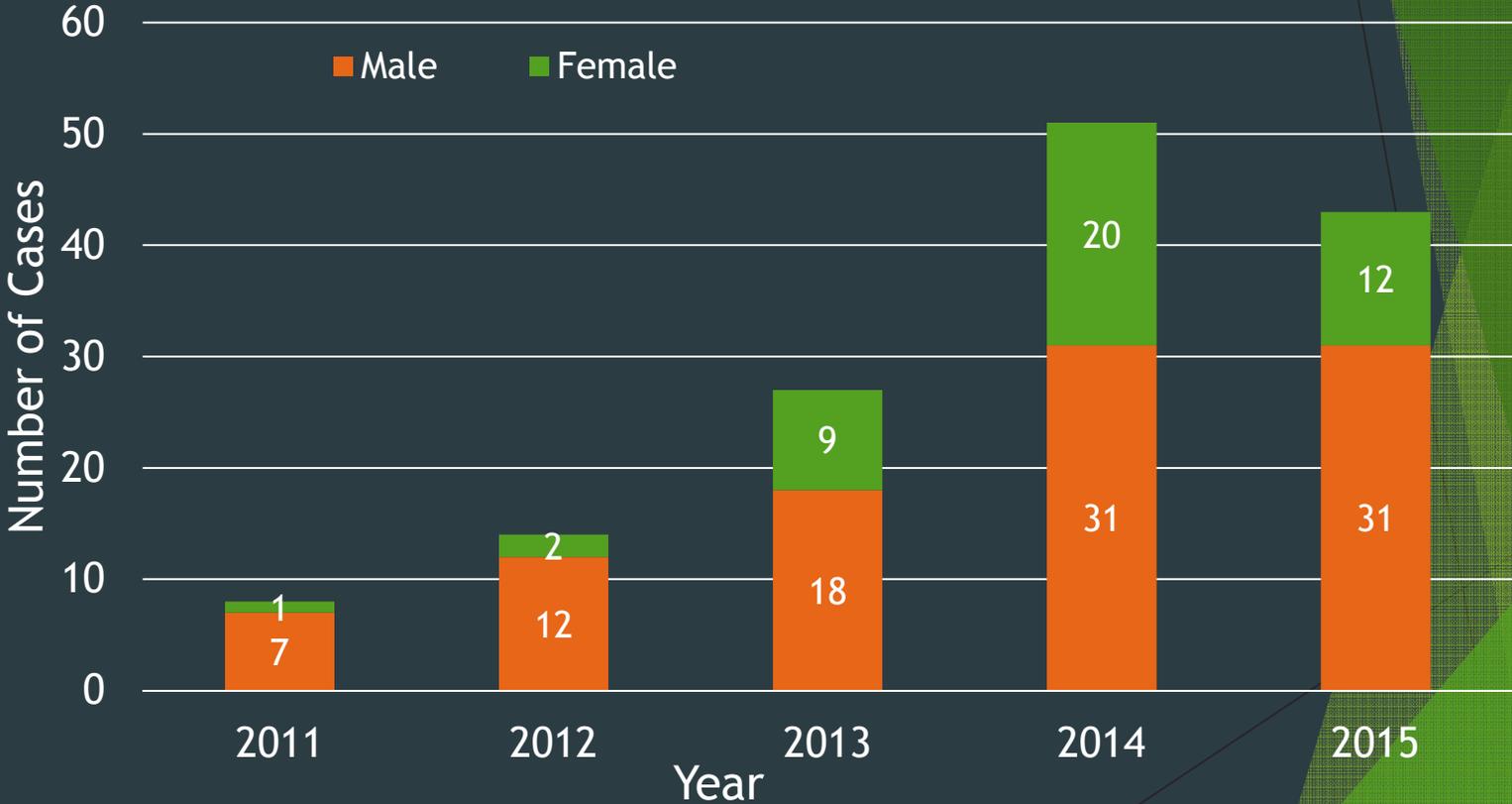
Gonorrhea Rates by County, 2015



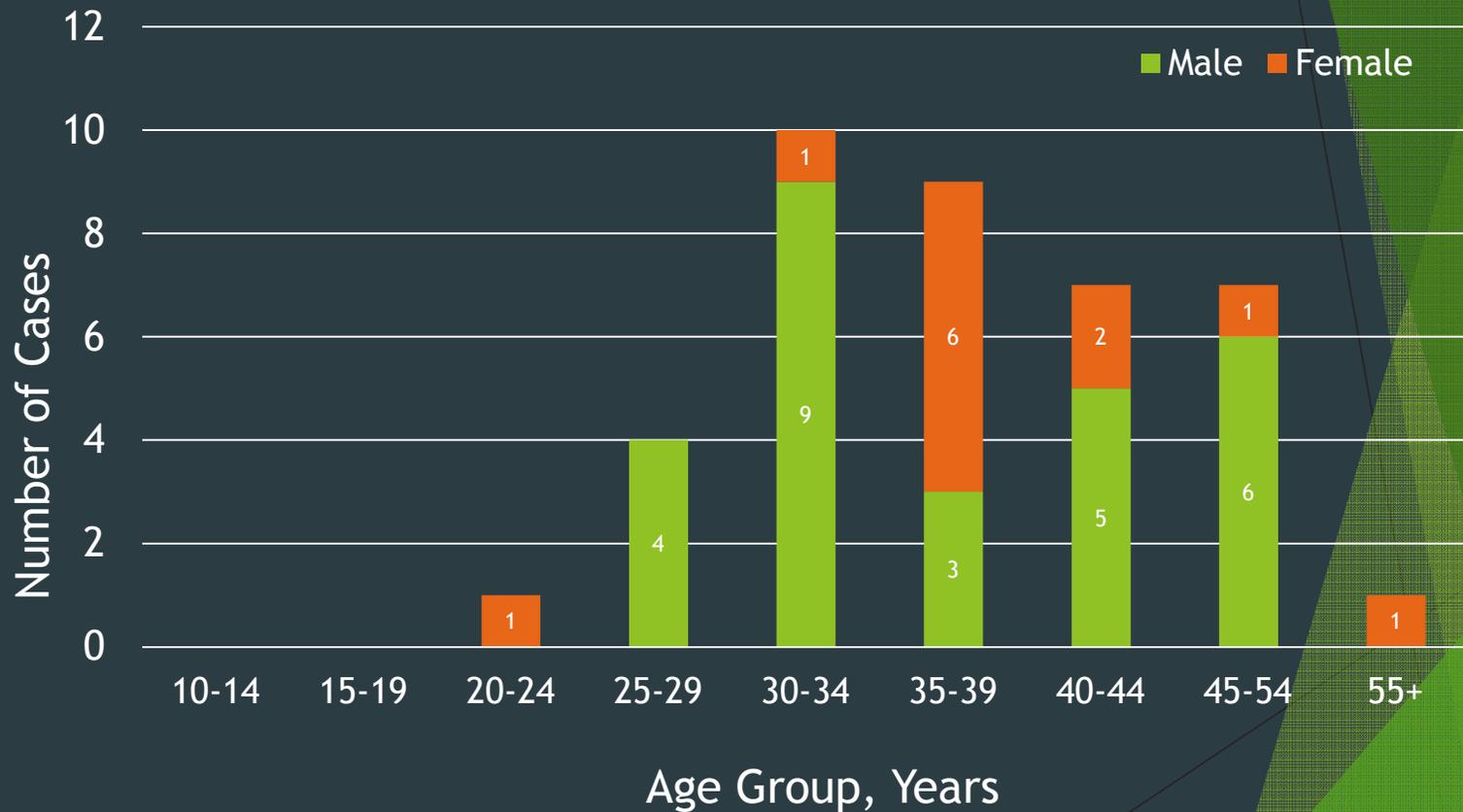
Reported Syphilis Cases by Year North Dakota, 2011-2015



