



Sexually Transmitted Disease (STD) Surveillance Report, 2018

Minnesota Department of Health STD Surveillance System

Introduction 1/2

- Under Minnesota law, physicians and laboratories must report all laboratory-confirmed cases of chlamydia, gonorrhea, syphilis, and chancroid to the Minnesota Department of Health (MDH) within one working day.
- The MDH does not maintain statistics for other, non-reportable STDs (ex: herpes, HPV/genital warts).
- This slide set describes trends in reportable STDs in Minnesota by person, place, and time.
- Analyses exclude cases reported from federal and private prisons.

Introduction 2/2

- **STD surveillance is the systematic collection of data from cases for the purpose of monitoring the frequency and distribution of STDs in a given population.**
- **STD surveillance data are used to detect problems, prioritize resources, develop and target interventions, and evaluate the effectiveness of interventions.**

Interpreting STD Surveillance Data I

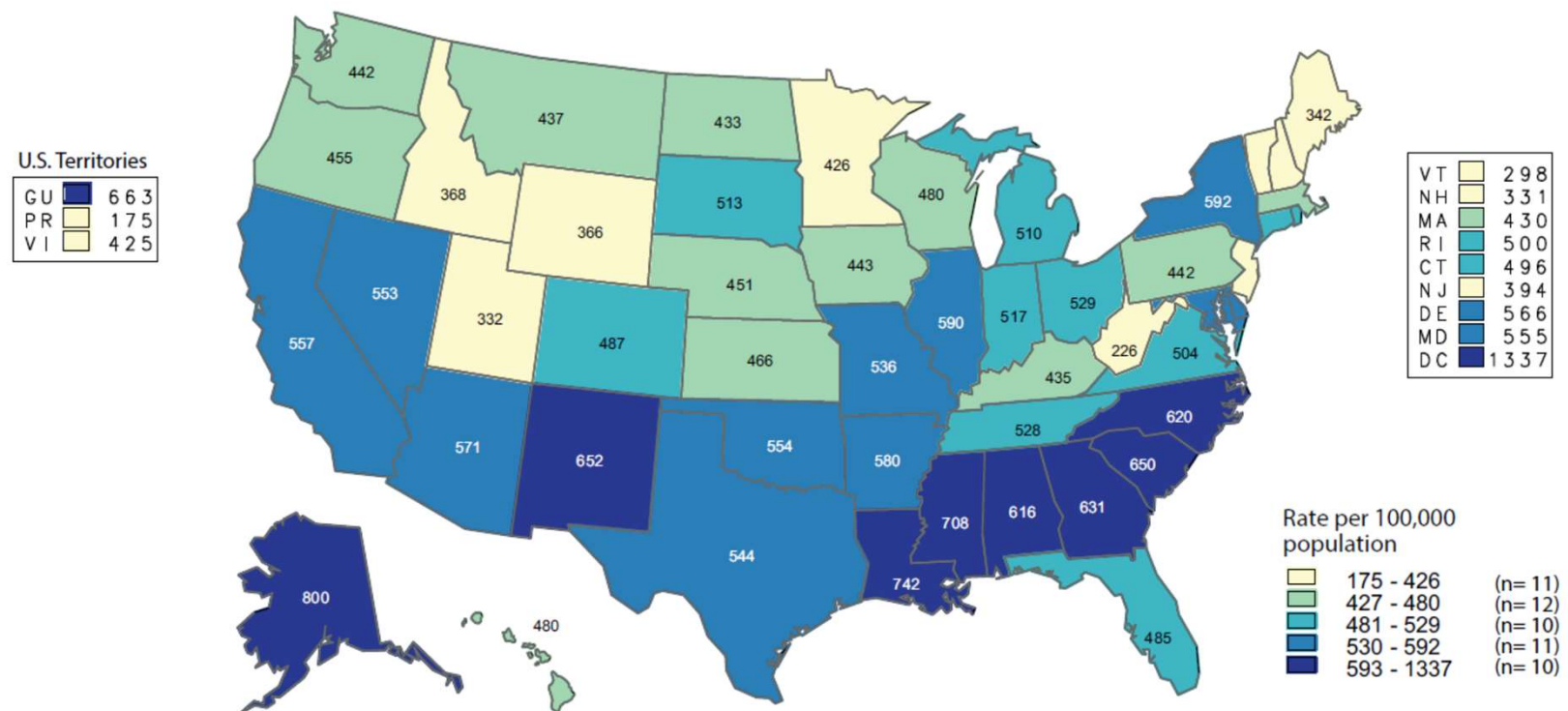
- Factors that impact the completeness and accuracy of STD data include:
 - Level of STD screening by healthcare providers
 - Individual test-seeking behavior
 - Sensitivity of diagnostic tests
 - Compliance with case reporting
 - Completeness of case reporting
 - Timeliness of case reporting
- Increases and decreases in STD rates can be due to actual changes in disease occurrence and/or changes in one or more of the above factors

Interpreting STD Surveillance Data II

- The surveillance system only includes cases with a positive laboratory test. Cases diagnosed solely on symptoms are not counted.
- Since 2012 we have included cases that had only a lab report and no corresponding case report form. This has increased the number of unknowns in some variables.
- In 2018, in order to be consistent with CDC, we categorized all White, Hispanic and Black, Hispanic cases as Hispanic. That means the race categories now reflect only White, Non-Hispanic and Black, Non-Hispanic cases
- Surveillance data represent cases of infection, not individuals. A person with multiple infections in a given year will be counted more than once.
- Caution is warranted when interpreting changes in STD numbers that can seem disproportionately large when the number of cases is small.

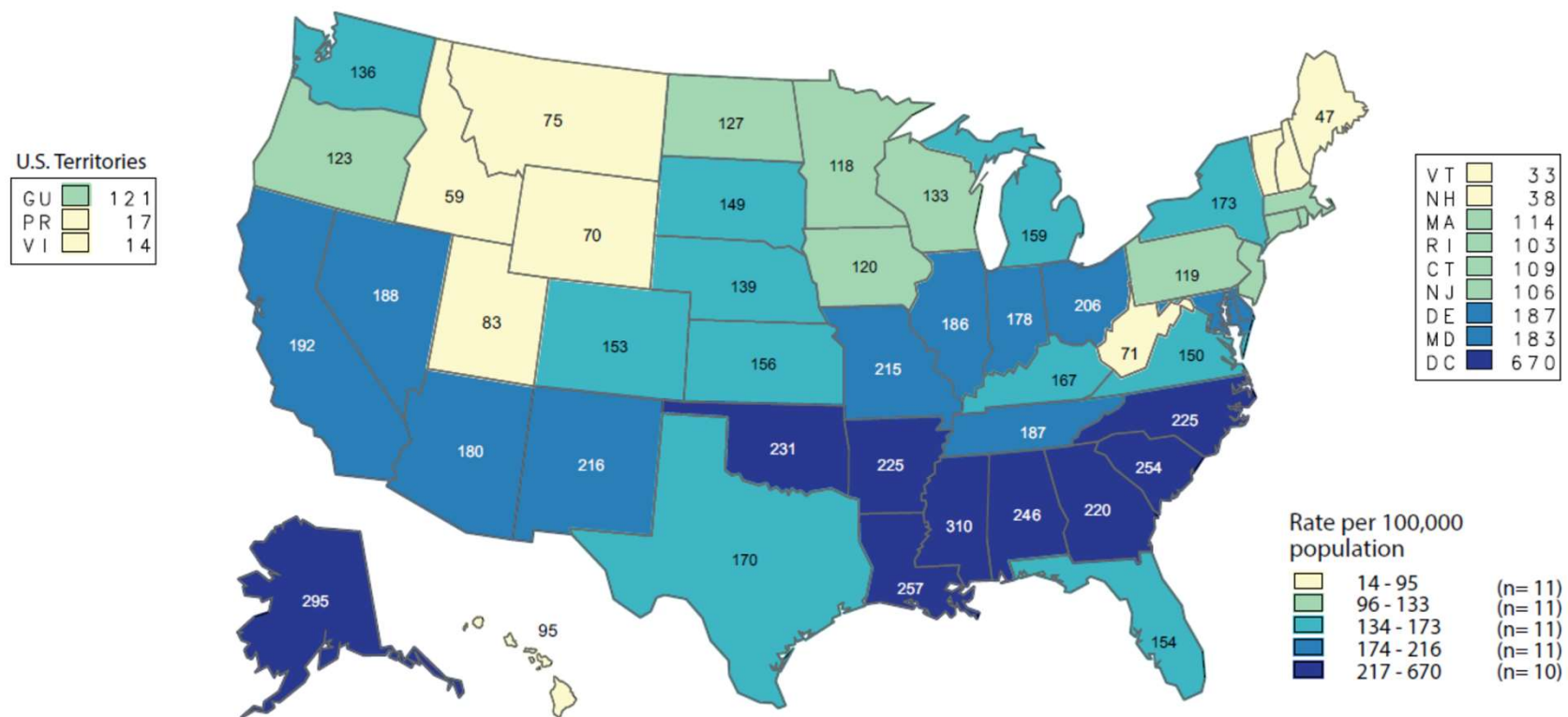
National Context

Chlamydia — Rates of Reported Cases by State United States and Outlying Areas, 2017



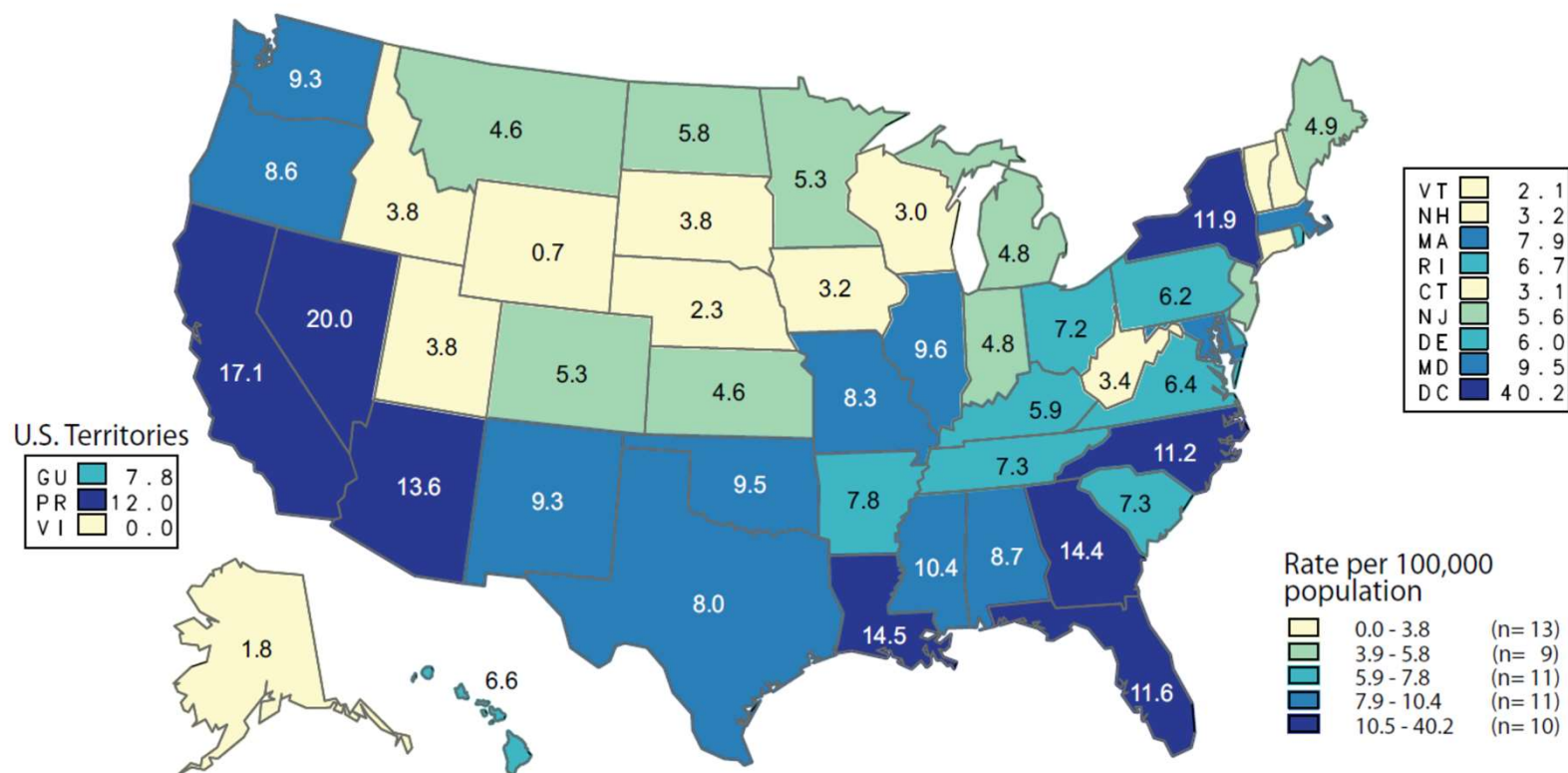
- NOTE: The total rate of reported cases of chlamydia for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 525.1 cases per 100,000 population.

Gonorrhea — Rates of Reported Cases by State United States and Outlying Areas, 2017



- NOTE: The total rate of reported cases of gonorrhea for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 170.3 cases per 100,000 population.

Primary and Secondary Syphilis — Rates of Reported Cases by State, United States and Outlying Areas, 2017



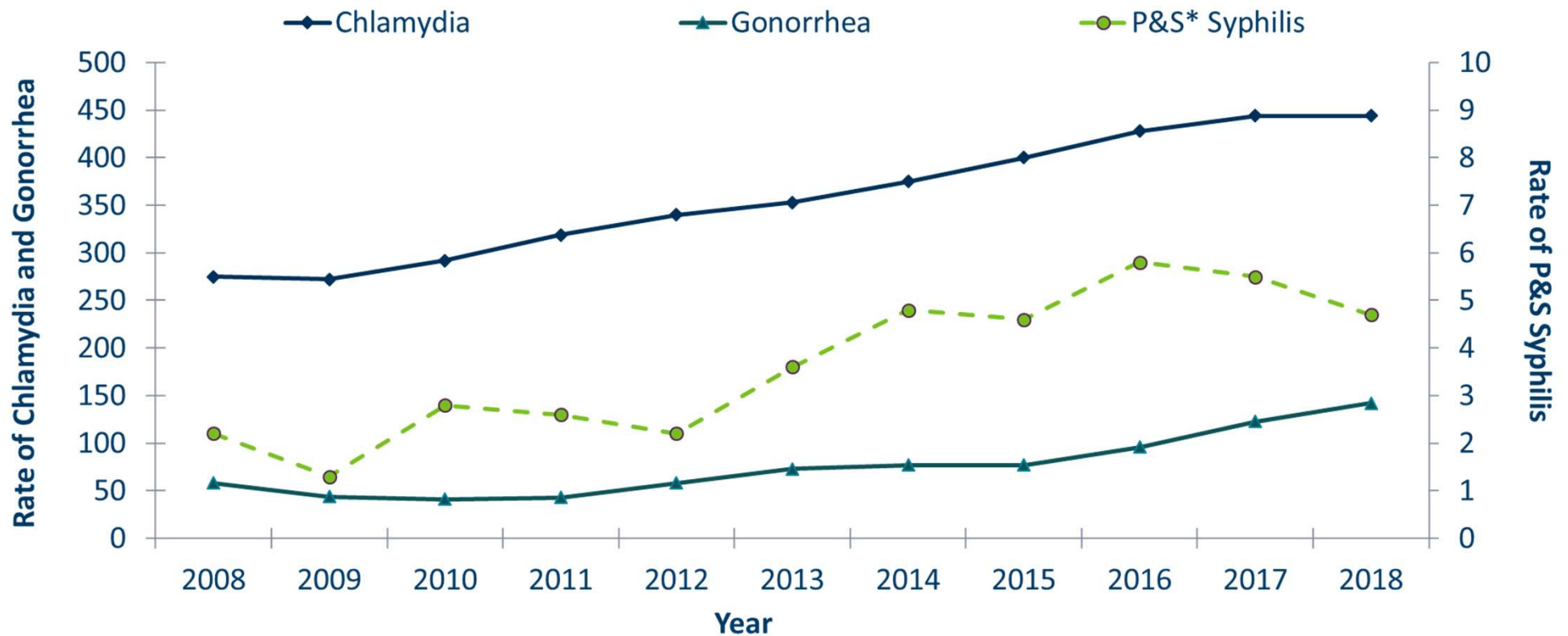
- NOTE: The total rate of primary and secondary syphilis for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 9.5 cases per 100,000 population.

