

# HIV/AIDS Prevalence and Mortality Report, 2016

## HIV/AIDS Surveillance System

# Introduction (I)

- These three 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/AIDS Prevalence & Mortality Report, 2016 or HIV/AIDS Prevalence & Mortality Technical Notes*.
- This slide set displays estimates of the number of persons living with HIV/AIDS (prevalence) and mortality in Minnesota by person, place, and time.
- The slides rely on data from HIV/AIDS cases diagnosed through 2016 and reported to the Minnesota Department of Health (MDH) HIV/AIDS Surveillance System.

## 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 = 102).
- Data analyses for new infections 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, 2016=168 ), as well as, other refugees/immigrants reporting a positive test prior to their arrival in Minnesota (n=171).
- 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 the 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

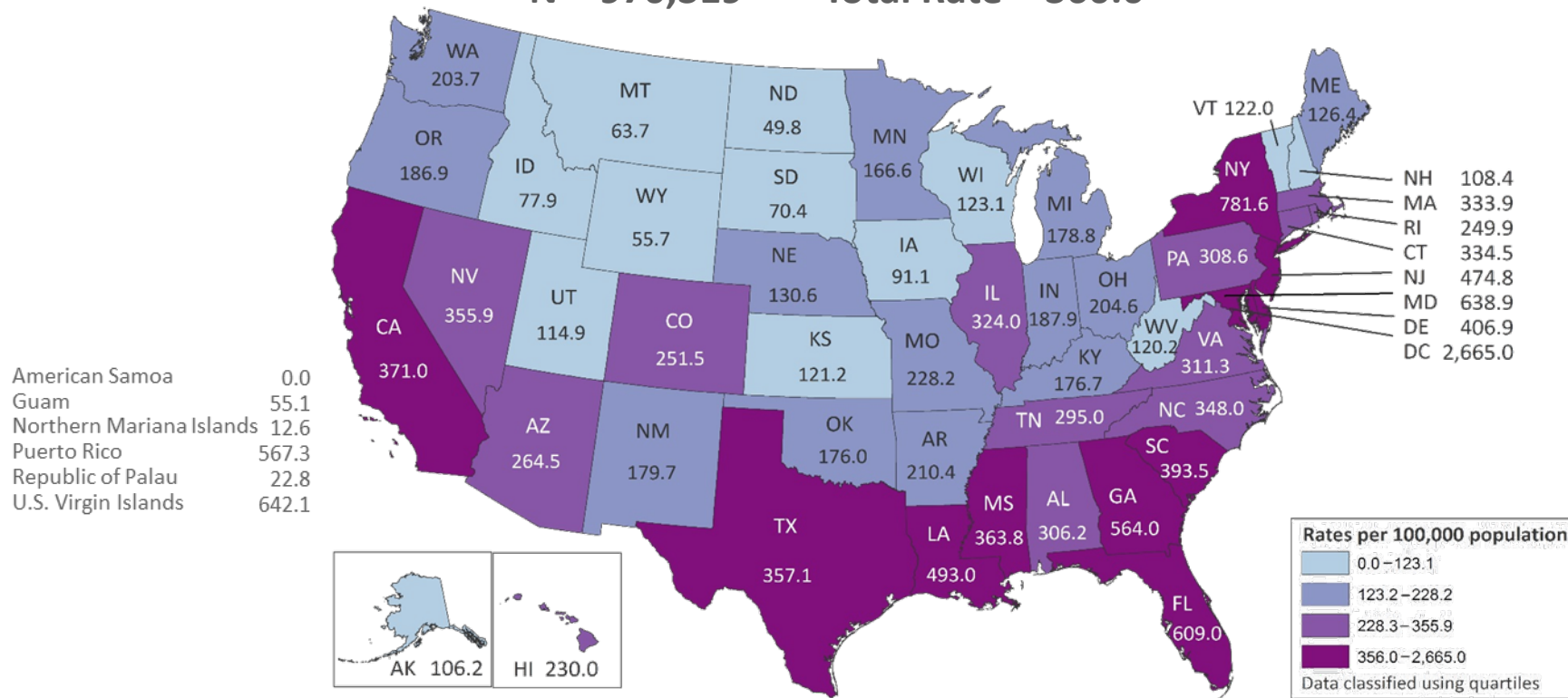
## Introduction (III)

- Persons are assumed to be alive unless the MDH has knowledge of their death.
- Persons whose most recently reported state of residence was Minnesota are assumed to be currently residing in Minnesota unless the MDH has knowledge of their relocation. Our ability to track changes of residence, including within the state, is limited.
- Vital status and current residence are updated through one or more of the following methods:
  - Standard case reporting
  - Correspondence with other health departments
  - Active surveillance (monthly)
  - Death certificate reviews (annually)
  - Birth certificate reviews (annually, women only)

# National Context

# Rates of Adults and Adolescents Living with Diagnosed HIV Infection Year-end 2014—United States and 6 Dependent Areas

N = 970,319      Total Rate = 360.0

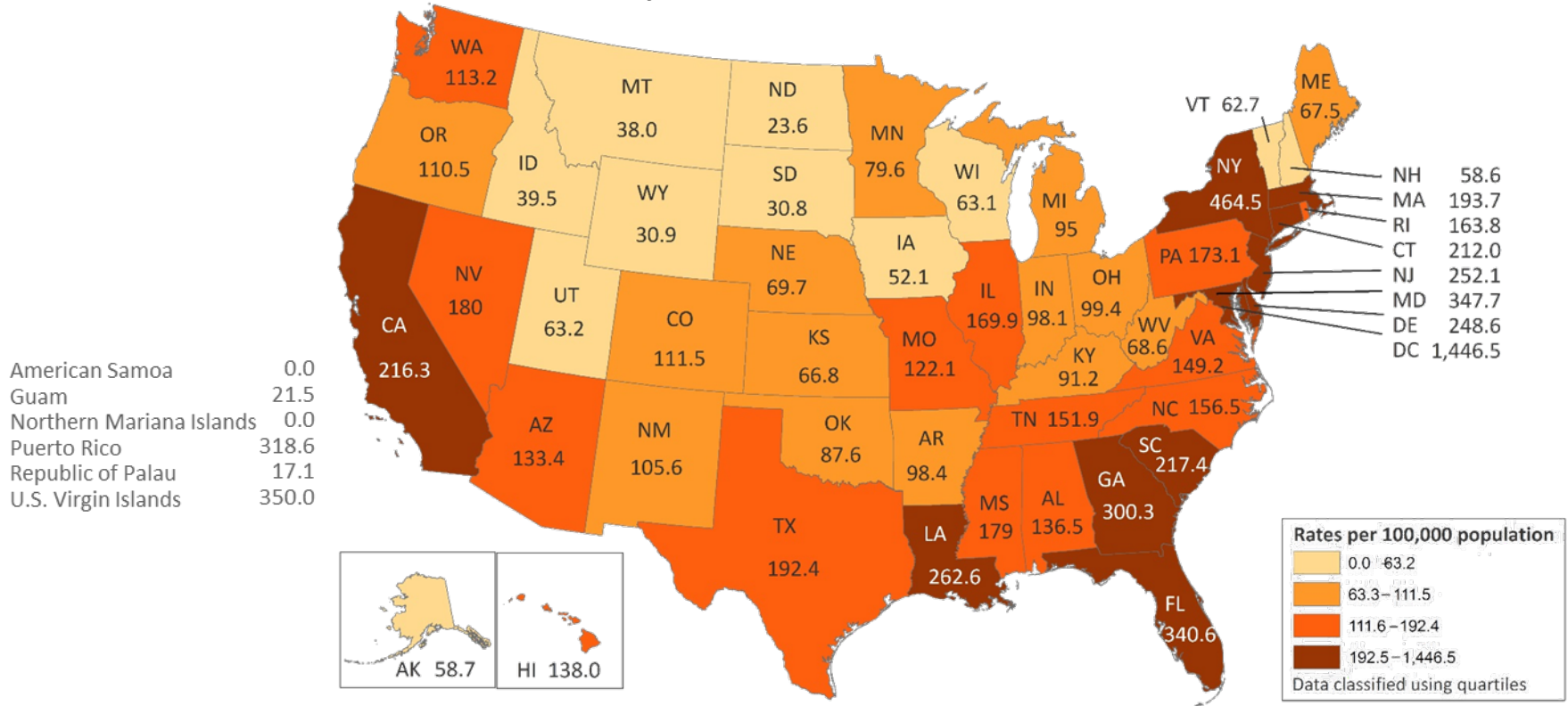


Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are based on address of residence as of December 31, 2014 (i.e., most recent known address).



# Rates of Adults and Adolescents Living with Diagnosed HIV Infection Ever Classified as Stage 3 (AIDS), Year-end 2014—United States and 6 Dependent Areas

