



# HIV Incidence Report, 2017

Sexually Transmitted Diseases, HIV and Tuberculosis Section,  
Epidemiology and Surveillance Unit

# Introduction (I)

These two introduction slides provide a general context for the data used to create this slide set. If you have questions about any of the slides please refer to the *Companion Text to the Minnesota HIV Surveillance Report, 2017* or *HIV Surveillance Technical Notes*.

This slide set describes new HIV diagnoses (including AIDS at first diagnosis) in Minnesota by person, place, and time.

The slides rely on data from HIV/AIDS cases diagnosed through 2017 and reported to the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System.

The data are displayed by year of HIV diagnosis.

# Introduction (II)

Data analyses exclude persons diagnosed in federal or private correctional facilities, but include state prisoners (number of state prisoners believed to be living with HIV/AIDS (n=162)).

Data analyses for new HIV diagnoses exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program (number of primary HIV+ refugees in this program living in MN as of December 31, 2017 = 170), as well as, other refugees/immigrants reporting a positive test prior to their arrival in Minnesota (n=166).

Some limitations of surveillance data:

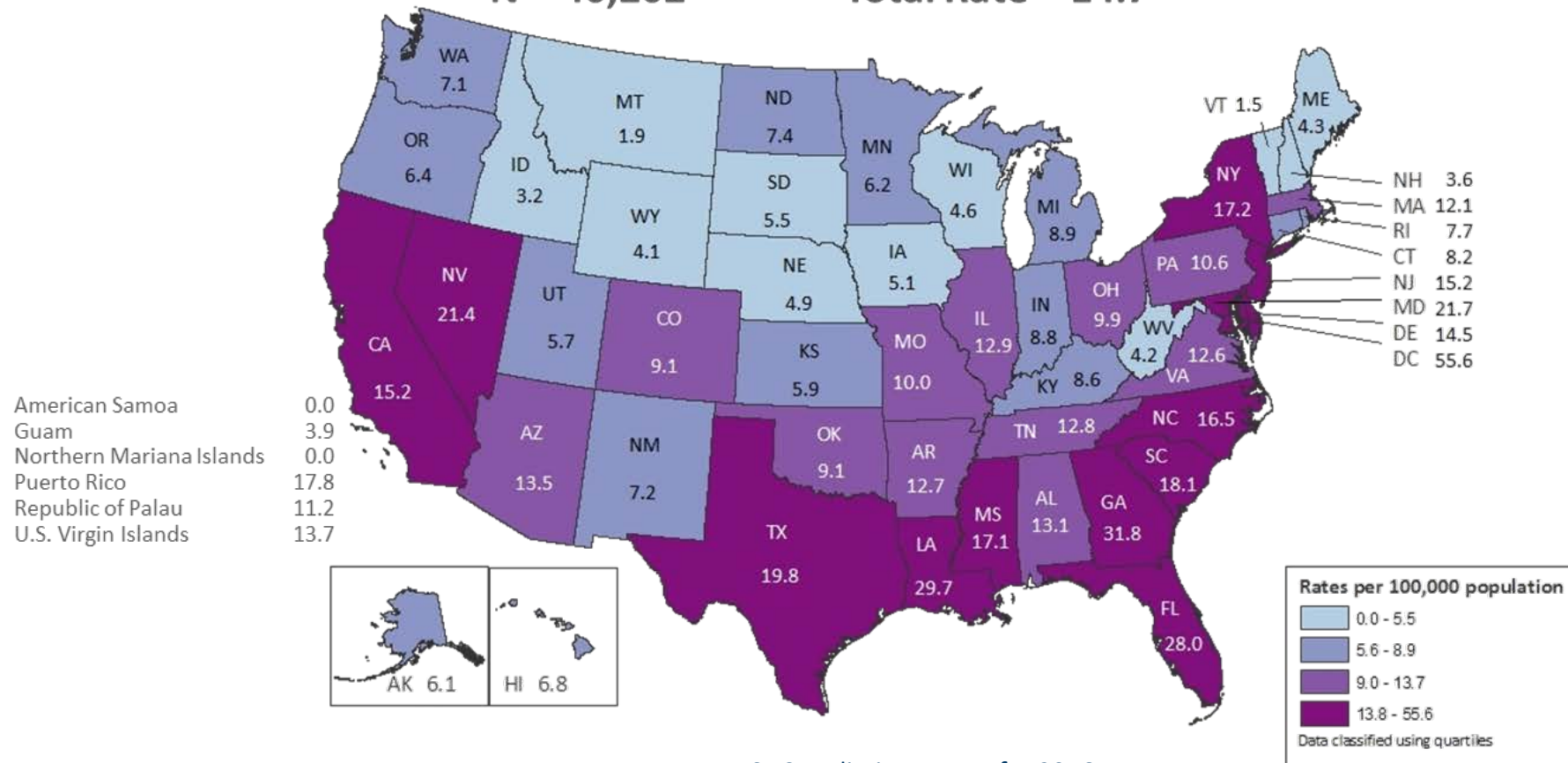
- Data do not include HIV-infected persons who have not been tested for HIV
- Data do not include persons whose positive test results have not been reported to MDH
- Data do not include HIV-infected persons who have only tested anonymously
- Case numbers for the most recent years may be undercounted due to delays in reporting
- Reporting of living cases that were not initially diagnosed in Minnesota is known to be incomplete

# National Context (I)

## Rates of Diagnoses of HIV Infection among Adults and Adolescents 2016—United States and 6 Dependent Areas

N = 40,202

Total Rate = 14.7



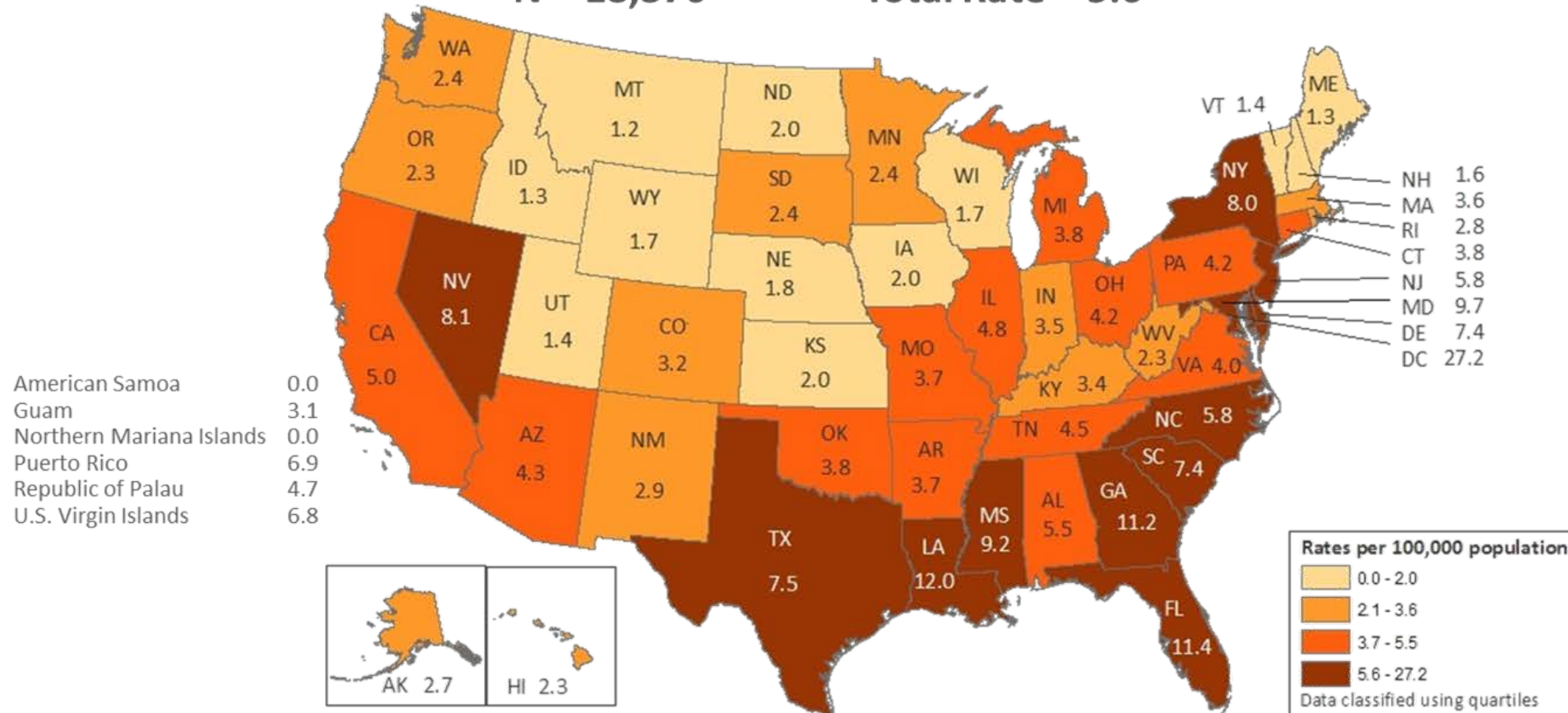
Data source: CDC Preliminary Data for 2016

# National Context (II)

## Rates of Diagnosed HIV Infection Classified as Stage 3 (AIDS) 2016—United States and 6 Dependent Areas

N = 18,370

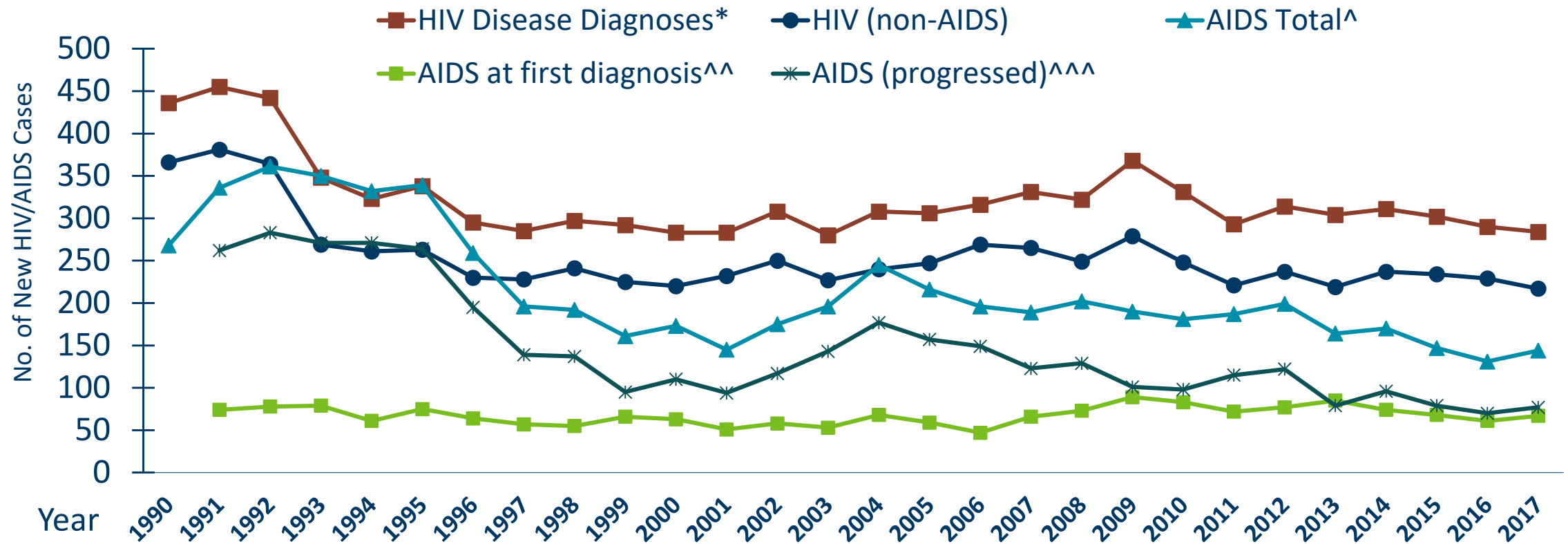
Total Rate = 5.6



Data source: CDC Preliminary Data for 2016

# Overview of HIV/AIDS in Minnesota

# New HIV Disease Diagnoses, HIV (non-AIDS) and AIDS Cases by Year, 1990-2017

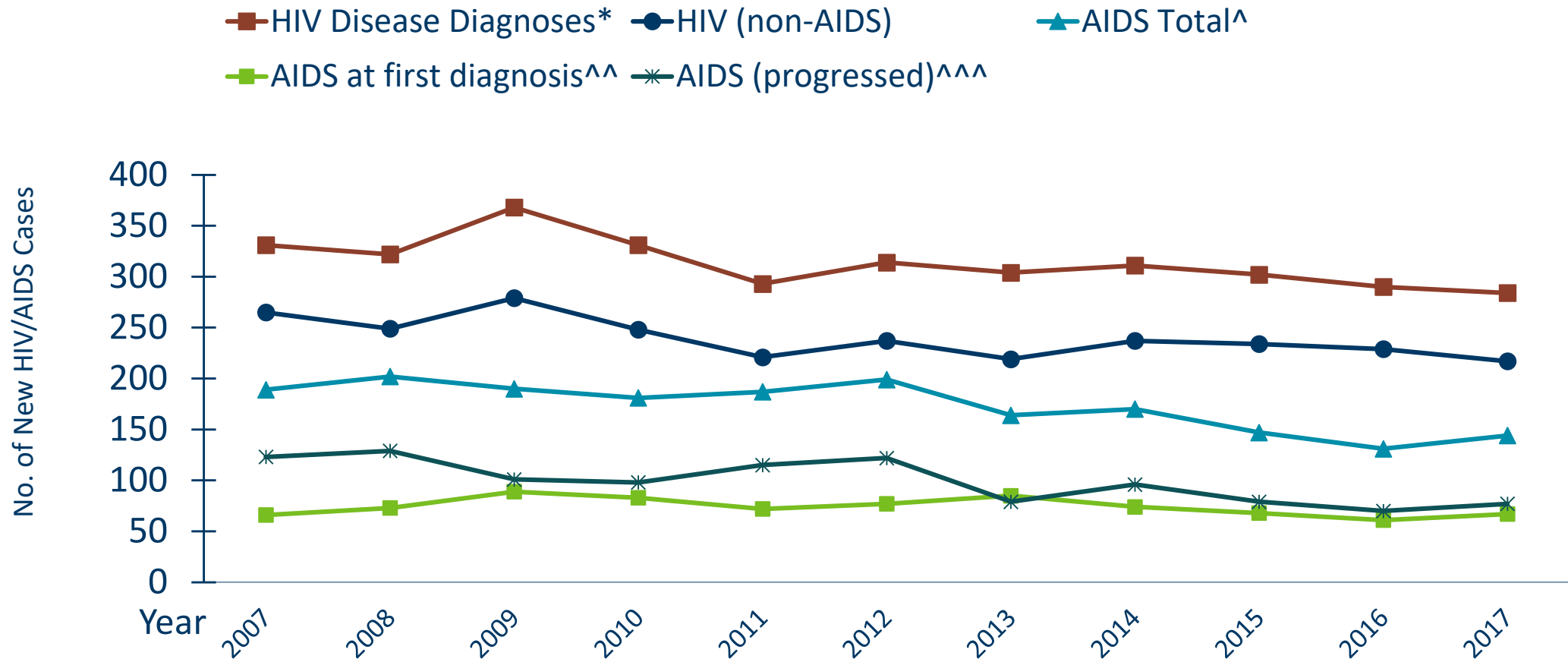


\*Includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year.

^Includes all new cases of AIDS diagnosed within a given calendar year, including AIDS at first diagnosis^^ and AIDS ((progressed)^^^ previous diagnosis of HIV).

This includes refugees in the HIV+ Resettlement Program, as well as, other refugee/immigrants diagnosed with AIDS subsequent to their arrival in the United States.

# New HIV Disease Diagnoses, HIV (non-AIDS) and AIDS Cases by Year, 2007-2017



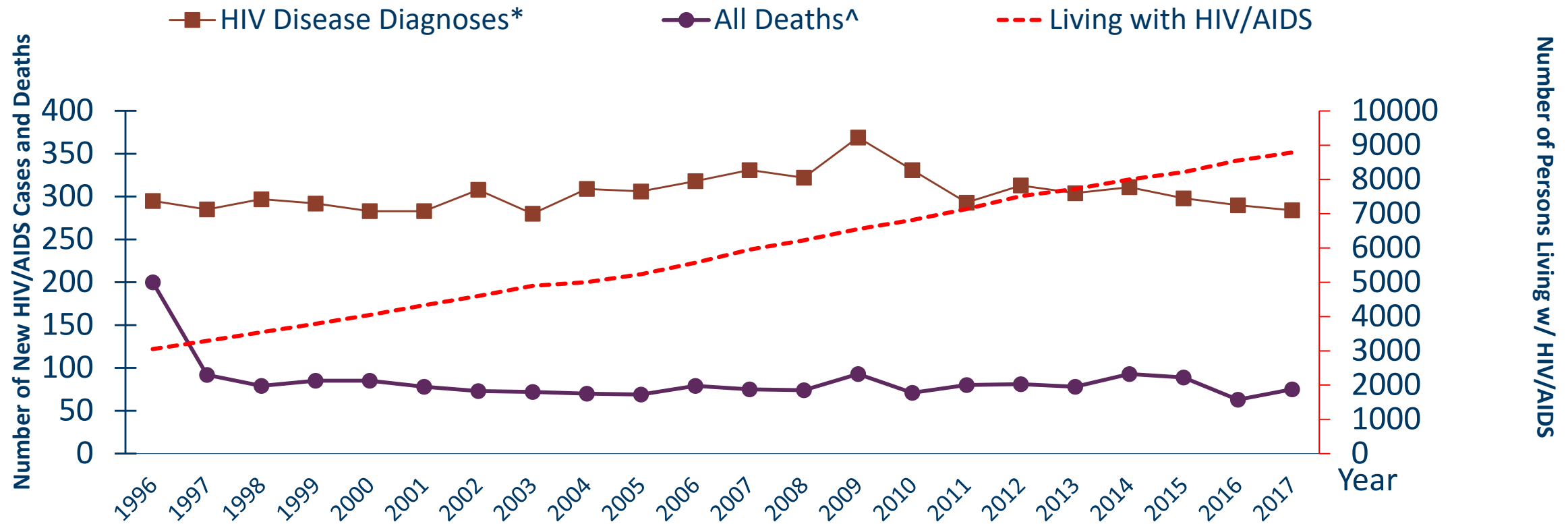
\*Includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year.

^Includes all new cases of AIDS diagnosed within a given calendar year, including AIDS at first diagnosis^^ and AIDS ((progressed)^^^ previous diagnosis of HIV).

This includes refugees in the HIV+ Resettlement Program, as well as, other refugee/immigrants diagnosed with AIDS subsequent to their arrival in the United States.