Overview of STDs in Minnesota

Minnesota Department of Health STD Surveillance System

STDs in Minnesota

Rate per 100,000 by Year of Diagnosis, 2008-2018



* P&S = Primary and Secondary

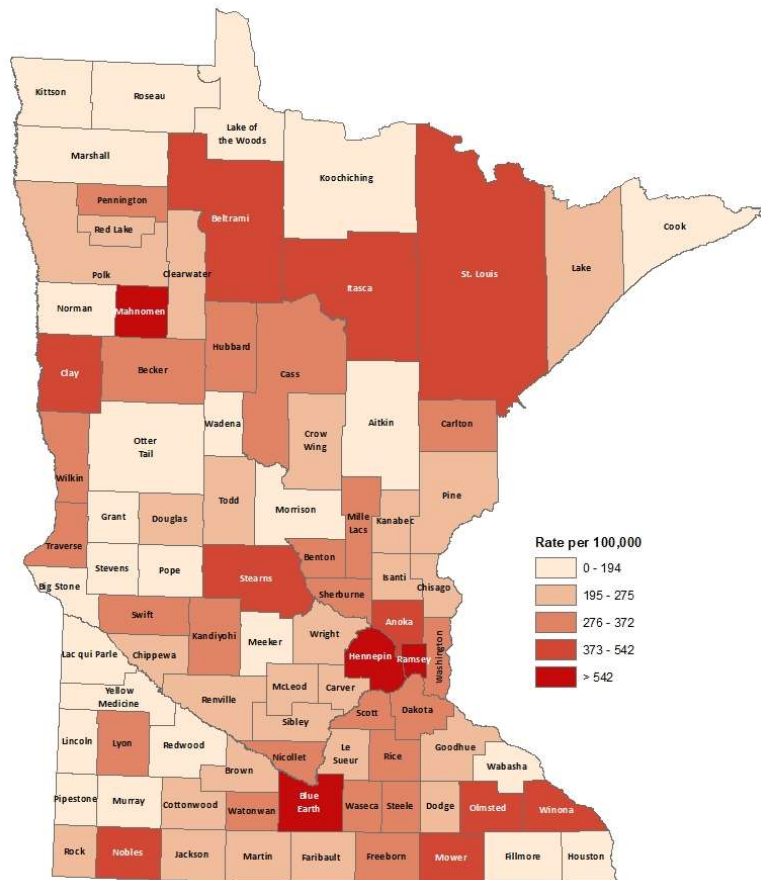
STDs in Minnesota: Number of Cases Reported in 2018

- **Total of 32,024 STD cases reported to MDH in 2018:**
 - **23,564 Chlamydia cases**
 - **7,542 Gonorrhea cases**
 - **918 Syphilis cases (all stages)**
 - **0 Chancroid cases**

Chlamydia

Minnesota Department of Health STD Surveillance System

2018 Minnesota Chlamydia Rates by County

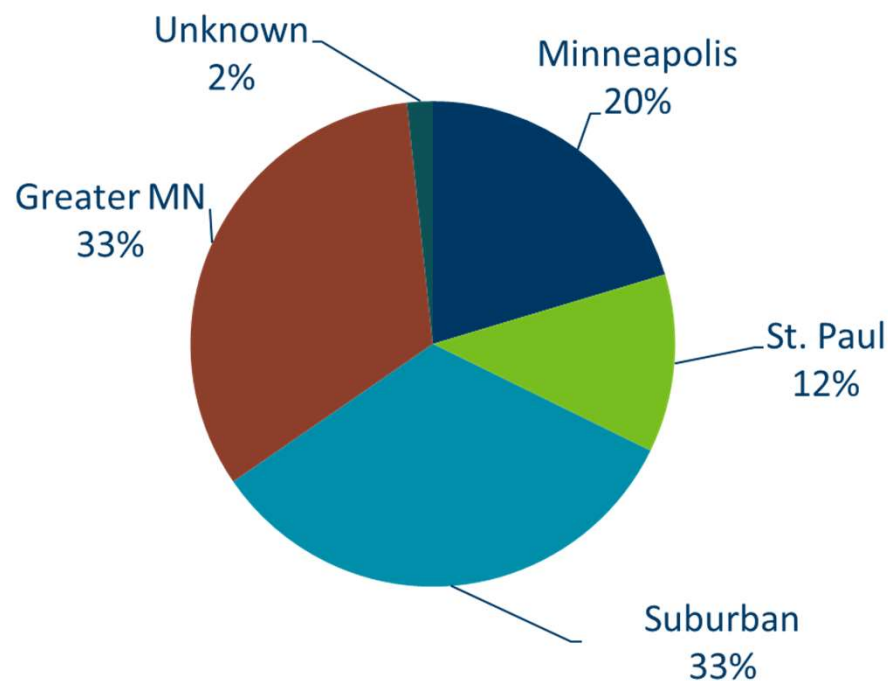


City of Minneapolis	1,255 per 100,000 (4,801 cases)
City of St. Paul	982 per 100,000 (2,798 cases)
Suburban*	358 per 100,000 (7,812 cases)
Greater Minnesota	316 per 100,000 (7,750 cases)
Total	444 per 100,000 (23,564 cases) (403 cases missing residence information)

*7-county metro area, excluding the cities of Minneapolis and St. Paul

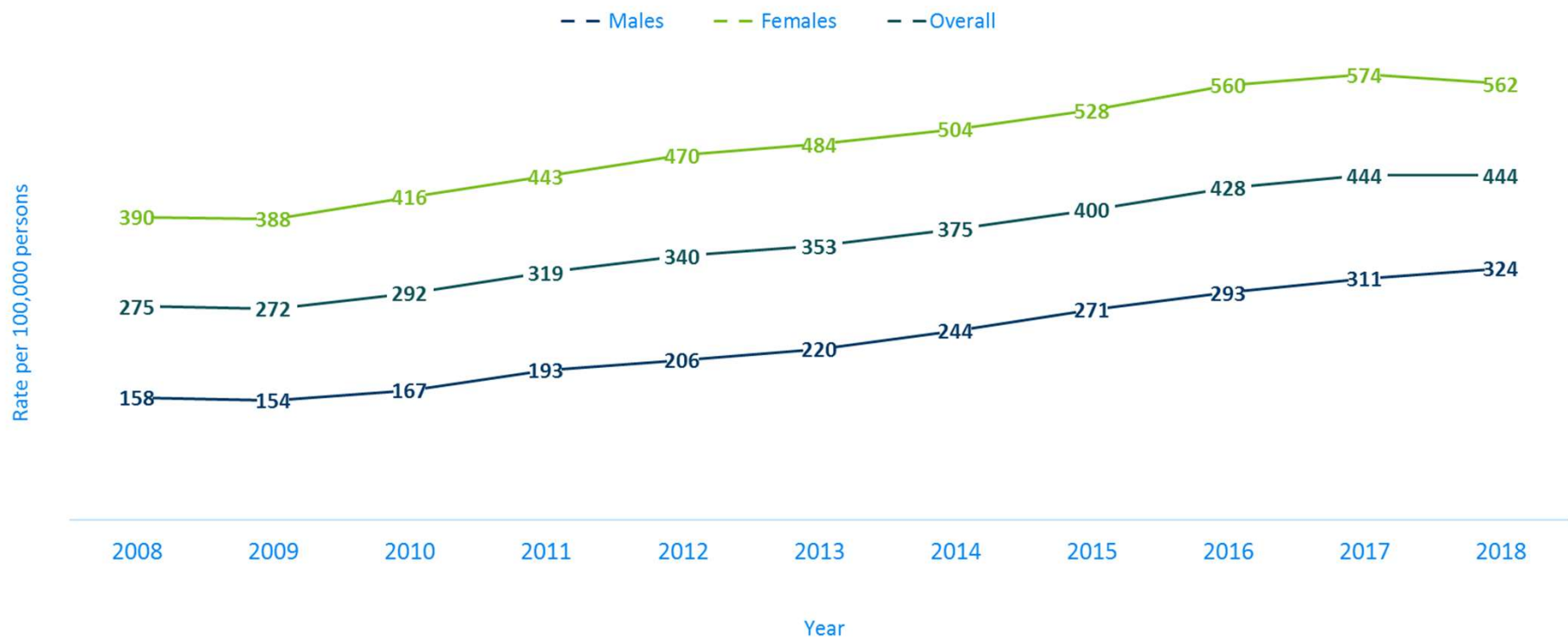
Chlamydia Infections by Residence at Diagnosis Minnesota, 2018

Total Number of Cases = 23,564

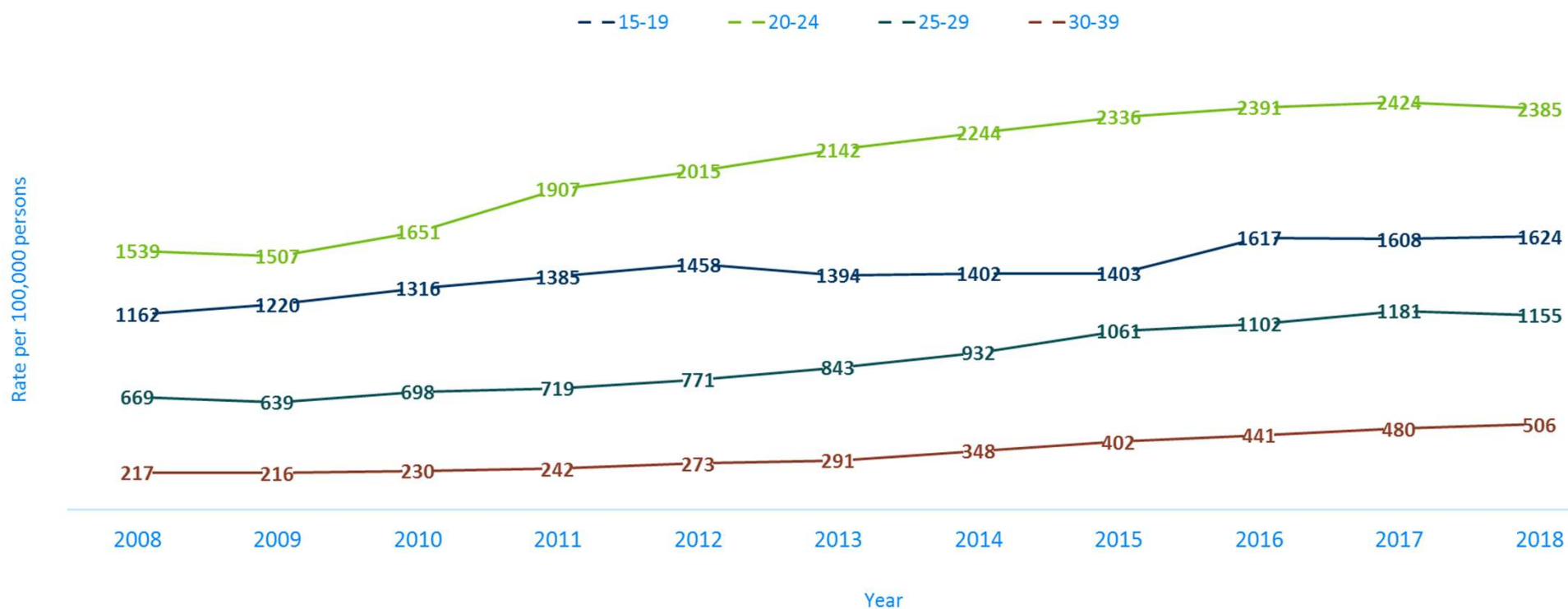


Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (excluding Minneapolis), Ramsey (excluding St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties outside the seven-county metro area.

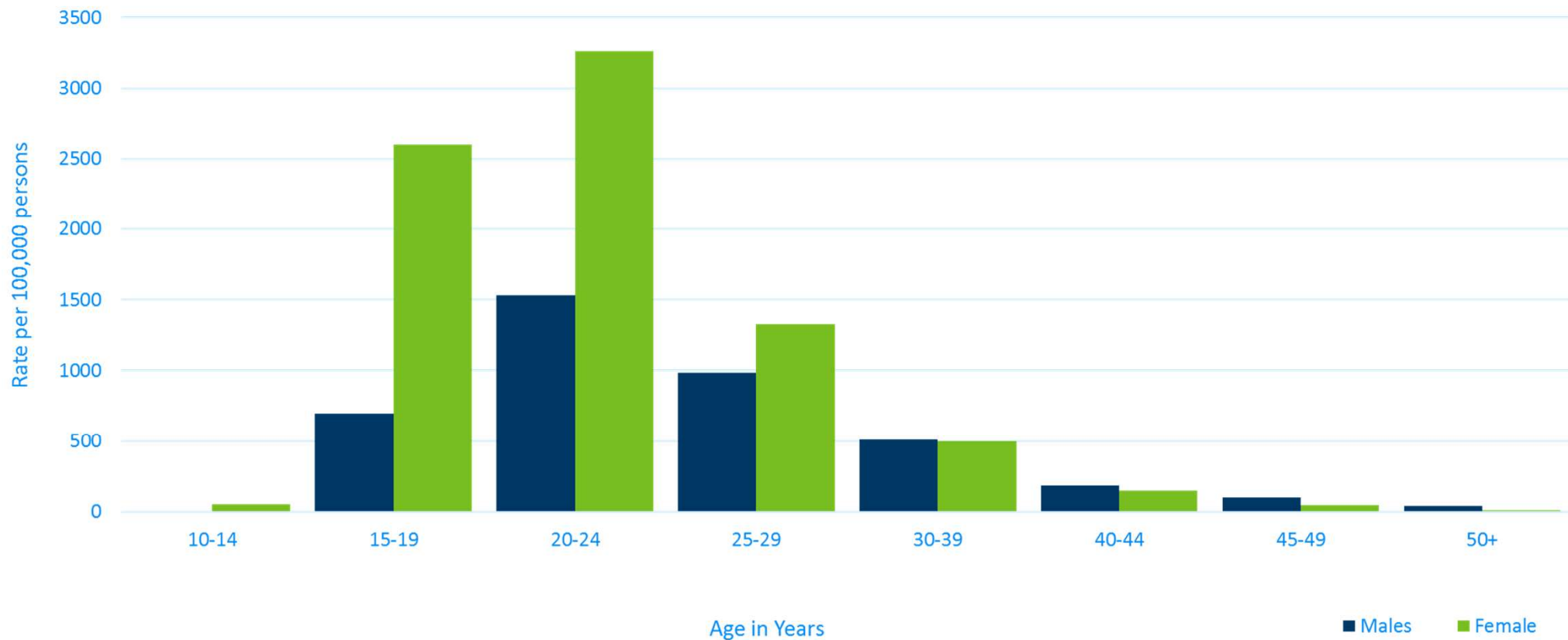
Chlamydia Rates by Gender, Minnesota, 2008-2018



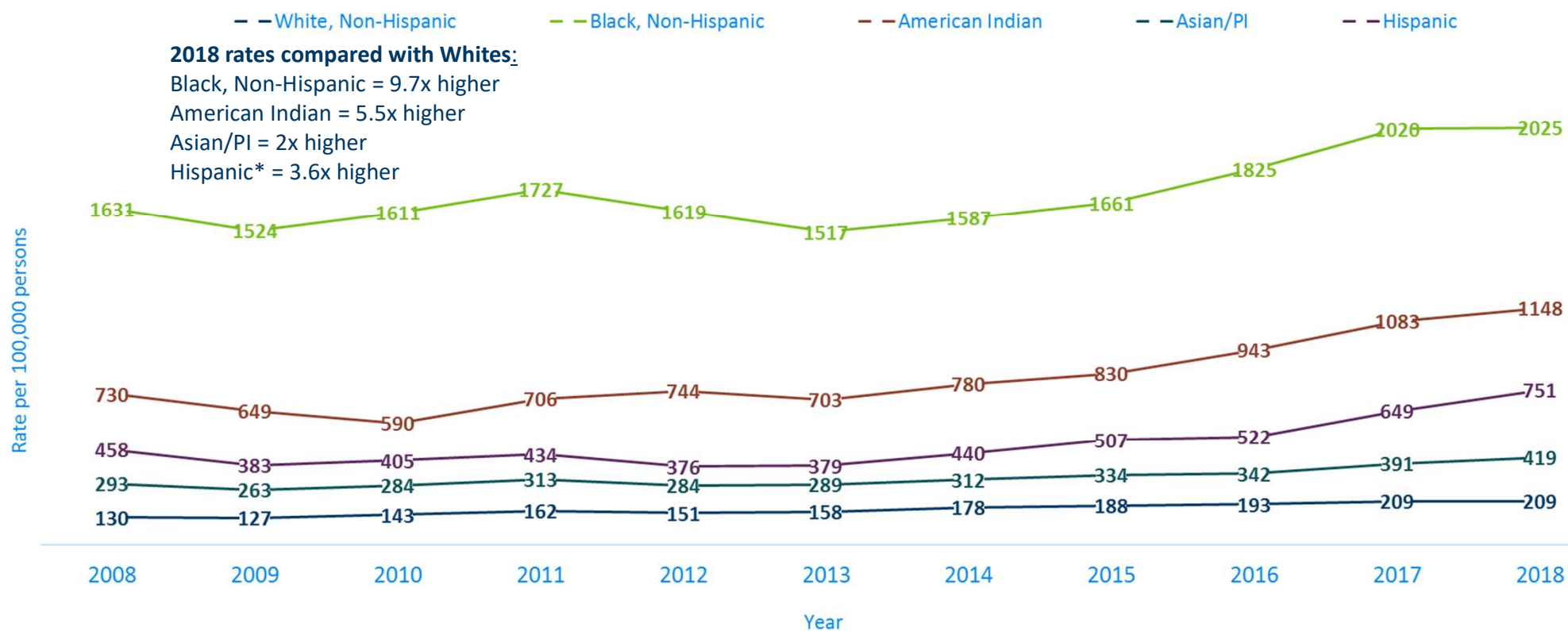
Chlamydia Rates by Age, Minnesota, 2008-2018