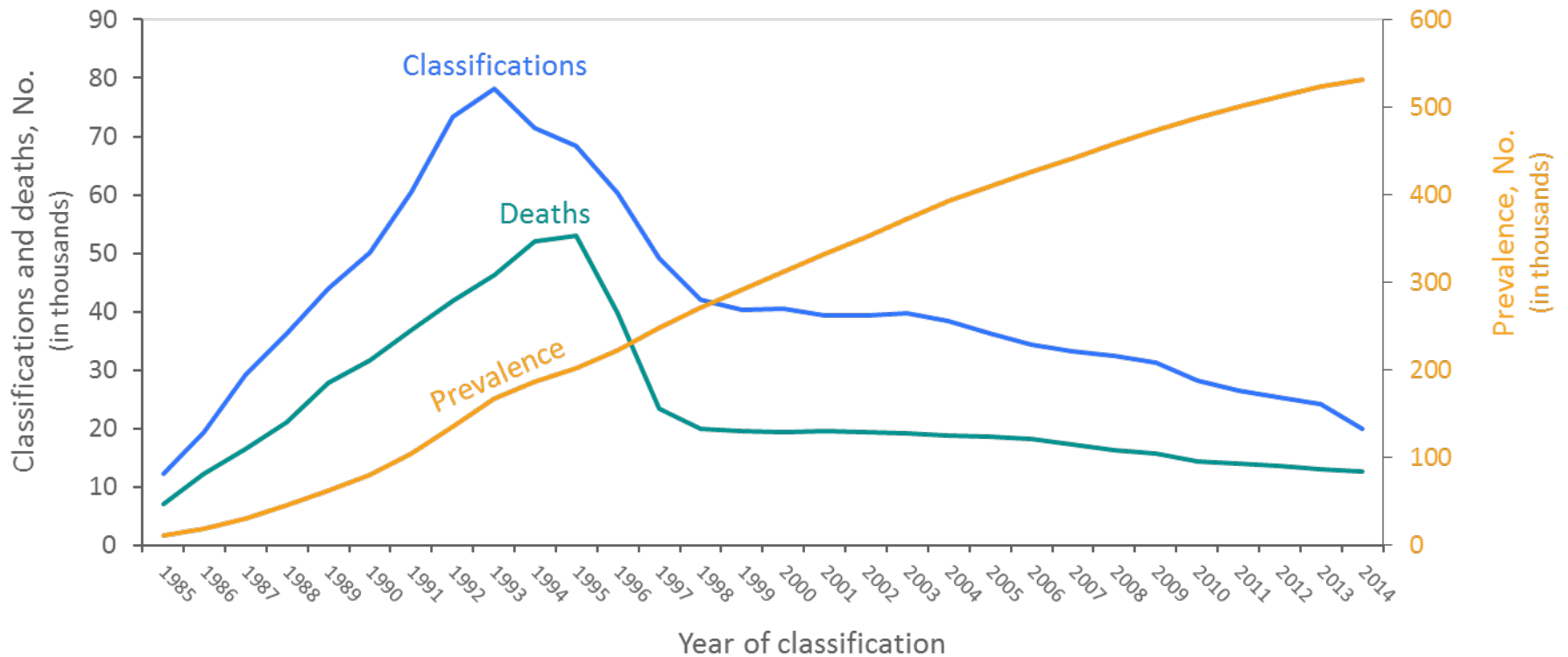
N = 530,620      Total Rate = 196.9



Note. Data are based on address of residence as of December 31, 2014 (i.e., most recent known address).



# Stage 3 (AIDS) Classifications, Deaths, and Persons Living with Diagnosed HIV Infection Ever Classified as Stage 3 (AIDS) 1985–2014--United States and 6 Dependent Areas

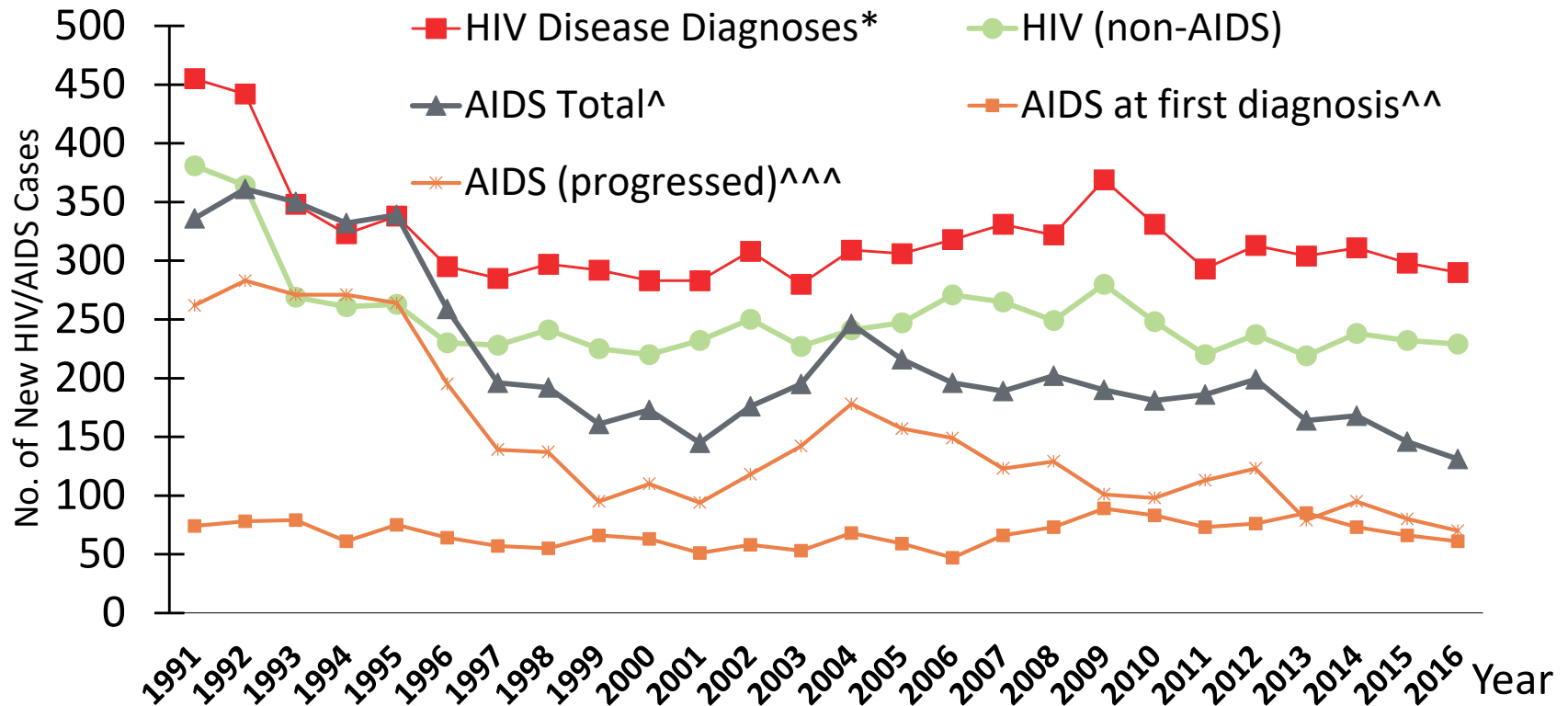


Note. Deaths of persons with HIV infection, stage 3 (AIDS) may be due to any cause.





# New HIV Disease Diagnoses, HIV (non-AIDS) and AIDS Cases by Year, 1990-2016



\*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.

# Persons Living with HIV/AIDS in Minnesota

## Estimated Number of Persons Living with HIV/AIDS in Minnesota

- As of December 31, 2016, **8,554\*** persons are assumed alive and living in Minnesota with HIV/AIDS
  - 4,575 living with HIV infection (non-AIDS)
  - 3,979 living with AIDS
- This number includes 2,064 persons who were first reported with HIV or AIDS elsewhere and subsequently moved to Minnesota
- This number excludes 1,332 persons who were first reported with HIV or AIDS in Minnesota and subsequently moved out of the state

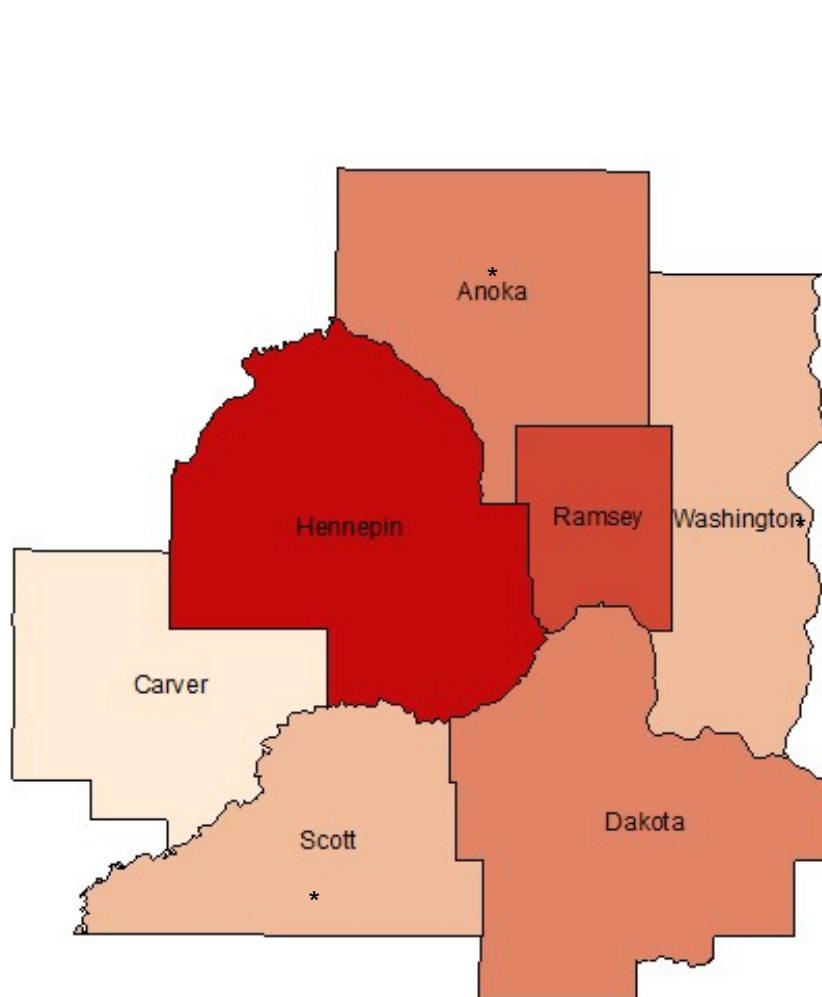
\* This number includes persons who reported Minnesota as their current state of residence, regardless of residence at time of diagnosis. Includes state prisoners and refugees arriving through the HIV+ Refugee Resettlement Program, as well as HIV+ refugee/immigrants arriving through other programs.