Reported Syphilis by Gender North Dakota, 2011-2015



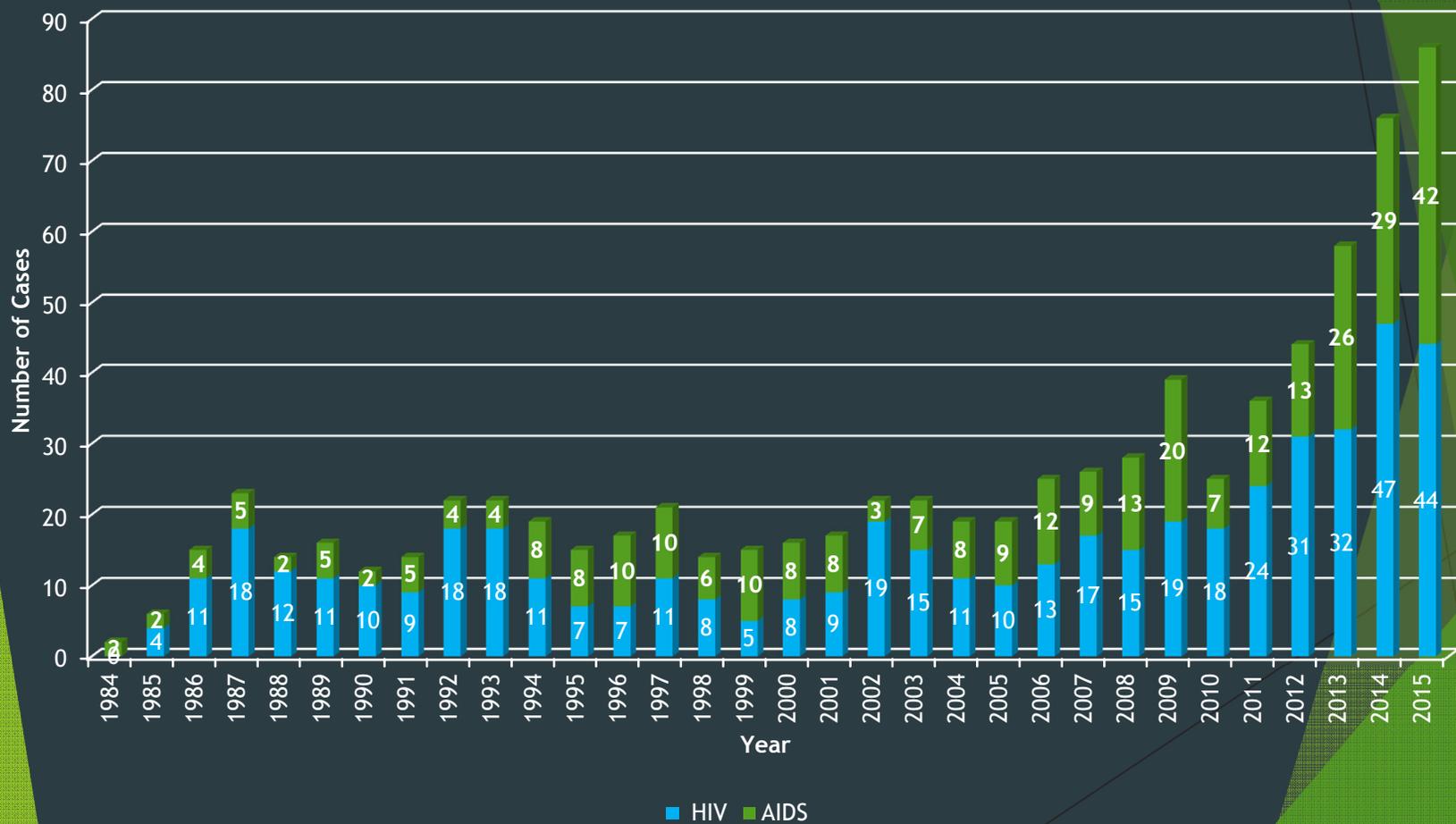
Reported Cases of Syphilis by Age Group North Dakota, 2015



HIV/AIDS

2015

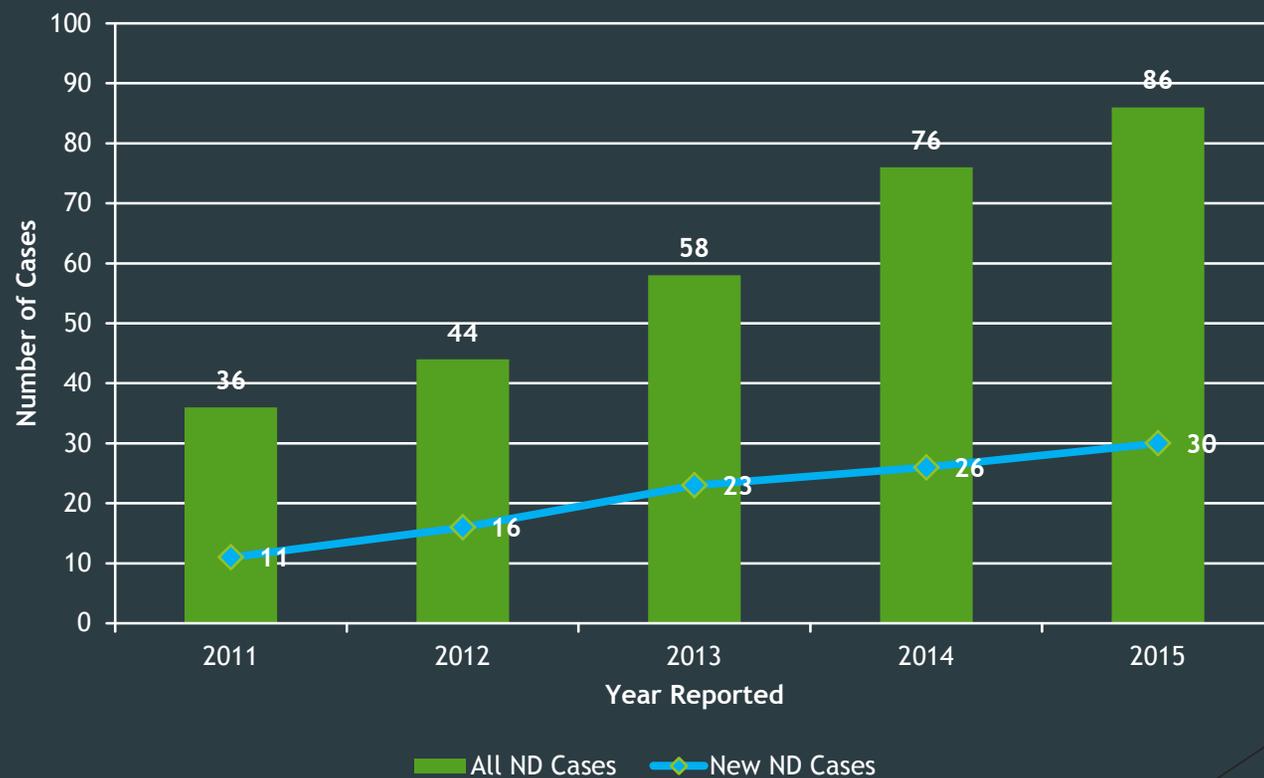
HIV/AIDS in North Dakota: 1984-2015



Why are we seeing an increase of HIV/AIDS cases in North Dakota?

- ▶ 2010 President Obama lifted the ban restricting individuals of moving to the US who were known HIV/AIDS cases
- ▶ Better Surveillance
 - ▶ Electronic reporting
 - ▶ Identifying labs not reporting CD4 and VL test results

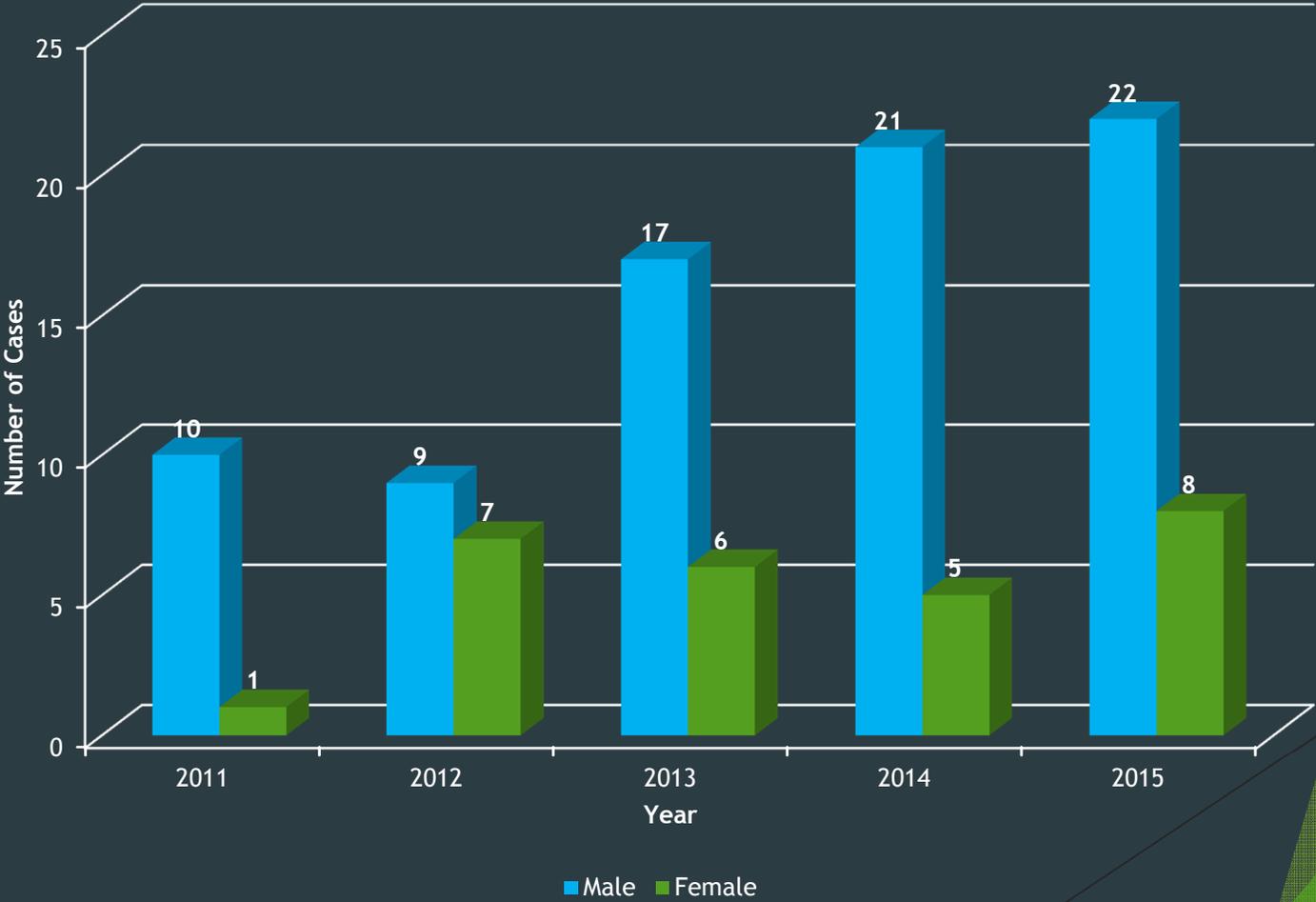
HIV/AIDS in North Dakota: All/New Diagnosis, 2011-2015