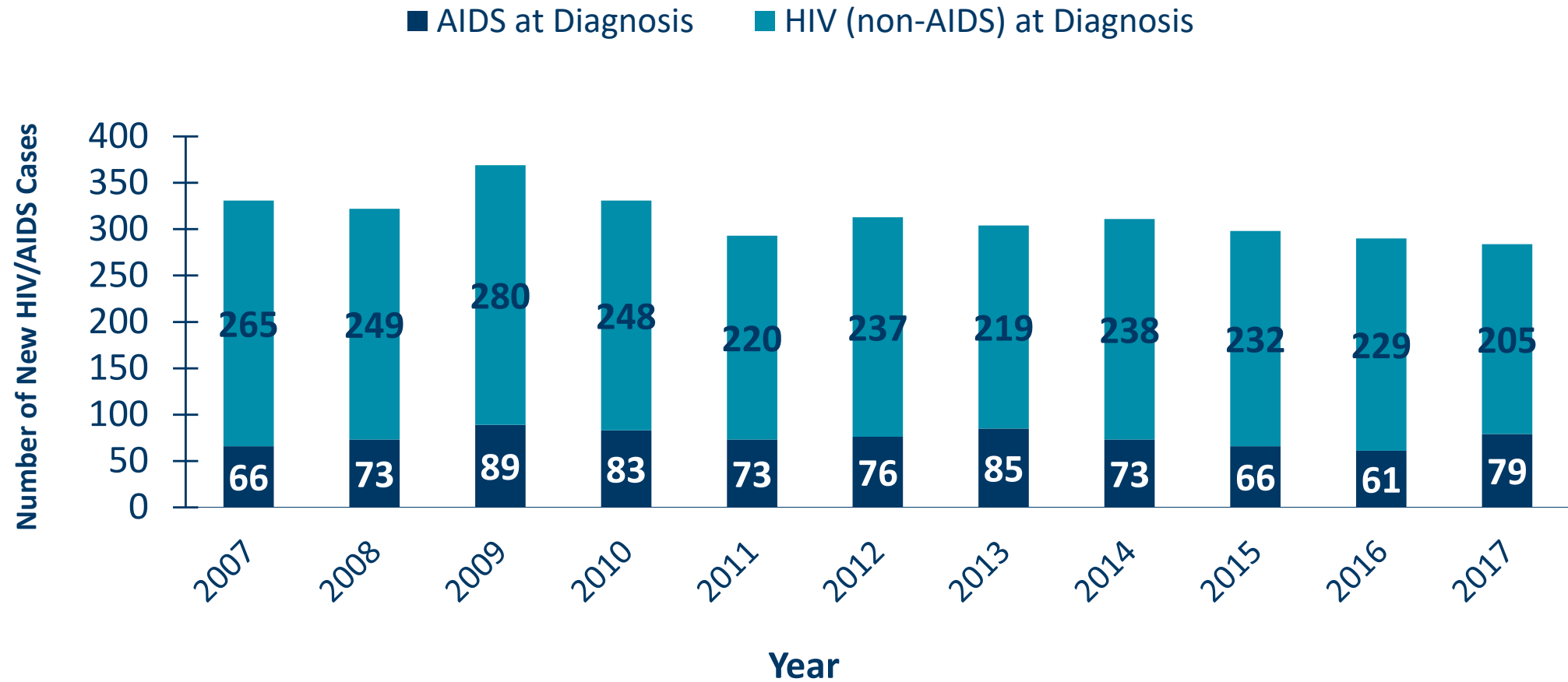
# New HIV Diagnoses, Deaths and Prevalent Cases by Year, 1996-2017



\*Includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year.

^Deaths in Minnesota among people with HIV/AIDS, regardless of location of diagnosis and cause.

# HIV (non-AIDS) and AIDS at Diagnosis by Year, 2007-2017



\*Includes all new cases of HIV infection (both HIV (non-AIDS) and AIDS at first diagnosis) diagnosed within a given calendar year.

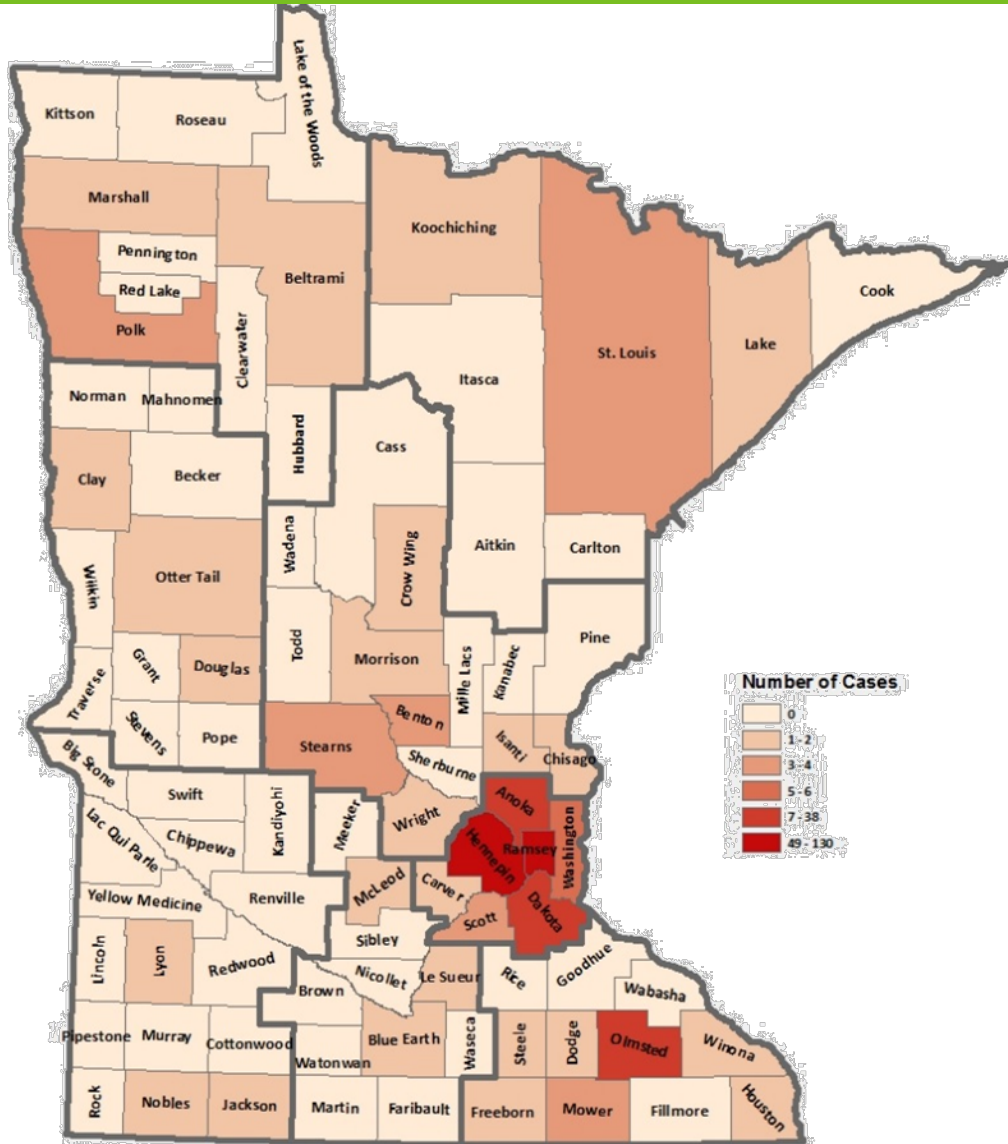
^Includes all new cases of AIDS diagnosed within a given calendar year, including AIDS at first diagnosis.

This includes refugees in the HIV+ Resettlement Program, as well as, other refugee/immigrants diagnosed with AIDS subsequent to their arrival in the United States.

# HIV Diagnoses\* in Minnesota by Person, Place, and Time

# Place

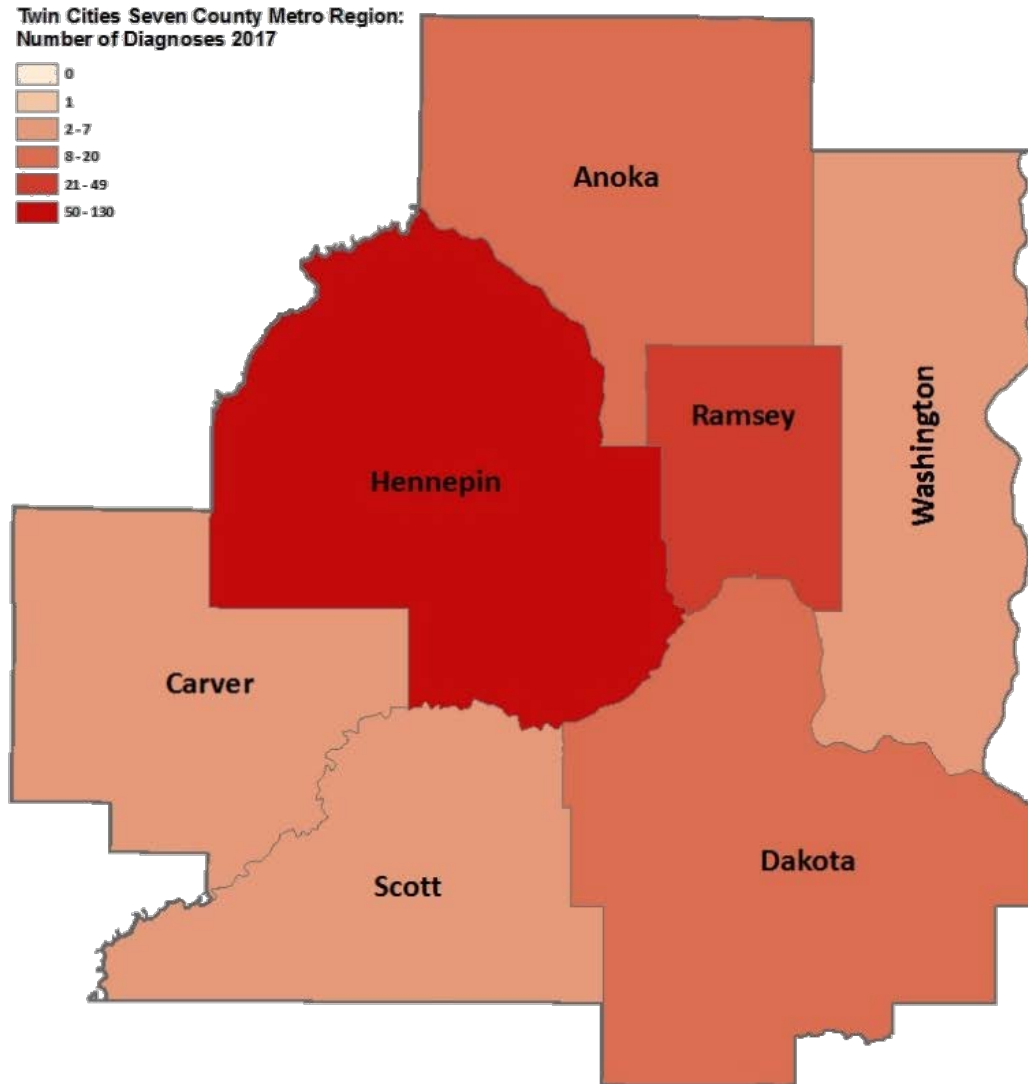
# HIV Diagnoses\* by County of Residence at Diagnosis, 2017



City of Minneapolis – 83 (29%)  
 City of St. Paul – 39 (14%)  
 Suburban# – 107 (38%)  
 Greater Minnesota – 55 (19%)  
 Total number = 284

\*HIV or AIDS at first diagnosis  
 # 7-county metro area, excluding the cities of Minneapolis and St. Paul

# HIV Diagnoses\* by County of Residence at Diagnosis, 2017 Seven-County Metro Area



City of Minneapolis – 83

City of St. Paul – 39

Suburban<sup>#</sup> – 107

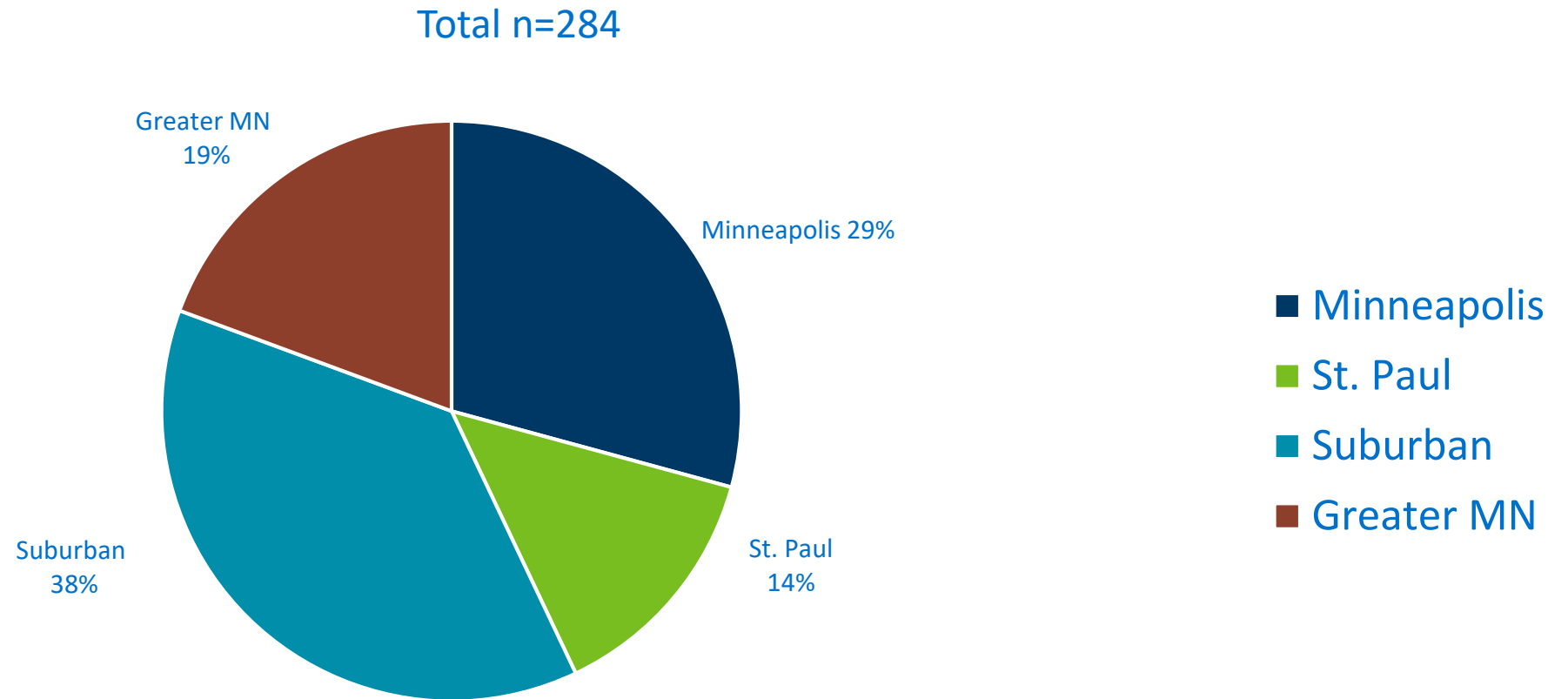
Total number (metro-region) = 229

\*HIV or AIDS at first diagnosis

<sup>#</sup> 7-county metro area, excluding the cities of Minneapolis and St. Paul

<sup>^</sup>Counties in which a state correctional facility is located.

# HIV Diagnoses\* in Minnesota by Residence at Diagnosis, 2017

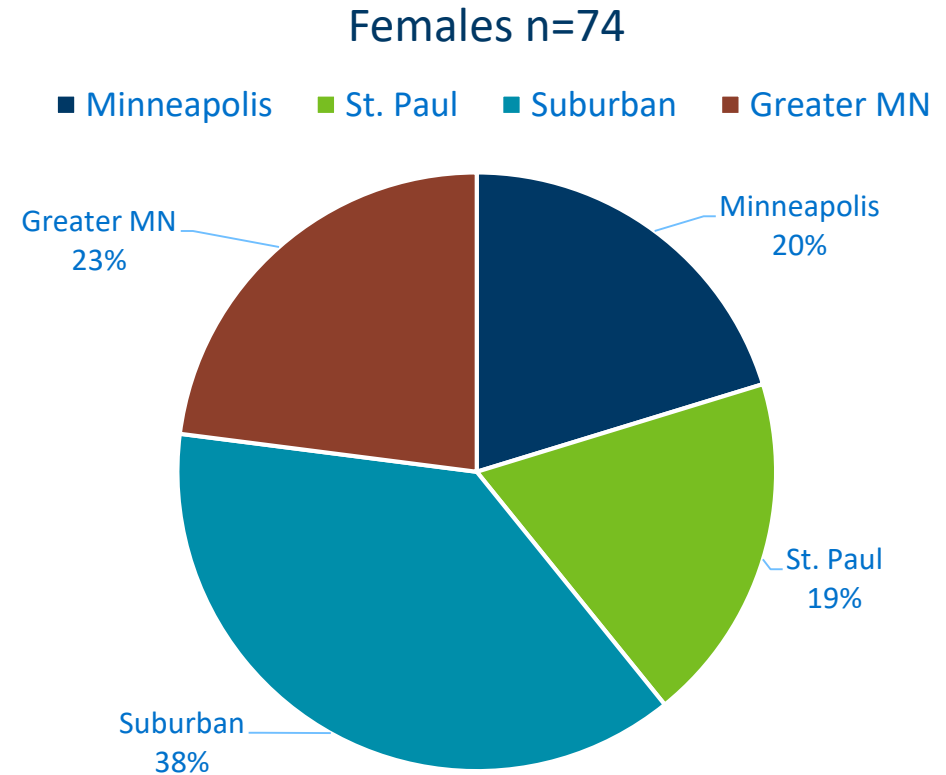
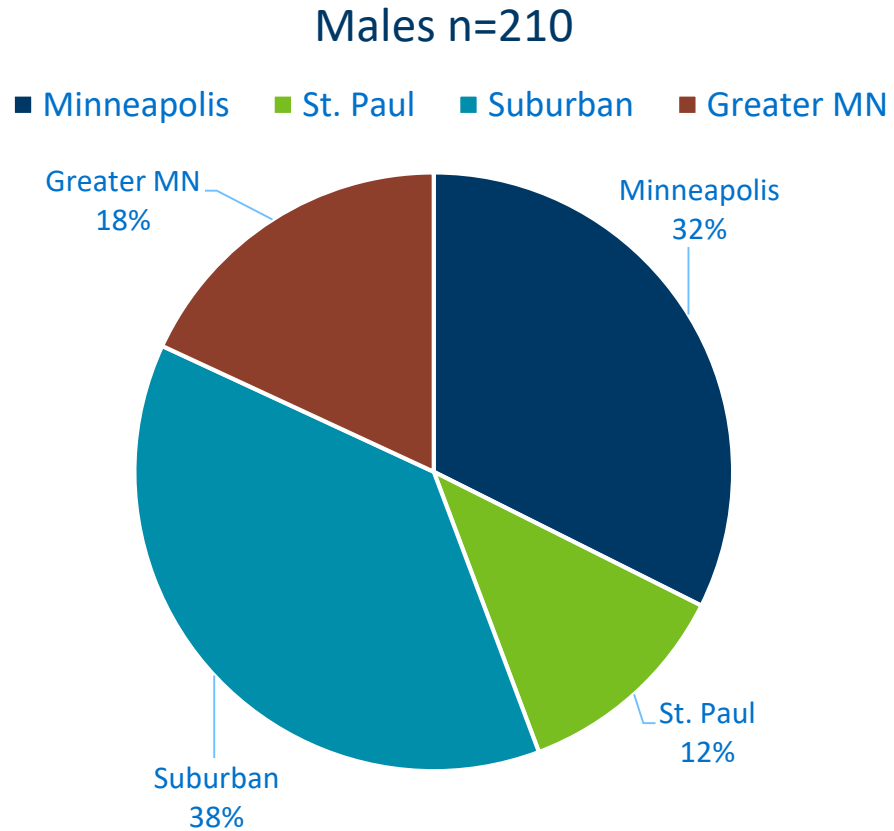


Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties.

Greater MN = All other Minnesota counties, outside the seven-county metro area.