Age-Specific Chlamydia Rates by Gender Minnesota, 2018

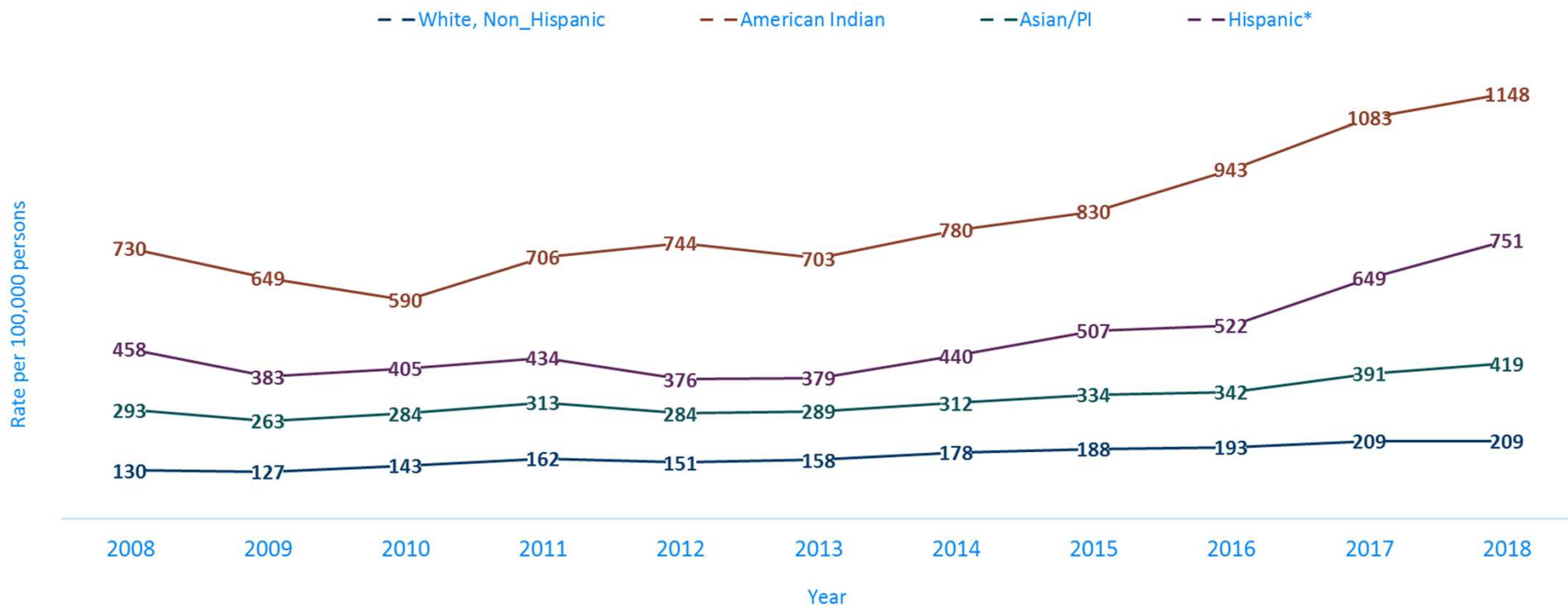


Chlamydia Rates by Race/Ethnicity Minnesota, 2008-2018 (I)



* Persons of Hispanic ethnicity can be of any race

Chlamydia Rates by Race/Ethnicity Minnesota, 2008-2018 (II)

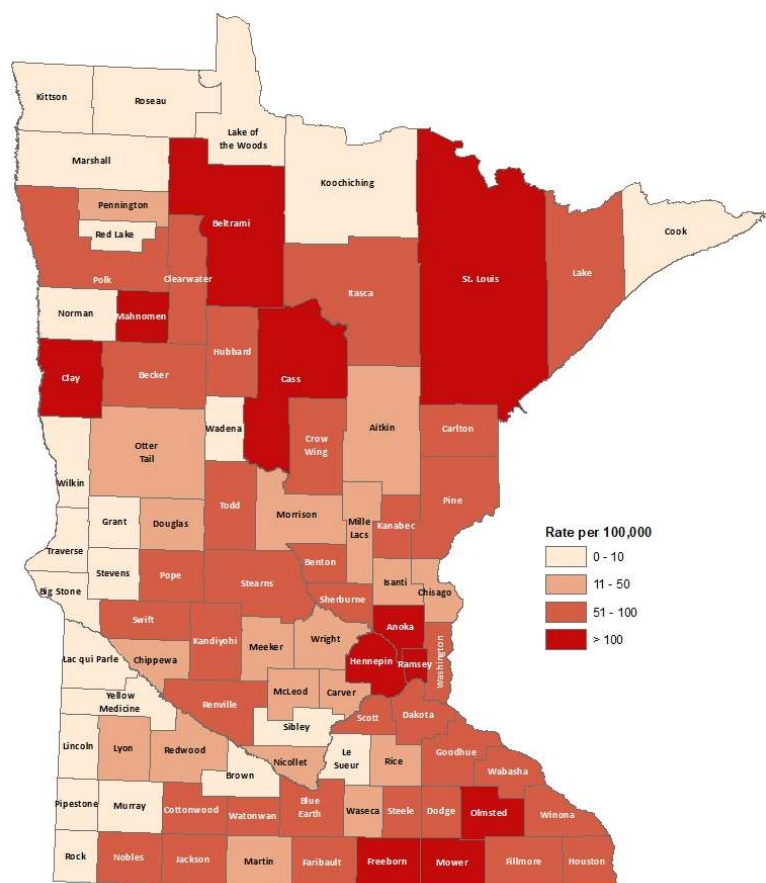


* Persons of Hispanic ethnicity can be of any race

Gonorrhea

Minnesota Department of Health STD Surveillance System

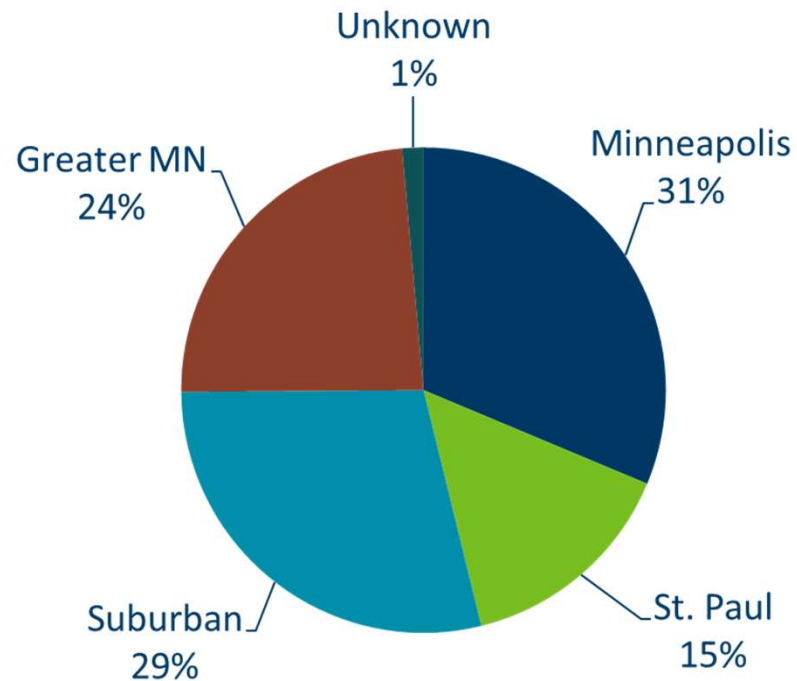
2018 Minnesota Gonorrhea Rates by County



City of Minneapolis	617 per 100,000 (2,361 cases)
City of St. Paul	393 per 100,000 (1,121 cases)
Suburban*	99 per 100,000 (2,166 cases)
Greater Minnesota	73 per 100,000 (1,787 cases)
Total	142 per 100,000 (7,542 cases) (107 cases missing residence information)

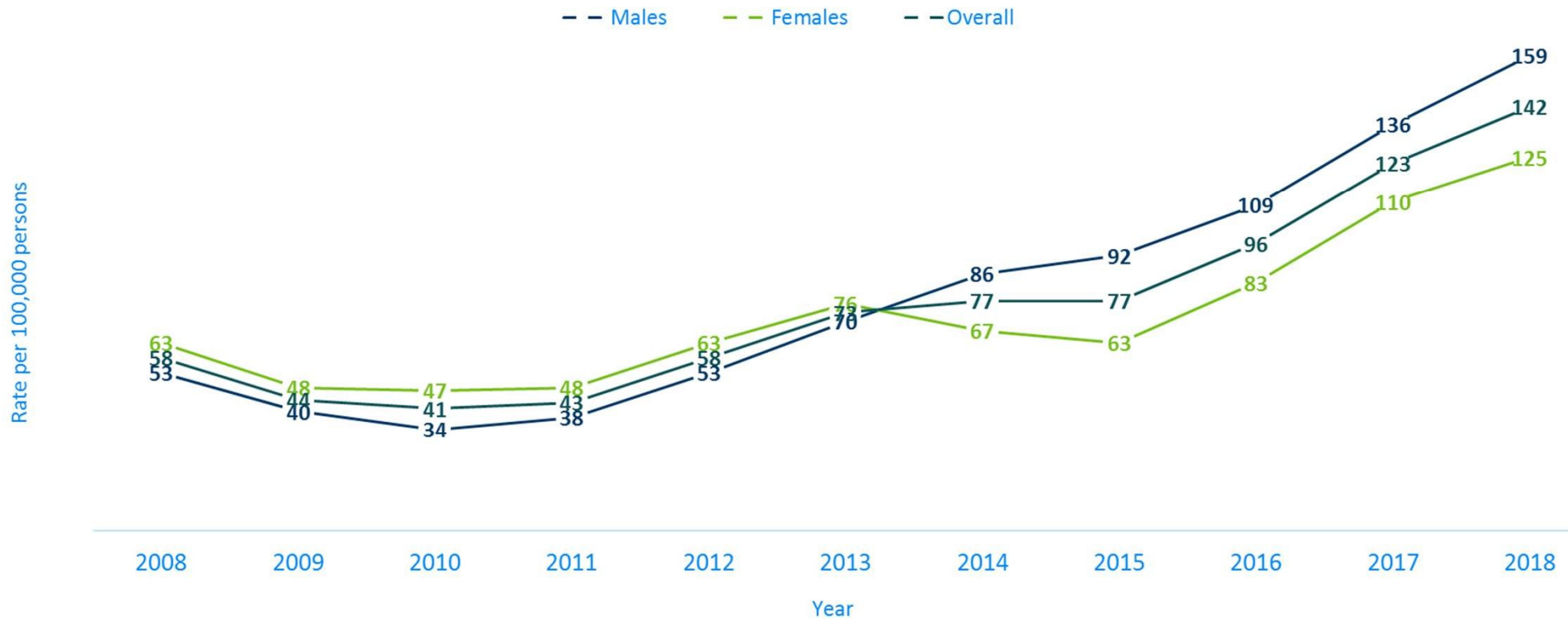
*7-county metro area, excluding the cities of Minneapolis and St. Paul

Gonorrhea Infections in Minnesota by Residence at Diagnosis, 2018

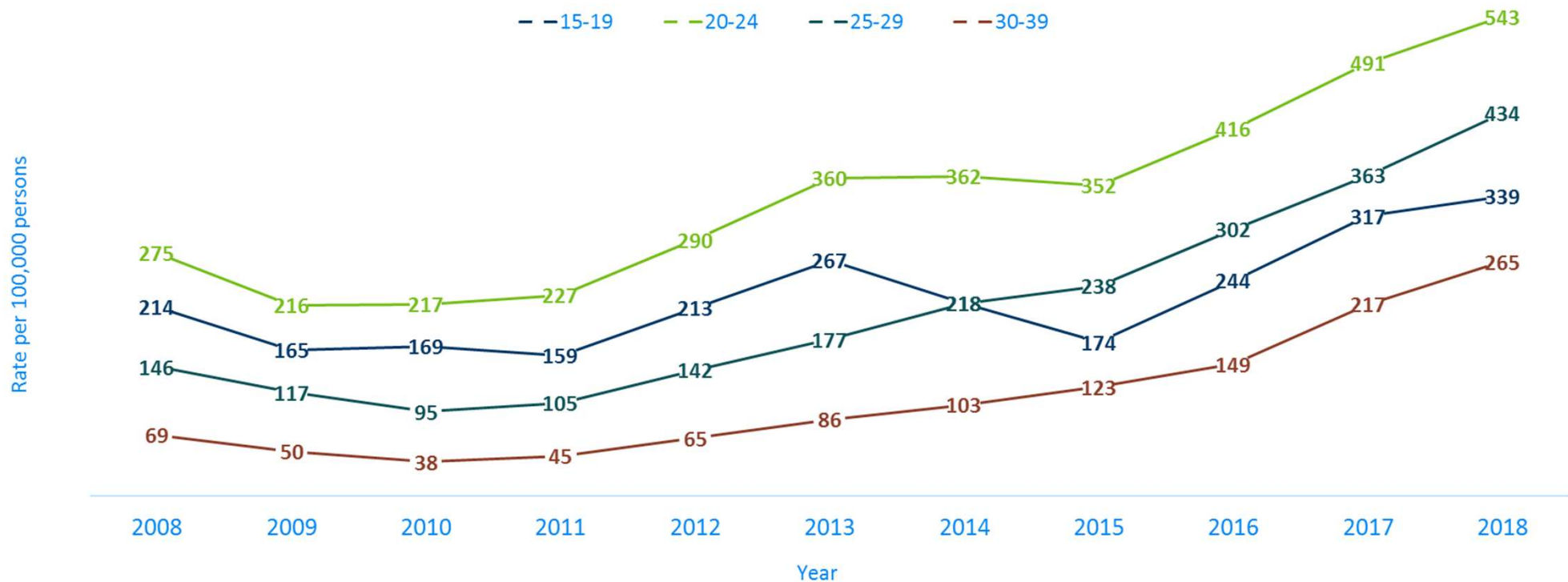


Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (excluding Minneapolis), Ramsey (excluding St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties outside the seven-county metro area.

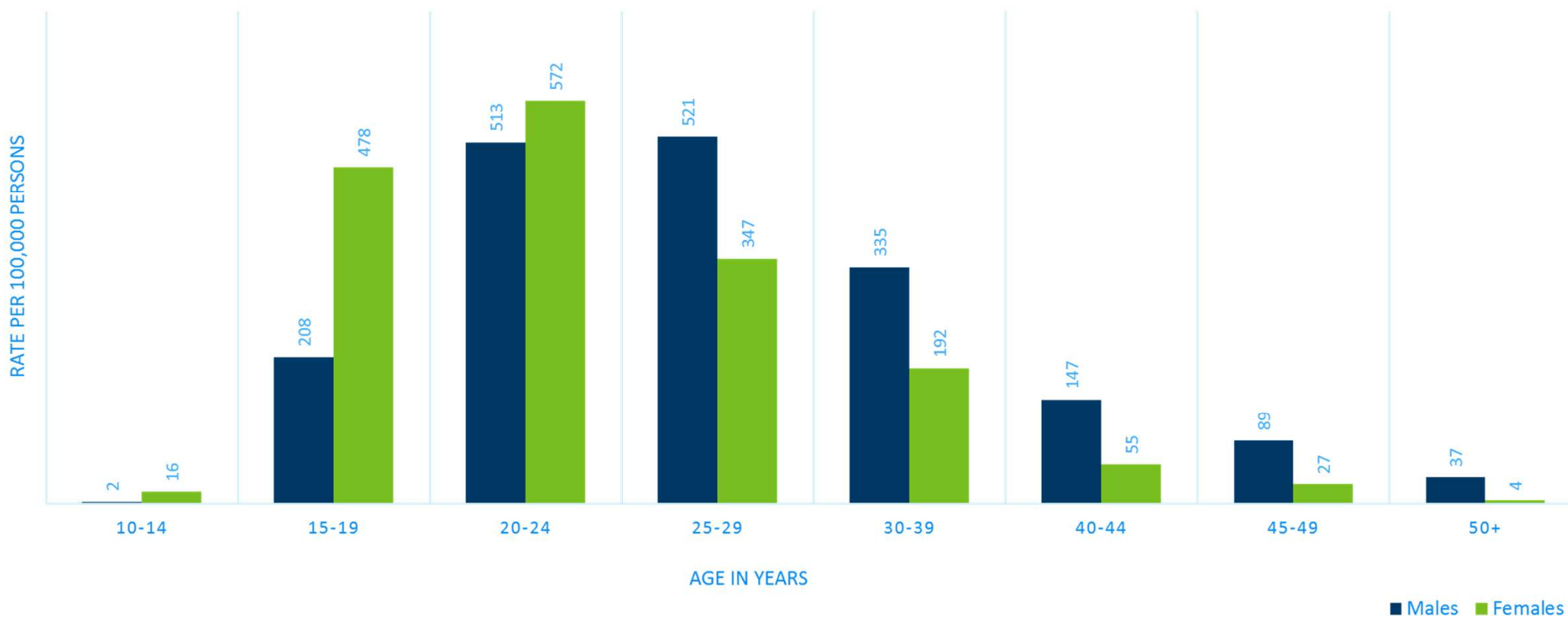
Gonorrhea Rates by Gender Minnesota, 2008-2018