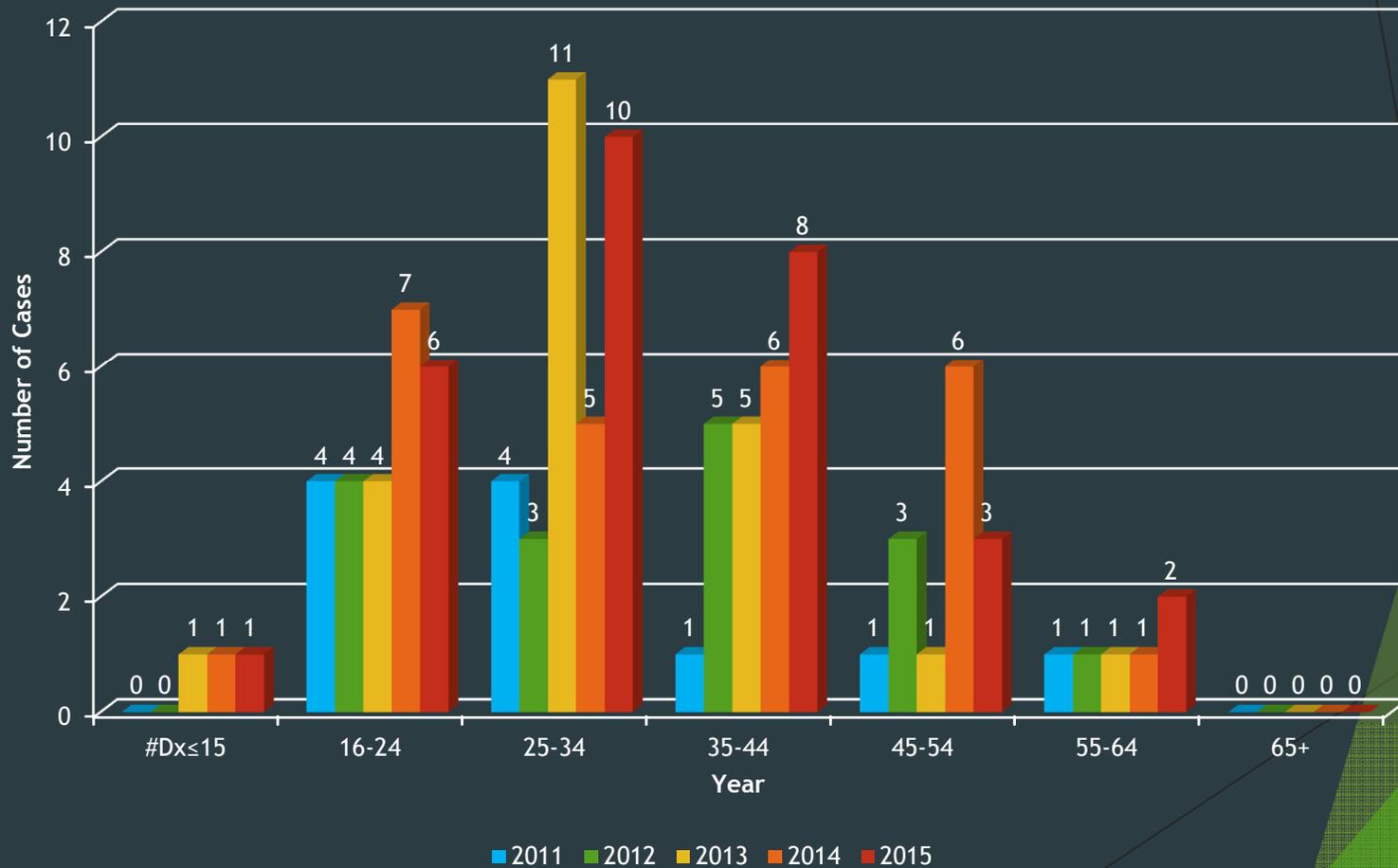
Incidence in HIV/AIDS in North Dakota: HIV/AIDS, 2011-2015



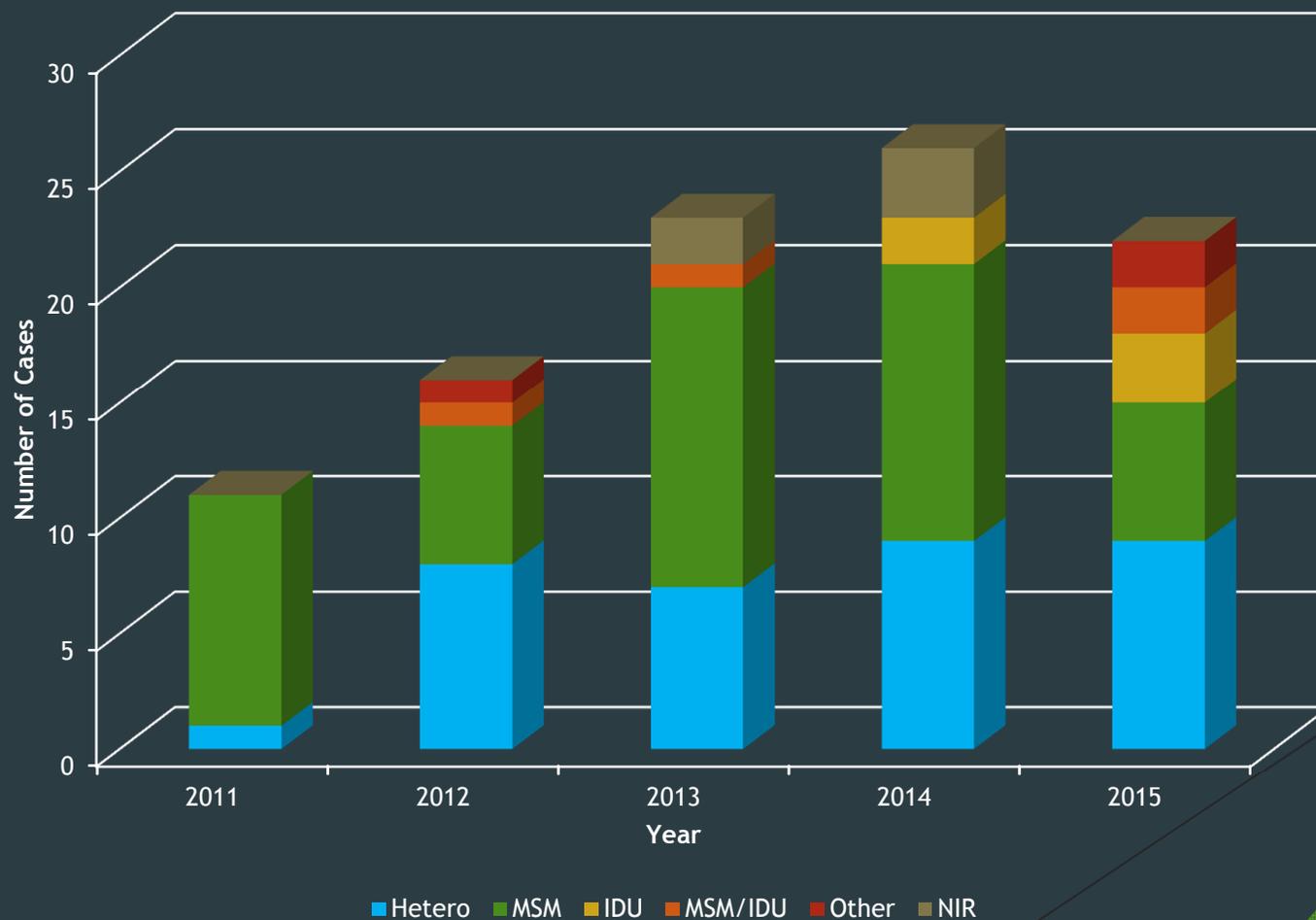
Incidence in HIV/AIDS in North Dakota: Gender, 2011-2015