# Place





# Map of Metro Area: Living HIV/AIDS Cases by County of Residence, 2016



## Twin Cities Seven County Metro Region

### Number of Cases



City of Minneapolis – 3,134

City of St. Paul – 1,108

Suburban# – 2,699

Total number (Metro only) = 6,941

# 7-county metro area,

excluding the cities of Minneapolis and St. Paul

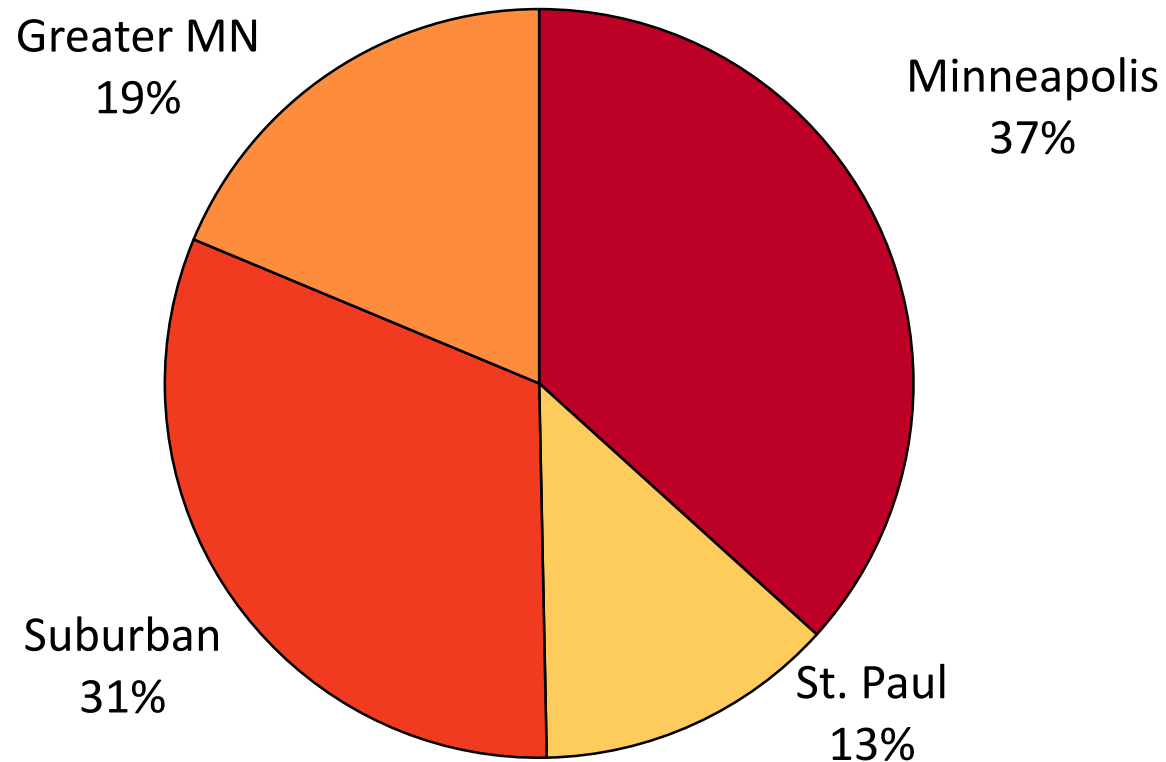
\* Counties in which a state correctional facility is located.



# Persons Living with HIV/AIDS in Minnesota by Current Residence, 2016

Total Number = 8,554

(61 persons missing residence information)



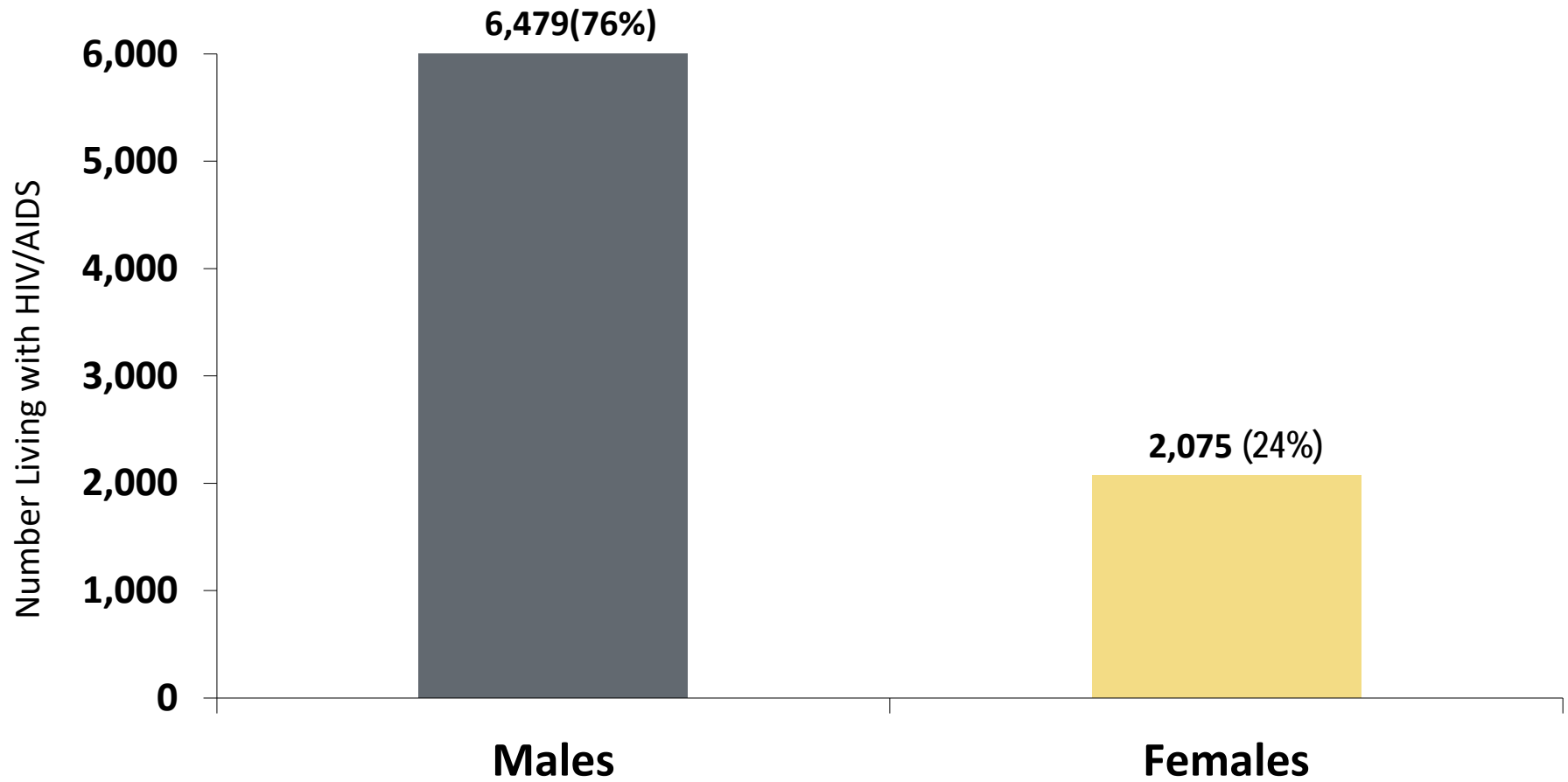
Suburban = Seven-county metro area including Anoka, Carver, Dakota, Hennepin (except Minneapolis), Ramsey (except St. Paul), Scott, and Washington counties. Greater MN = All other Minnesota counties, outside the seven-county metro area.