\*HIV or AIDS at first diagnosis

# HIV Diagnoses\* in Minnesota by Gender and Residence at Diagnosis, 2017



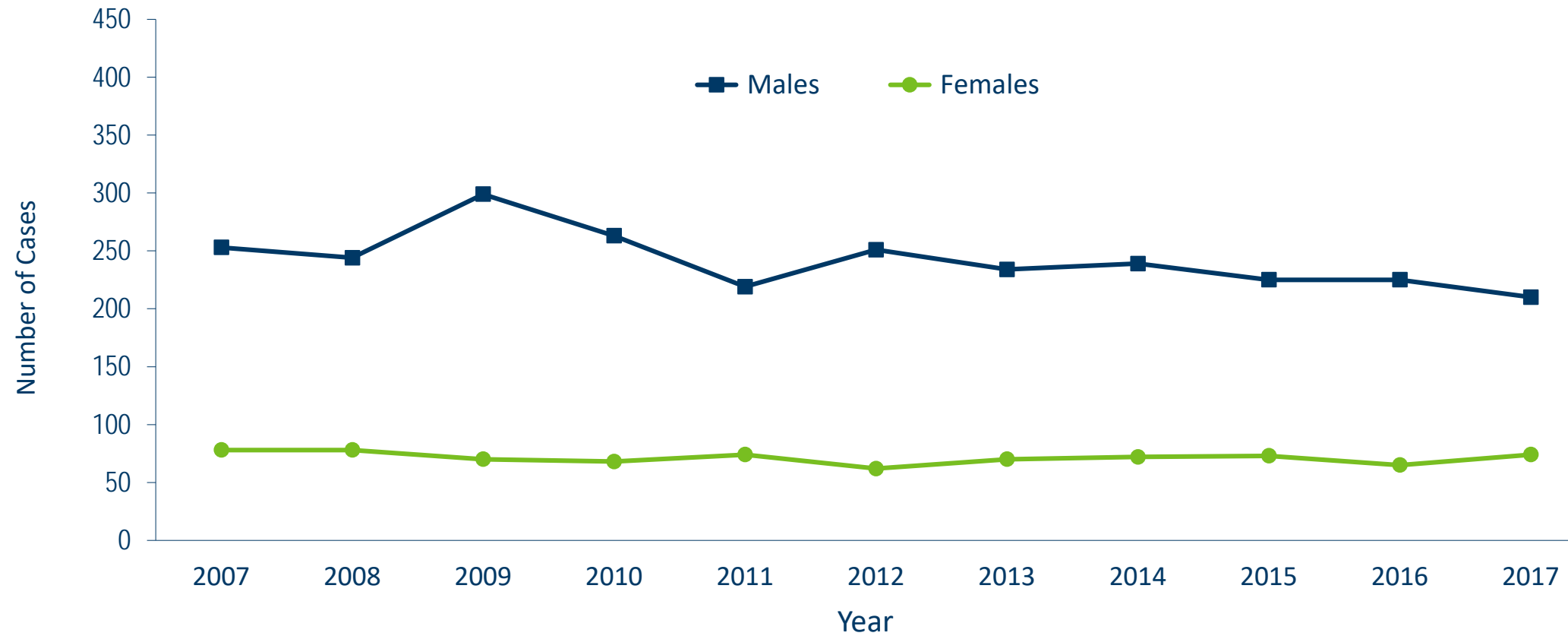
Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties.  
Greater MN = All other Minnesota counties, outside the seven-county metro area.

\*HIV or AIDS at first diagnosis



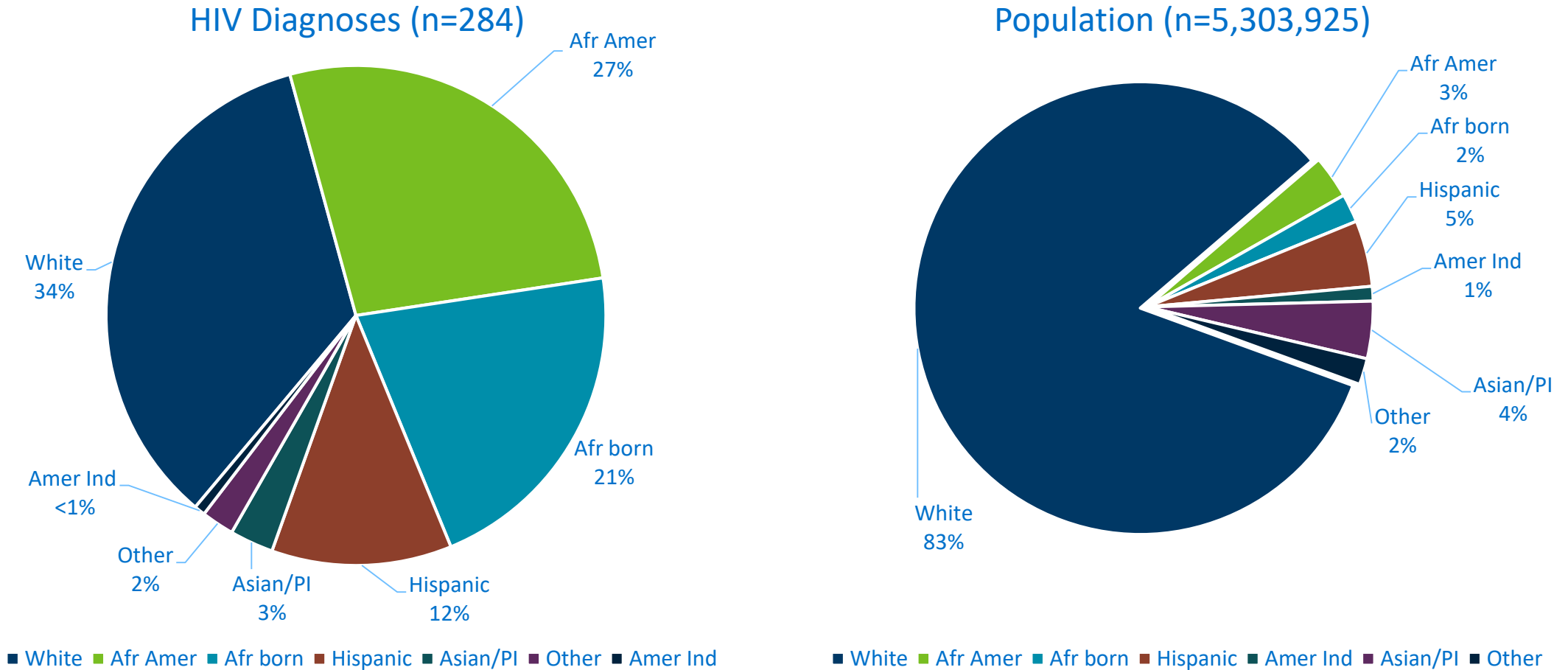
# Gender and Race/Ethnicity

# HIV Diagnoses\* by Gender and Year of Diagnosis 2007 - 2017



\*HIV or AIDS at first diagnosis

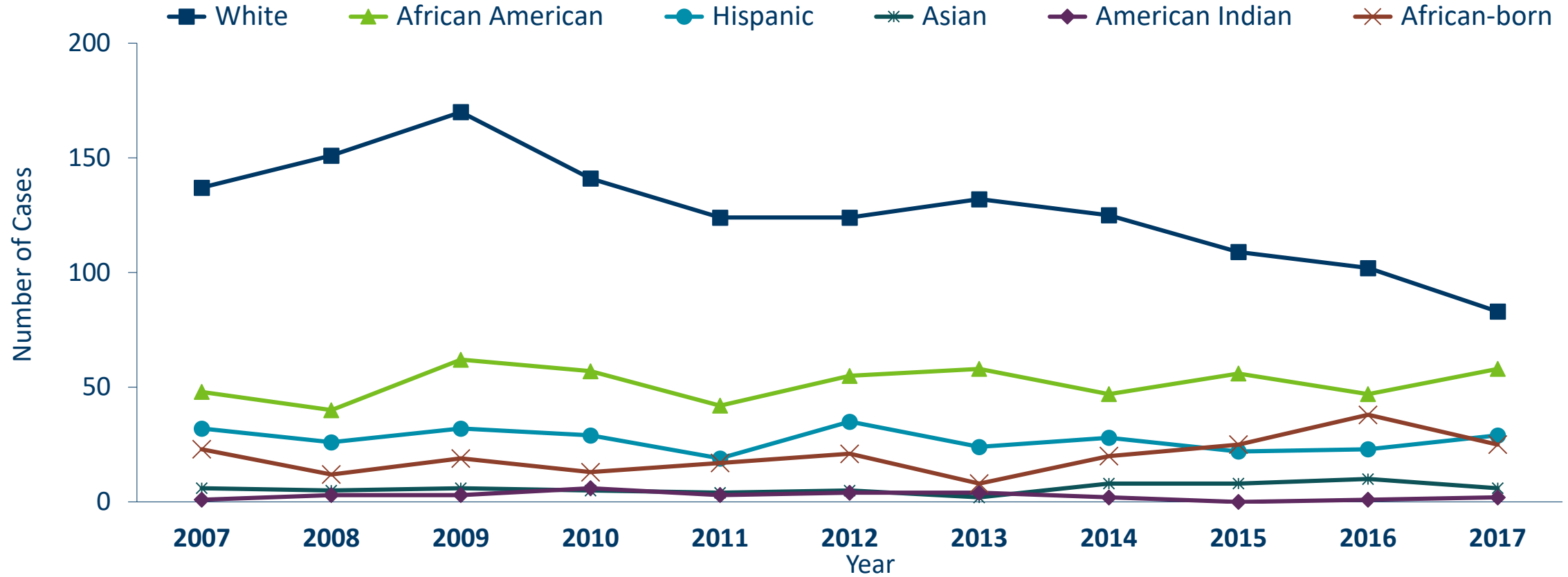
# HIV Diagnoses\* in Year 2017 and General Population in Minnesota by Race/Ethnicity



\* HIV or AIDS at first diagnosis † Population estimates based on 2010 U.S. Census data. (n = Number of persons)

Amer Ind = American Indian , Afr Amer = African American (Black, not African-born persons) , and Afr born = African-born (Black, African-born persons)

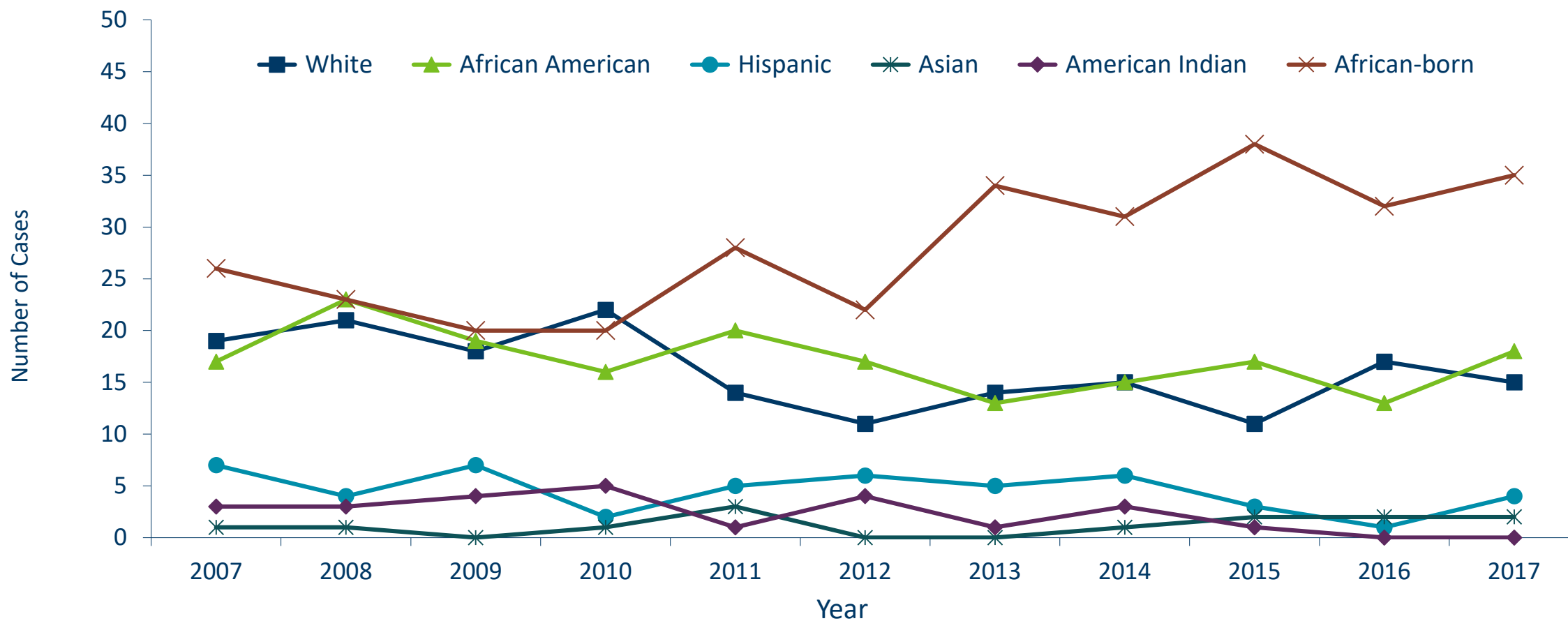
# HIV Diagnoses\* Among Males by Race/Ethnicity† and Year of Diagnosis 2007 - 2017



\* HIV or AIDS at first diagnosis

† "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks. Cases with unknown or multiple races are excluded.

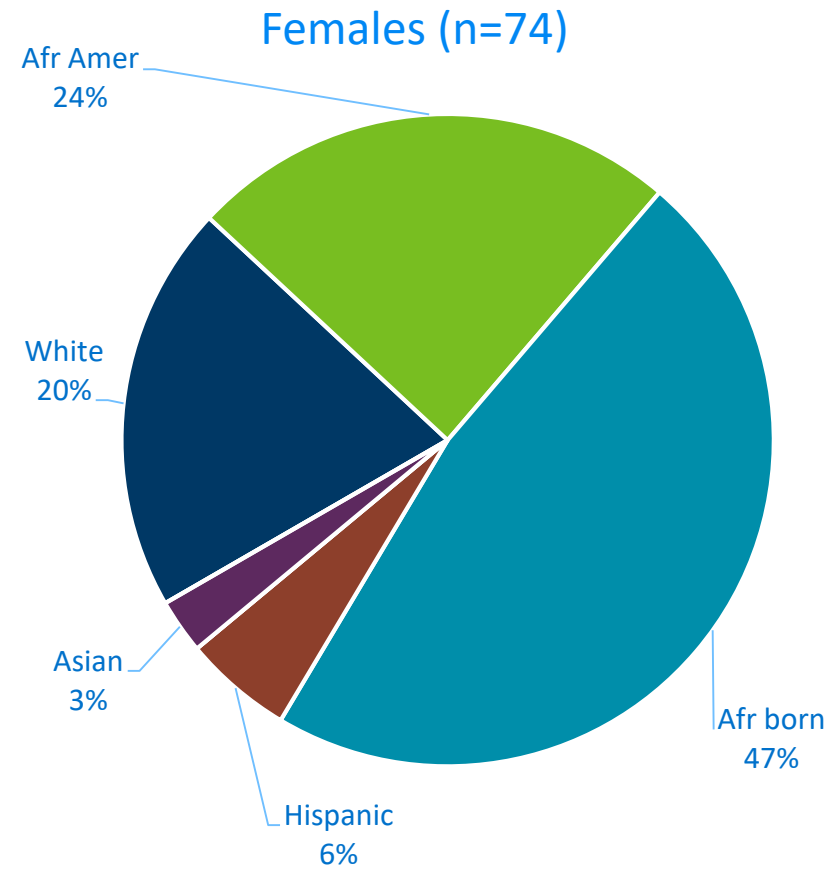
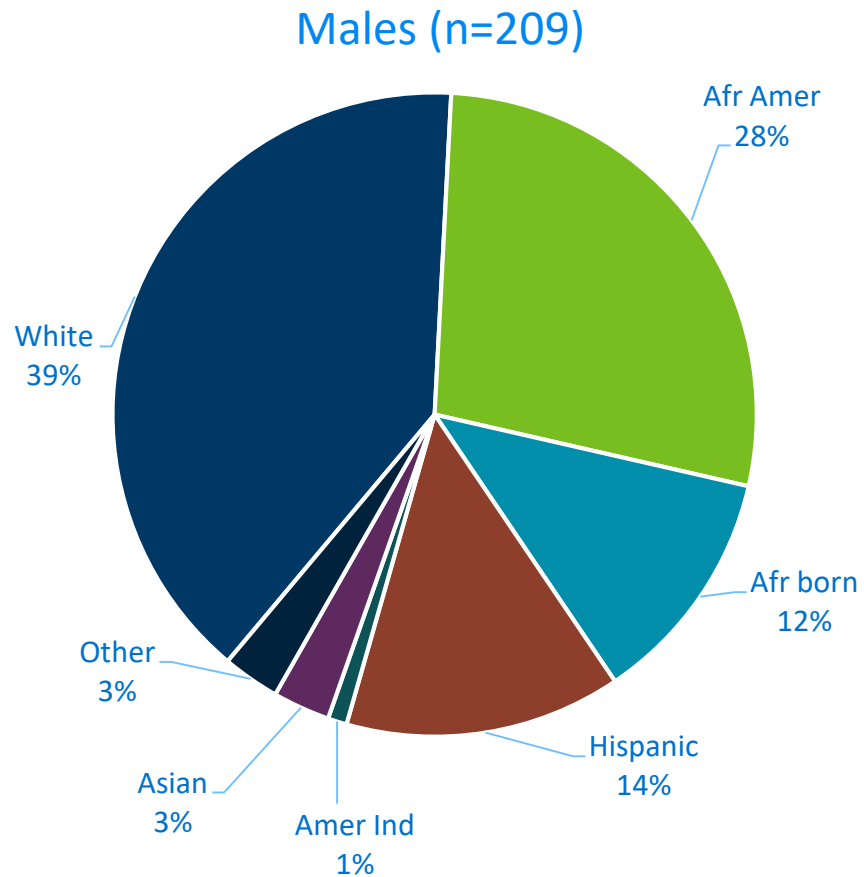
# HIV Diagnoses\* Among Females by Race/Ethnicity† and Year of Diagnosis 2007 – 2017



HIV or AIDS at first diagnosis

† “African-born” refers to Blacks who reported an African country of birth; “African American” refers to all other Blacks. Cases with unknown race are excluded.

# HIV Diagnoses\* Diagnosed in Year 2017 by Gender and Race/Ethnicity



\* HIV or AIDS at first diagnosis (n = Number of persons)

Amer Ind = American Indian, Afr Amer = African American (Black, not African-born persons), and Afr born = African-born (Black, African-born persons)

# Number of Cases and Rates (per 100,000 persons) of HIV Diagnoses\* by Race/Ethnicity† Minnesota, 2017

Race/Ethnicity	Cases	%	Rate
White, non-Hispanic	98	35%	2.2
Black, African-American	76	27%	46.6
Black, African-born	60	21%	55.6 <sup>††</sup>
Hispanic	33	12%	13.2
American Indian	2	0.7%	#
Asian/Pacific Islander	8	3%	3.7
Other <sup>^</sup>	7	2%	6.0
<b>Total</b>	<b>284</b>	<b>100%</b>	<b>5.3</b>

\* HIV or AIDS at first diagnosis; 2010 U.S. Census Data used for rate calculations.

† “African-born” refers to Blacks who reported an African country of birth; “African American” refers to all other Blacks.

†† Estimate of 107,880 Source: 2010-2012 American Community Survey. Additional calculations by the State Demographic Center.

(Note: Rates for black, African-American and black, African-born are not comparable to previous years due to an increase in the estimate for black, African-born population.)