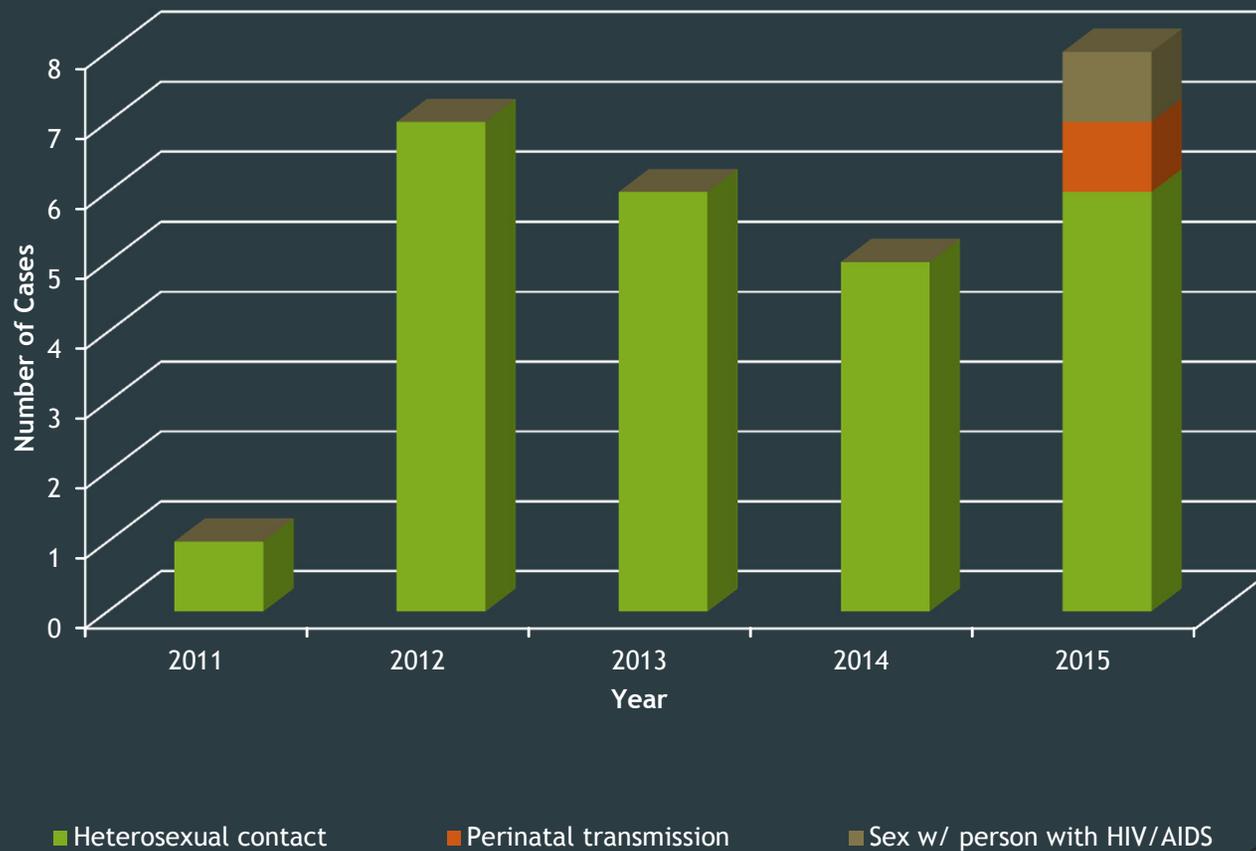
Incidence of HIV/AIDS in North Dakota: Age, 2011-2015



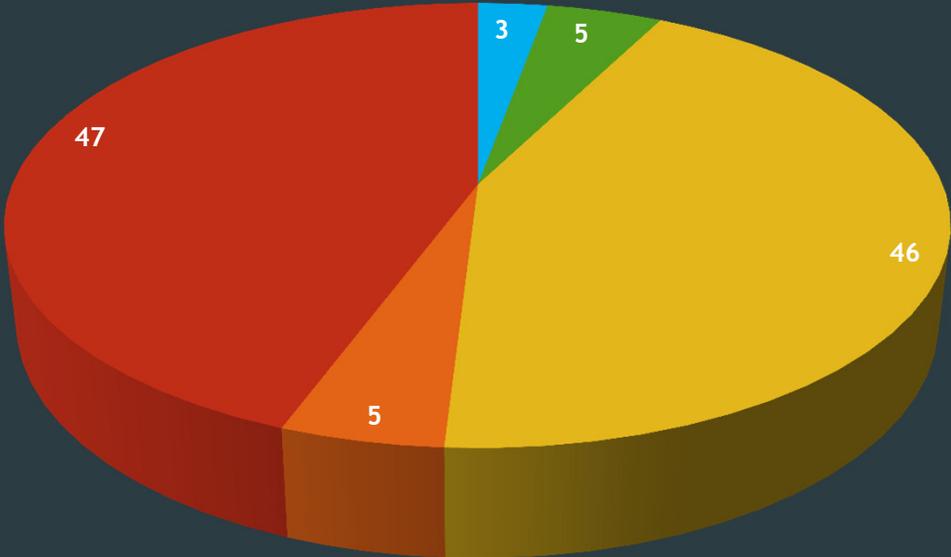
Incidence of HIV/AIDS in North Dakota: Male Risk Factor, 2011-2015