# Gender and Race/Ethnicity



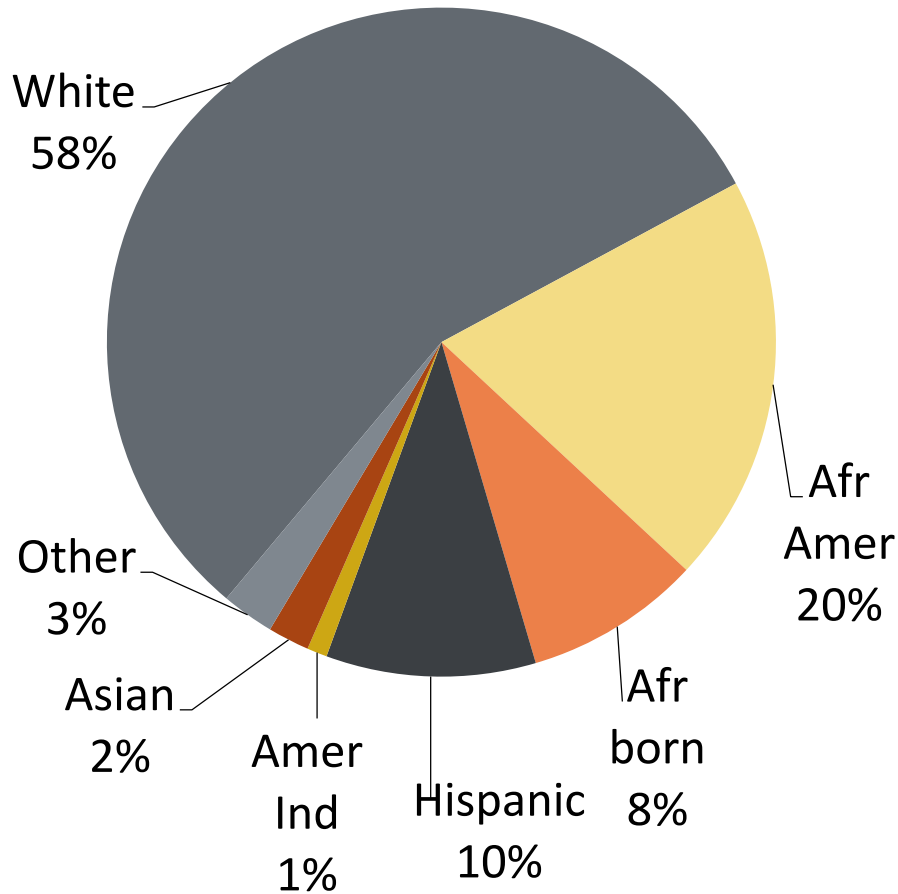


# Persons Living with HIV/AIDS in Minnesota by Gender, 2016

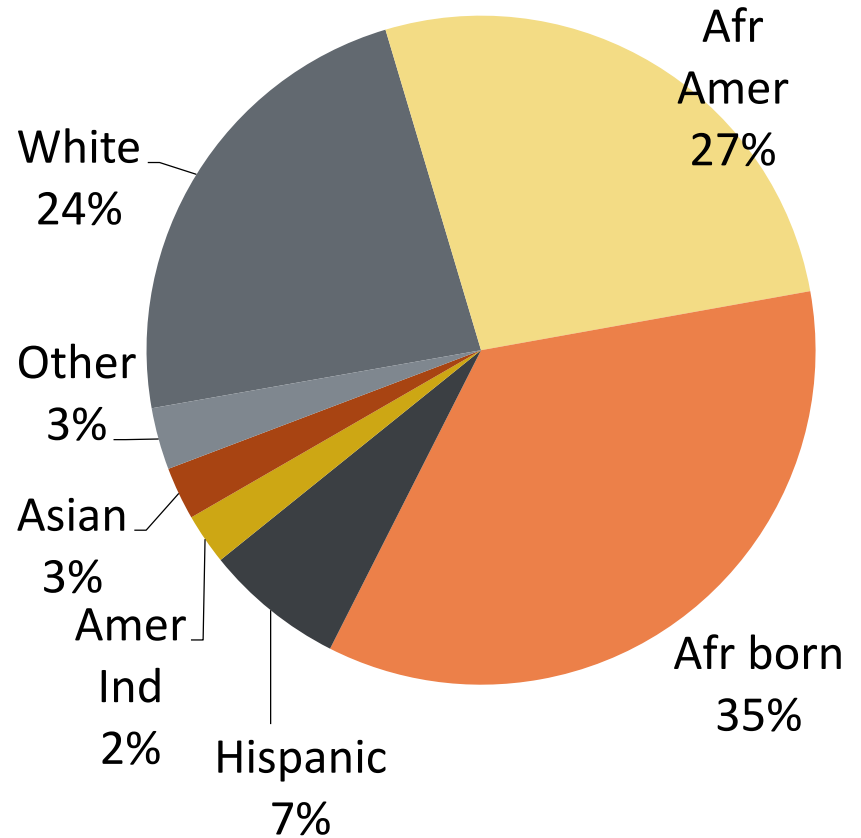


# Persons Living with HIV/AIDS in Minnesota by Gender and Race/Ethnicity, 2016

Males (n = 6,474)



Females (n = 2,072)



n = Number of persons

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

Afr born = African-born (Black, African-born persons)

Amer Ind = American Indian

Other = Multi-racial persons or persons with unknown race



# Number of Cases and Rates (per 100,000 persons) of Persons Living with HIV/AIDS by Race/Ethnicity<sup>†</sup> – Minnesota, 2016

Race/Ethnicity	Cases	%	Rate
White, non-Hispanic	4,107	48%	93.2
Black, African-American	1,836	21%	958.3
Black, African-born	1,283	15%	1654.3 <sup>††</sup>
Hispanic	796	9%	318.1
American Indian	114	1%	205.7
Asian/Pacific Islander	183	2%	85.2
Other <sup>^</sup>	227	3%	X
<b>Total</b>	<b>8,546</b>	<b>100%</b>	<b>161.1</b>

<sup>††</sup> Estimate of 77,557 Source: 2010-2012 American Community Survey. Additional calculations by the State Demographic Center.

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

Census Data used for rate calculations.

<sup>†</sup> "African-born" refers to Blacks who reported an African country of birth; "African American" refers to all other Blacks.



# Number of Cases and Rates (per 100,000 persons) of Adults and Adolescents\* Living with HIV/AIDS by Gender/Risk<sup>†</sup>, Minnesota, 2016

Gender/Risk	Cases	%	Rate
<b>Men (Total)</b>	(6,408)	76%	246.2
<b>MSM<sup>†</sup></b>	4,687	73%	5,051.3 <sup>††</sup>
<b>Non-MSM</b>	1,721	27%	83.2
<b>Women</b>	1,995	24%	89.8
<b>Total</b>	<b>8,403</b>	<b>100%</b>	<b>191.7</b>

\*HIV or AIDS at first diagnosis age 13 and older;

2010 U.S. Census Data for persons age 13 and over used for rate calculations.

<sup>†</sup> “MSM” refers to both MSM and MSM/IDU.

<sup>††</sup> Estimate of 92,788



## Number of Cases of Adults and Adolescents\* Living with HIV/AIDS by Gender Identity and Risk<sup>†</sup>, Minnesota, 2016

Gender/Risk	Cases	%
<b>Men (Total)</b>	(6,354)	76%
<b>MSM<sup>†</sup></b>	4,637	73%
<b>Non-MSM</b>	1,717	27%
<b>Women</b>	1,980	24%
<b>Transgender (Total)</b>	69	0.8%
<b>Male to Female</b>	54	78%
<b>Female to Male</b>	15	22%
<b>Total</b>	<b>8,403</b>	<b>100%</b>

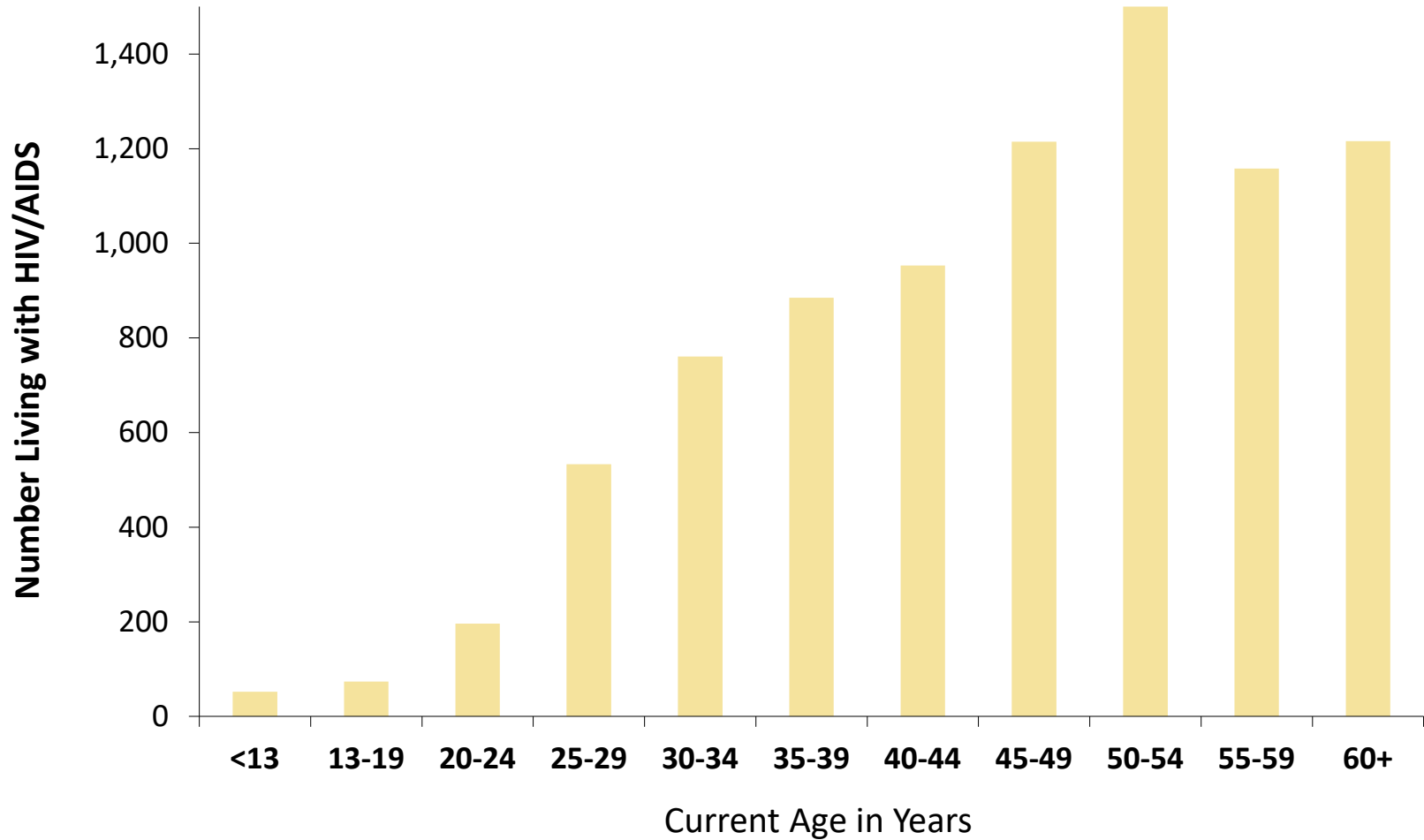
\*HIV or AIDS at first diagnosis age 13 and older;

<sup>†</sup> “MSM” refers to both MSM and MSM/IDU.