Gonorrhea Rates by Age Minnesota, 2008-2018

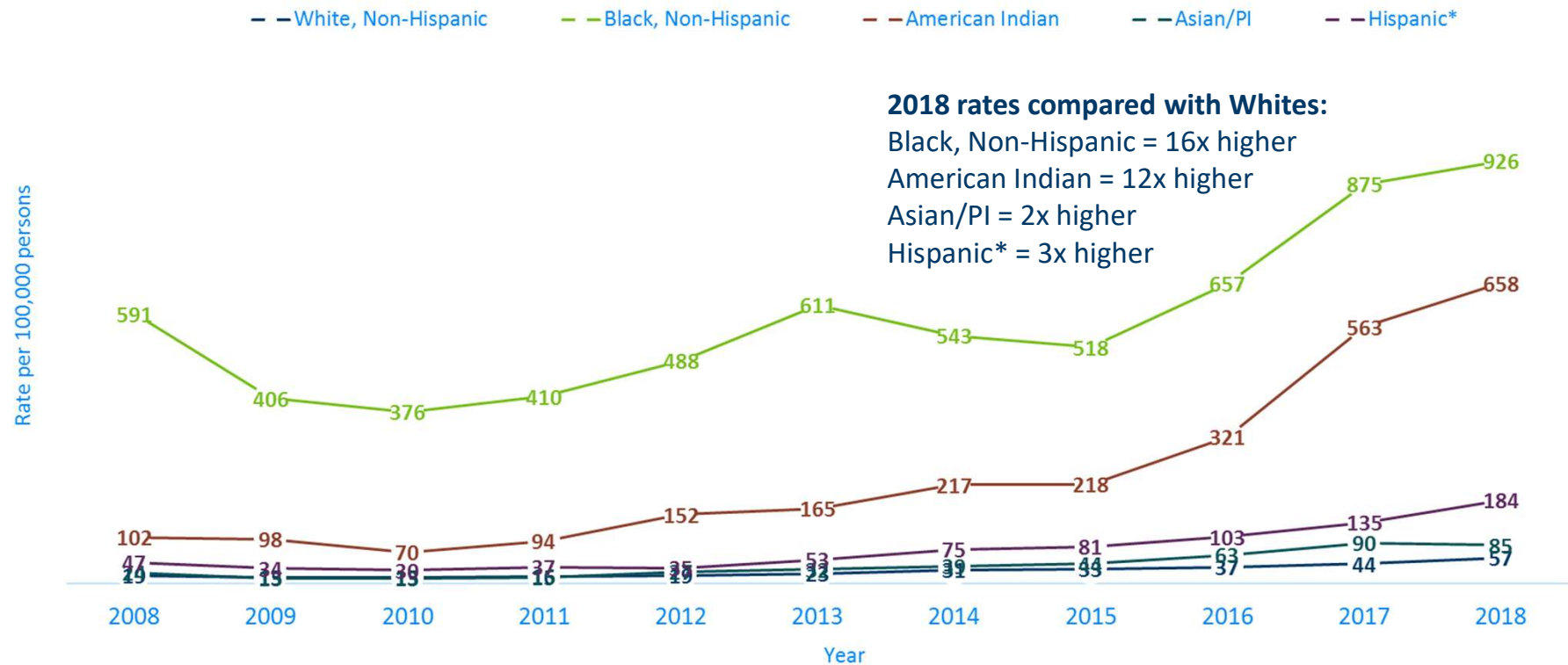


Age-Specific Gonorrhea Rates by Gender Minnesota, 2018



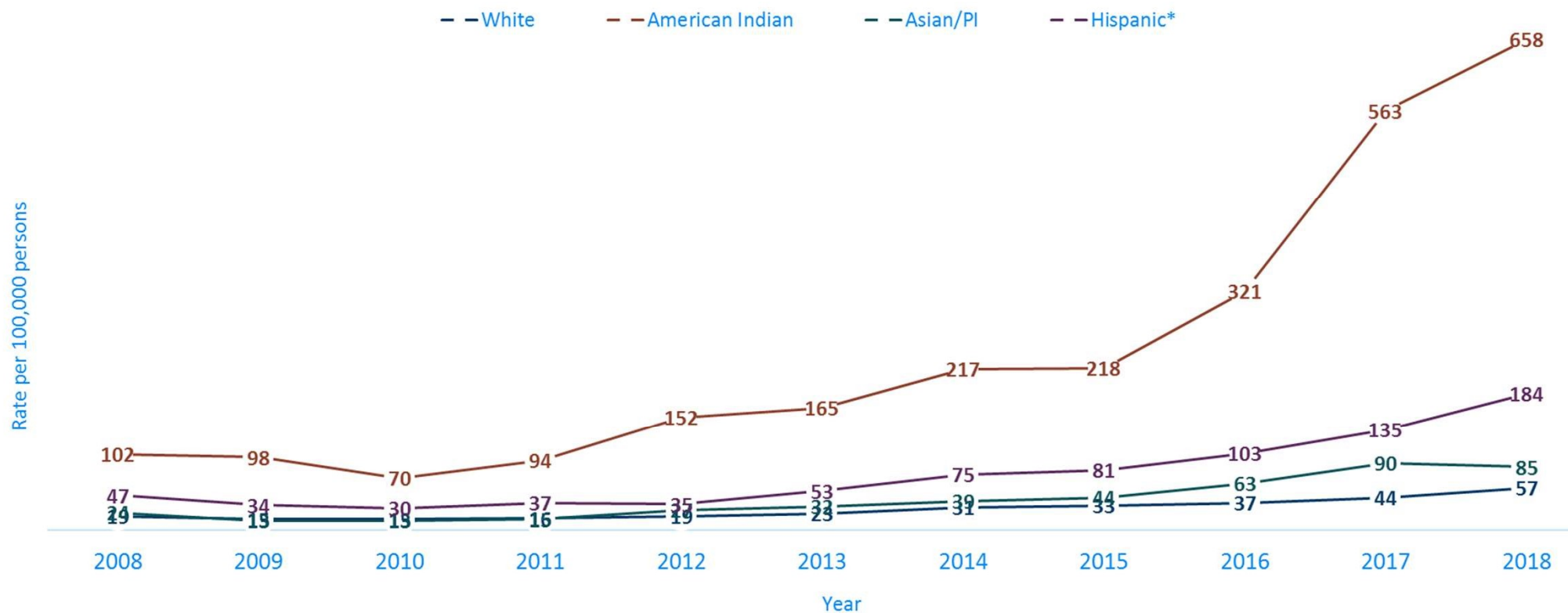
■ Males ■ Females

Gonorrhea Rates by Race/Ethnicity Minnesota, 2008-2018 (I)



* Persons of Hispanic ethnicity can be of any race

Gonorrhea Rates by Race/Ethnicity Minnesota, 2008-2018 (II)

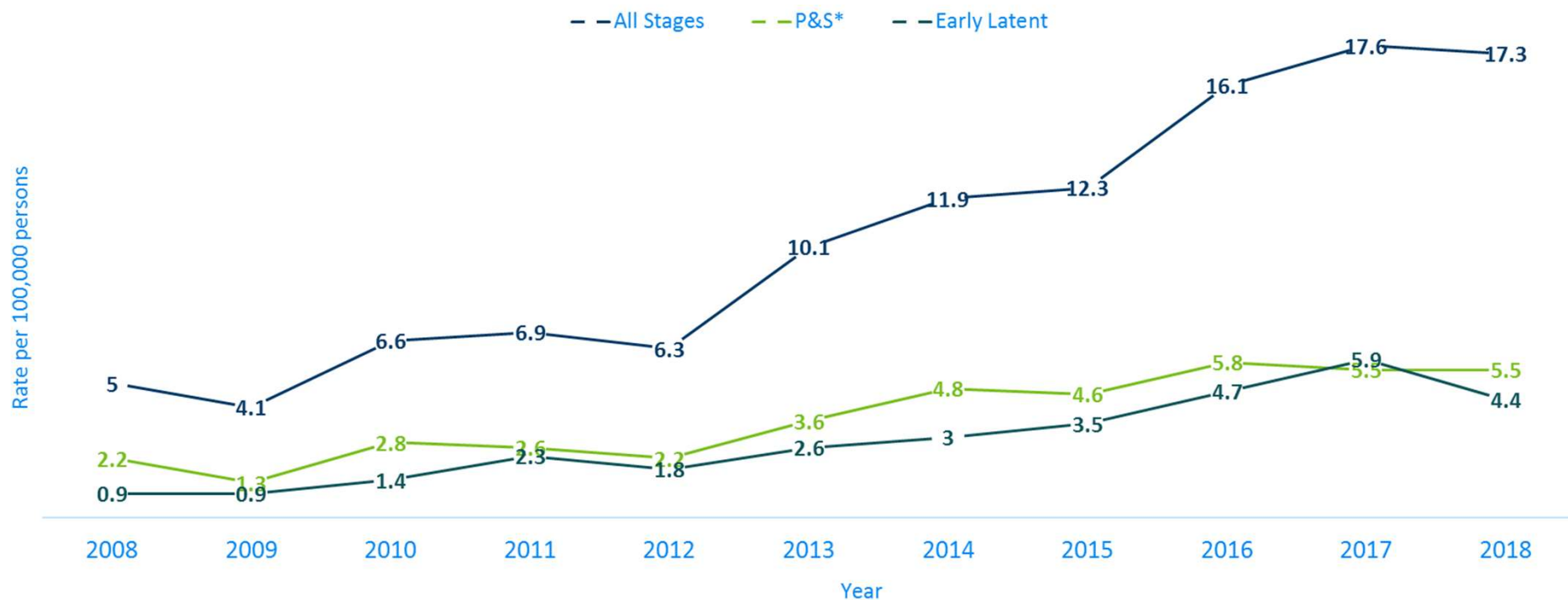


* Persons of Hispanic ethnicity can be of any race

Syphilis

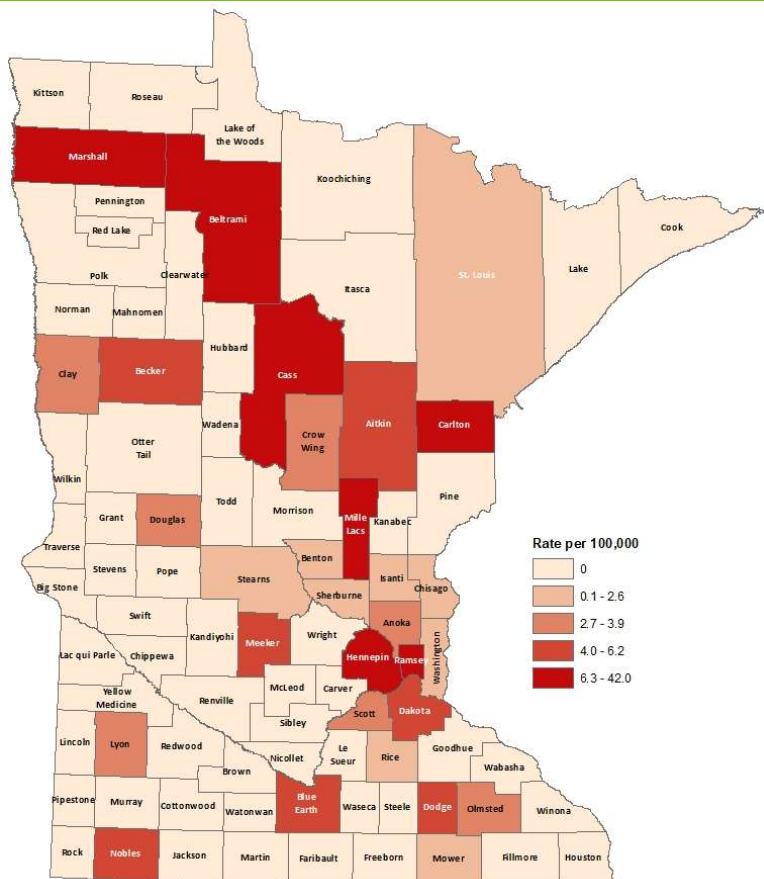
Minnesota Department of Health STD Surveillance System

Syphilis Rates by Stage of Diagnosis Minnesota, 2008-2018



* P&S = Primary and Secondary

2018 Minnesota Primary & Secondary Syphilis Rates by County

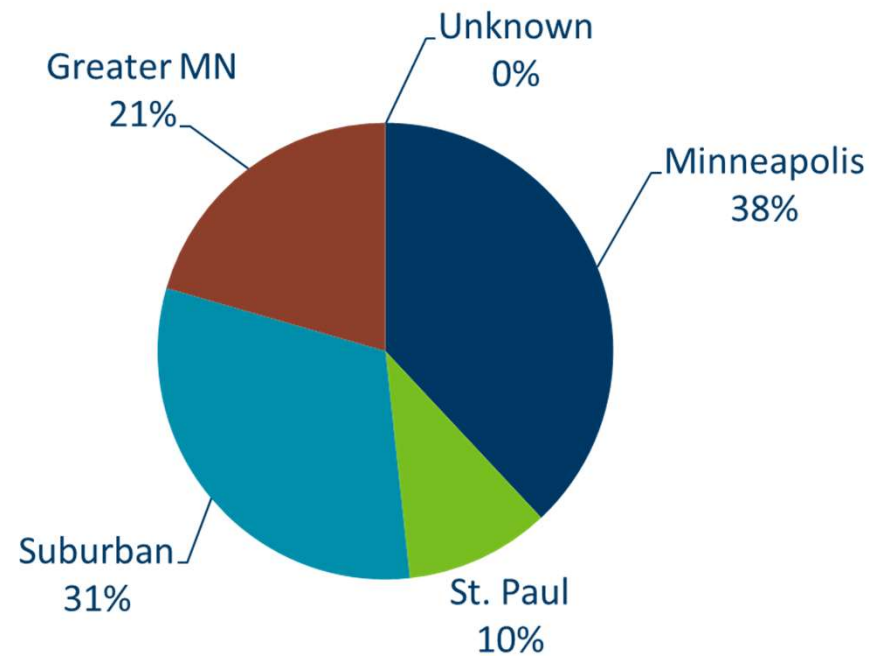


City of Minneapolis	29.0 per 100,000 (111 cases)
City of St. Paul	10.5 per 100,000 (30 cases)
Suburban*	4.2 per 100,000 (91 cases)
Greater Minnesota	2.4 per 100,000 (60 cases)
Total	5.5 per 100,000 (292 cases)

*7-county metro area, excluding the cities of Minneapolis and St. Paul

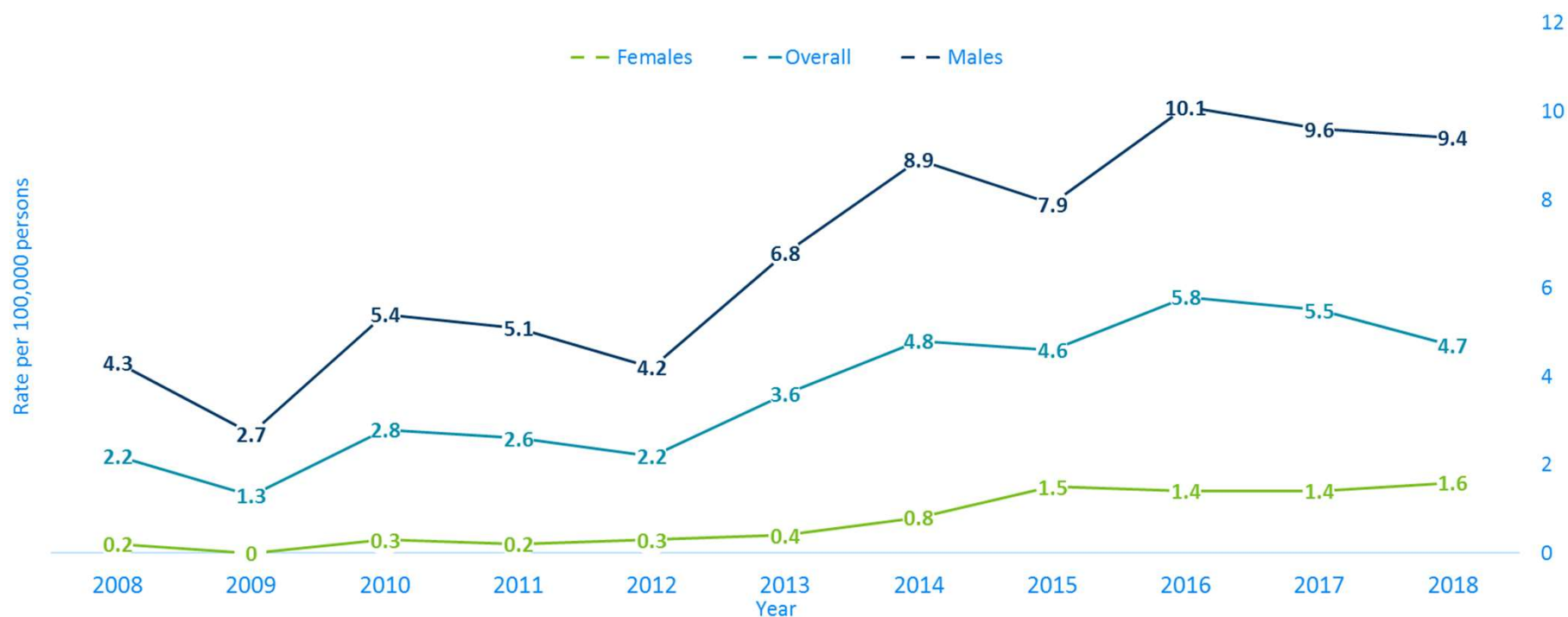
Primary & Secondary Syphilis Infections in Minnesota by Residence at Diagnosis, 2018