Incidence of HIV/AIDS in North Dakota: Female Risk Factor, 2011-2015

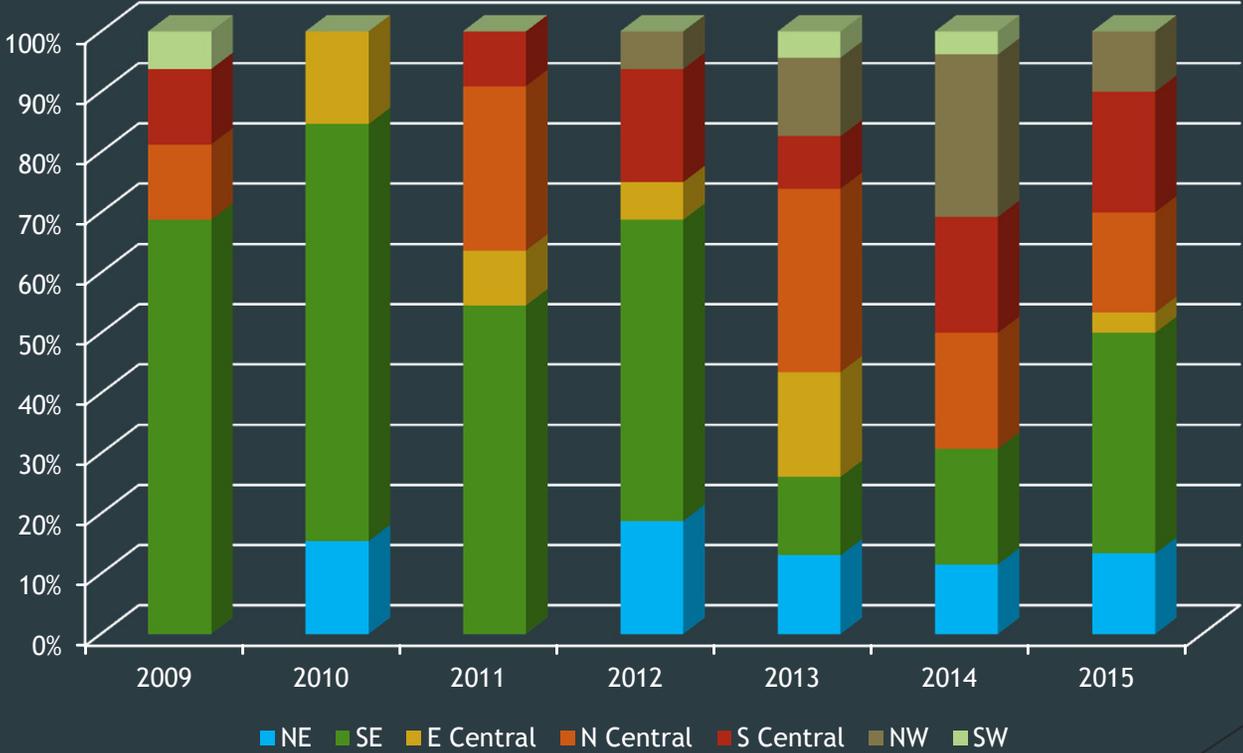


Incidence of HIV/AIDS in North Dakota: Race, 2011-2015

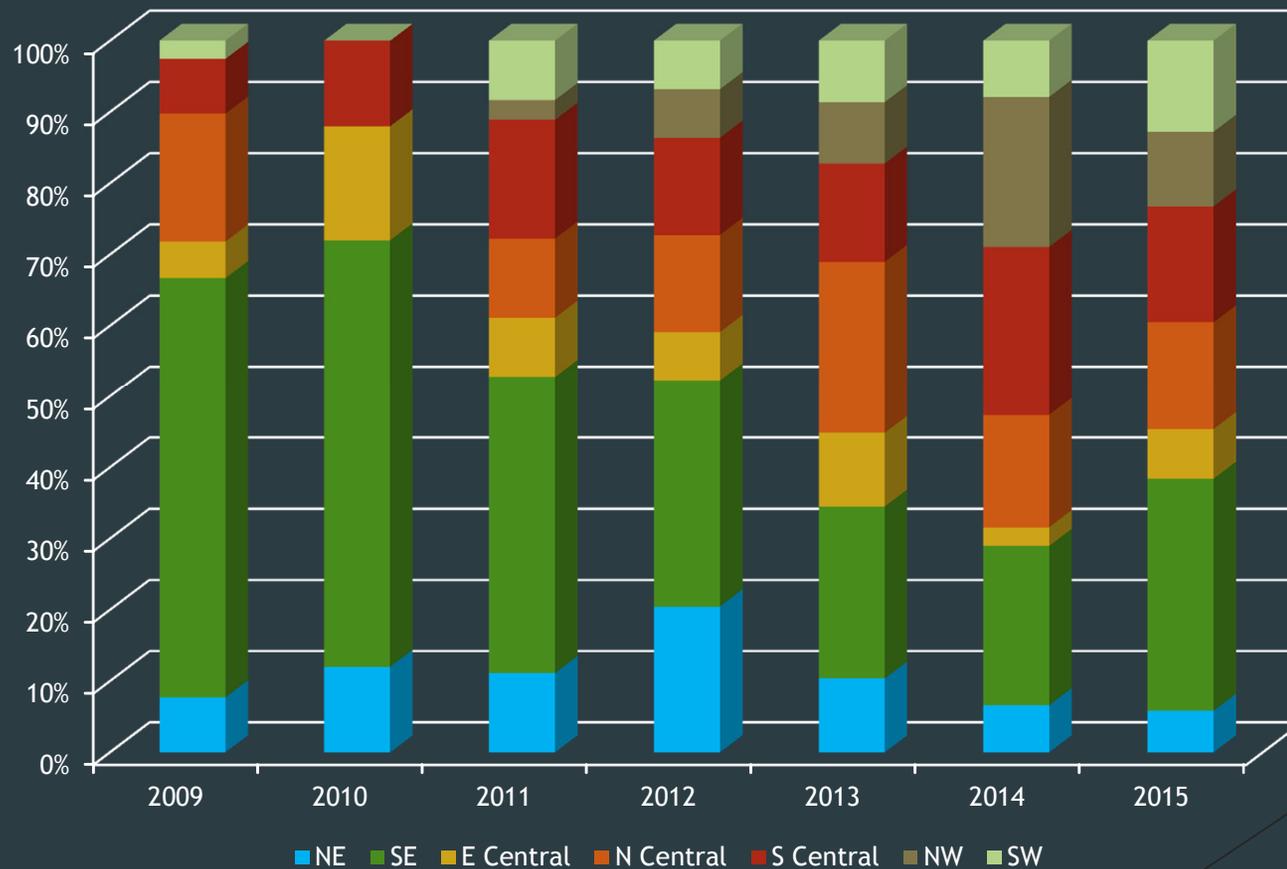


■ American Indian ■ Asian ■ Black ■ Hispanic ■ White

Incidence of HIV/AIDS in North Dakota: Geographic Area, 2009-2015

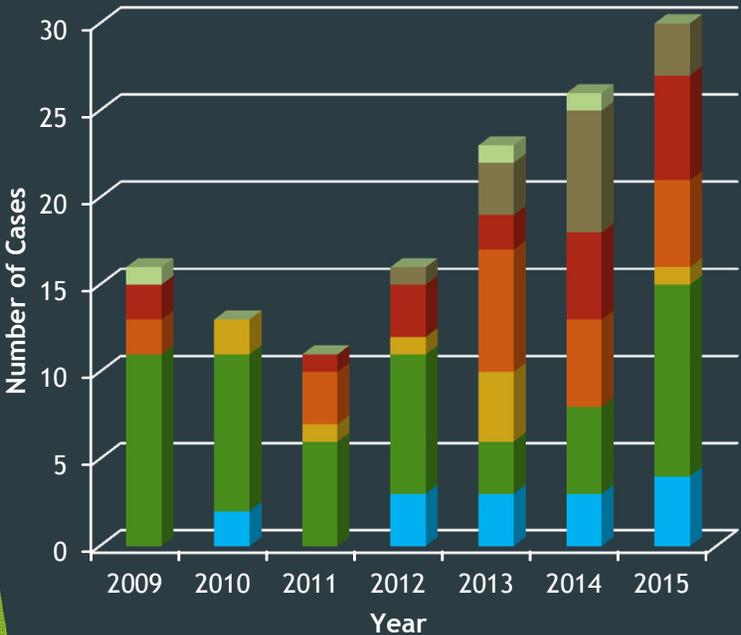


Prevalence of HIV/AIDS in North Dakota: Geographic Area, 2009-2015

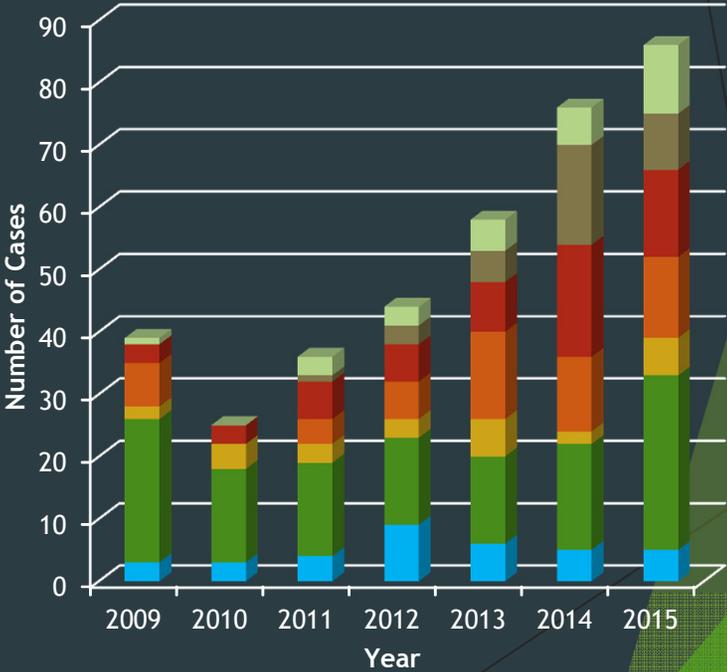