<sup>^</sup> Other = Multi-racial persons or persons with unknown or missing race

# Number of cases too small to calculate reliable rate

# Number of Cases of Adult and Adolescent HIV Diagnoses\*\* by Gender Identity and Risk† Minnesota, 2017

Gender/Risk	Cases	%	Rate
Men (Total)	(204)	72%	7.8
MSM†	136	(67%)	150.0
Non-MSM	68	(33%)	2.7
Women	70	25%	2.6
Transgender ^ (Total)		3%	x
Male to Female	6	(67%)	x
Female to Male	3	(33%)	x
<b>Total</b>	<b>283</b>	<b>100%</b>	<b>5.3</b>

\*\*HIV or AIDS at first diagnosis over the age of 13 (1 infant not included)

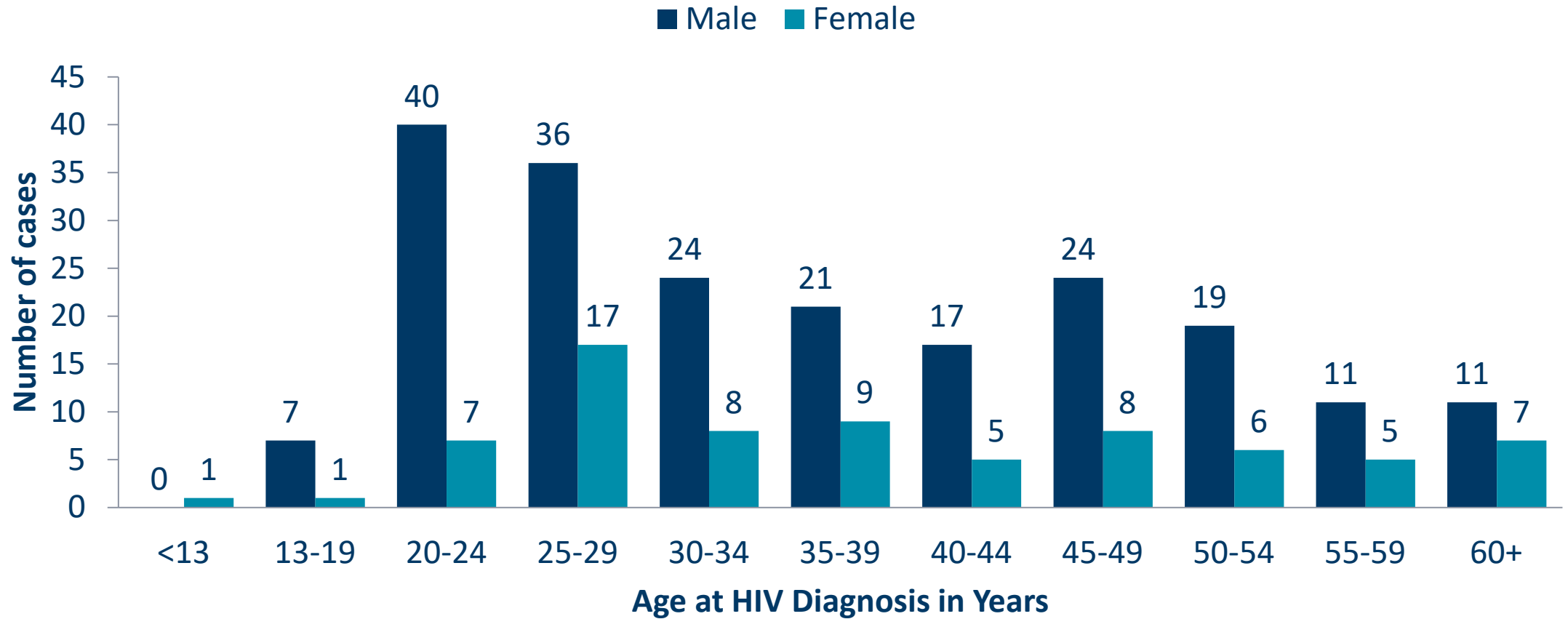
† “MSM” refers to both MSM and MSM/IDU. Estimate of 90,663

^ No current transgender estimate available



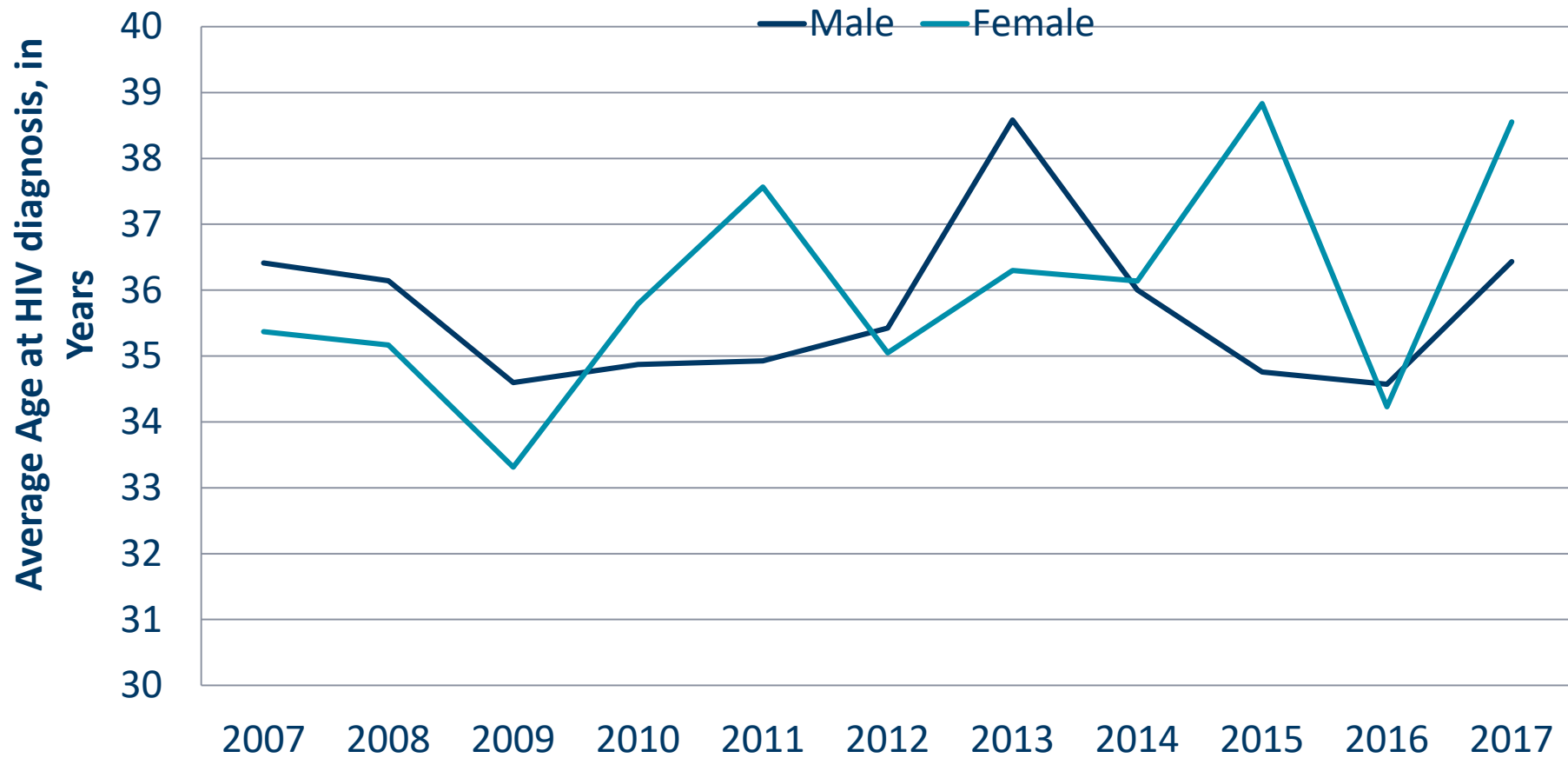
# Age

# Age at HIV Diagnosis\* by Sex at Birth, Minnesota, 2017



\*HIV or AIDS at first diagnosis

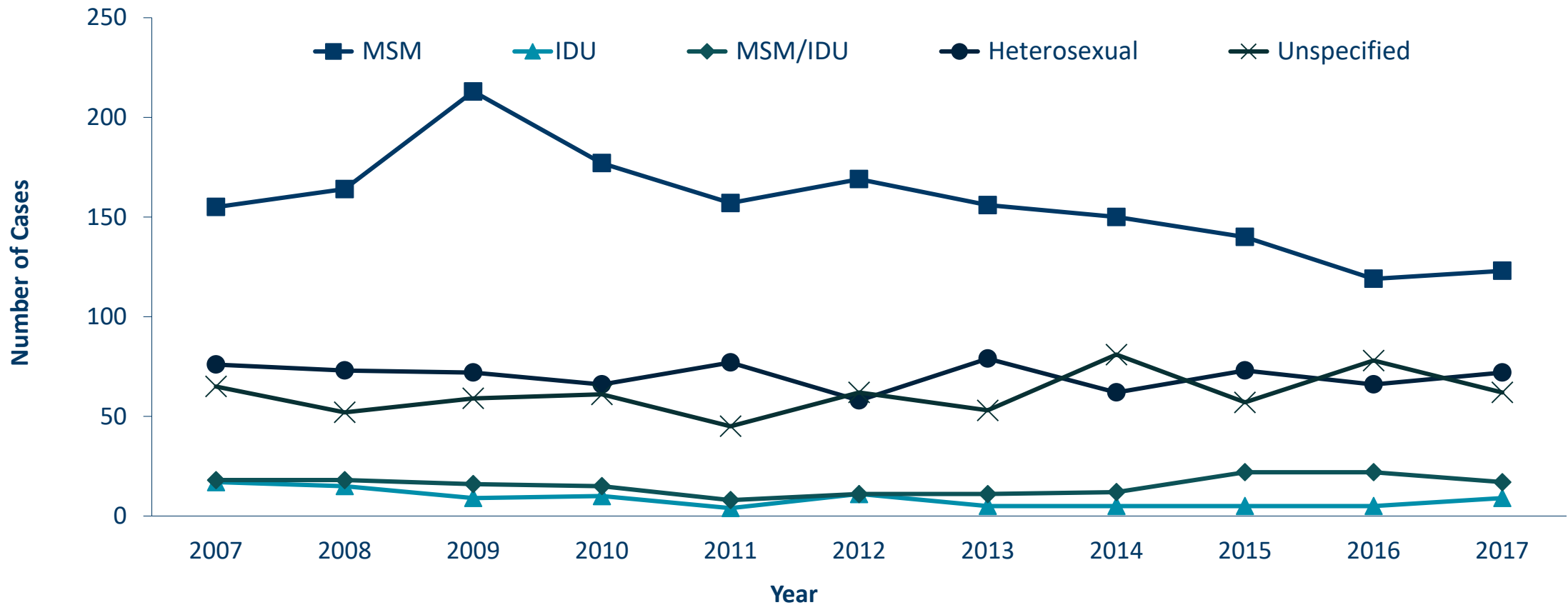
# Average Age at HIV Diagnosis\* by Sex at Birth, 2007-2017



\*HIV or AIDS at first diagnosis

# Mode of Exposure

# HIV Diagnoses\* by Mode of Exposure and Year, 2007 - 2017



\*HIV or AIDS at first diagnosis

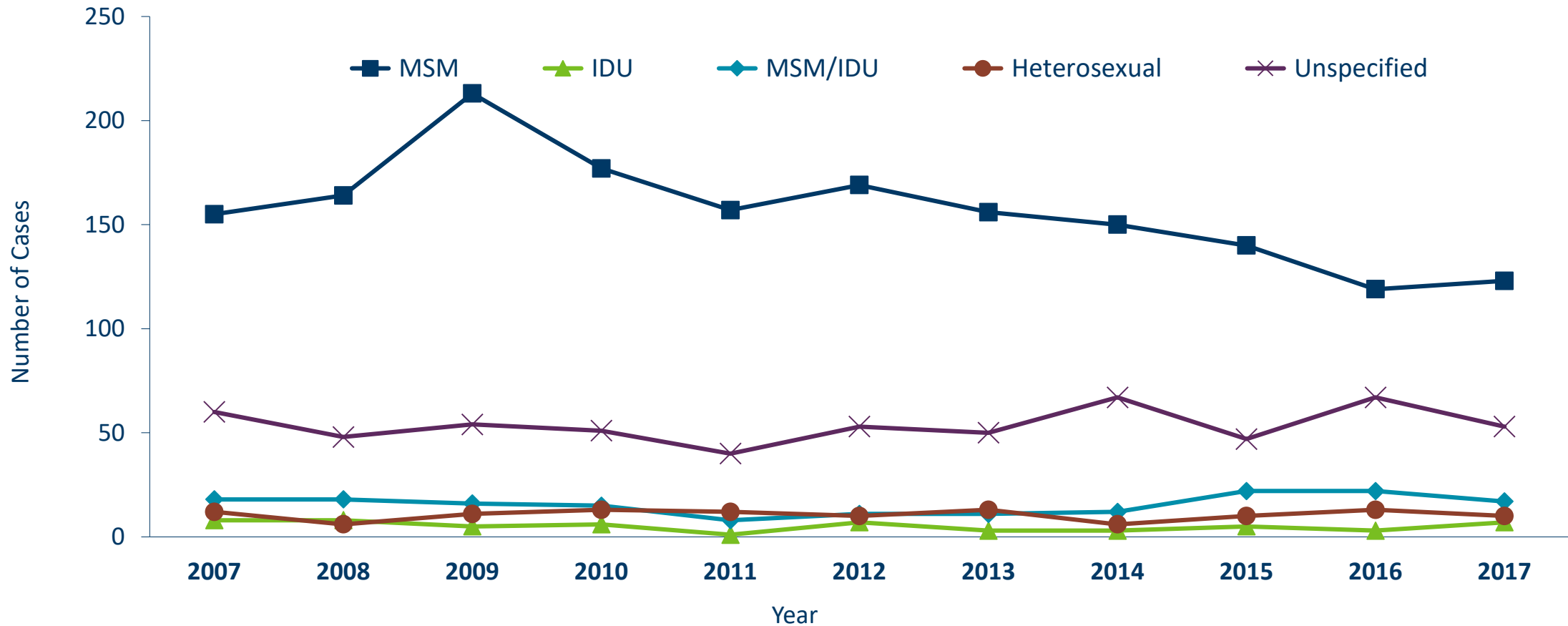
MSM = Men who have sex with men

IDU = Injecting drug use

Heterosexual = Heterosexual contact

Unspecified = No mode of exposure ascertained

# HIV Diagnoses\* Among Males by Mode of Exposure and Year 2007 - 2017



\* HIV or AIDS at first diagnosis

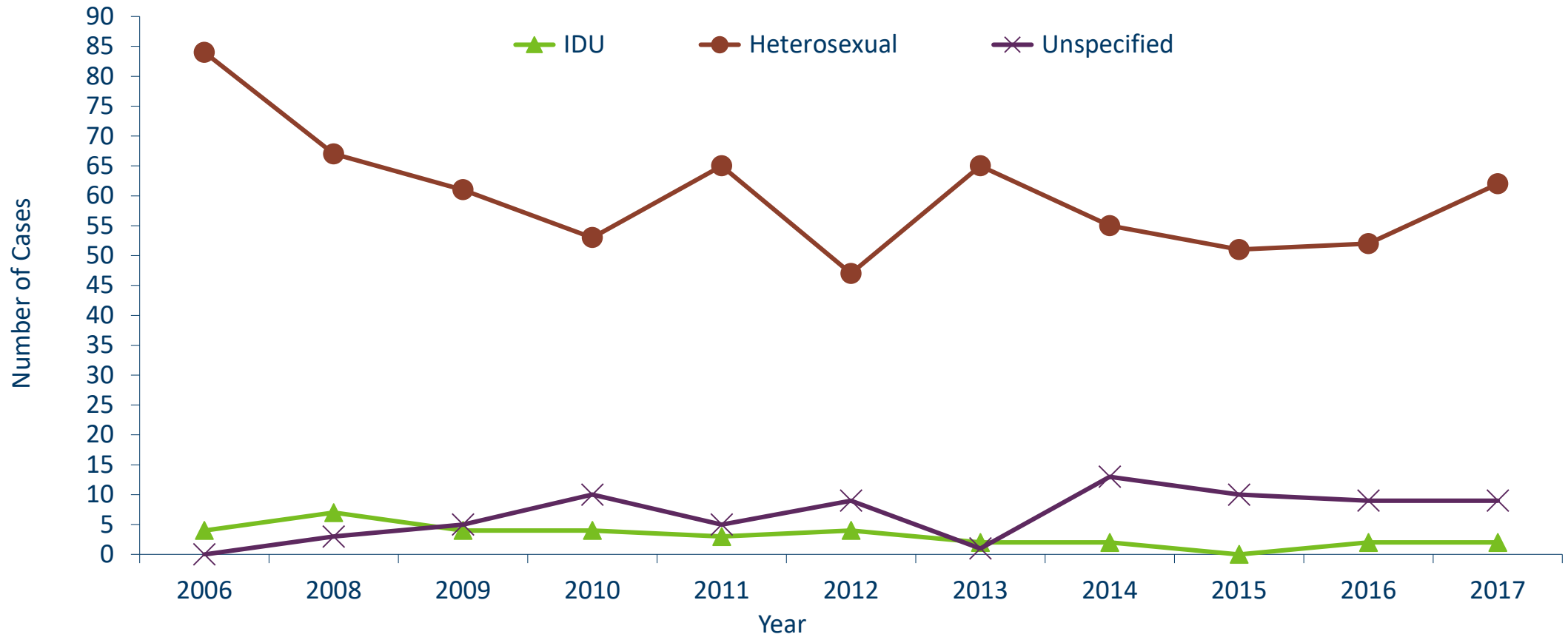
MSM = Men who have sex with men

IDU = Injecting drug use

Heterosexual = Heterosexual contact

Unspecified = No mode of exposure ascertained

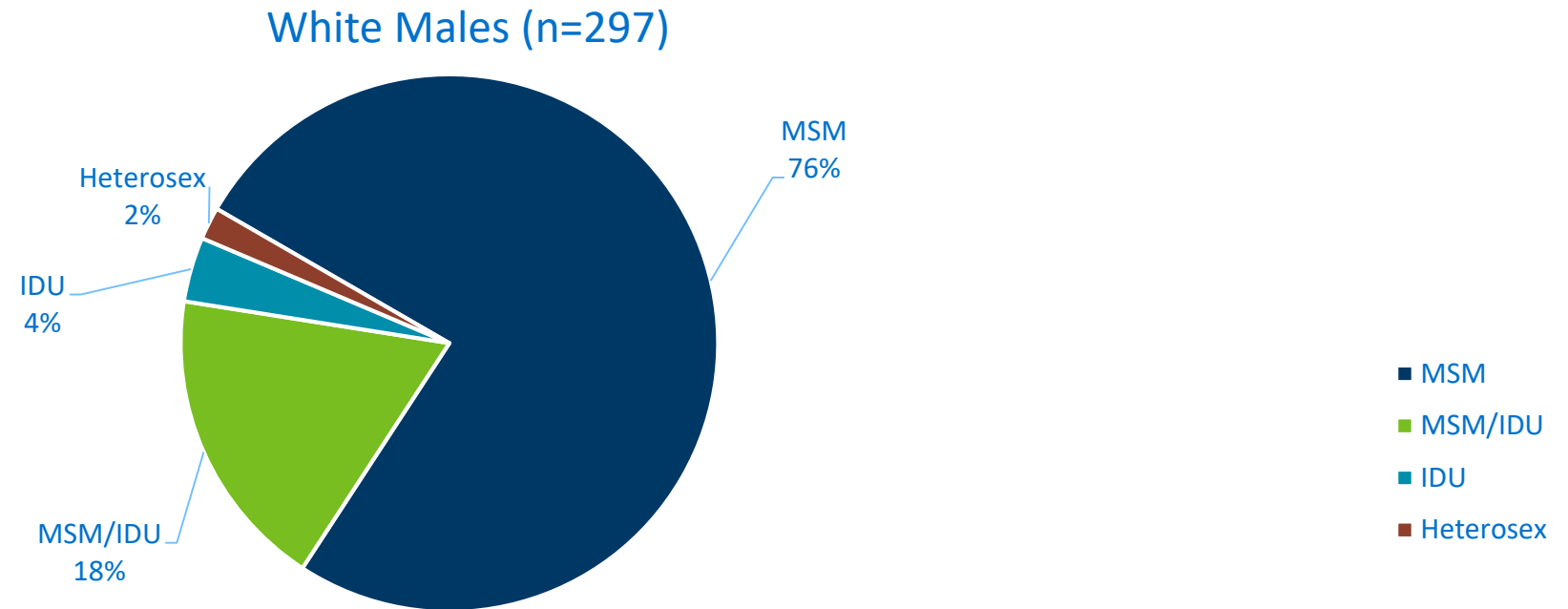
# HIV Diagnoses\* Among Females by Mode of Exposure and Year of Diagnosis 2007 - 2017