# Age



# Persons Living with HIV/AIDS in Minnesota by Age Group<sup>†</sup>, 2016

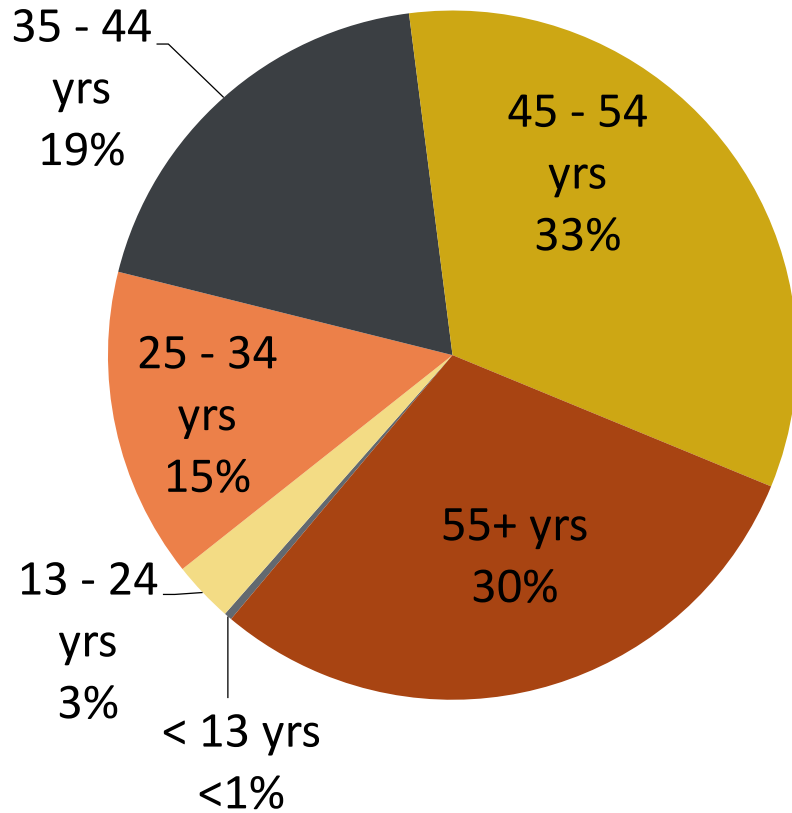


<sup>†</sup>Age missing for 5 persons living with HIV/AIDS

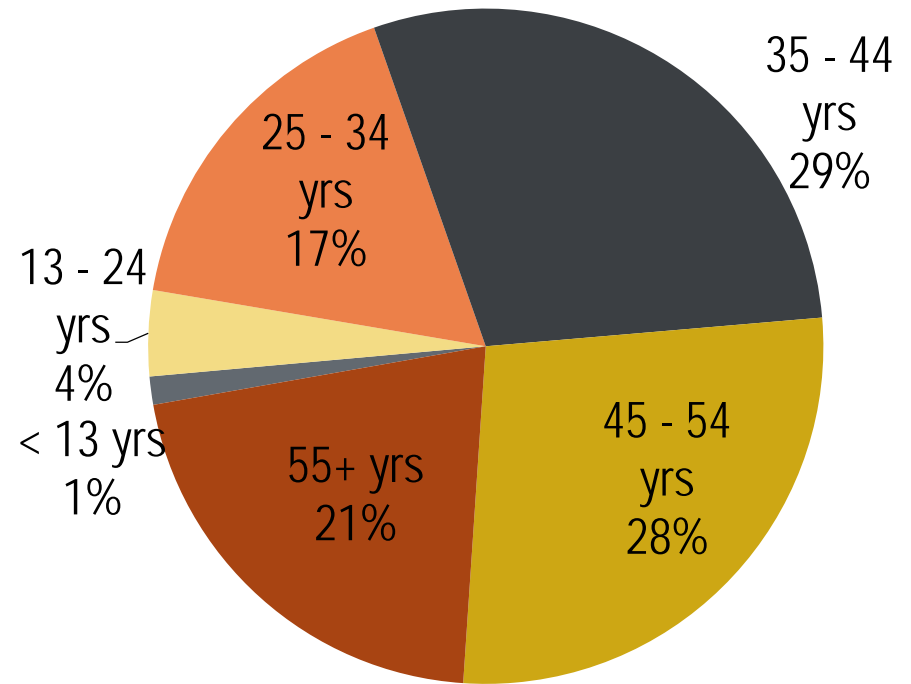


# Persons Living with HIV/AIDS in Minnesota by Age<sup>†</sup> and Gender, 2016

## Males (n = 6,474)



## Females (n = 2,075)



n = Number of persons

<sup>†</sup> Age missing for 5 people .

Data Source: Minnesota HIV/AIDS Surveillance System



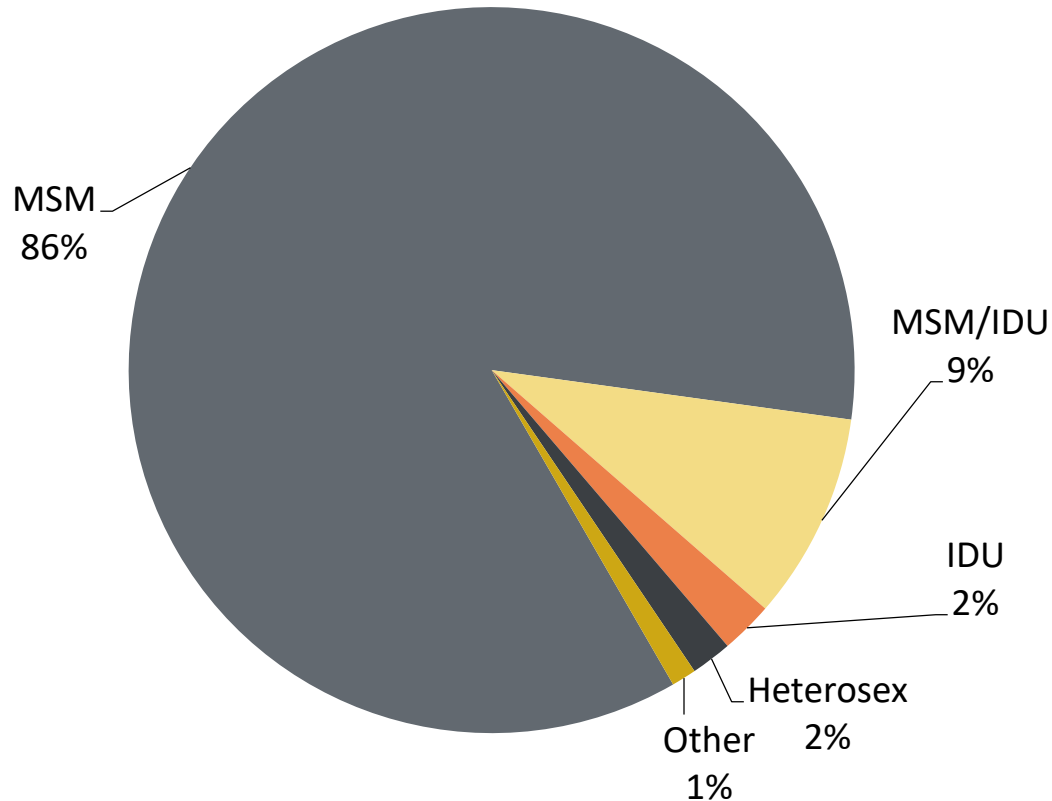


# Mode of Exposure



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

White Males (n = 3,627)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

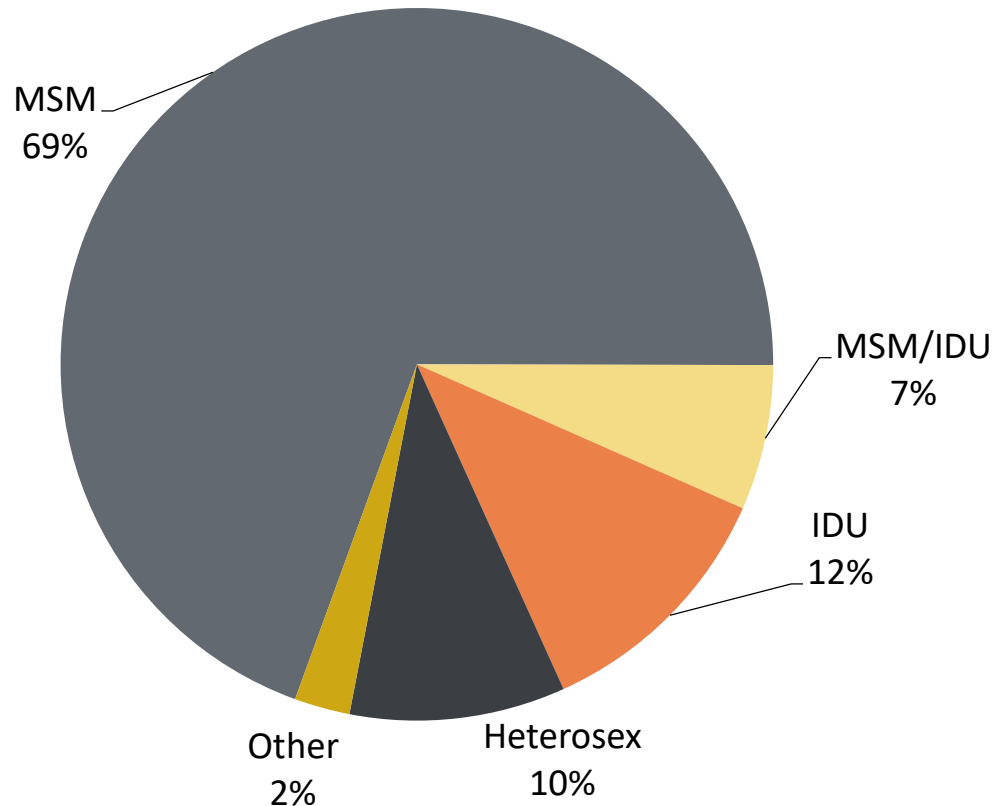
Data Source: Minnesota HIV/AIDS Surveillance System

*HIV/AIDS in Minnesota: Annual Review*



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

African American Males<sup>††</sup> (n = 1,281)



n = Number of persons

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

IDU = Injecting drug use

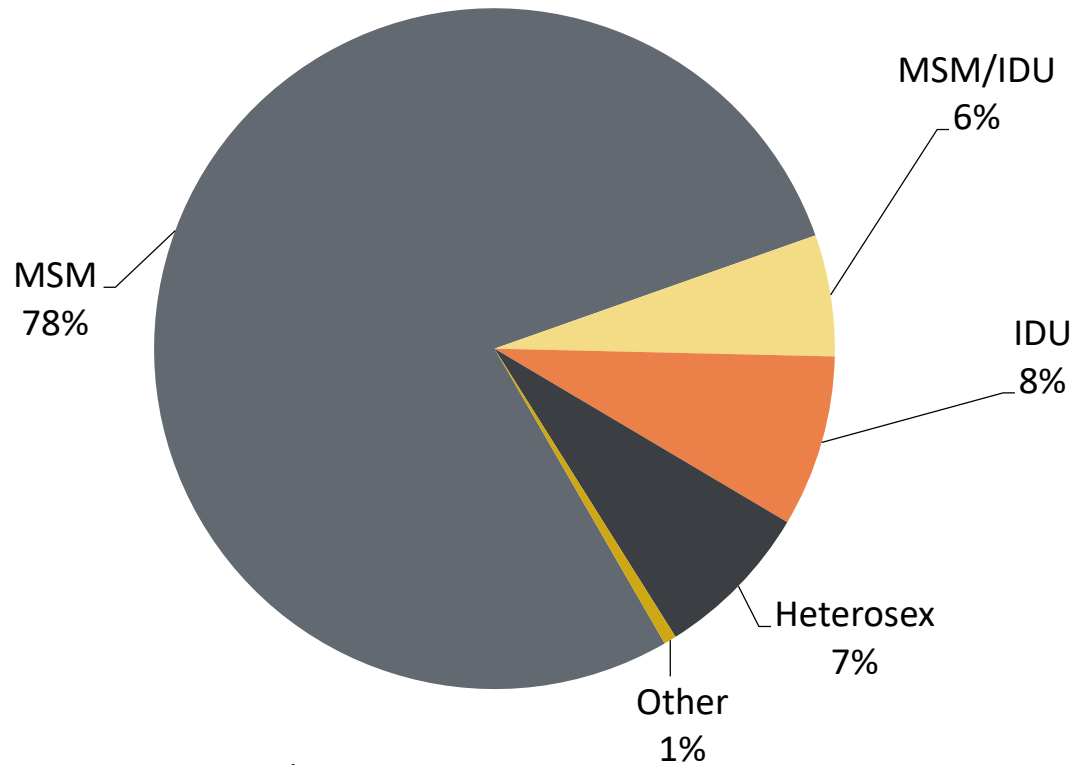
Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