HIV/AIDS Cases in North Dakota: Geographic Area, 2009-2015

Incidence



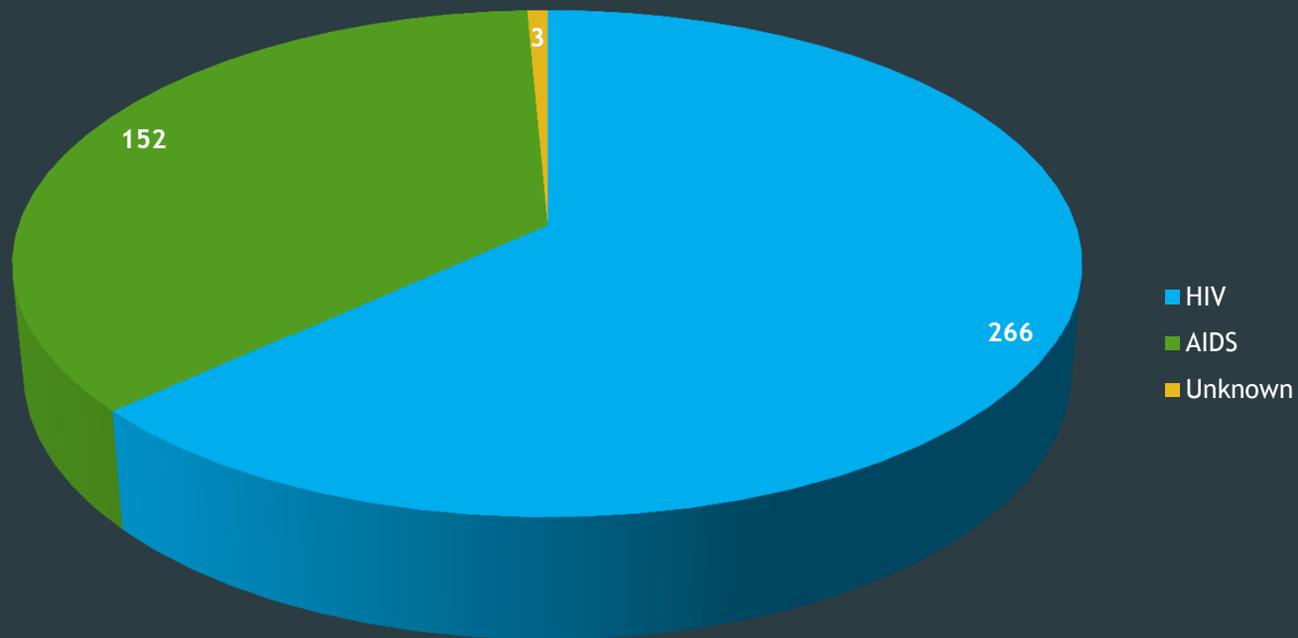
Prevalence



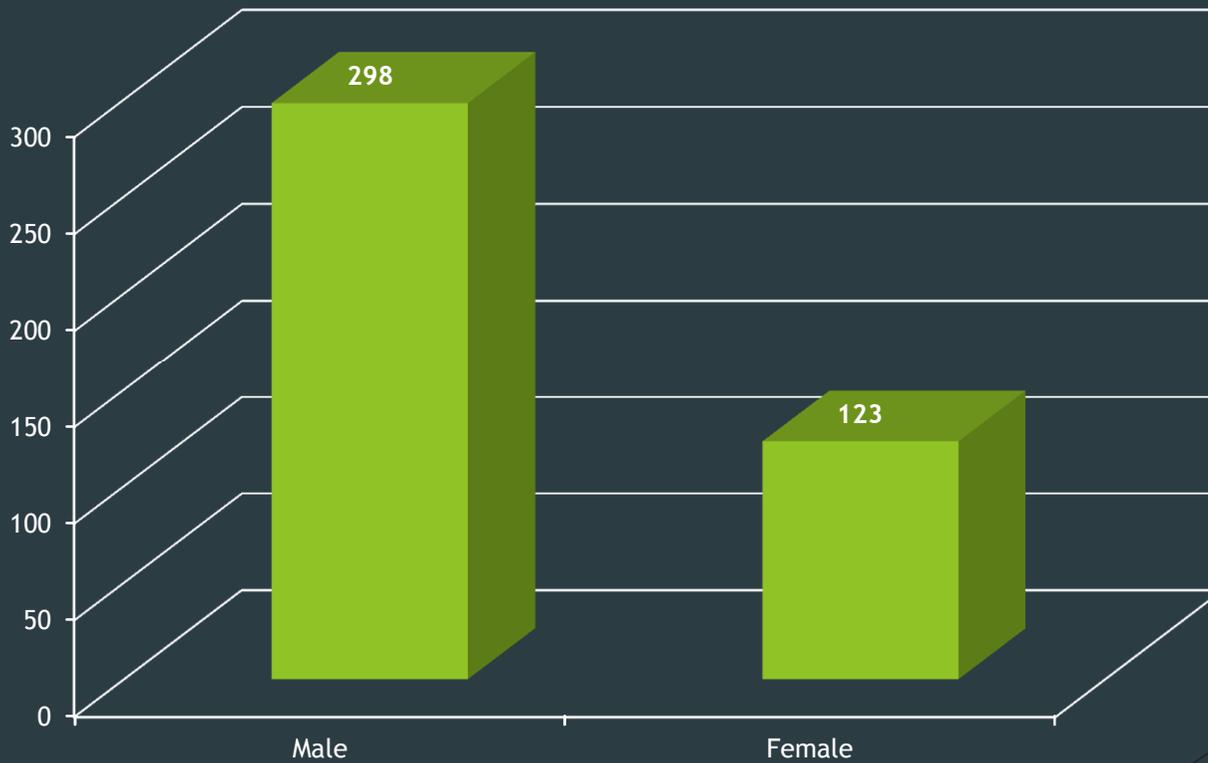
■ NE ■ SE ■ E Central ■ N Central ■ S Central ■ NW ■ SW

■ NE ■ SE ■ E Central ■ N Central ■ S Central ■ NW ■ SW

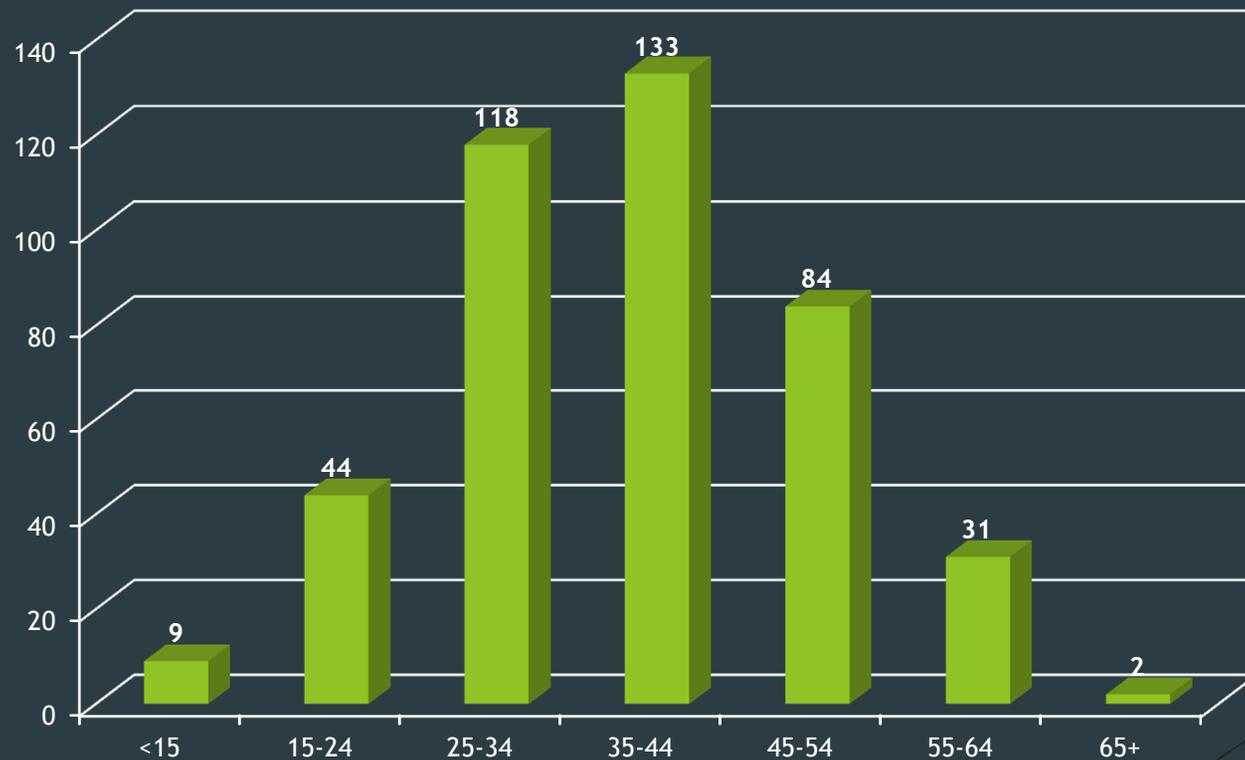
Currently Living in North Dakota with HIV/AIDS



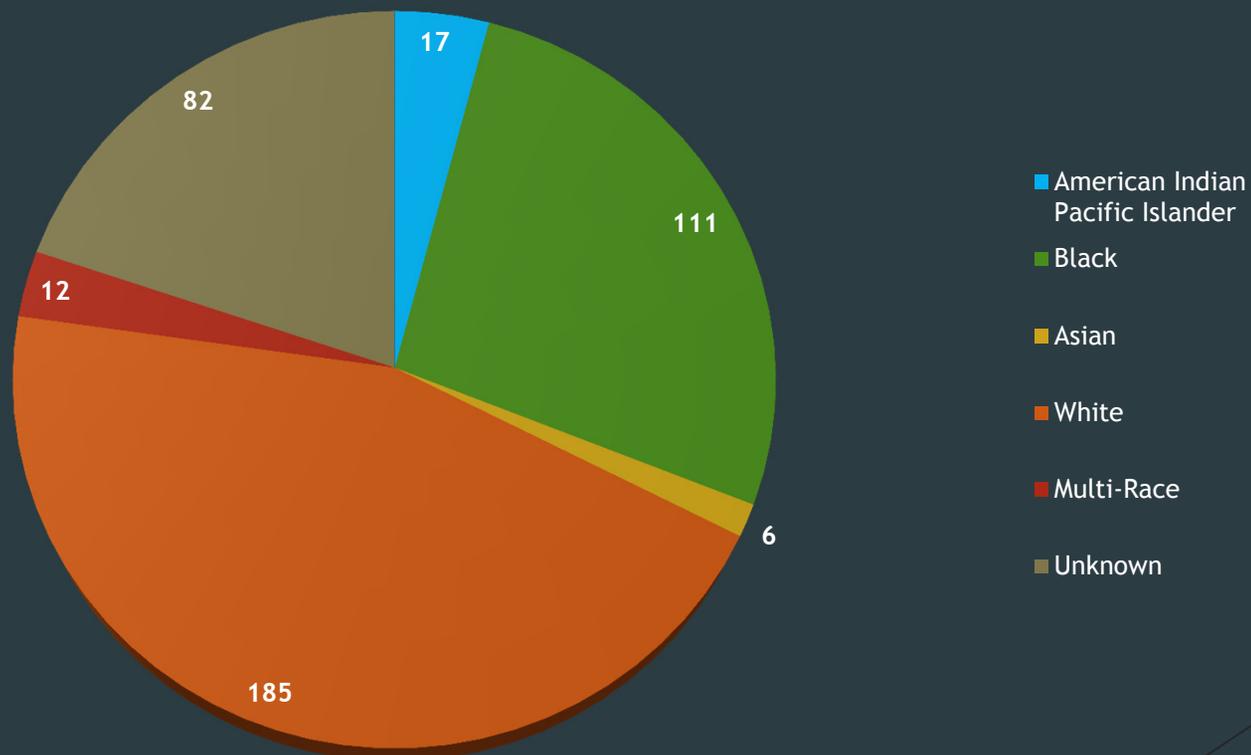
Currently Living with HIV/AIDS in North Dakota - Gender