\* HIV or AIDS at first diagnosis

IDU = Injecting drug use    Heterosexual = Heterosexual contact    Unspecified = No mode of exposure ascertained

# HIV Diagnoses\*: White Males by Estimated Mode of Exposure† 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

Heterosex = Heterosexual contact

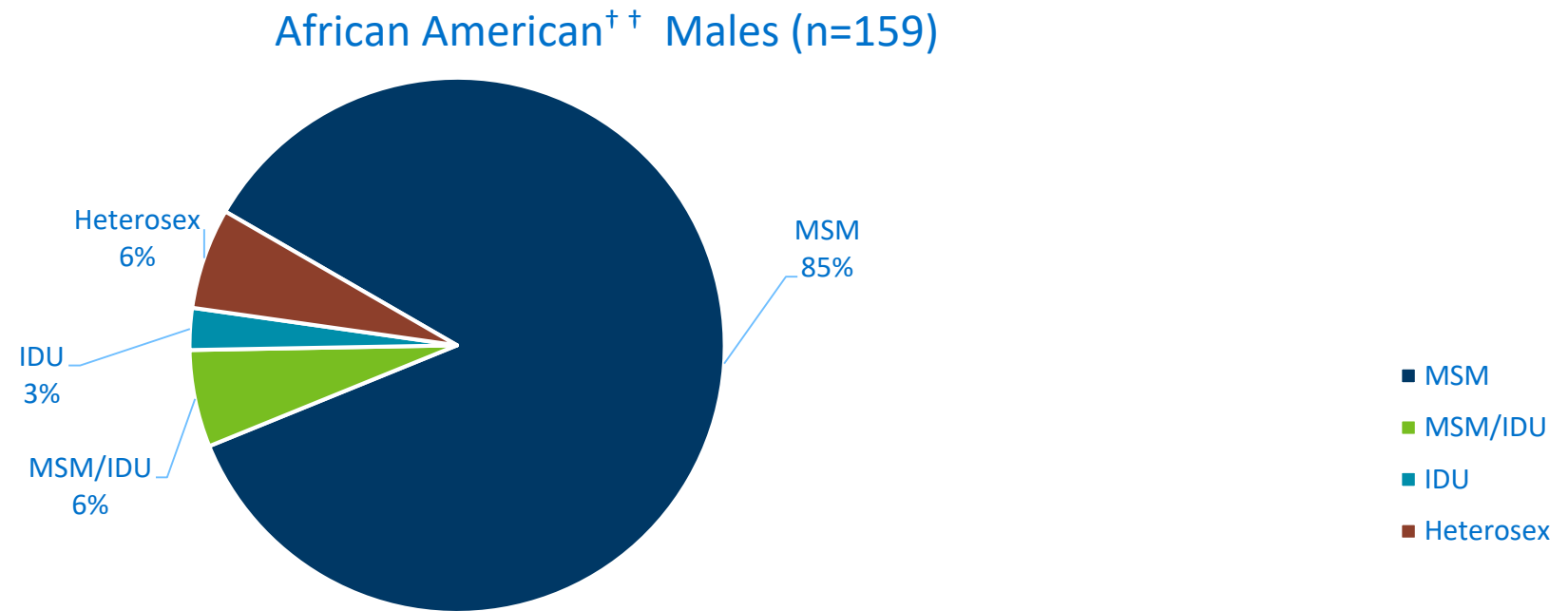
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.



# HIV Diagnoses\*: African American Males by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

Heterosex = Heterosexual contact

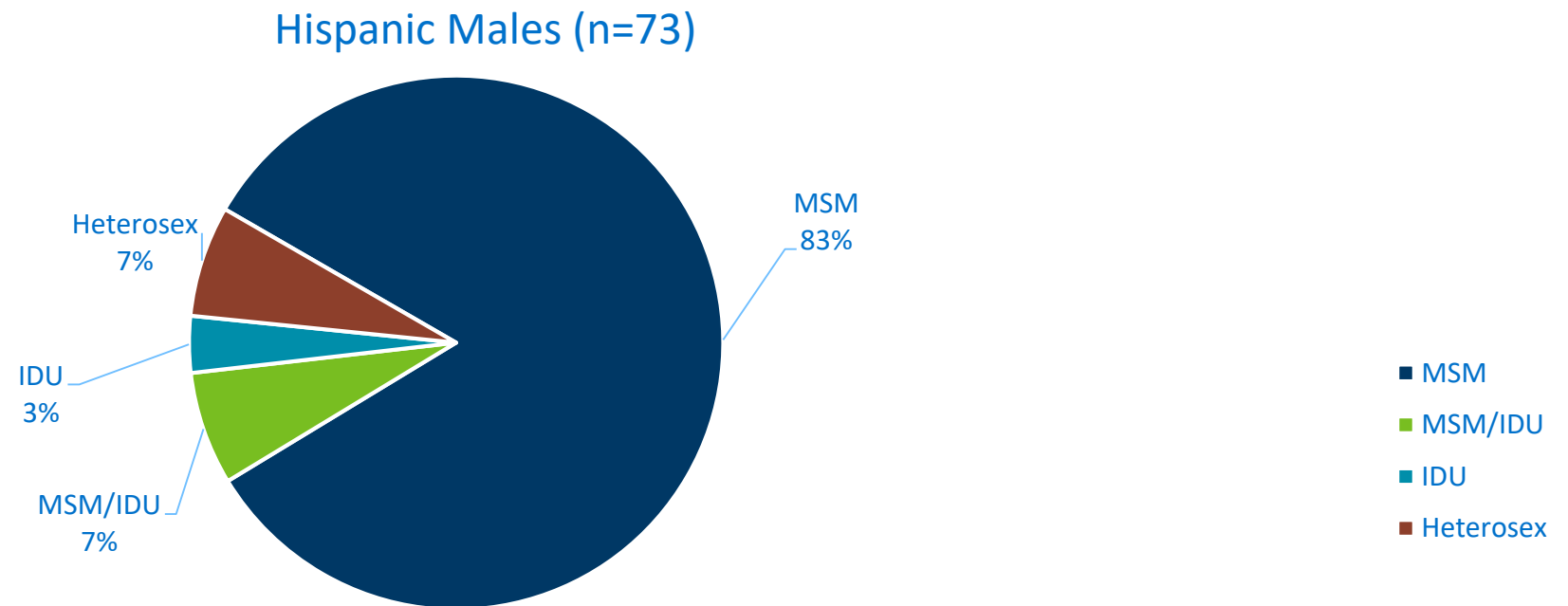
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

<sup>††</sup> Refers to Black, African American (not African-born) males.

# HIV Diagnoses\*: Hispanic Males by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

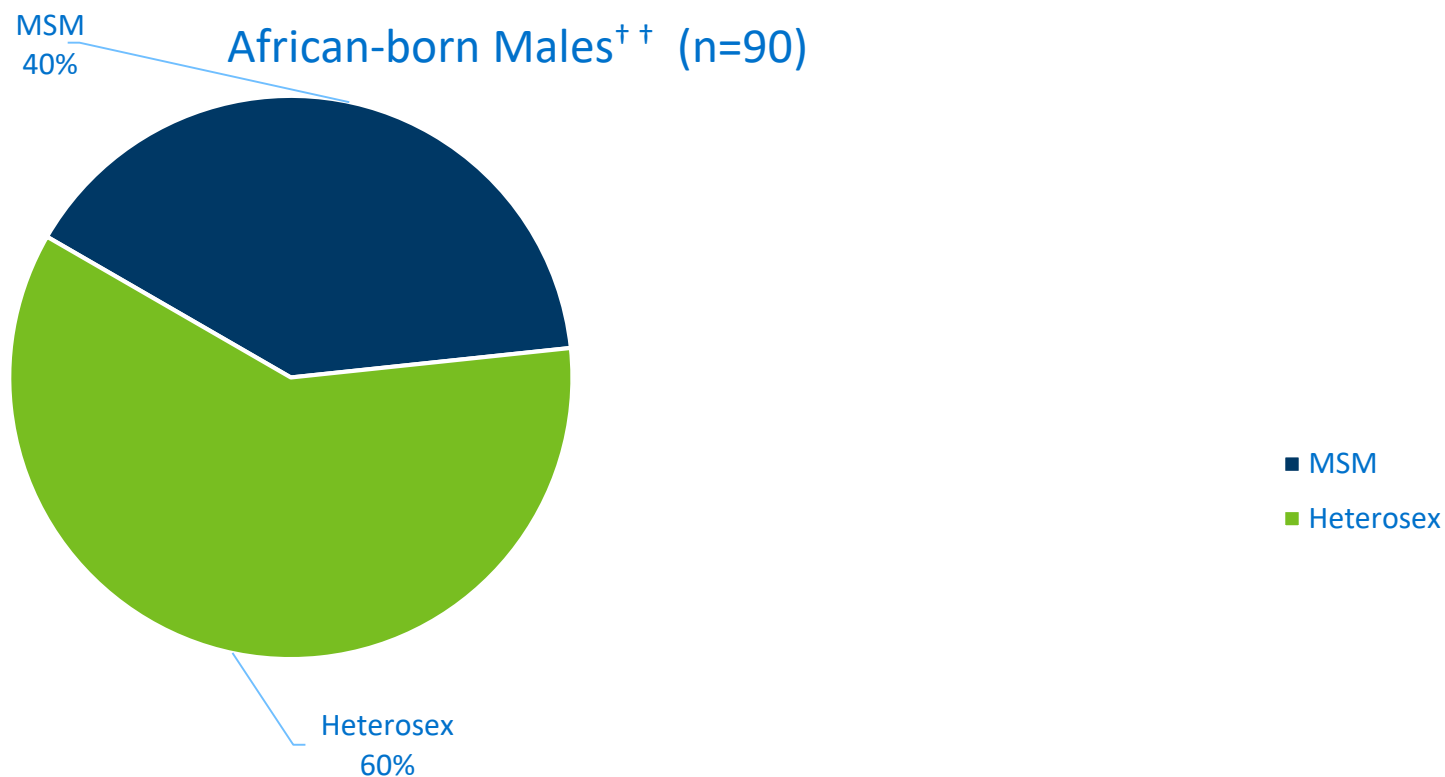
Heterosex = Heterosexual contact

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

# HIV Diagnoses\*: African-born Males by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

Heterosex = Heterosexual contact

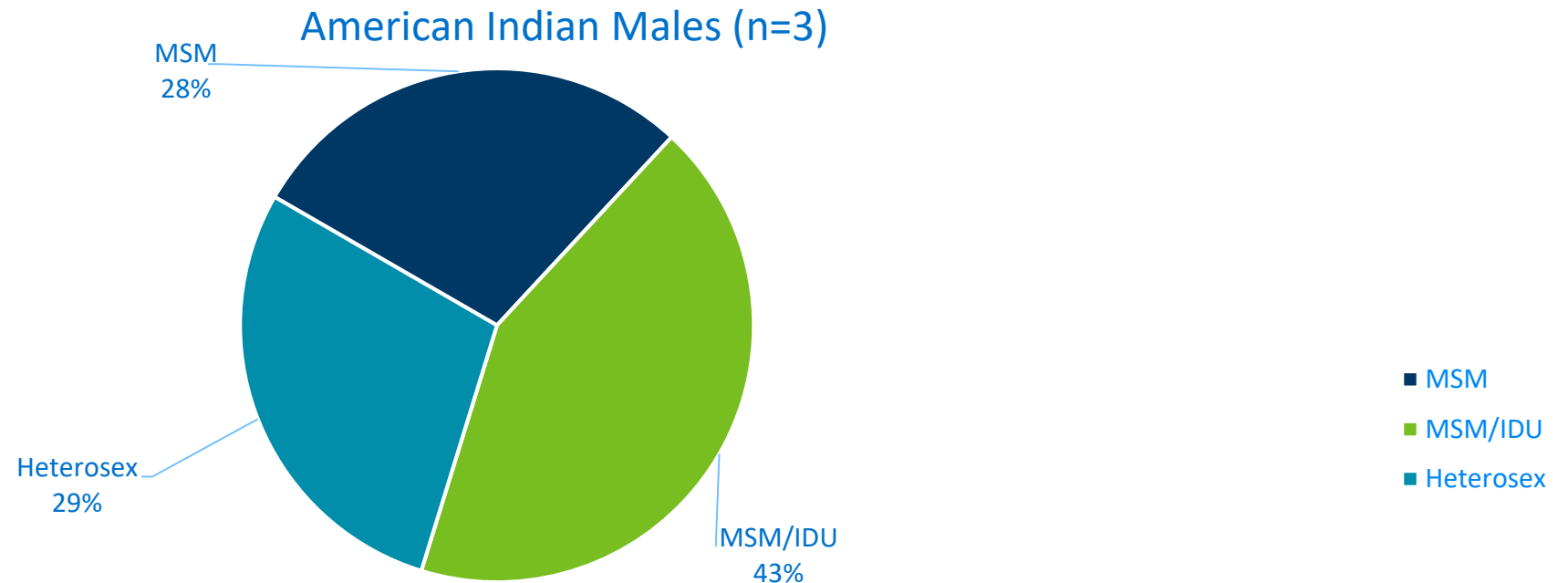
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

<sup>††</sup> Refers to Black, African-born (not African-American) males.

# HIV Diagnoses\*: American Indian Males by Estimated Mode of Exposure† 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

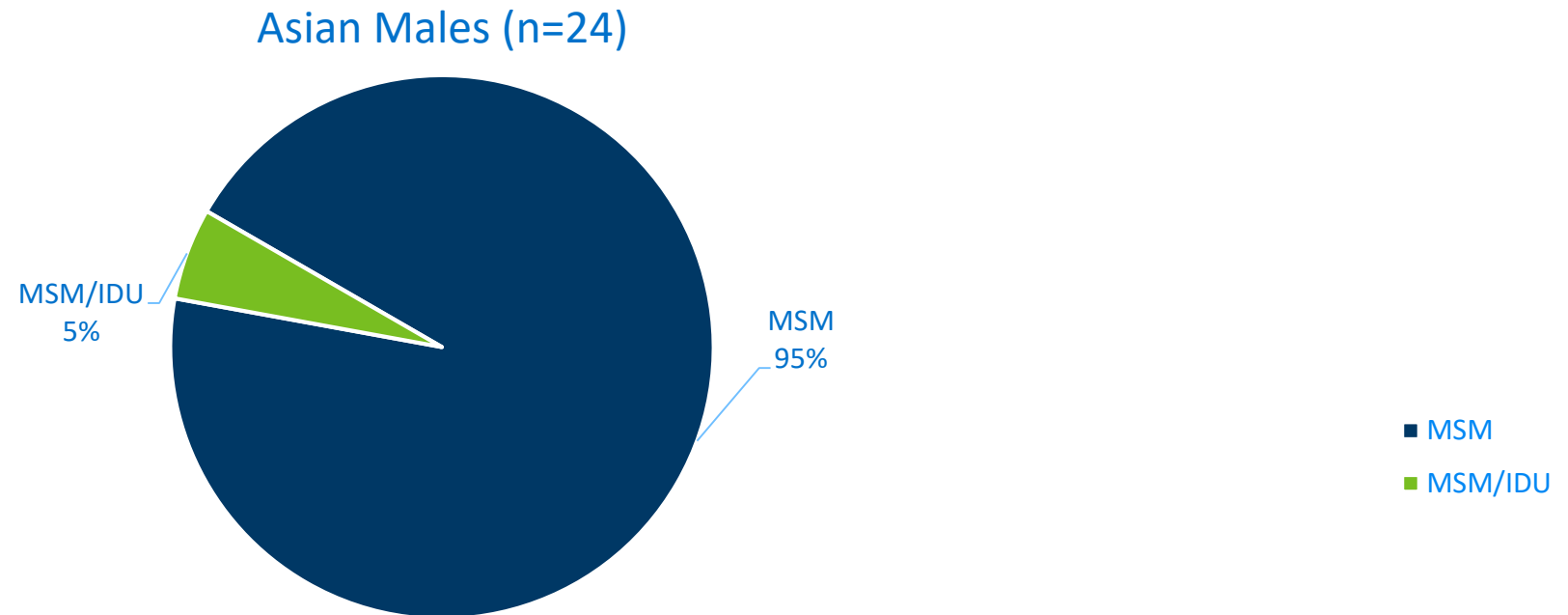
Heterosex = Heterosexual contact

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes

# HIV Diagnoses\*: Asian Males by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined



n = Number of persons

MSM = Men who have sex with men

IDU = Injecting drug use

Heterosex = Heterosexual contact

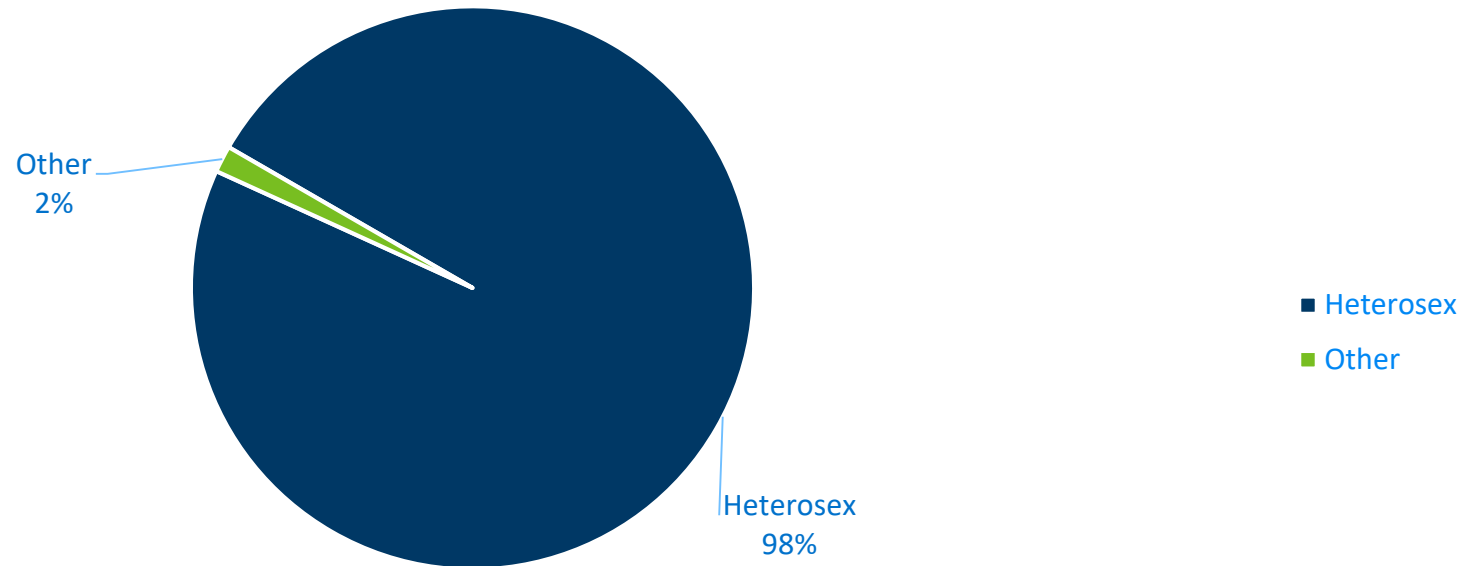
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