Hispanic Males (n = 656)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

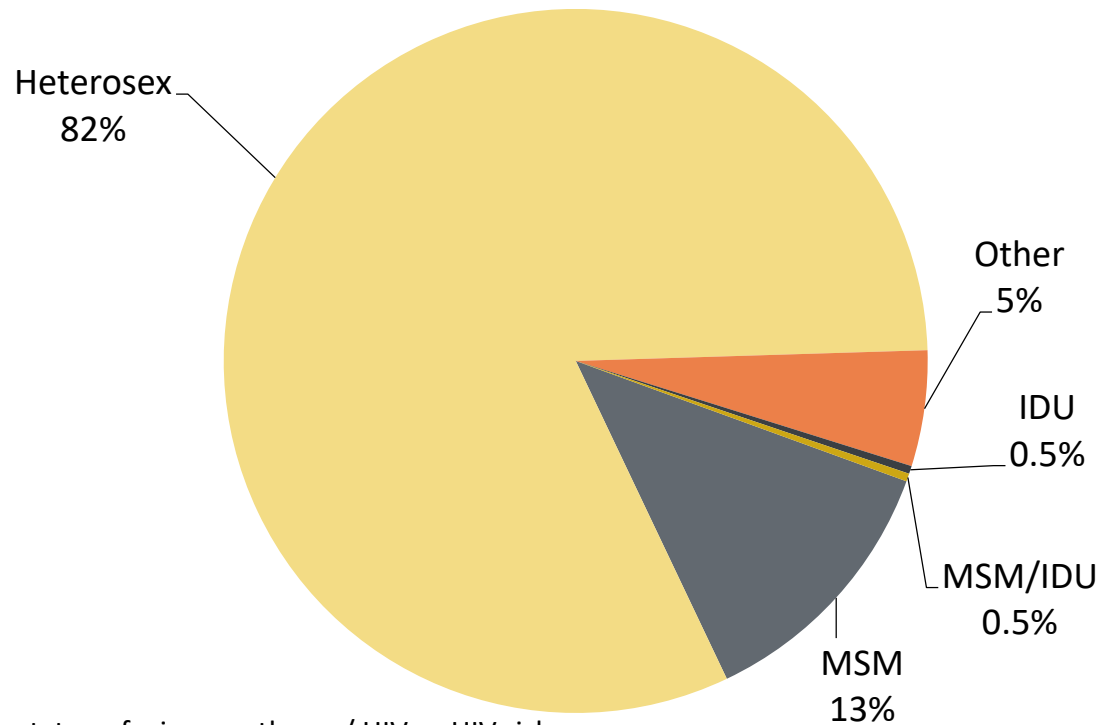
Data Source: Minnesota HIV/AIDS Surveillance System

HIV/AIDS in Minnesota: Annual Review



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

African-born Males<sup>††</sup> (n = 552)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using the following proportions: 95% - Heterosexual, 5% - Other.

For additional detail see the HIV Surveillance Technical Notes.

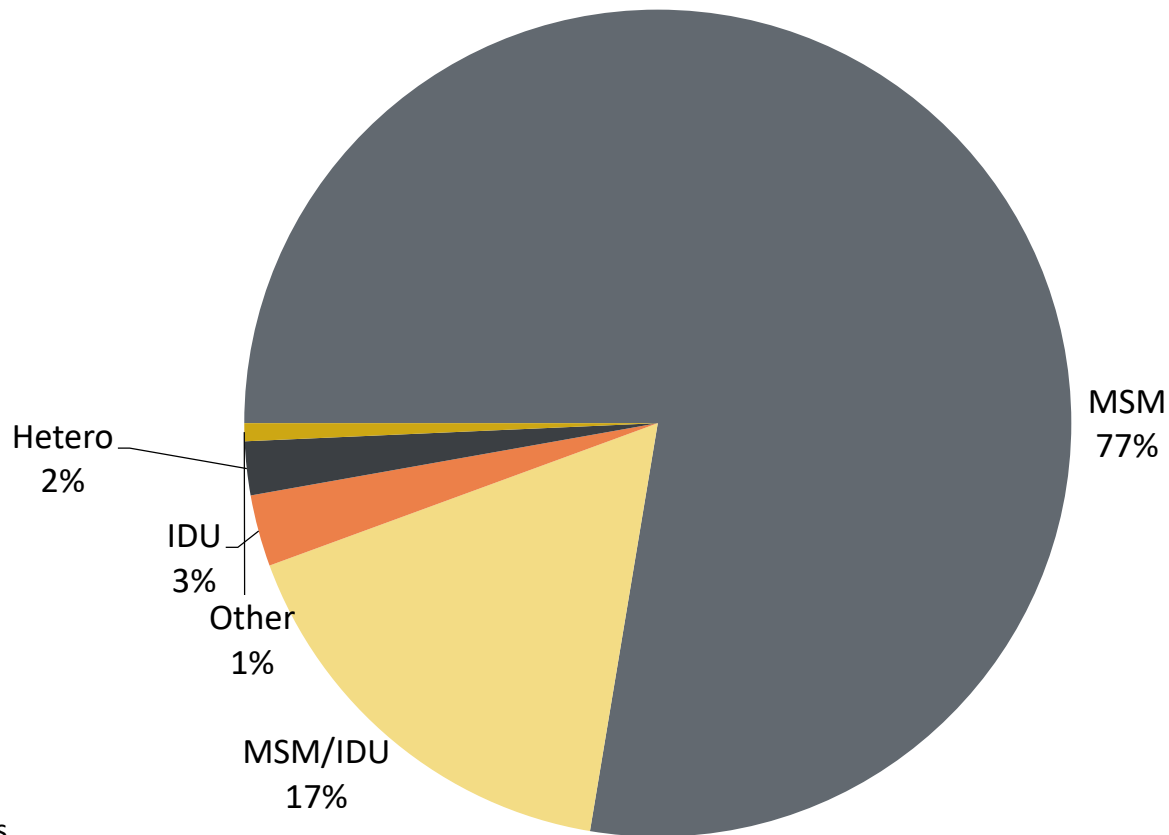
<sup>††</sup> Refers to Black, African-born males.

Data Source: Minnesota HIV/AIDS Surveillance System



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

Multi-racial Males (n = 155)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

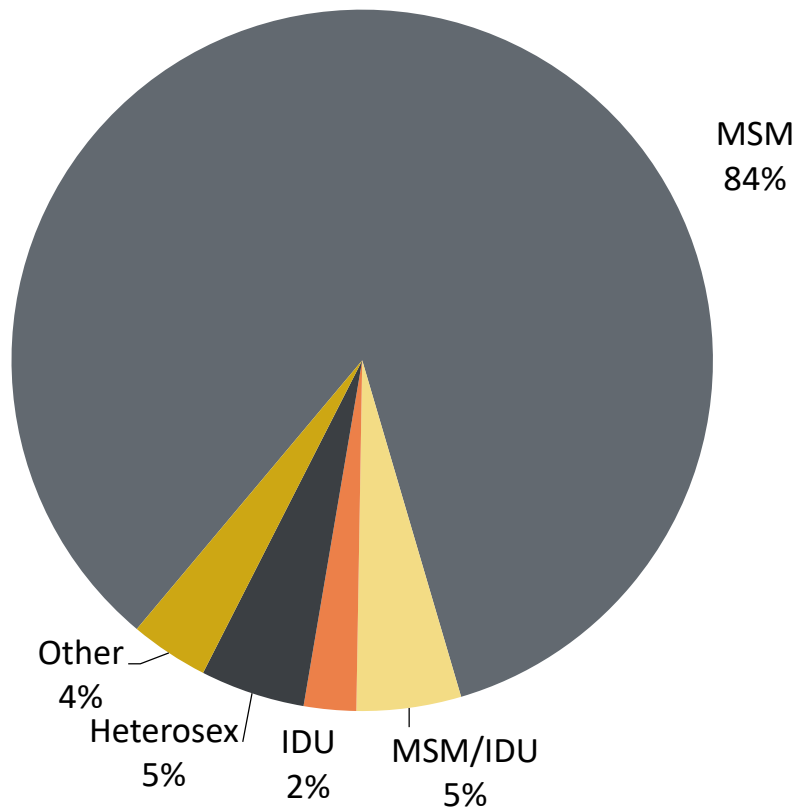
<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