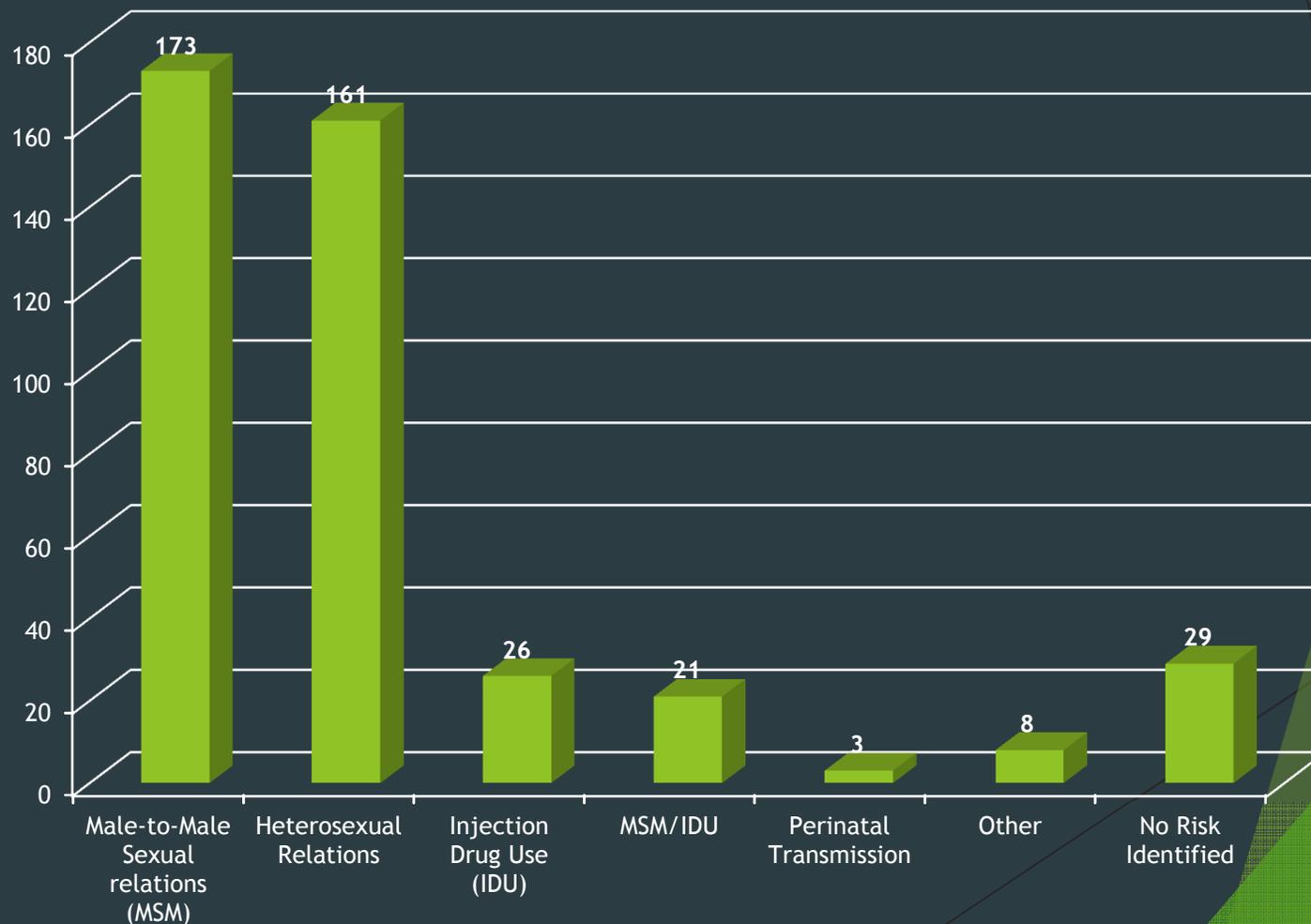
Currently Living in North Dakota with HIV/AIDS - Age



Currently Living in North Dakota with HIV/AIDS - Race



Currently Living in North Dakota with HIV/AIDS - Risk Factor





Clinical Management of Syphilis

Natural History of Syphilis Infection

- ▶ Divided into stages:
 - ▶ Primary
 - ▶ Secondary
 - ▶ Latent
 - ▶ Early latent (< 1year)
 - ▶ Late Latent (>1 year)
 - ▶ Tertiary

Primary Syphilis

- ▶ Primary lesion or "chancre" develops at the site of inoculation
- ▶ **Chancre:**
 - ▶ Progresses from macule to papule to ulcer
 - ▶ Typically painless, indurated, and has a clean base
 - ▶ Highly infectious
 - ▶ Heals spontaneously within 1 to 6 weeks
 - ▶ 25% present with multiple lesions
- ▶ Regional lymphadenopathy: classically rubbery, painless, bilateral
- ▶ Serologic tests for syphilis may not be positive during early primary syphilis

Primary Chancre



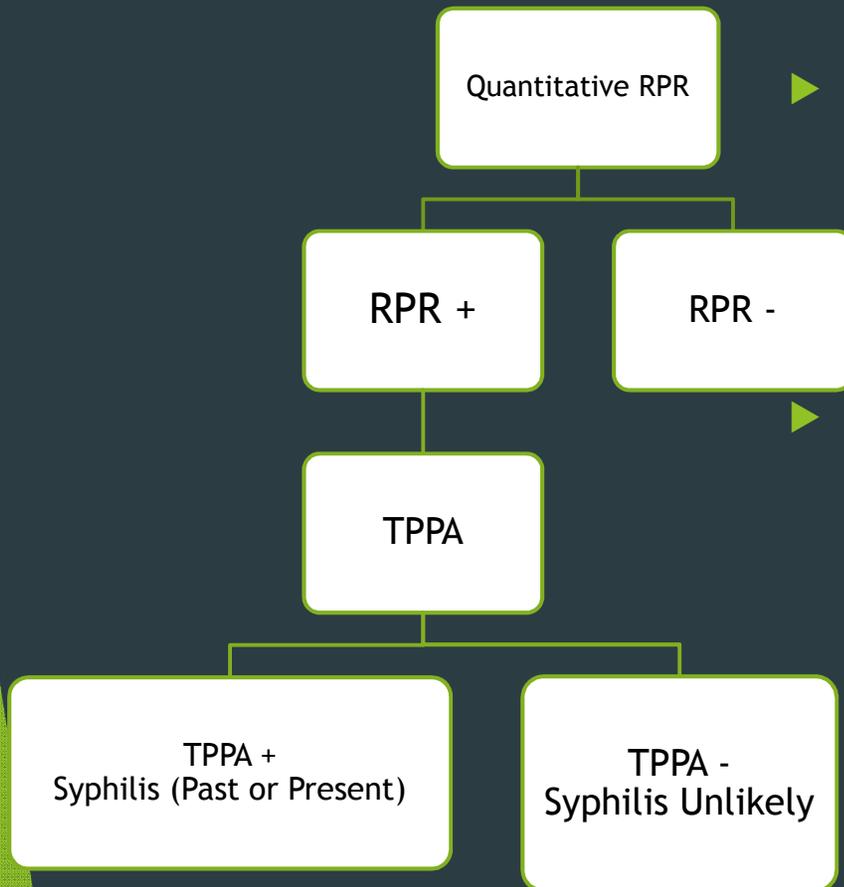
Secondary Syphilis

- ▶ Secondary lesions occur 3 to 6 weeks after the primary chancre appears; may persist for weeks to months
- ▶ Primary and secondary stages may overlap
- ▶ Mucocutaneous lesions most common
- ▶ Manifestations:
 - ▶ Rash (75%-100%)
 - ▶ Lymphadenopathy (50%-86%)
 - ▶ Malaise
 - ▶ Mucous patches (6%-30%)
 - ▶ Condylomata lata (10%-20%)
 - ▶ Alopecia (5%)
- ▶ Serologic tests are usually highest in titer during this stage

Latent Syphilis

- ▶ Host suppresses infection-no lesions are clinically apparent
- ▶ Only evidence is positive serologic test
- ▶ May occur between primary and secondary stages, between secondary relapses, and after secondary stage
- ▶ Categories:
 - ▶ Early latent: <1 year duration
 - ▶ Late latent: ≥ 1 year duration

Syphilis Testing



▶ RPR—non-treponemal test

▶ Followed by antibody titer

▶ Example (1:32 or 1:128)

▶ FTA or TP-PA—treponemal

▶ Syphilis is confirmed

Non-treponemal Tests

RPR and VDRL

- ▶ Fourfold change in titer (ie 1:4 to 1:16) indicates a clinical difference or treatment response
- ▶ Cannot compare RPR and VDRL
- ▶ Can remain positive after treatment
- ▶ False positives occur due to other clinical conditions

Treponemal Testing

FTA-ABS and TP-PA

- ▶ Required confirmatory test
- ▶ Generally remain positive for life (15-25% revert to seronegative)
- ▶ Cannot be used to gauge clinical response

Treatment Syphilis

Benzathine penicillin G: 2.4 million units IM

- **Early Syphilis: 1 dose**
- **Latent Syphilis: 3 Doses**

2015 CDC Treatment Guidelines

Management of Sex Partners

- ▶ For sex partners of patients with syphilis in any stage:
 - ▶ Draw syphilis serology
 - ▶ Perform physical exam
- ▶ For sex partners of patients with primary, secondary, or early latent syphilis
 - ▶ Treat presumptively as for early syphilis at the time of examination, unless:
 - ▶ The non-treponemal test result is known and negative AND
 - ▶ The last sexual contact with the patient is > 90 days prior to examination.