# HIV Diagnoses\*: African-born Females by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined

African-born Females<sup>††</sup> (n=93 )



n = Number of persons

IDU = Injecting drug use

Heterosex = Heterosexual contact

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

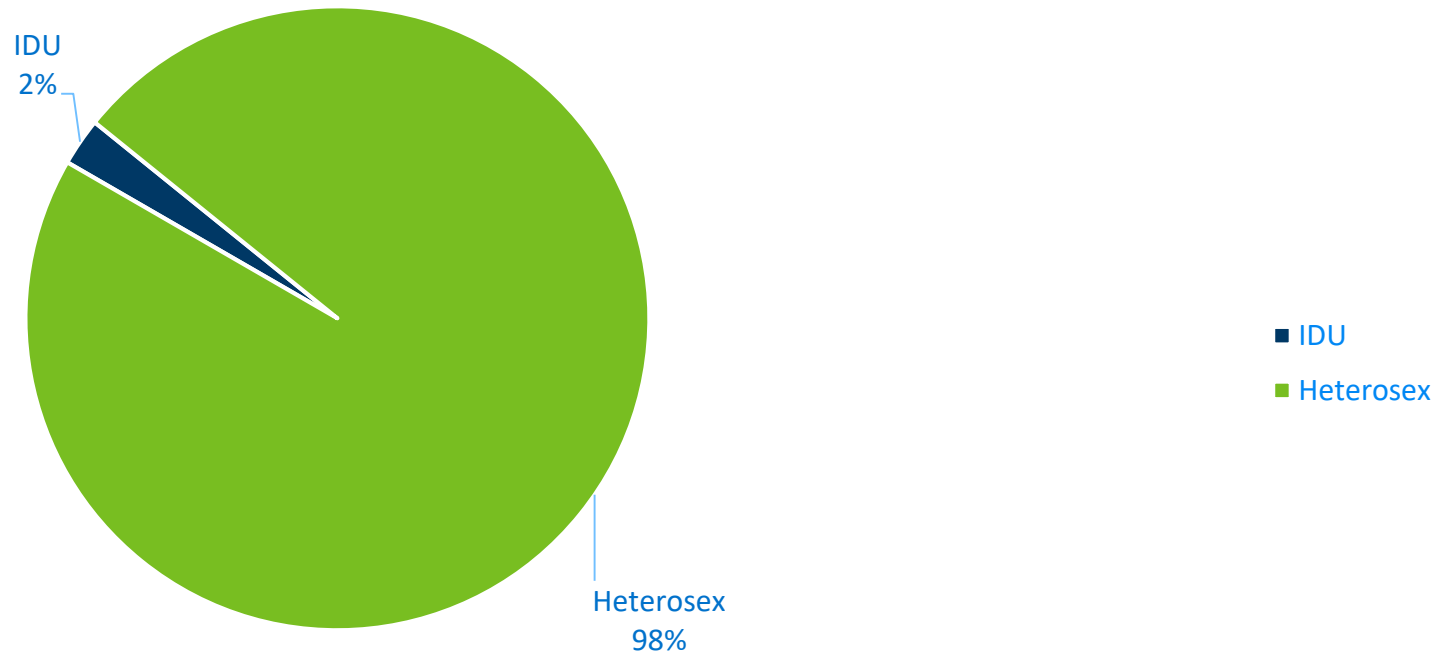
\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

<sup>††</sup> Refers to Black, African-born (not African-American) females.

# HIV Diagnoses\*: African American Females by Estimated Mode of Exposure<sup>†</sup> 2015–2017 combined

African American Females<sup>††</sup> (n=46)



n = Number of persons

IDU = Injecting drug use

Heterosex = Heterosexual contact

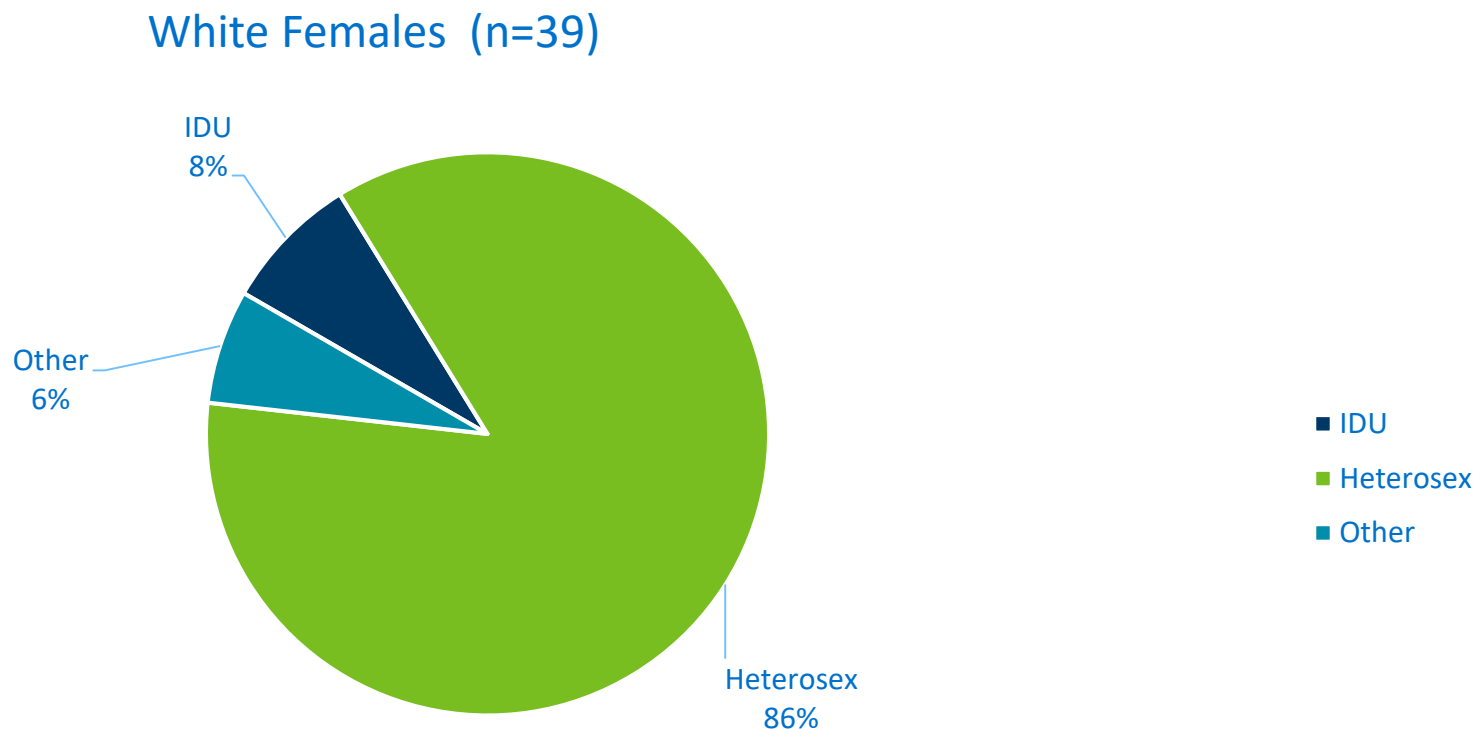
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

<sup>†</sup> Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

<sup>††</sup> Refers to Black, African-American (not African-born) females.

# HIV Diagnoses\*: White Females by Estimated Mode of Exposure† 2015–2017 combined



n = Number of persons

IDU = Injecting drug use

Heterosex = Heterosexual contact

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

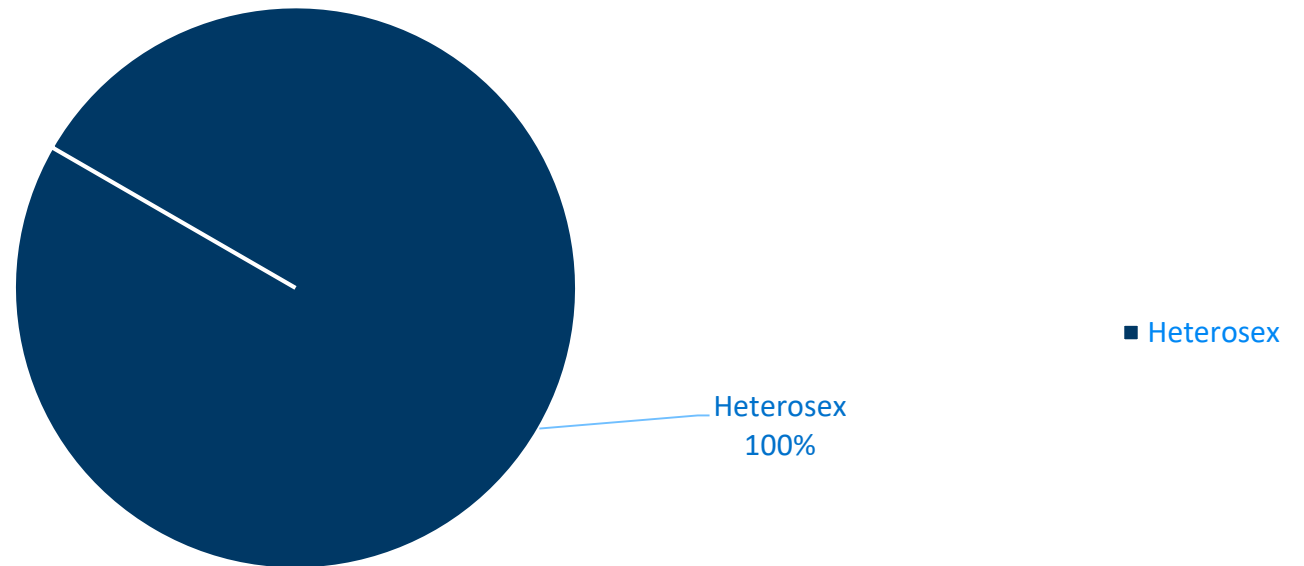
\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.



# HIV Diagnoses\*: Hispanic Females by Estimated Mode of Exposure† 2015–2017 combined

Hispanic Females (n=9)



n = Number of persons

IDU = Injecting drug use

Heterosex = Heterosexual contact

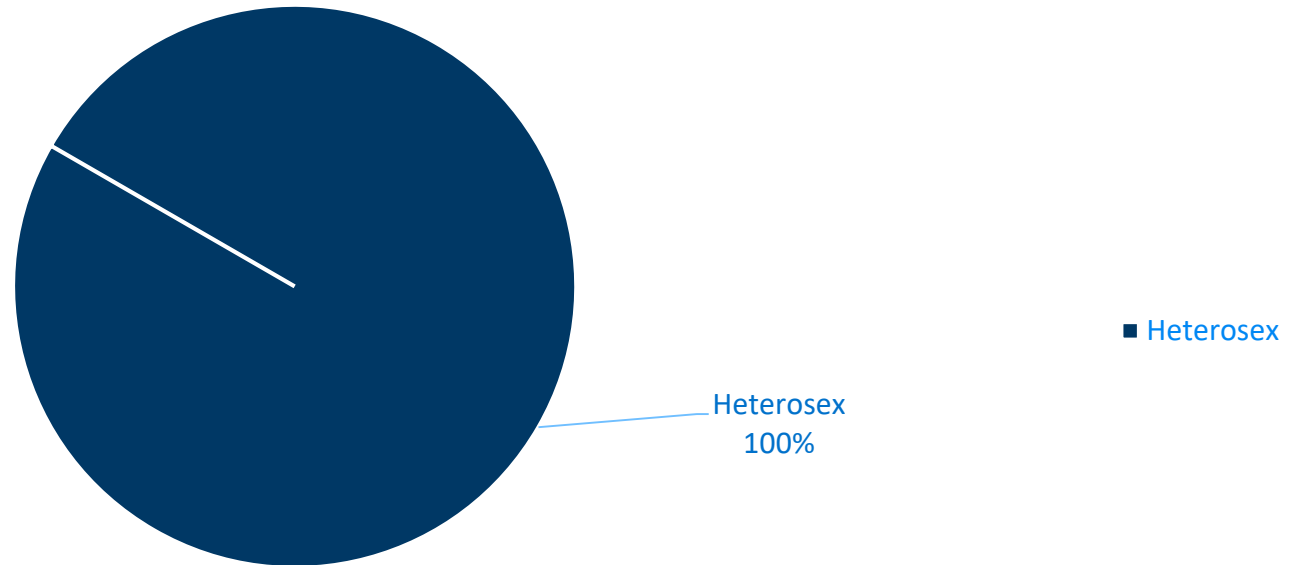
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

# HIV Diagnoses\*: American Indian Females by Estimated Mode of Exposure† 2015–2017 combined

American Indian Females (n=1)



n = Number of persons

IDU = Injecting drug use

Heterosex = Heterosexual contact

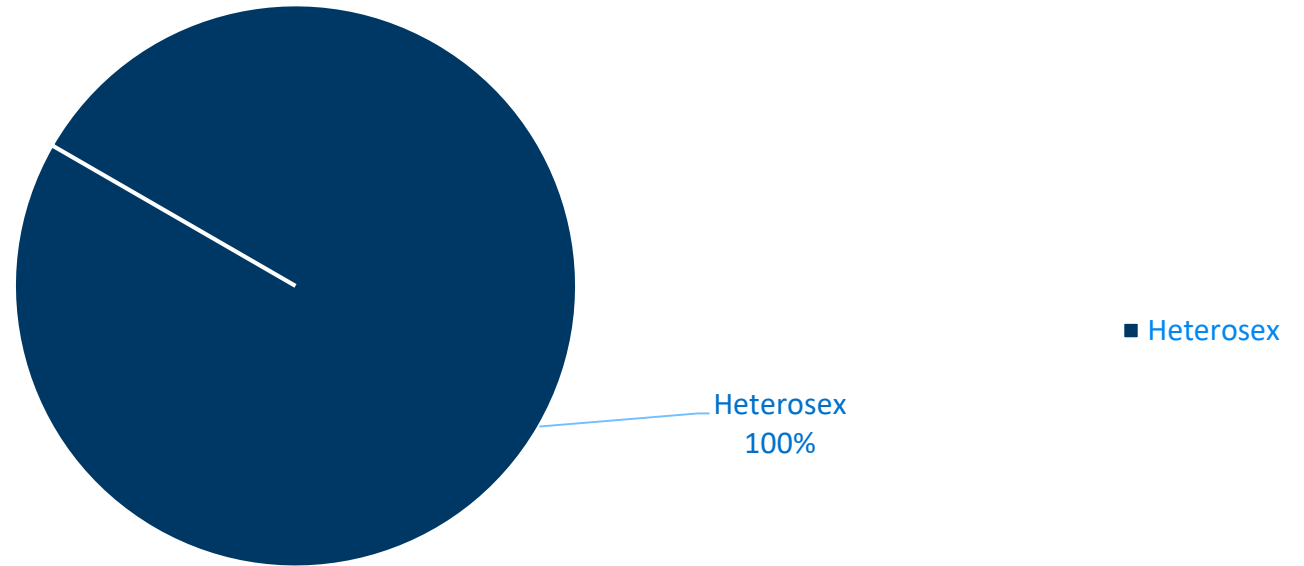
Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

# HIV Diagnoses\*: Asian Females by Estimated Mode of Exposure† 2015–2017 combined

Asian Females (n=4)



n = Number of persons

IDU = Injecting drug use

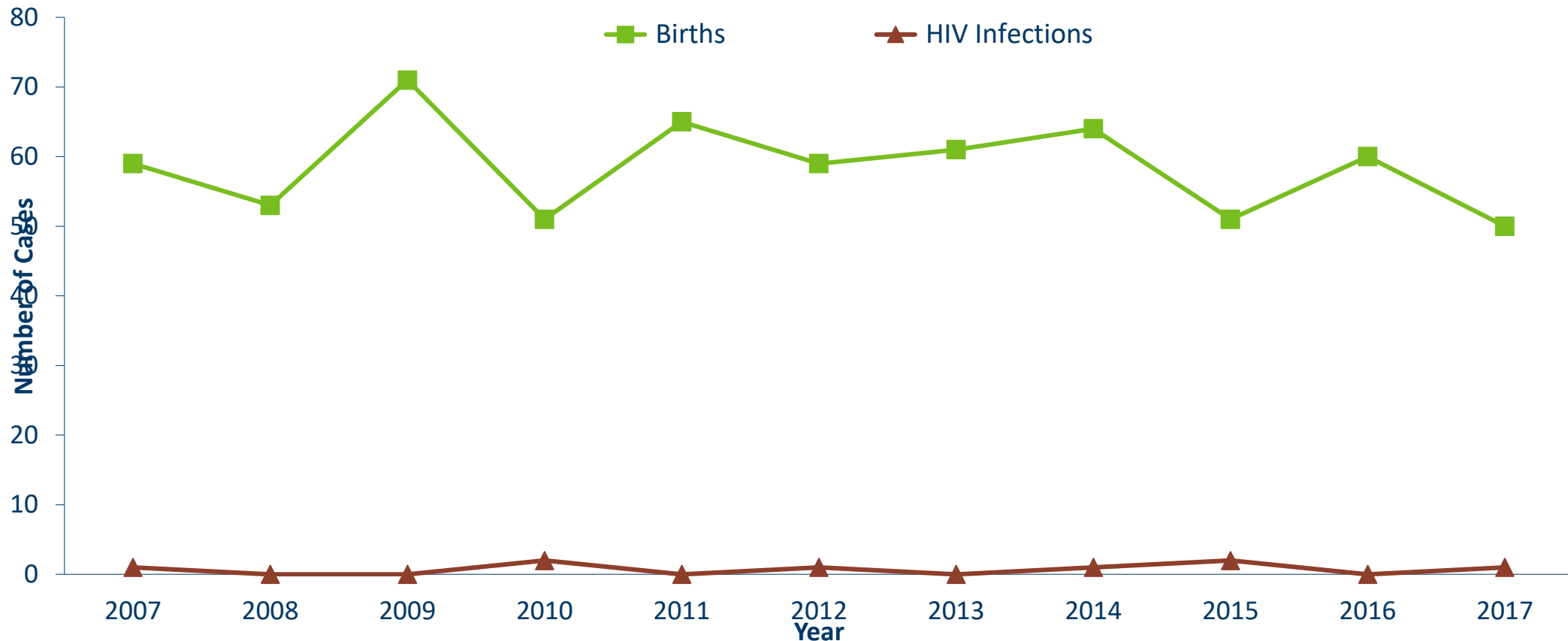
Heterosex = Heterosexual contact

Other = Hemophilia, transplant, transfusion, mother w/ HIV or HIV risk

\* HIV or AIDS at first diagnosis

† Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

# Births to HIV-Infected Women and Number of Perinatal Acquired HIV Infections\* by Year of Birth, 2007- 2017



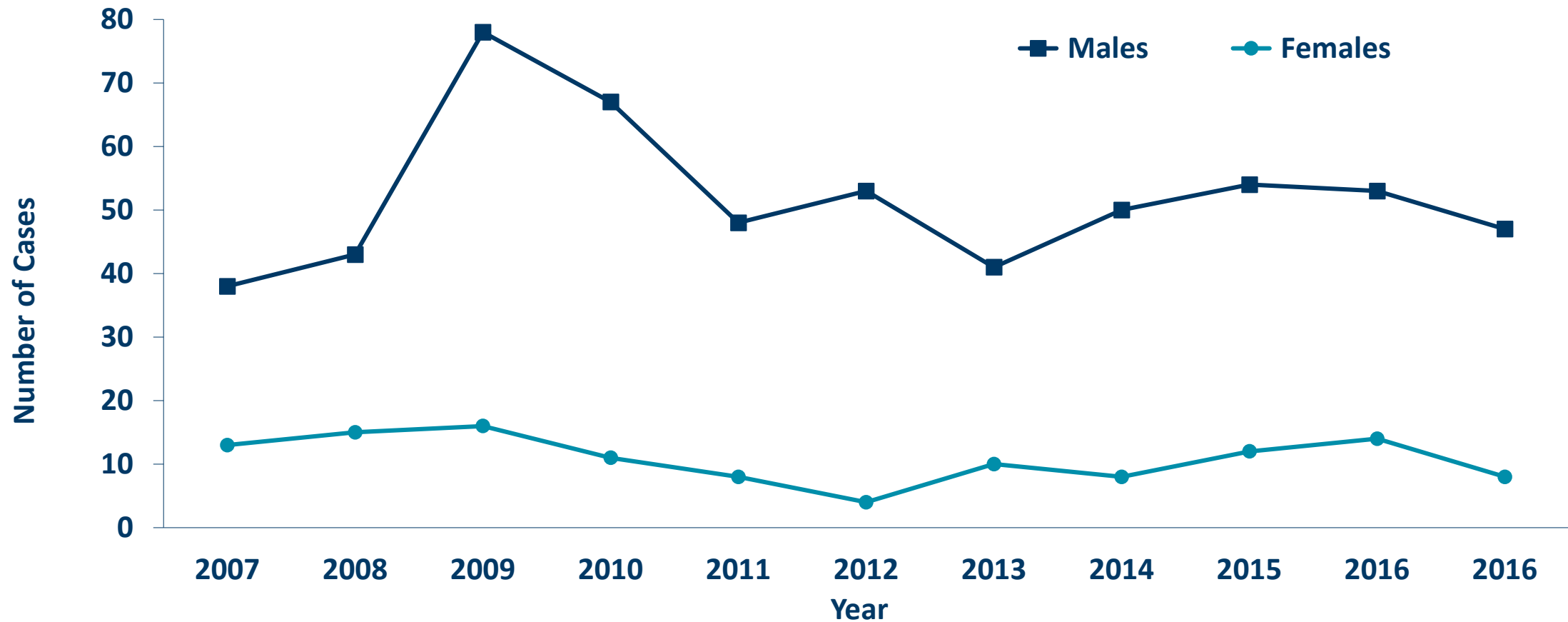
\* HIV or AIDS at first diagnosis for a child exposed to HIV during mother's pregnancy, at birth, and/or during breastfeeding.