Data Source: Minnesota HIV/AIDS Surveillance System

*HIV/AIDS in Minnesota: Annual Review*

# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

Asian Males (n = 130)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

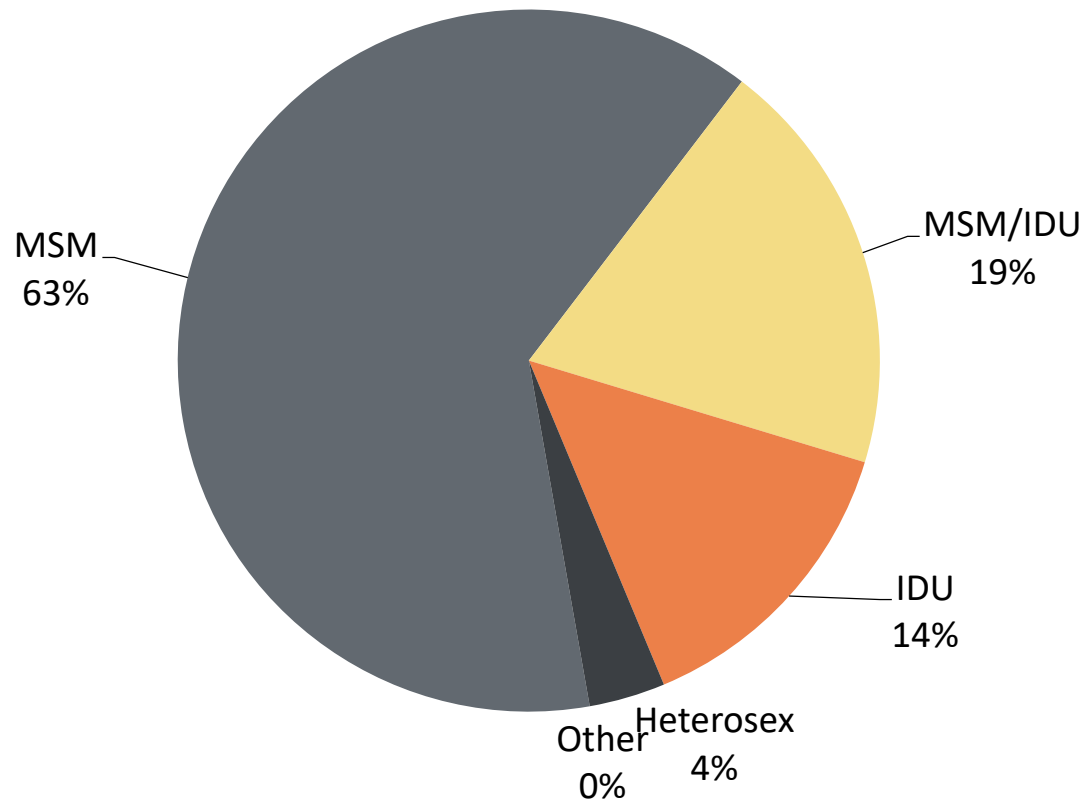
<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

Data Source: Minnesota HIV/AIDS Surveillance System



# Males Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

American Indian Males (n = 63)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

Data Source: Minnesota HIV/AIDS Surveillance System

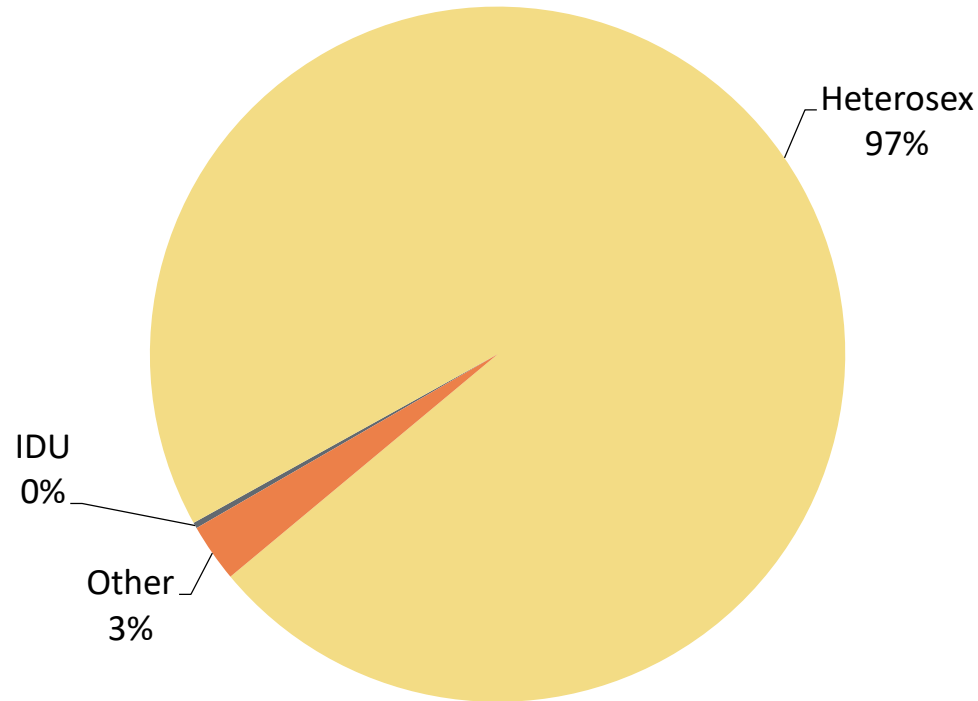
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# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

African-born Females<sup>††</sup> (n = 731)



n = Number of persons

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

IDU = Injecting drug use

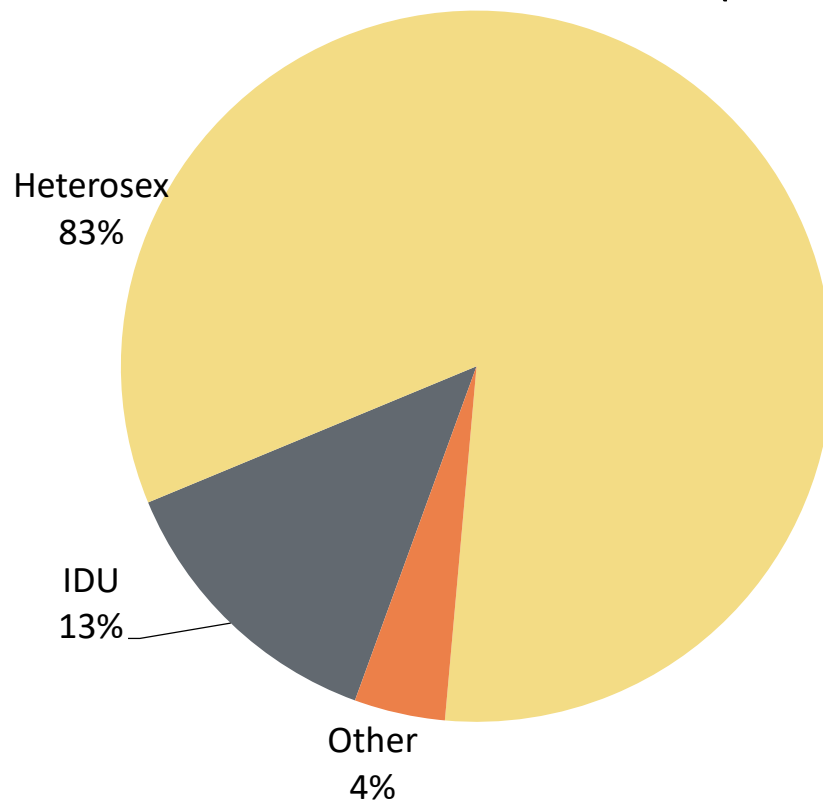
Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

<sup>††</sup> Refers to Black, African-born females.

# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

## African American Females<sup>††</sup> (n = 555)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

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

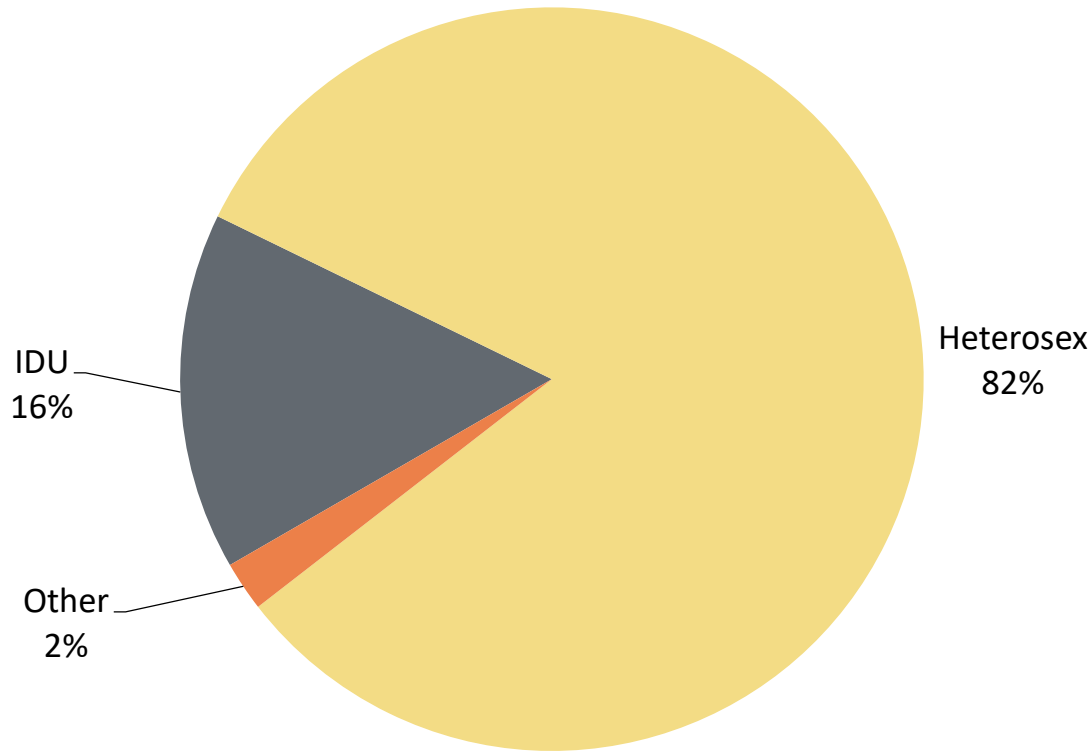
Data Source: Minnesota HIV/AIDS Surveillance System

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# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

White Females (n = 480)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.