Case Example

- Primary Case of Syphilis Diagnosed on 1/9/2016
 - Onset of Symptoms: 12/26/2015
- Partner Tested Negative on 11/15/2015 -No Treatment Given
 - Partner Tested Positive on 4/11/2016 - RPR 1:64
 - Partner Symptoms: No History of Symptoms

Chlamydia and Gonorrhoea

Chlamydia

- ▶ Treatment Recommendation: no Change to recommended treatment in adults and adolescents

Recommended:

Azithromycin 1 g orally in a single dose

OR

Doxycycline 100 mg orally twice a day for 7 days

- ▶ Retesting: 3 months after completion of therapy
- ▶ Test of Cure: Only recommended in pregnant women

Chlamydia Treatment Updates

- ▶ 2015: Updated treatment recommendation in pregnant women

Recommended:

Azithromycin 1 g orally in a single dose

- 2015: Removed Amoxicillin 500 mg orally three times a day for 7 days as a recommended treatment; It is now an alternative treatment

Alternative Regimens:

- Amoxicillin 500 mg orally three times a day for 7 days OR
 - Erythromycin base 500 mg orally four times a day for 7 days
 - Erythromycin base 250 mg orally four times a day for 14 days
 - Erythromycin ethylsuccinate 800 mg orally four times a day for 7 days
 - Erythromycin ethylsuccinate 400 mg orally four times a day for 14 days
- Reminder: Test-of-cure recommended for pregnant women 3-4 weeks after completion of therapy because of potential sequelae

Uncomplicated Gonorrhea Infection

Recommended:

Ceftriaxone 250 mg IM

PLUS

Azithromycin 1 g orally

Change from 2010 to 2015:

Removed Doxycycline as
Second Agent

▶ Alternatives:

Cefixime 400 mg PLUS Azithromycin 1 gram

▶ Can use alternative regimen for EPT

New Treatment Option for GC

- ▶ Monotherapy of 2g Azithromycin is Not Recommended

- ▶ **Gentamicin 240 mg IM + Azithromycin 2 g PO**
Or
Gemifloxacin 320 mg PO + Azithromycin 2 g PO

Test of Reinfection vs. Test of Cure - Gonorrhea

Test of Reinfection

- ▶ There is a high prevalence of gonorrhea infections among men and women previously treated for gonorrhea. Most of these infections are reinfection caused by failure to treat all sex partners and not treatment failures.
 - ▶ Retesting should occur 3 months after treatment regardless if sex partners were treated

Test -of-Cure

- ▶ Not needed if treated with recommended regimens
- ▶ Need to perform test-of-cure if pharyngeal infection suspected when alternative regimens used
 - ▶ Cefixime has limited efficacy against pharyngeal infections
 - ▶ 14 days after treatment

Partner Services

- ND: All Gonorrhea, Syphilis & HIV Cases, Complicated Chlamydia
 - Complicated Chlamydia: Pregnant, Diagnosed with PID, <14 yrs.
- Providers should routinely offer EPT to heterosexual patients with chlamydia or gonorrhea when the provider cannot ensure the sex partners from the prior 60 days will be treated, unless prohibited by law or other regulations

Resources available from nddoh - STD treatment guidelines



2015 CDC Treatment Summaries for Chlamydia, Gonorrhea, Syphilis, Genital Herpes, and Outpatient Oral Regimens for Pelvic Inflammatory Disease¹ A Quick Reference Guide from the North Dakota Department of Health

INFECTION	RECOMMENDED RX	DOSE / ROUTE	ALTERNATIVES / NOTES
Chlamydia			
Chlamydia in adults and adolescents	Azithromycin OR Doxycycline	1 g orally in a single dose 100 mg orally BID x 7 days	Erythromycin base 500 mg orally QID X 7 days or erythromycin ethylsuccinate (EES) 800 mg orally QID x 7 days or ofloxacin 300 mg orally BID x 7 days or levofloxacin 500 mg orally once daily x 7 days.
Chlamydia in pregnancy	Azithromycin	1 g orally in a single dose	Amoxicillin 500 mg orally TID x 7 days or erythromycin base 500 mg orally QID x 7 days or erythromycin base 250 mg orally QID x 14 days or EES 800 mg orally QID x 7 days or EES 400 mg orally QID x 14 days.
Chlamydia in infants and children (<45kg)	Erythromycin base OR Ethylsuccinate	50 mg/kg/day orally divided into 4 doses daily x 14 days	Data are limited on the effectiveness and optimal dose of azithromycin for chlamydial infection in infants and children <45kg.
Chlamydia in neonates - ophthalmia neonatorum or pneumonia	Erythromycin base OR Ethylsuccinate	50 mg/kg/day orally divided into 4 doses daily x 14 days	Azithromycin 20mg/kg/day orally, 1 dose daily for 3 days. An association between oral erythromycin and azithromycin and infantile hypertrophic pyloric stenosis (IHPS) has been reported in infants aged <6 weeks.
Gonorrhea			
Gonorrhea in adults, adolescents and children >45 kg, uncomplicated gonorrhea infections of the cervix, urethra and rectum	Ceftriaxone PLUS Azithromycin	250 mg IM in a single dose 1 g orally in a single dose	If ceftriaxone is not available: cefixime 400 mg orally in a single dose PLUS azithromycin 1 g orally in a single dose If cephalosporin allergy: gemifloxacin 320 mg orally in a single dose PLUS azithromycin 2 g orally in a single dose OR gentamicin 240 mg IM single dose PLUS azithromycin 2 g orally in a single dose
Uncomplicated infections of the pharynx	Ceftriaxone PLUS Azithromycin	250 mg IM in a single dose 1 g orally in a single dose	If patient with suspected pharyngeal infection is treated with cefixime, should be retested 14 days after treatment.
Gonorrhea in pregnancy	Pregnant women should be treated with ceftriaxone 250 mg in a single IM dose and azithromycin 1 g orally as a single dose. When cephalosporin allergy or other considerations preclude treatment with this regimen and spectinomycin is not available, consult infectious disease specialist.		
Gonorrhea in adults and adolescents: conjunctivitis	Ceftriaxone PLUS Azithromycin	1 g IM in a single dose 1 g orally in a single dose	
Gonorrhea in children (<45 kg): urogenital, rectal and pharyngeal	Ceftriaxone	25-50 mg/kg IV or IM, not to exceed 125 mg IM in a single dose	

Chlamydia and Gonorrhea: Follow-Up and Screening

All patients testing positive for chlamydia or gonorrhea should abstain from sexual activity for seven days after completion of treatment and until all sex partners are adequately treated. Also, men and women testing positive for chlamydia or gonorrhea should be retested three months after completing treatment. All persons who receive STD diagnoses and their sex partners should be tested for HIV infection. All persons diagnosed with chlamydia or gonorrhea should be provided education and counseling aimed at risk reduction. They should also be encouraged to notify their sex partners and urge them to seek medical evaluation and treatment. Ensuring the treatment of a patient's sex partners can reduce the risk for reinfection and reduce disease transmission in the community. All sexually active women aged <25 years and older women at increased risk for infection (e.g., those who have a new sex partner, more than one sex partner, a sex partner with concurrent partners or a sex partner who has a sexually transmitted infection) should be screened annually for chlamydia. Men who have sex with men should also be screened annually for chlamydia and gonorrhea. All men who are symptomatic, have been notified of an exposure or are at increased risk should also be screened for chlamydia and gonorrhea.

Expedited Partner Therapy (EPT)

Expedited partner therapy (EPT) is the clinical practice of treating sex partners of persons who receive chlamydia or gonorrhea diagnoses by providing medications or prescriptions to the patient. EPT is legal practice for healthcare providers in North Dakota. EPT should be offered to all heterosexual patients with chlamydia or gonorrhea when the provider cannot confidently ensure that all of a patient's sex partners from the prior 60 days will be treated. EPT is associated with a decreased risk of reinfection. EPT should not be used for men who have sex with men (MSM). Additional EPT informational is available at www.ndhealth.gov/STD/Expedited/.

December 2015

For Resources, Contact: Sarah Weninger - 701.328.2378 or sweninger@nd.gov

Questions

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