## Adolescents & Young Adults (Ages 13-24)\*

\* Case numbers are too small to present meaningful data separately for adolescents and young adults



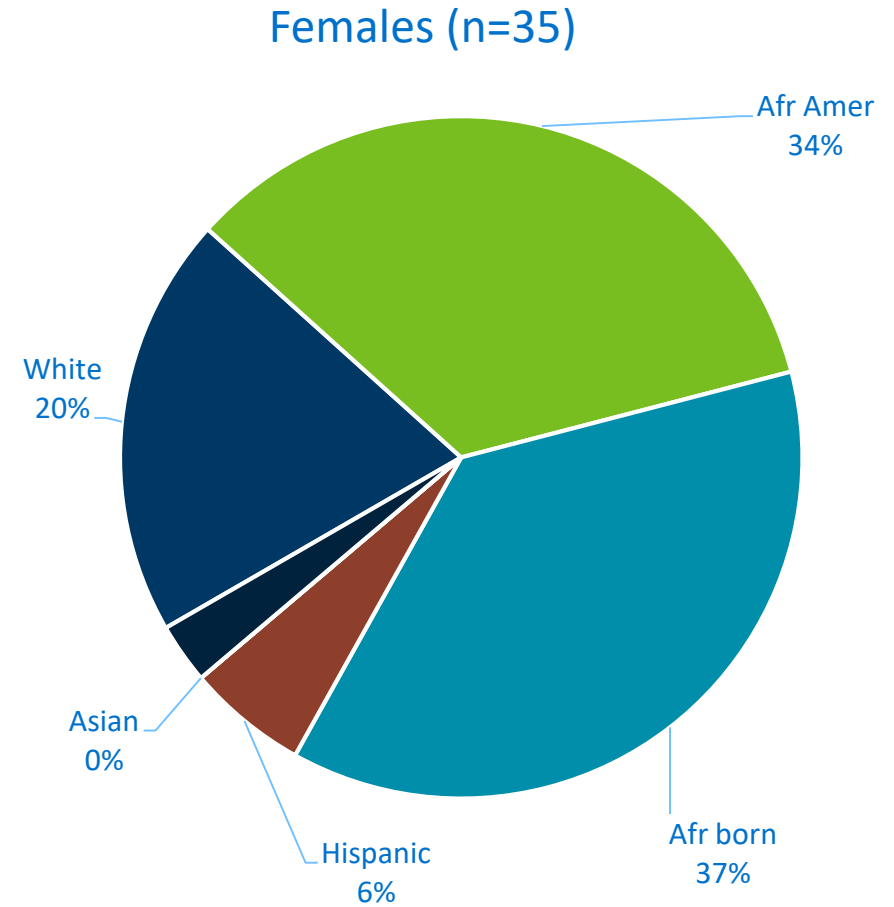
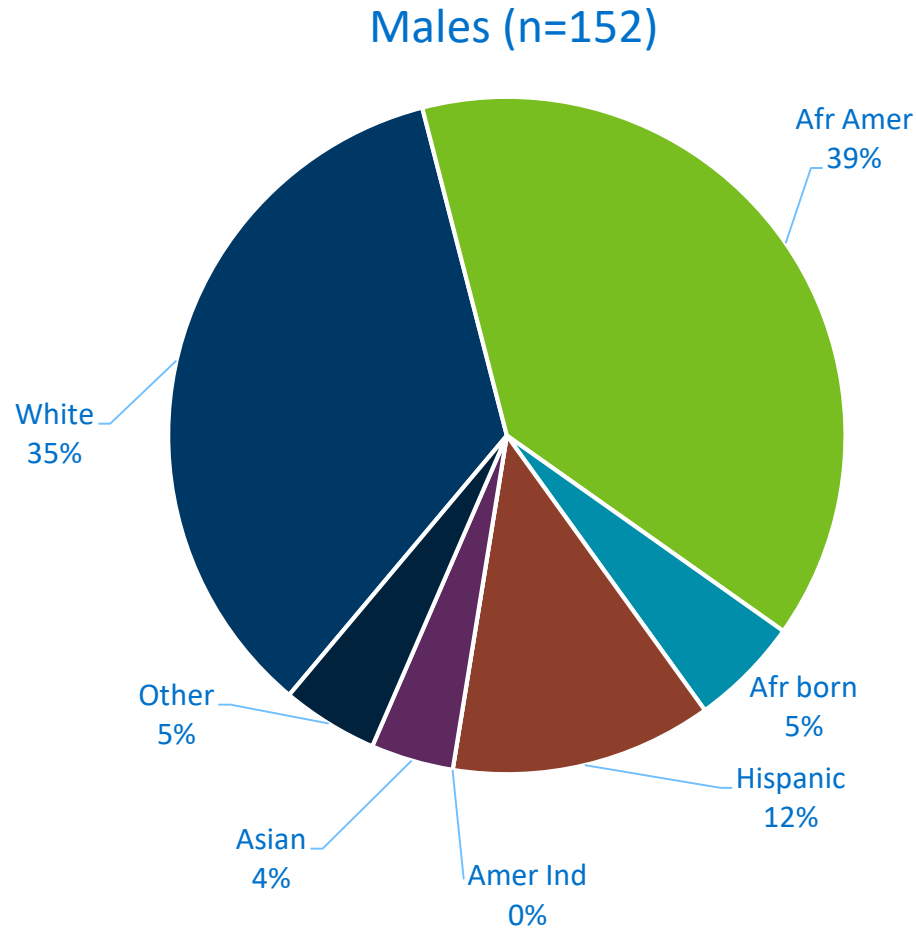
# HIV Diagnoses\* Among Adolescents and Young Adults† by Gender and Year 2007 - 2017



\* HIV or AIDS at first diagnosis

† Adolescents defined as 13-19 year-olds; Young Adults defined as 20-24 year-olds.

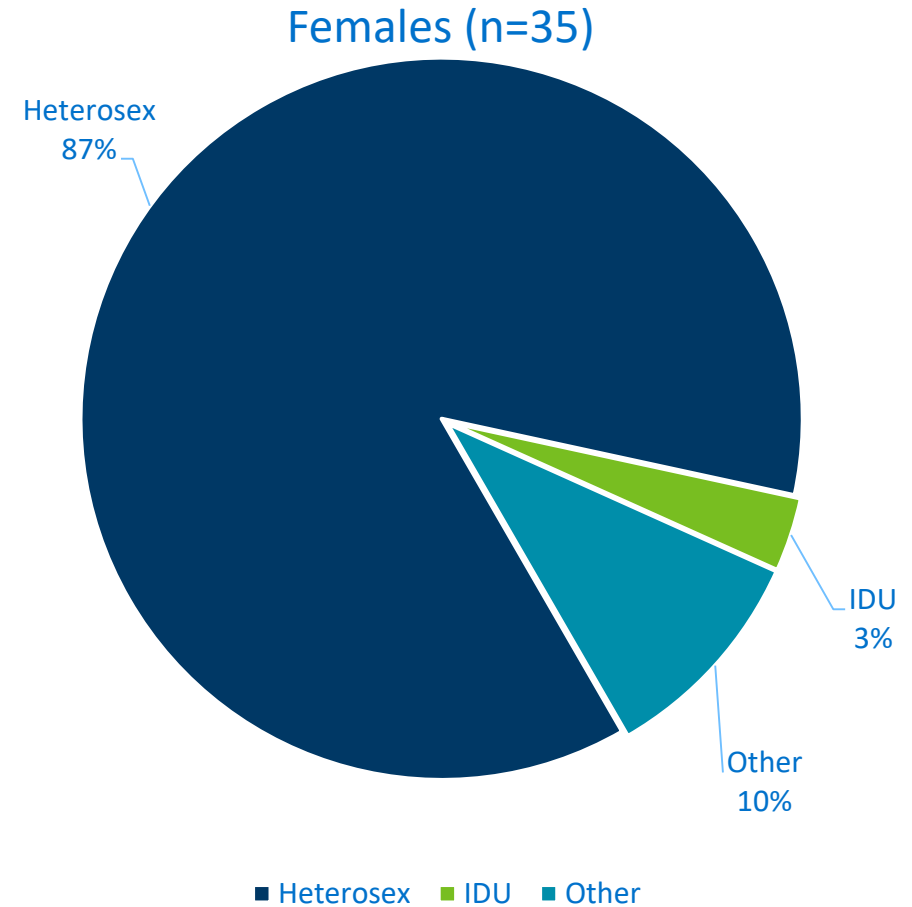
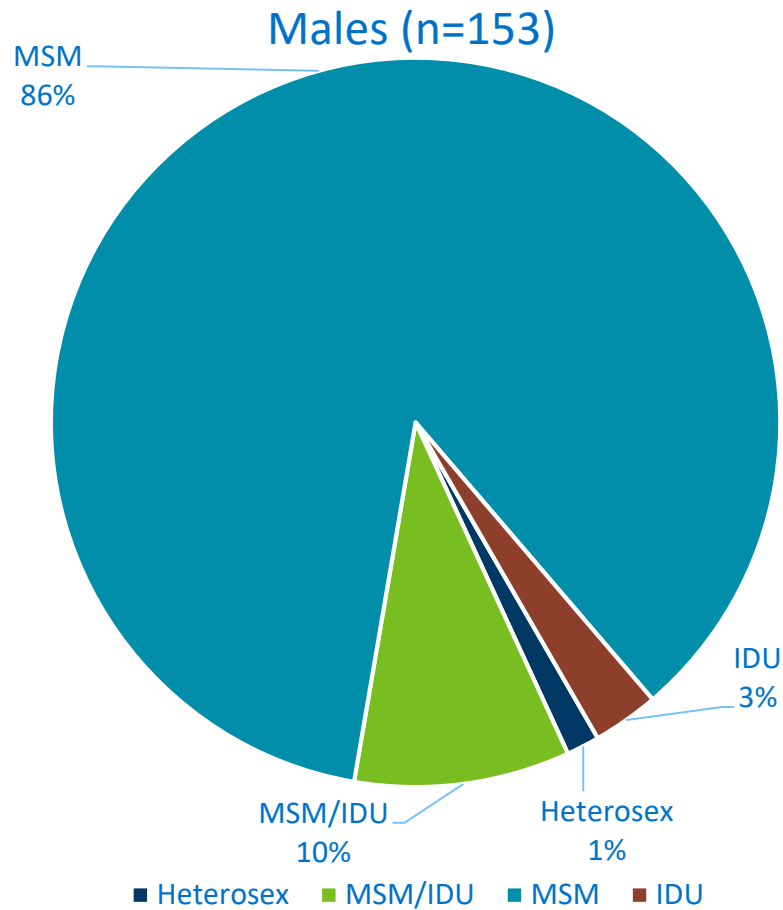
# HIV Diagnoses\* Among Adolescents and Young Adults† by Gender and Race/Ethnicity, 2015 - 2017 Combined



\* HIV or AIDS at first diagnosis (n = Number of persons)

Amer Ind = American Indian, Afr Amer = African American (Black, not African-born persons), and Afr born = African-born (Black, African-born persons)

# HIV Diagnoses\* Among Adolescents and Young Adults† by Gender and Estimated Exposure Group# 2015 - 2017 Combined



† Adolescents defined as 13-19 year-olds; Young Adults defined as 20-24 year-olds.

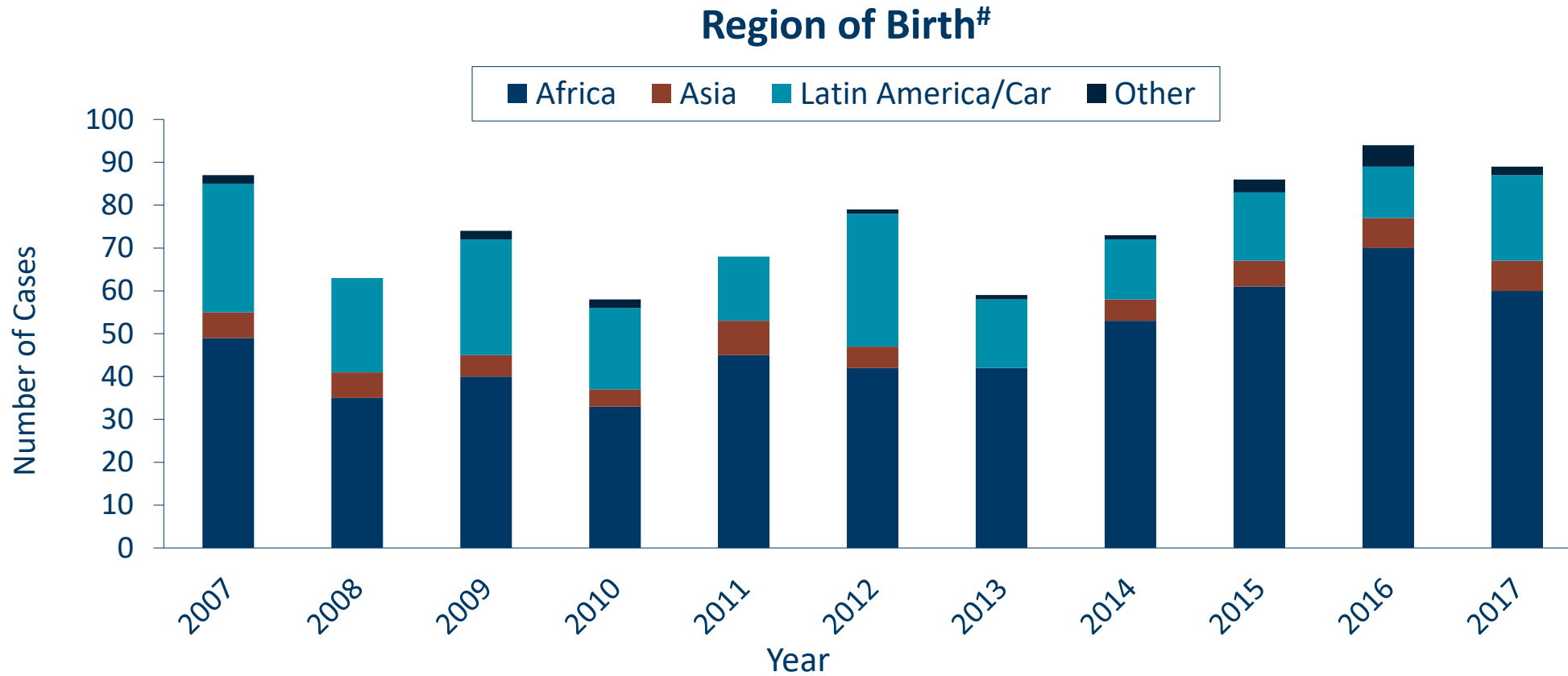
# Mode of Exposure proportions have been estimated using cases for 2015-2017 with known risk. For more detail see the HIV Surveillance Technical notes.

MSM = Men who have sex with men IDU = Injecting drug use Heterosex = Heterosexual contact n = Number of persons \*HIV or AIDS at first diagnosis



# Foreign-born Cases

# HIV Diagnoses\* among Foreign-Born Persons† in Minnesota by Year and Region of Birth 2007 - 2017

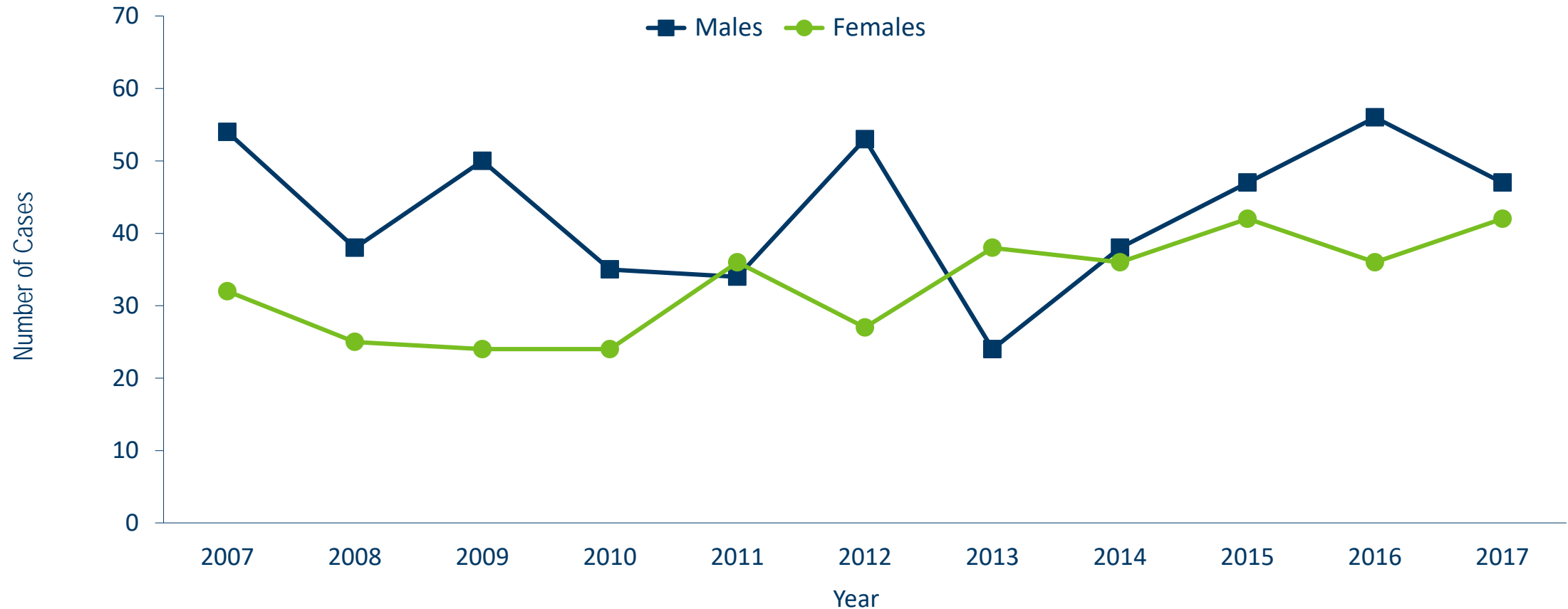


\* HIV or AIDS at first diagnosis

† Excludes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

# Latin America/Car includes Mexico and all Central, South American, and Caribbean countries.

# HIV Diagnoses\* Among Foreign-Born Persons† by Gender and Year 2007 – 2017



\*HIV or AIDS at first diagnosis

† Excludes persons arriving in Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