Total Number of Cases = 292

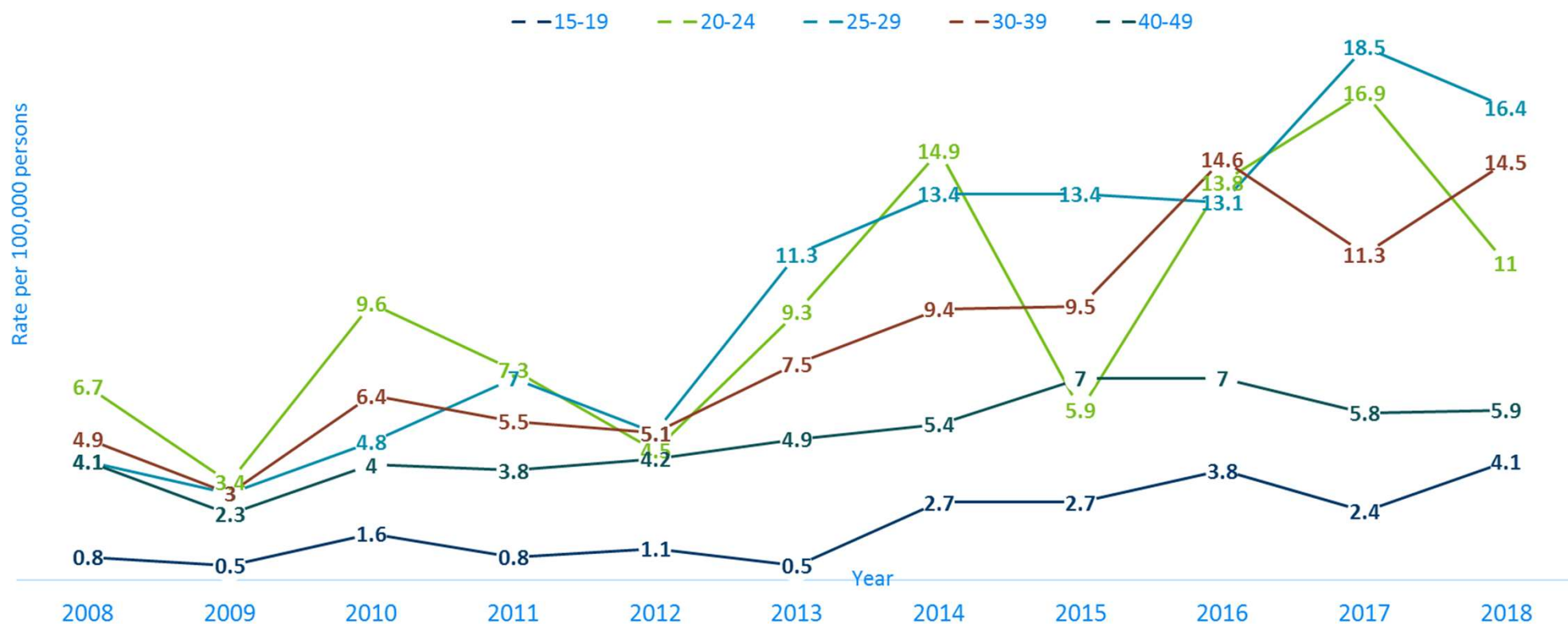


Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (excluding Minneapolis), Ramsey (excluding St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties outside the seven-county metro area.

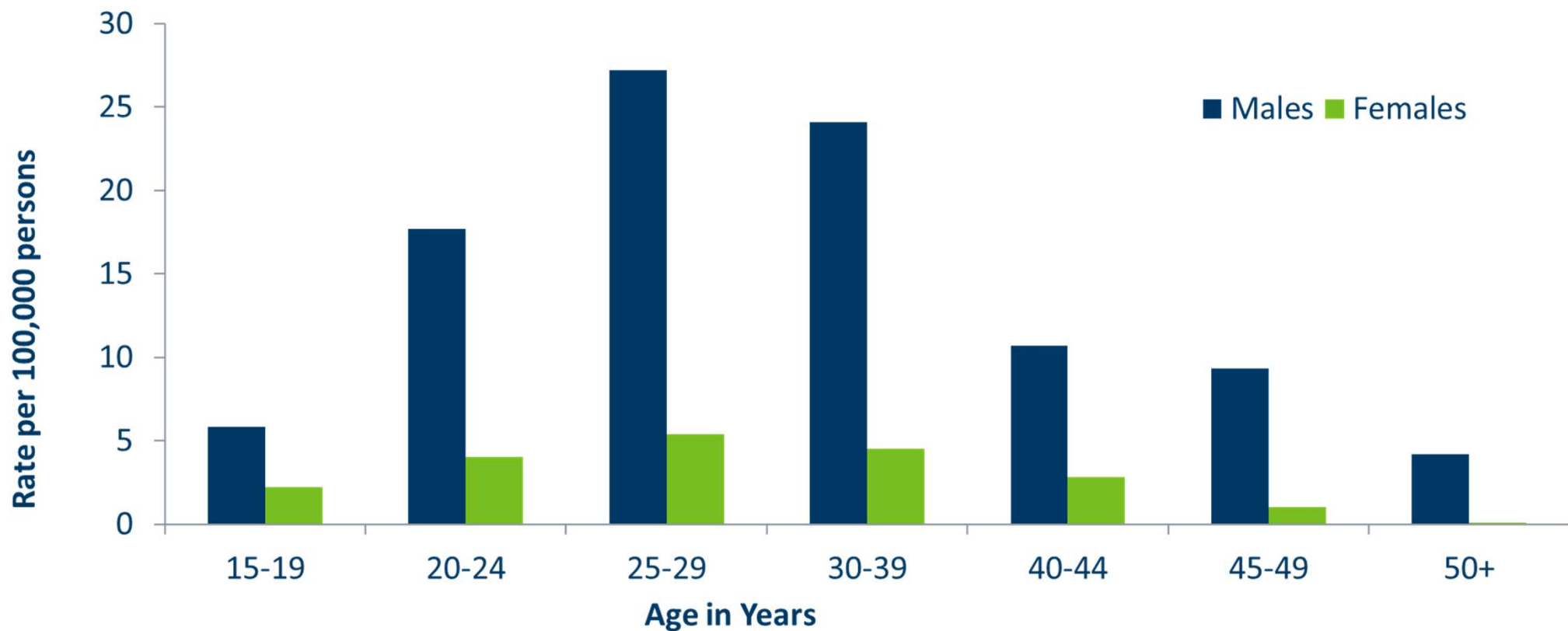
Primary & Secondary Syphilis Rates by Gender Minnesota, 2008-2018



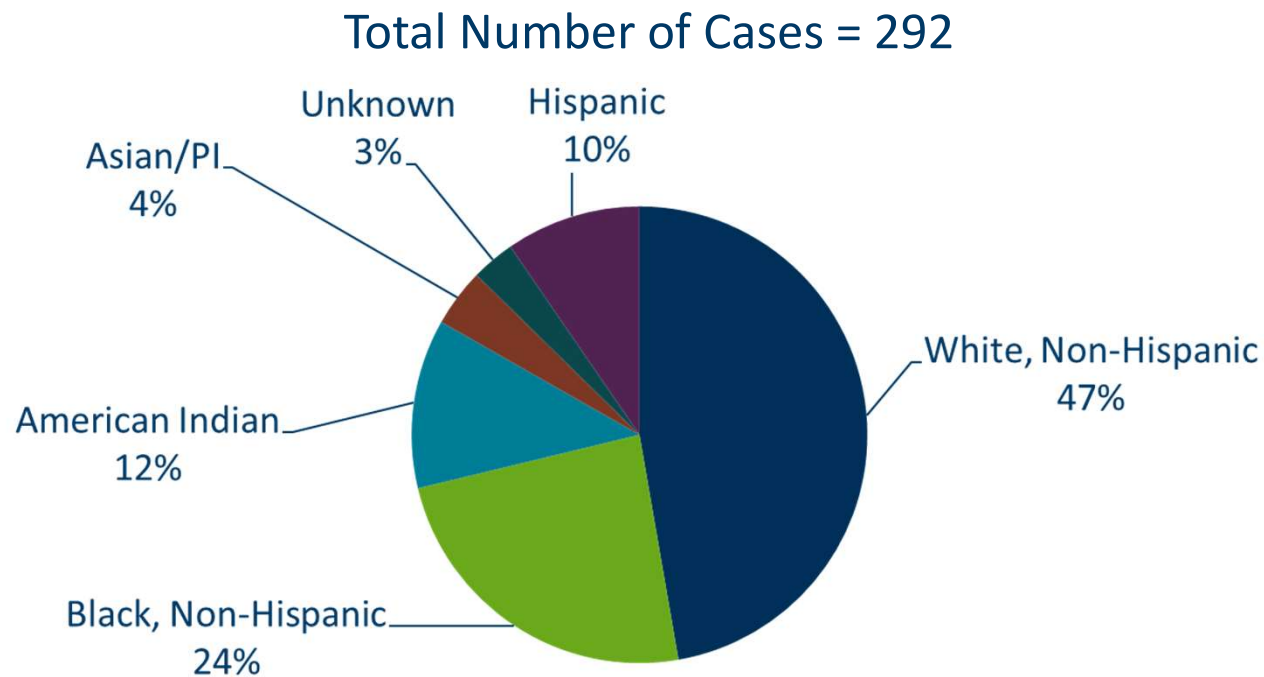
Primary & Secondary Syphilis Rates by Age Minnesota, 2008-2018



Age-Specific Primary & Secondary Syphilis Rates by Gender, Minnesota, 2018

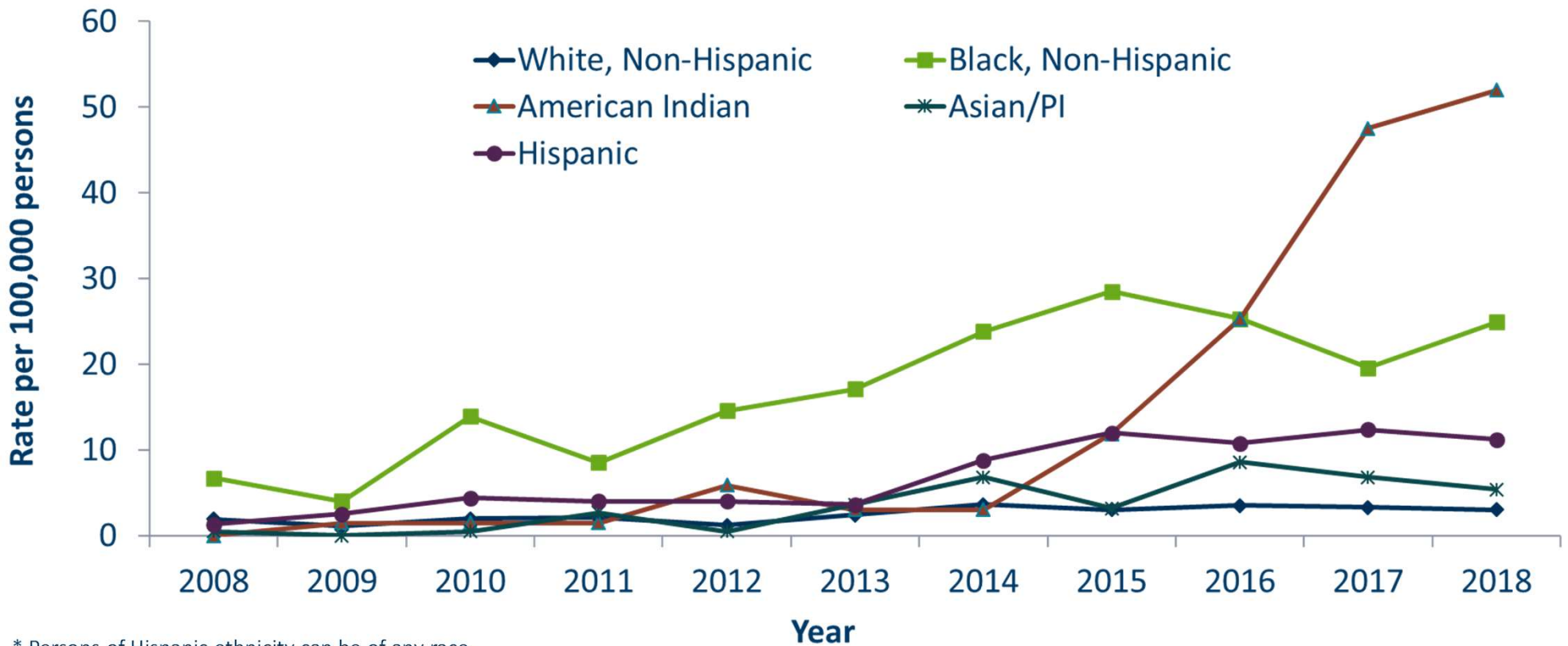


Primary & Secondary Syphilis Cases by Race Minnesota, 2018



*Includes persons reported with more than one race

Primary & Secondary Syphilis Rates by Race/Ethnicity Minnesota, 2008-2018



* Persons of Hispanic ethnicity can be of any race.

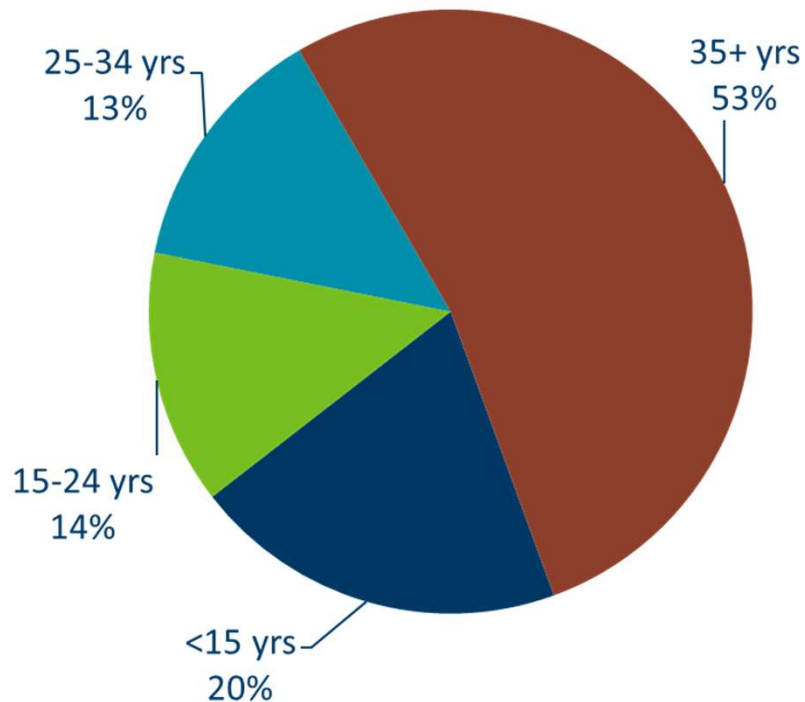
Chlamydia and Gonorrhea Among Adolescents & Young Adults

Minnesota Department of Health STD Surveillance System

Chlamydia Disproportionately Impacts Youth

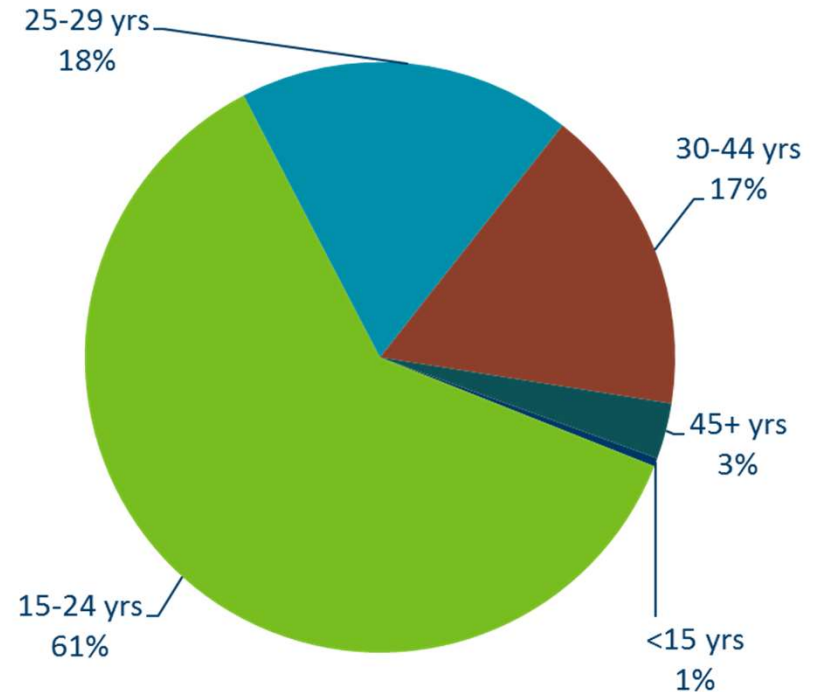
MN Population in 2010

(n = 5,303,925)