# Countries of Birth Among Foreign-Born Persons<sup>†</sup> Diagnosed with HIV\* Minnesota, 2017

Country	N
Liberia	14
Ethiopia	14
Mexico	12
Somalia	6
Cameroon	5
Kenya	4
Viet Nam	3
South African	3
Other <sup>^</sup>	28

\* HIV or AIDS at first diagnosis

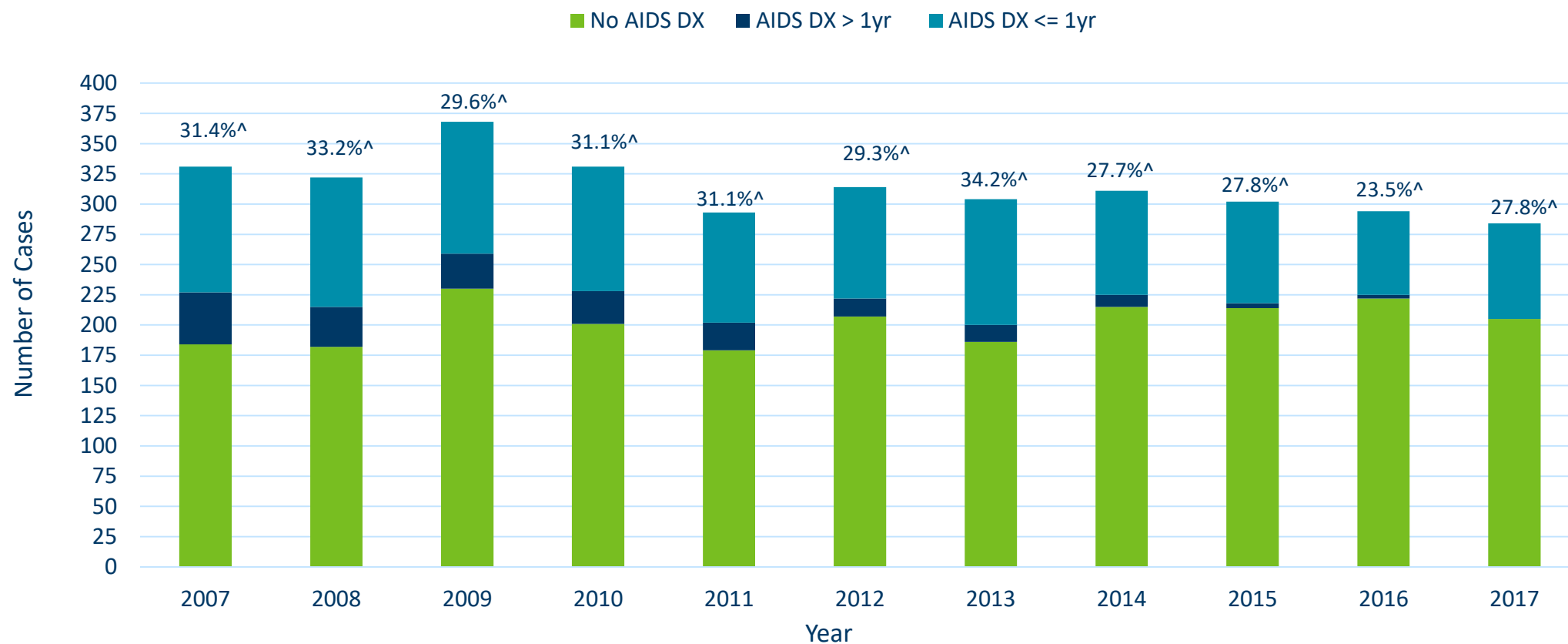
<sup>†</sup> Excludes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>^</sup> Includes 23 additional countries.

# Late-Testers

(AIDS Diagnosis within one year of initial HIV Diagnosis)

# Time of Progression to AIDS for HIV Diagnoses in Minnesota\* 2007 - 2017†

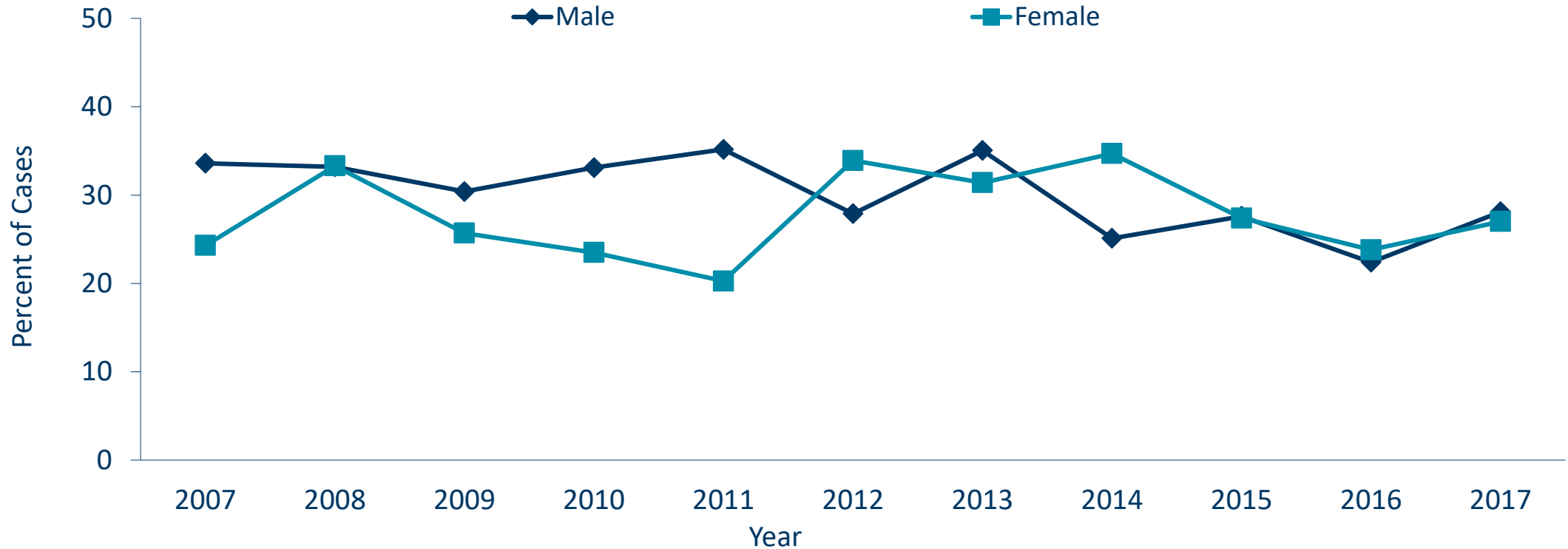


\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>^</sup> Percent of cases progressing to AIDS within one year of initial diagnosis with HIV

<sup>†</sup> Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2018.

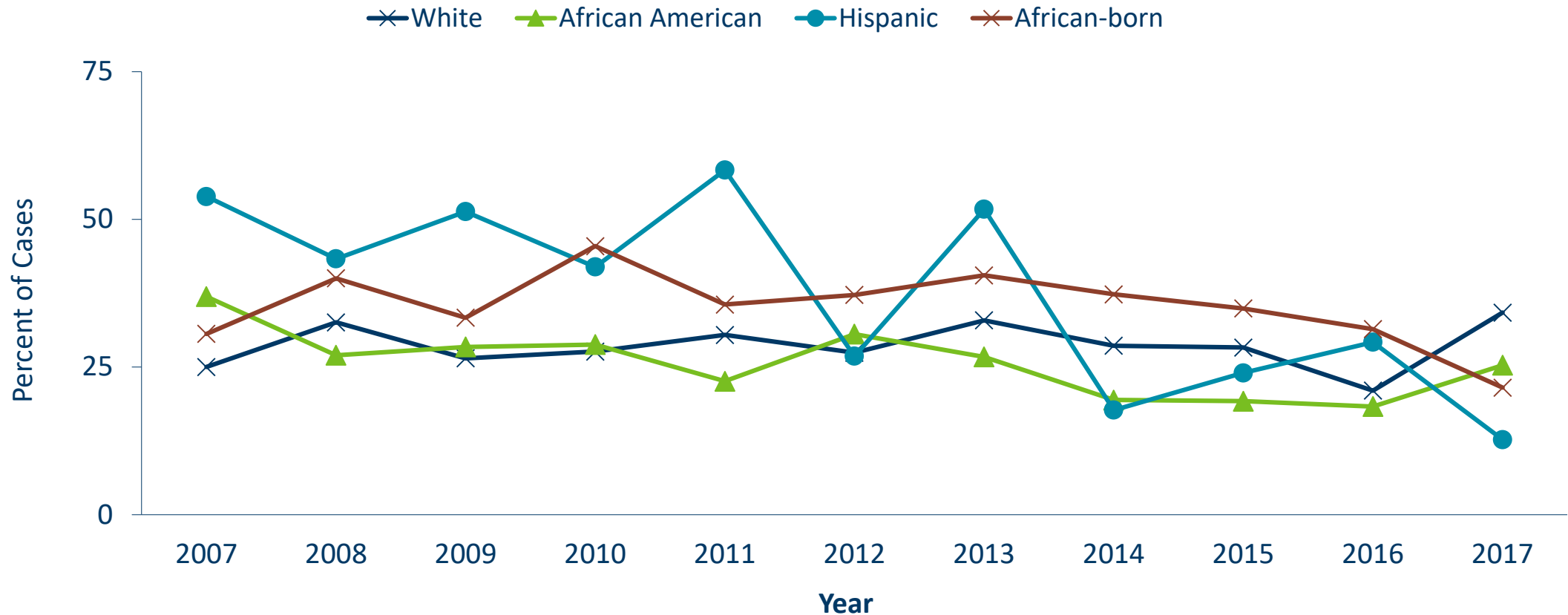
# Progression to AIDS within 1 year of initial HIV Diagnosis\* by Sex at Birth 2007 - 2017†



\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

† Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2017

# Progression to AIDS within 1 year of initial HIV Diagnoses\* by Race/Ethnicity^ 2007 - 2017†



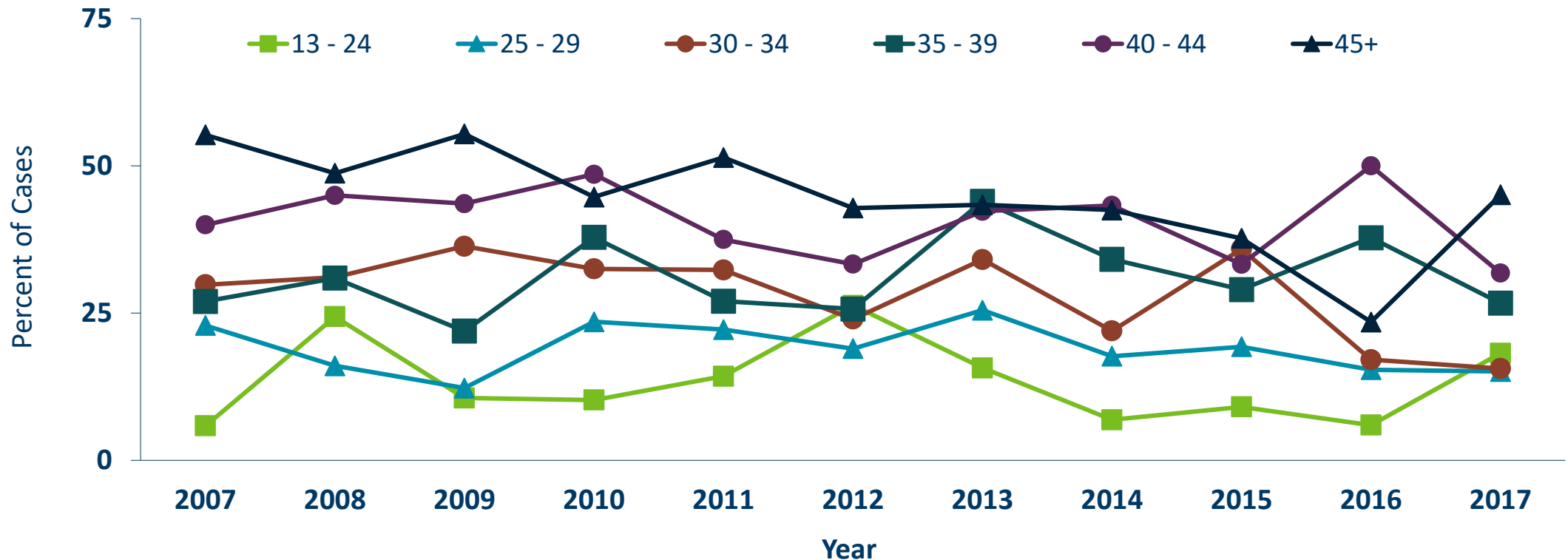
\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

† Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2018.

^Percentage not calculated if less than 10 cases diagnosed per year



# Progression to AIDS within 1 year of initial HIV Diagnosis\* by Age 2007 - 2017<sup>†</sup>

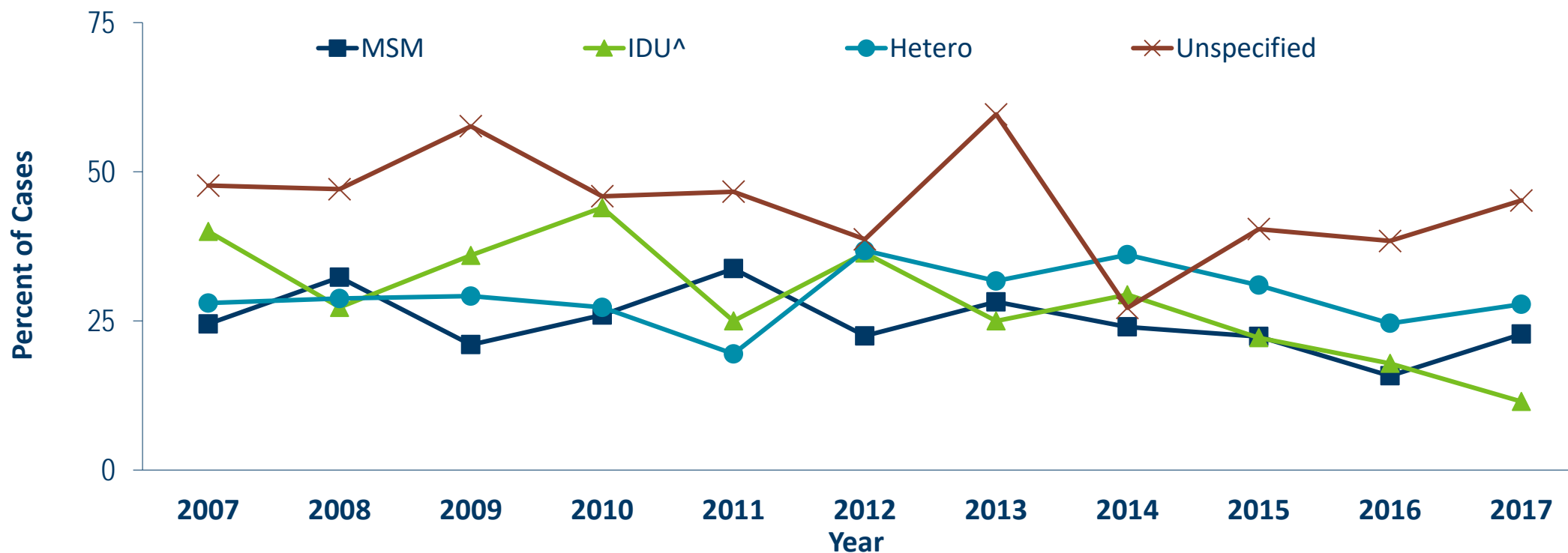


\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>†</sup> Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2018.

<sup>^</sup>Percentage not calculated if less than 10 cases diagnosed per year

# Progression to AIDS within 1 year of initial HIV Diagnosis\* by Mode of Transmission 2007 - 2017<sup>†</sup>

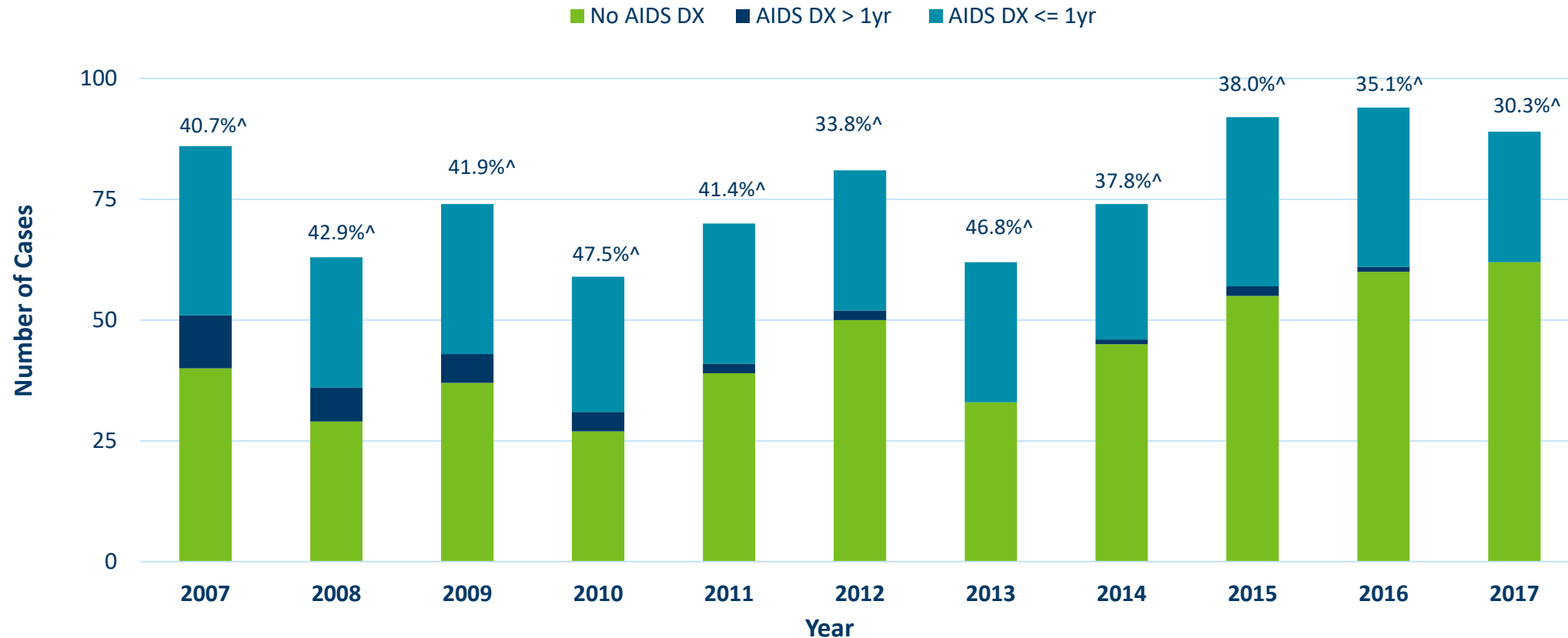


\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>†</sup> Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2018.

<sup>^</sup>Includes MSM/IDU

# Time of Progression to AIDS for HIV Diagnoses\* Among Foreign-Born Persons, Minnesota 2007 - 2017<sup>†</sup>



\*Numbers include AIDS at 1<sup>st</sup> report but exclude persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>^</sup> Percent of cases progressing to AIDS within one year of initial diagnosis with HIV

<sup>†</sup> Numbers/Percent for cases diagnosed in 2017 only represents cases progressing to AIDS through March 20, 2018.

# Thank you!

**Cheryl Barber**

*Cheryl.Barber@state.mn.us*

651-201-5624