Chlamydia Cases in 2018

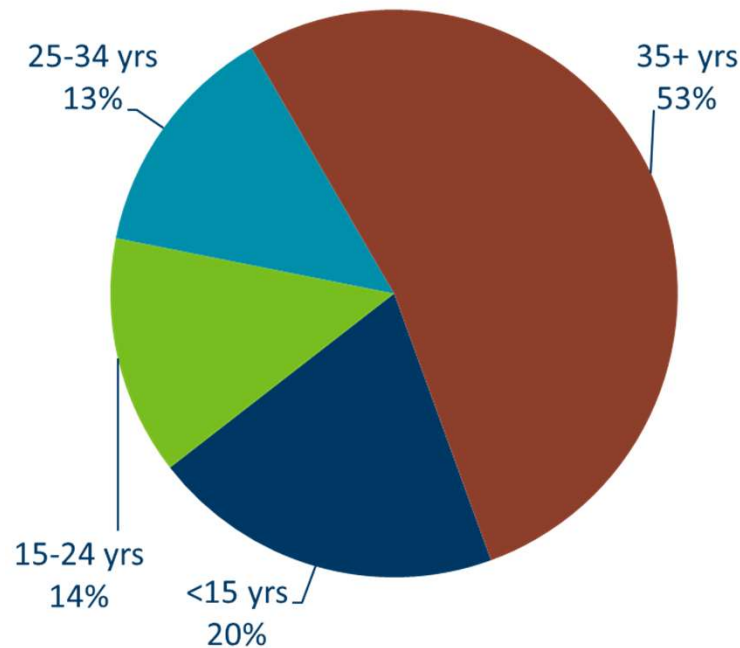
(n = 23,564)



Gonorrhea Disproportionately Impacts Youth

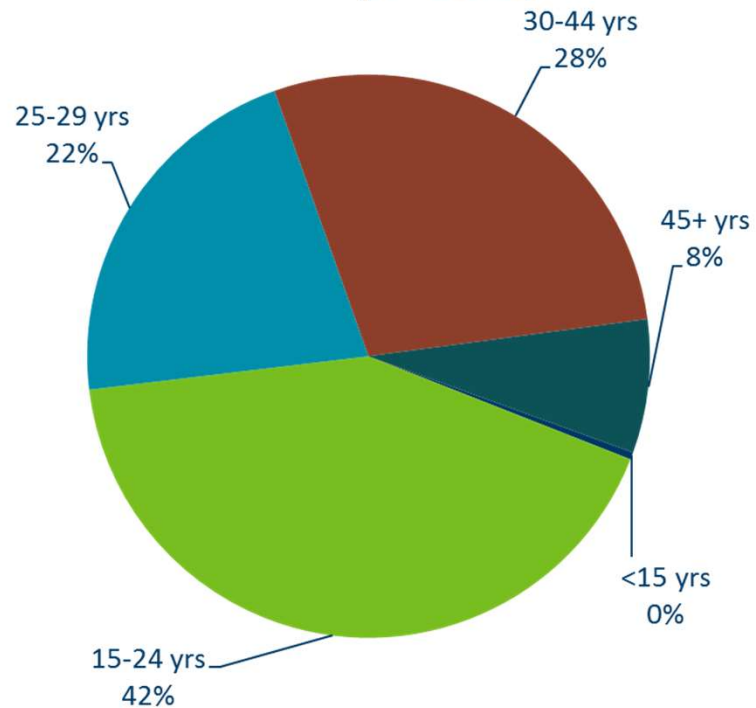
MN Population in 2010

(n = 5,303,925)



Gonorrhea Cases in 2018

(n = 7542)



Characteristics of Adolescents & Young Adults[†] Diagnosed With Chlamydia or Gonorrhea in 2018

	Cases	% of Total
Male	4,083	28%
Female	10,365	72%
Transgender	7	
White, Non-Hispanic	6,665	46%
Black, Non-Hispanic	5,068	35%
Am Indian	595	4%
Asian/PI	570	4%
Hispanic	1367	10%
Unknown/Other	190	1%
TOTAL	14,445	

[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

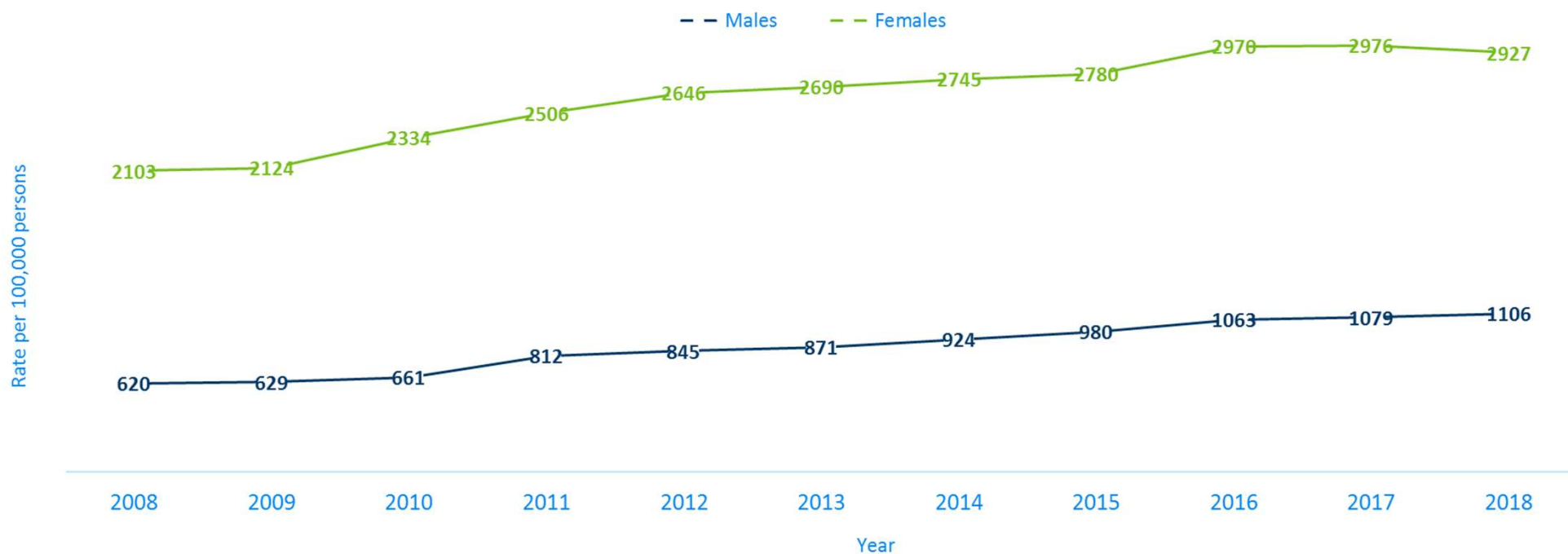
Characteristics of Adolescents & Young Adults[†] Diagnosed With Chlamydia or Gonorrhea in 2018

	Cases	% of Total
Minneapolis	2,490	17%
St. Paul	1,703	12%
Suburban MN	4,871	34%
Greater MN	5,138	36%
Unknown	252	2%
TOTAL	14,454	

Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (excluding Minneapolis), Ramsey (excluding St. Paul), Scott, and Washington counties.
Greater MN = All other Minnesota counties outside the seven-county metro area.

[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds

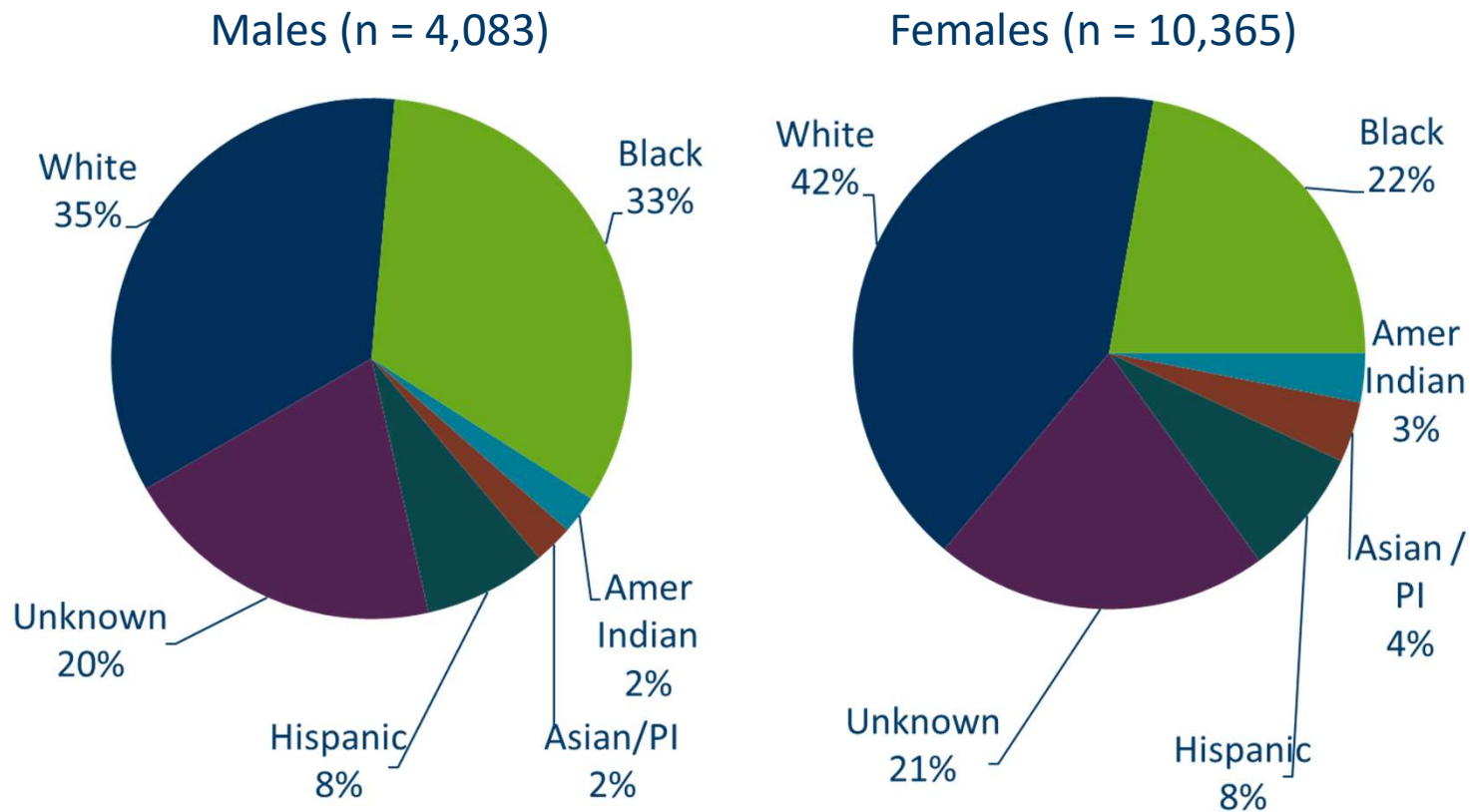
Chlamydia Rates Among Adolescents & Young Adults† by Gender in Minnesota, 2008-2018



Rate=Cases per 100,000 persons based on 2010 U.S. Census counts.

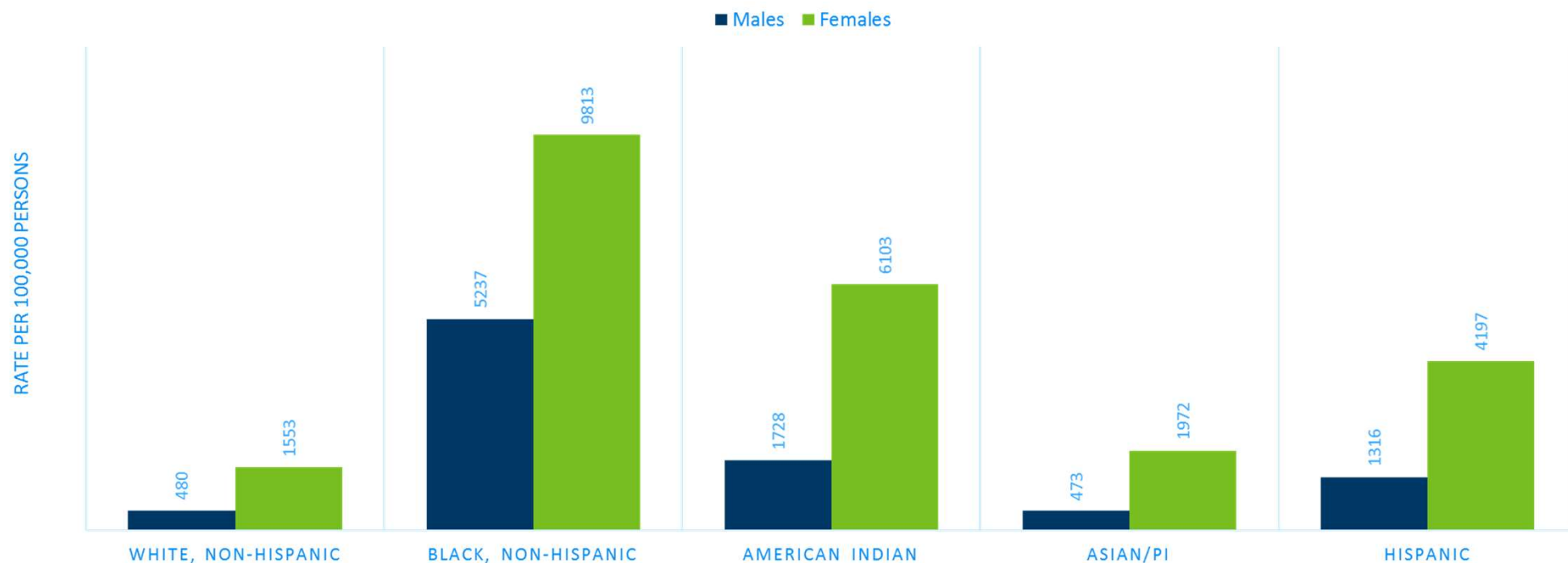
† Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds

Chlamydia Cases Among Adolescents and Young Adults[†] by Gender and Race, Minnesota, 2018



[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

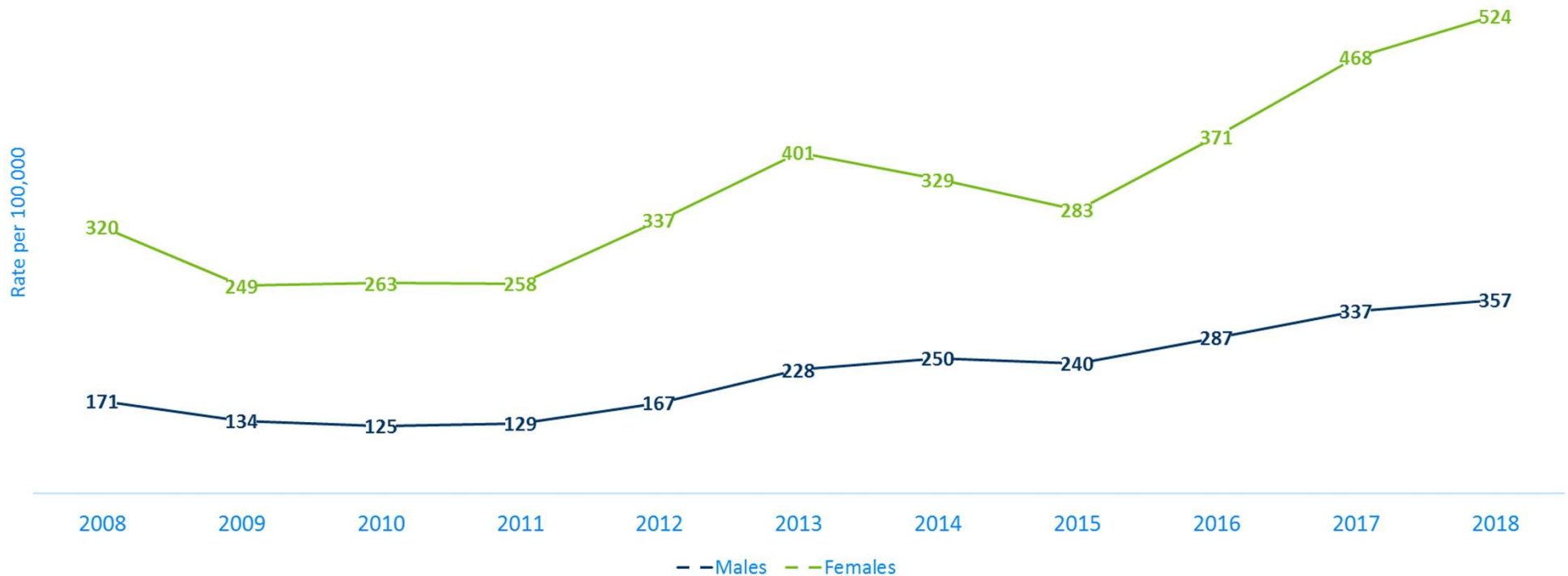
Chlamydia Rate Among Adolescents and Young Adults[†] by Race, Minnesota, 2018



Rate=Cases per 100,000 persons based on 2010 U.S. Census counts.

[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds

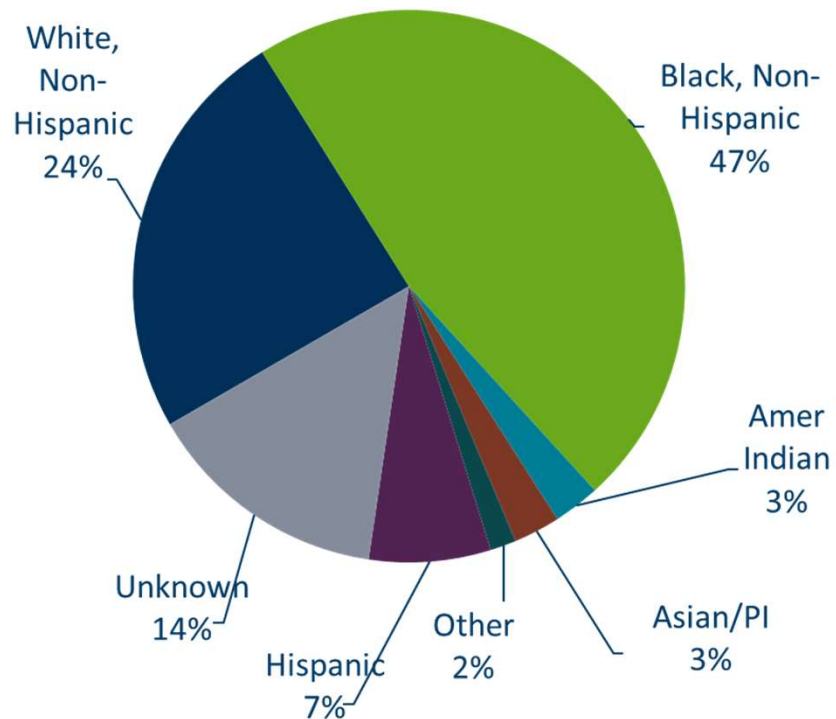
Gonorrhea Rates Among Adolescents & Young Adults[†] by Gender in Minnesota, 2008-2018



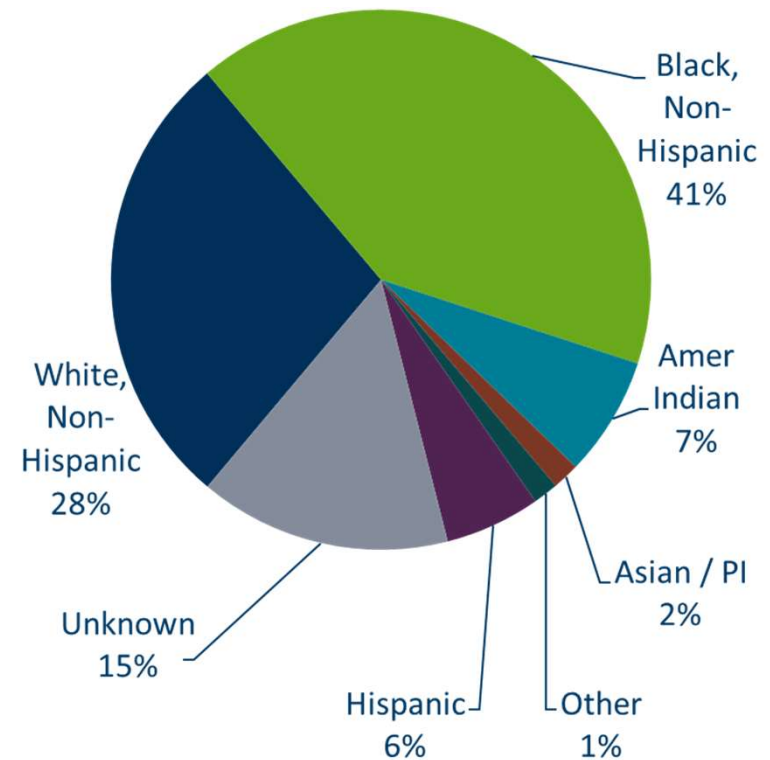
Rate=Cases per 100,000 persons based on 2010 U.S. Census counts. [†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

Gonorrhea Cases Among Adolescents and Young Adults[†] by Gender and Race, 2018

Males (n = 1,319)

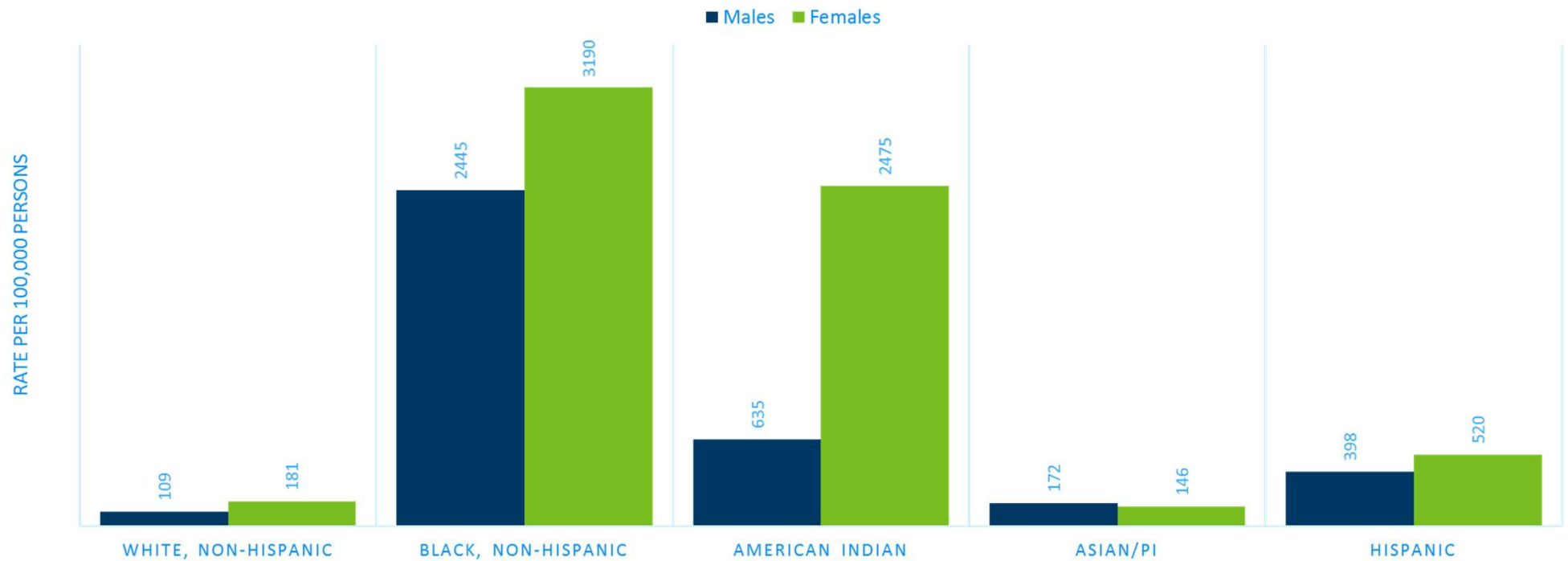


Females (n = 1,856)



[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

Gonorrhea Rate Among Adolescents and Young Adults† by Race, Minnesota, 2018



Rate=Cases per 100,000 persons based on 2010 U.S. Census counts.

† Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

Summary of Chlamydia and Gonorrhea Among Adolescents and Young Adults[†], Minnesota, 2018

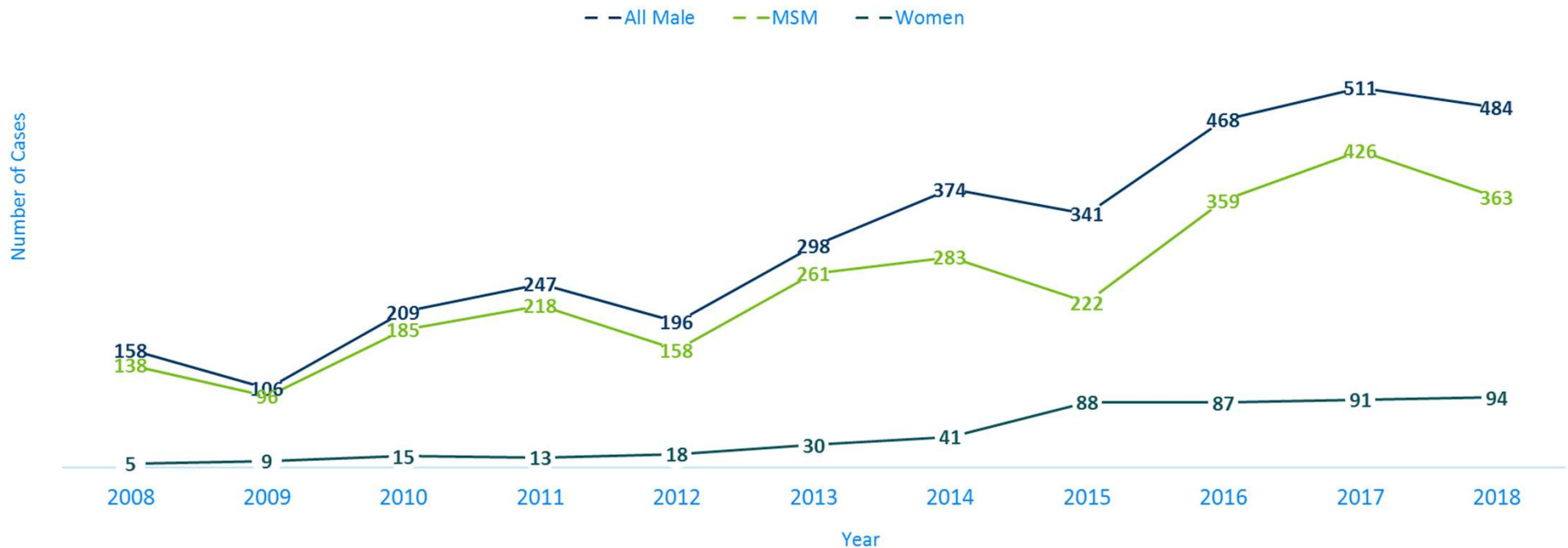
- Adolescents and young adults accounted for 61% of chlamydia and 43% of gonorrhea cases diagnosed in Minnesota.
- 72% of chlamydia or gonorrhea cases diagnosed among adolescents and young adults were females.
- About one of every six cases of chlamydia and gonorrhea diagnosed among adolescents and young adults are missing race/ethnicity
- 29% of gonorrhea or chlamydia cases were in the Cities of Minneapolis and Saint Paul.

[†] Adolescents defined as 15-19 year-olds; Young Adults defined as 20-24 year-olds.

Topic of Interest: Early Syphilis Among Men Who Have Sex With Men in Minnesota

Minnesota Department of Health STD Surveillance System

Number of Early Syphilis† Cases by Gender Minnesota, 2008-2018



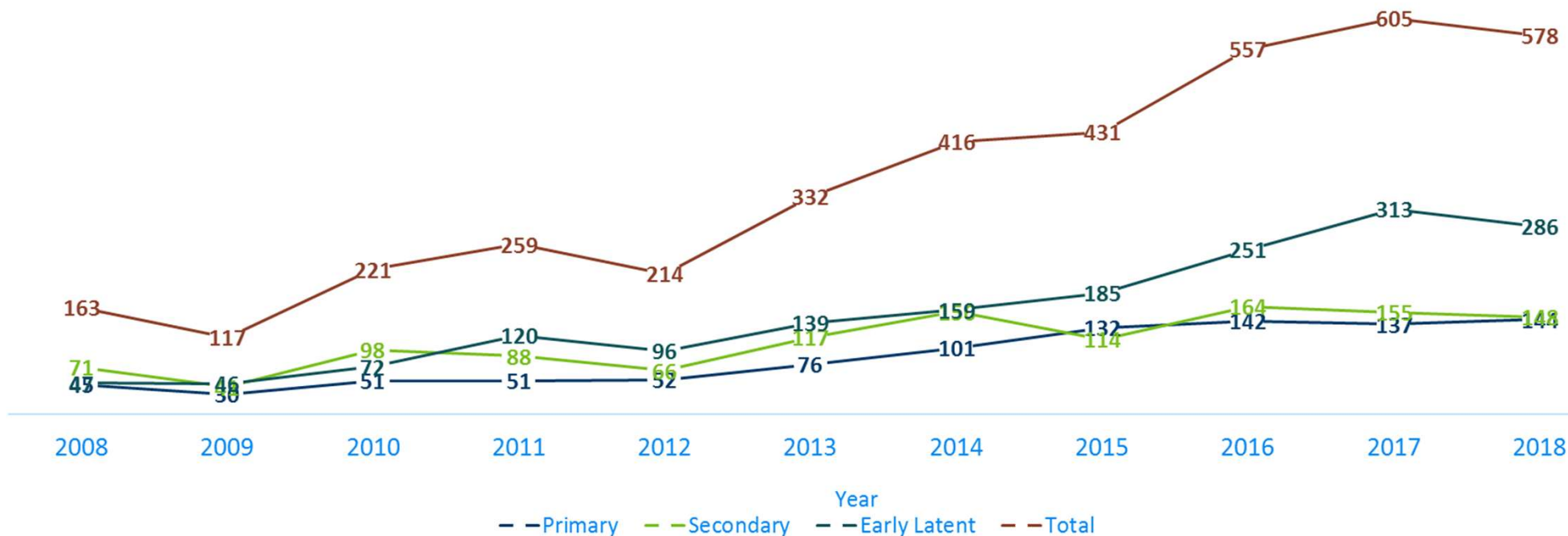
MSM=Men who have sex with men.

Figure does not include cases diagnosed in transgender persons (1 each in 2005, 2007, 2009, 4 in 2013, 1 in 2014, 2 in 2015, 3 in 2017).

† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

Early Syphilis† Cases by Stage at Diagnosis Minnesota, 2008-2018

Number of Cases



† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

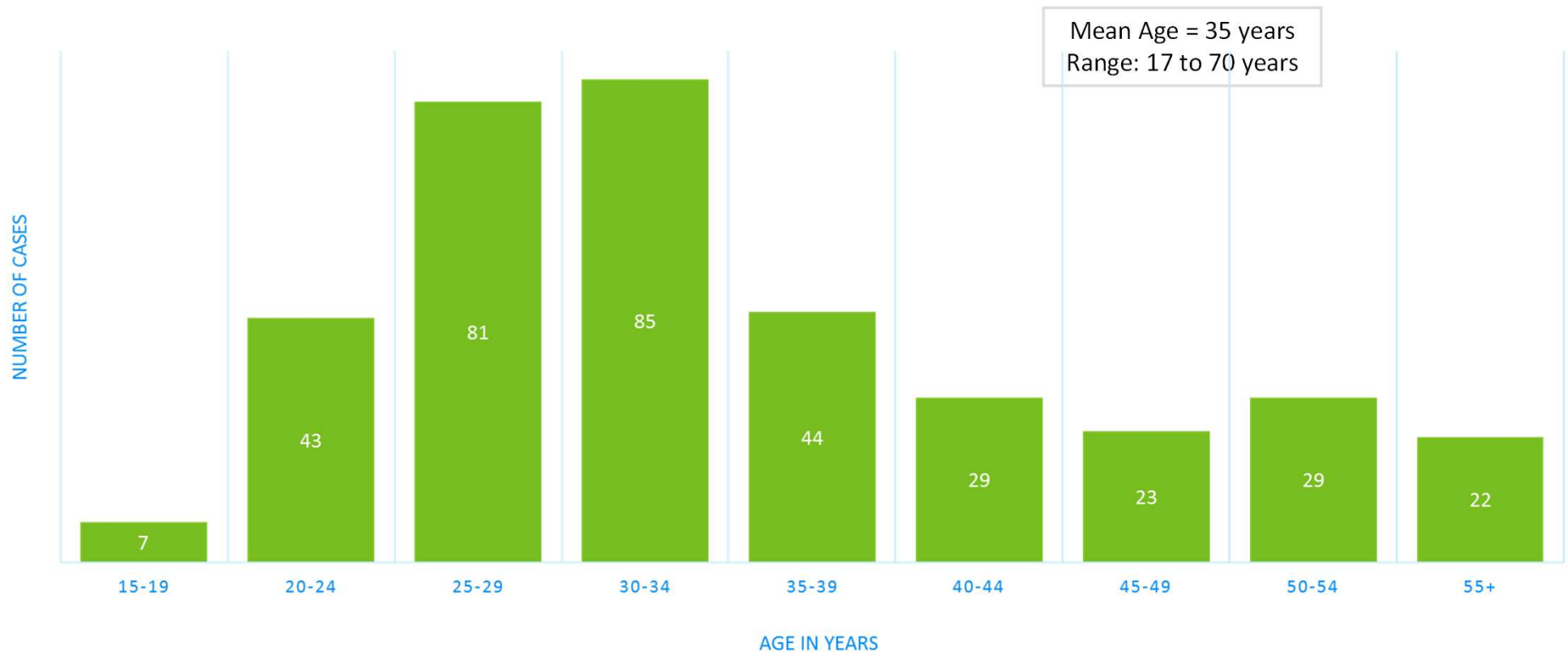
Early Syphilis† by Gender and Sexual Behavior Minnesota, 2008-2018

Year	Early Syphilis Cases	Male Cases (%)	MSM Cases (% of males)
2008	163	158 (97)	140 (89)
2009	117	106 (91)	96 (91)
2010	221	207 (94)	185 (89)
2011	260	246 (95)	218 (89)
2012	214	196 (92)	158 (81)
2013	332	298 (90)	261 (88)
2014	416	374 (90)	283 (76)
2015	431	341 (79)	222 (65)
2016	557	468 (84)	359 (77)
2017	605	511 (84)	426 (83)
2018	578	484 (84)	363 (62)

MSM=Men who have sex with men

† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

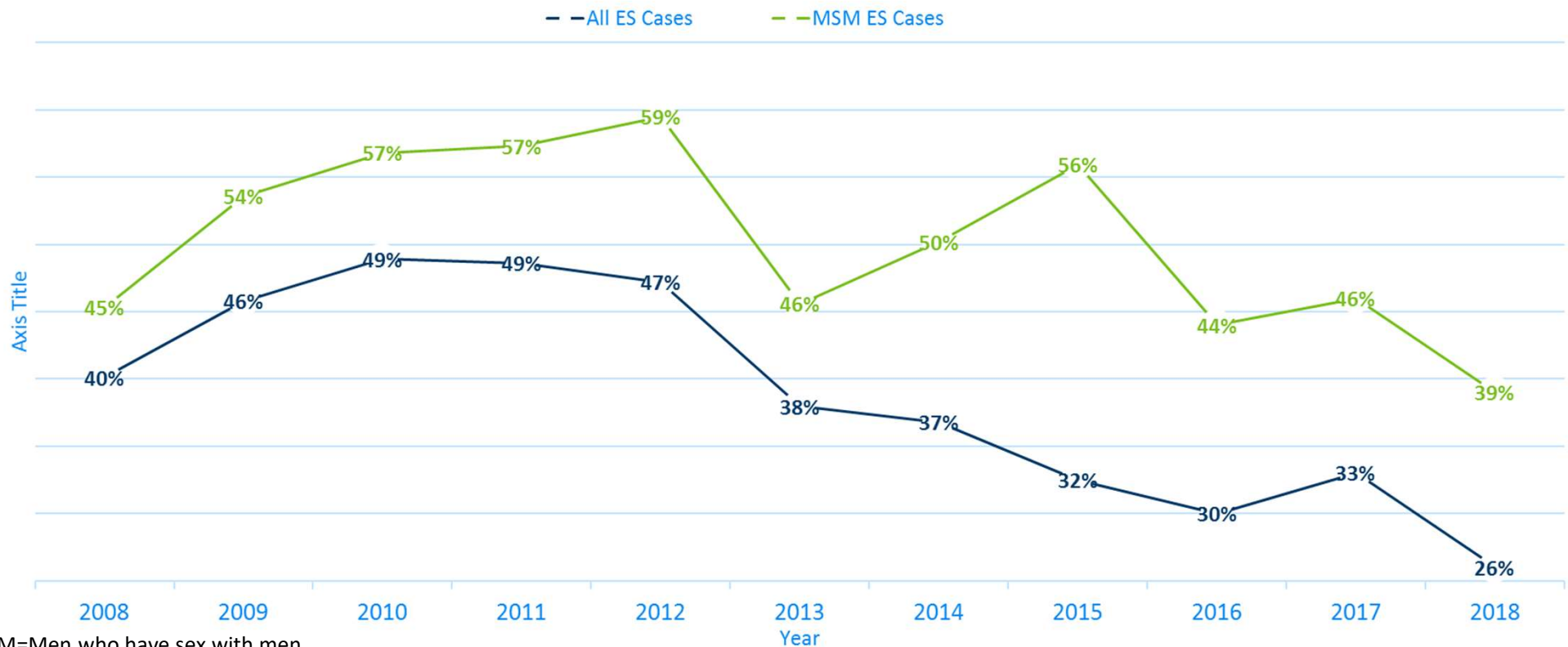
Early Syphilis† Cases Among MSM by Age Minnesota, 2018 (n=363)



MSM=Men who have sex with men

† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

Early Syphilis† (ES) Cases Co-infected with HIV, 2008-2018



MSM=Men who have sex with men

† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

Characteristics of Early Syphilis† Cases Among MSM, Minnesota, 2018

- Gay and bisexual men account for 75% of cases among men.
- Almost half (46%) of cases among MSM are in the 25-34 age groups.
- 39% of cases are also infected with HIV.

MSM=Men who have sex with men

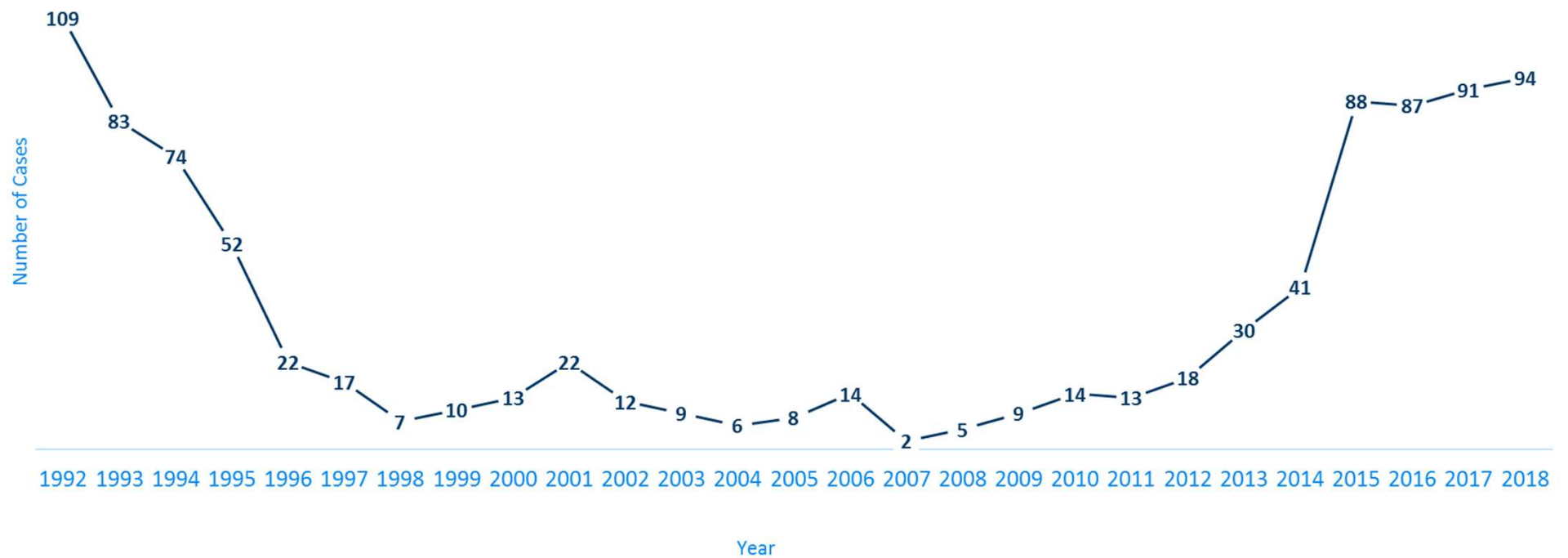
† Early Syphilis includes primary, secondary, and early latent stages of syphilis.

Topic of Interest: Syphilis Among Females and Congenital Syphilis in Minnesota

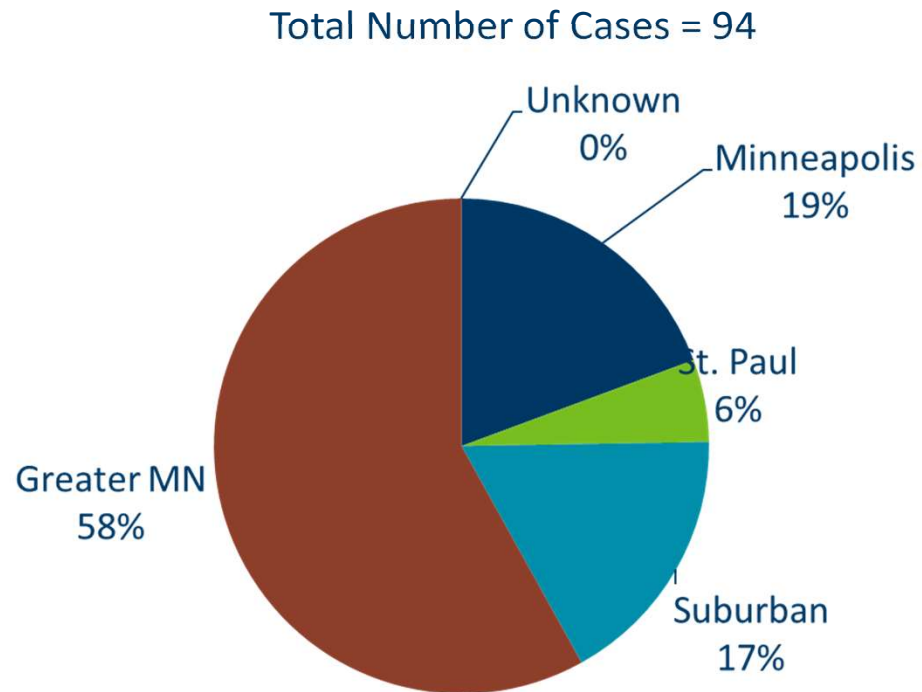
Minnesota Department of Health STD Surveillance System

Female Early Syphilis cases

NUMBER OF FEMALE EARLY SYPHILIS CASES



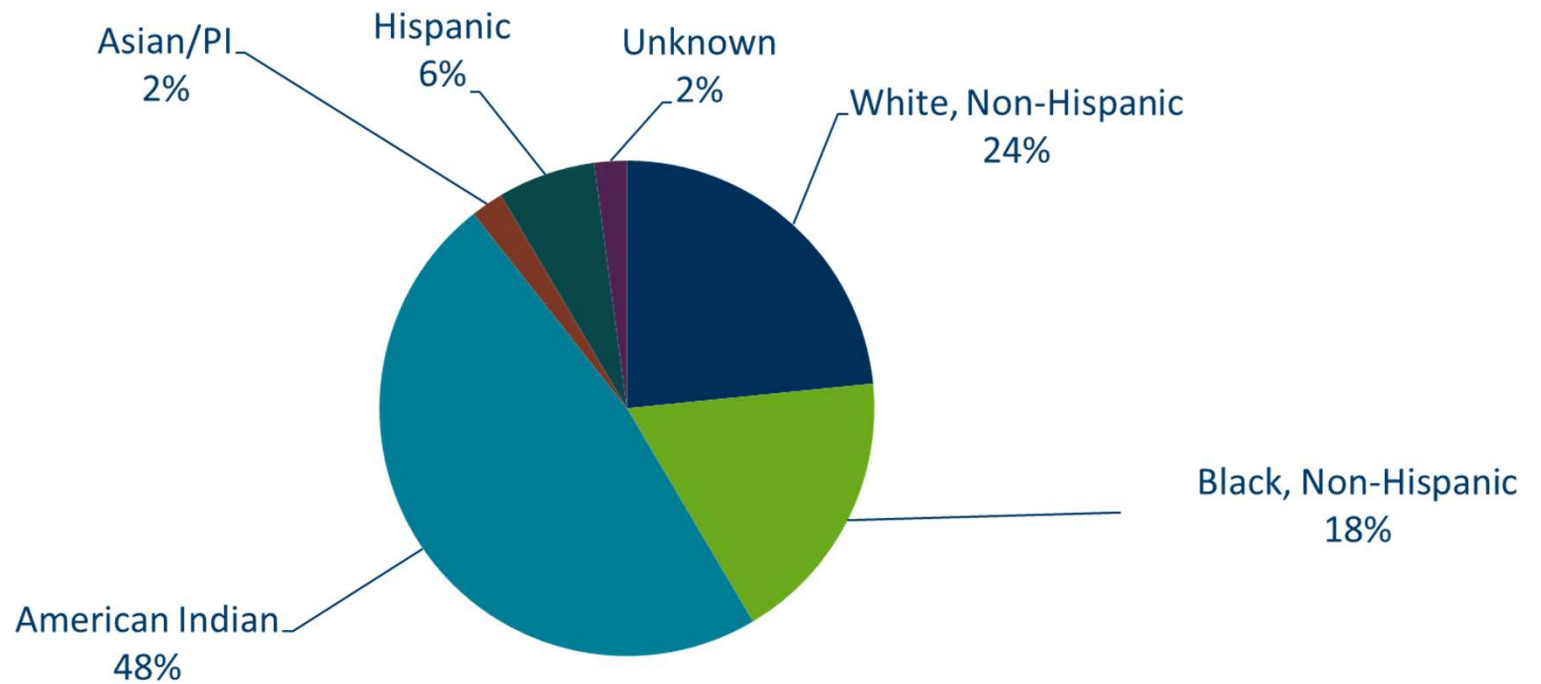
Early Syphilis Infections in Women in Minnesota by Residence at Diagnosis, 2018



Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (excluding Minneapolis), Ramsey (excluding St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties outside the seven-county metro area.

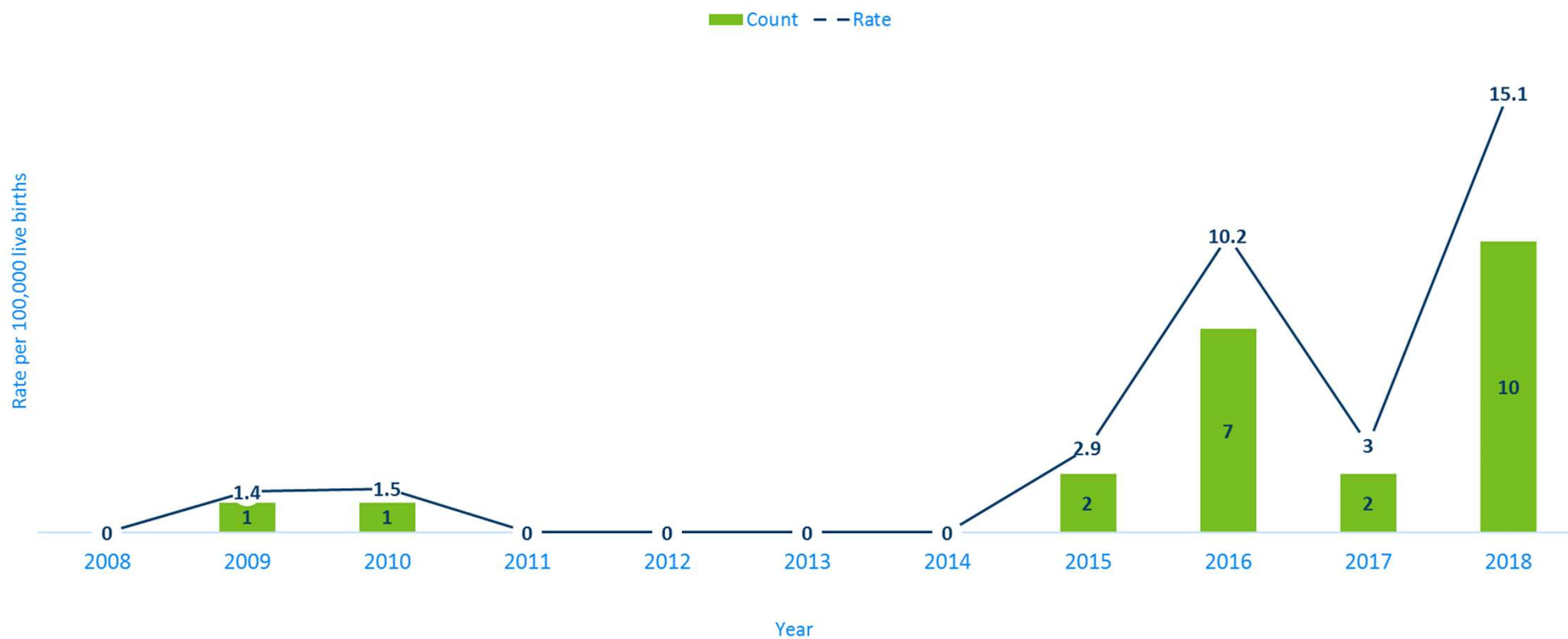
Early Syphilis Cases in Females by Race Minnesota, 2018

Total Number of Cases = 94



*Includes persons reported with more than one race

Congenital Syphilis Rates among infants Minnesota, 2008-2018



What's Being Done in Minnesota?

- The MDH Partner Services Program continues to follow up on early syphilis cases and their sex partners and all pregnant syphilis cases.
- All HIV/Syphilis co-infected cases are assigned to Partner Services for follow-up.
- Physicians are encouraged to screen men who have sex with men at least annually and to ask about sex partners.
- All pregnant people should be screened for syphilis at first prenatal visit, 28 weeks' gestation (at minimum 28-36 weeks), and many need a third test at delivery

Summary of STD Trends in Minnesota

- From 2008-2018, the chlamydia rate increased by 61%. The rate of gonorrhea increased by 145%. While rates of reported syphilis have increased over the past decade, they have remained the same in 2018 as compared to 2017.
- Minnesota has seen a resurgence of syphilis over the past decade, with men who have sex with men and those co-infected with HIV being especially impacted. However, the number of females is at the record high for the last decade.
- Persons of color continue to be disproportionately affected by STDs.
- STD rates are generally highest in the metro. However, chlamydia continues to be reported from every county in 2018.
- Between 2017 and 2018, early syphilis cases decreased by 5%. Men who have sex with men comprised 84% of all male cases in 2018; cases among women are continuing to rise.

Future Updates to STD Reporting and Current Follow-Up

- There will soon be a new case report form to accommodate changes in treatment guidelines, requesting HIV testing status, and PrEP (Pre-Exposure Prophylaxis) usage
- The case report form (available online) can be filled out and mailed or faxed into MDH
- All cases co-infected with Early Syphilis will continue to be assigned to MDH Partner Services for follow-up
- All STD cases continue to have the potential for being contacted by MDH for additional follow-up