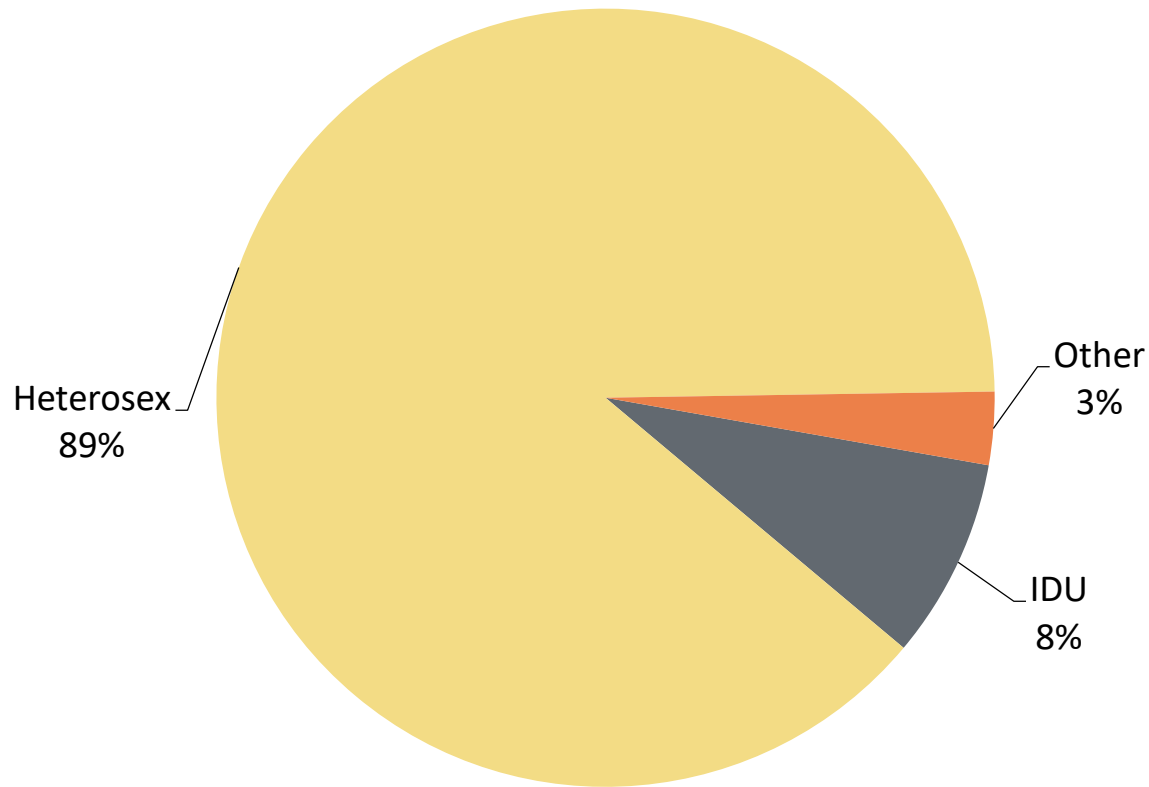
Data Source: Minnesota HIV/AIDS Surveillance System

*HIV/AIDS in Minnesota: Annual Review*



# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

Hispanic Females (n = 140)



n = Number of persons

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

IDU = Injecting drug use

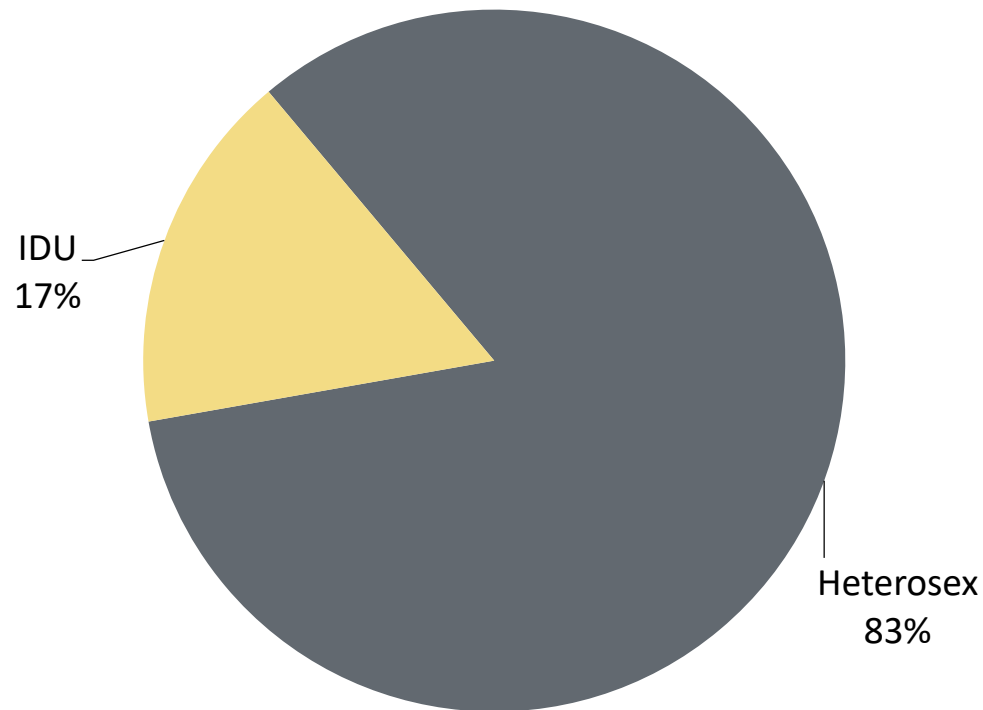
Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.



# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

American Indian Females (n = 51)



n = Number of persons

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

IDU = Injecting drug use

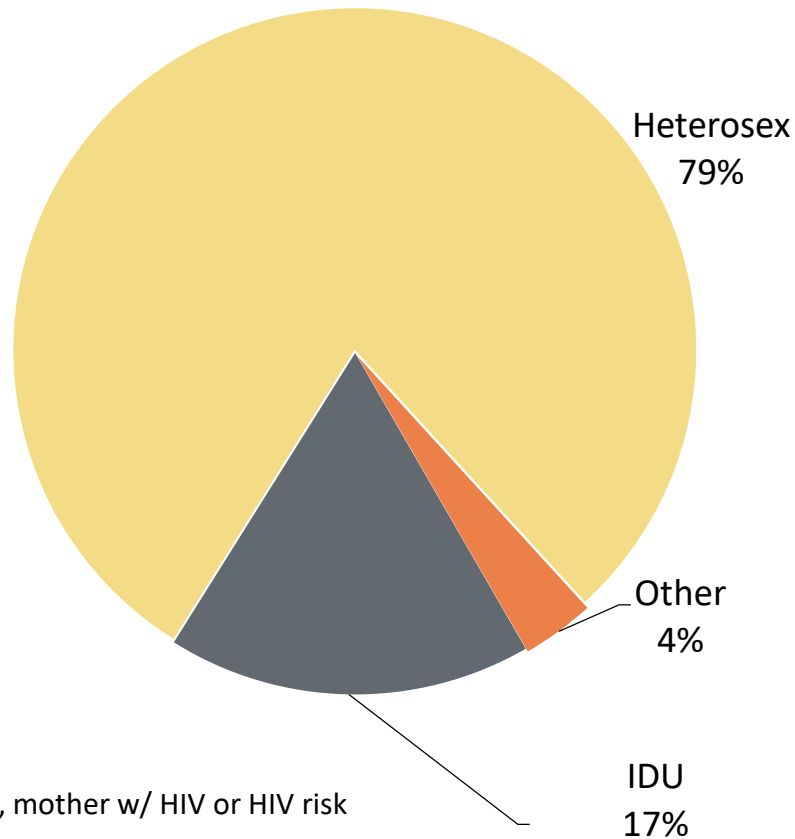
Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using prevalent cases with known risk. For additional detail see the HIV Surveillance Technical Notes.



# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

## Multi-racial Females (n = 59)



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using the following proportions: 95% - Heterosexual, 5% - Other.

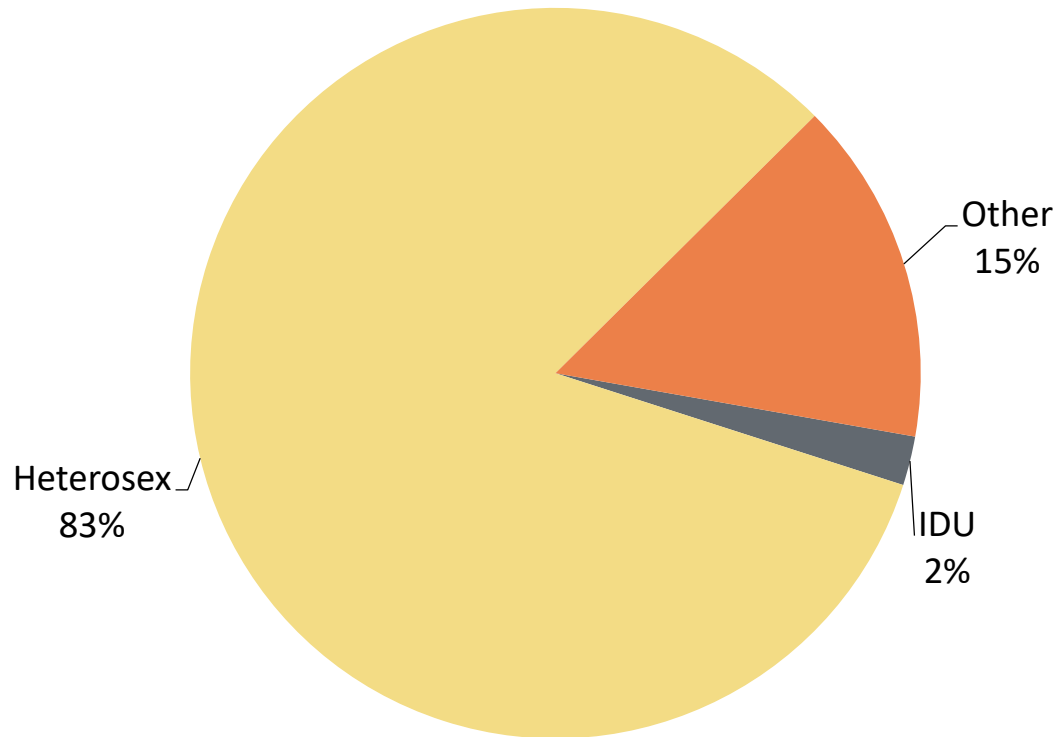
For additional detail see the HIV Surveillance Technical Notes.



# Females Living with HIV/AIDS in Minnesota by Estimated Mode of Exposure<sup>†</sup>, 2016

## Asian Females (n = 53)

CAUTION: Small number of cases – interpret carefully.



n = Number of persons

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

IDU = Injecting drug use

Heterosex = Heterosexual contact

<sup>†</sup> Mode of Exposure has been estimated using the following proportions: 95% - Heterosexual, 5% - Other.

For additional detail see the HIV Surveillance Technical Notes.

# Populations of Interest



# HIV and Hepatitis B, C co-infection

## HIV and Hepatitis B and C

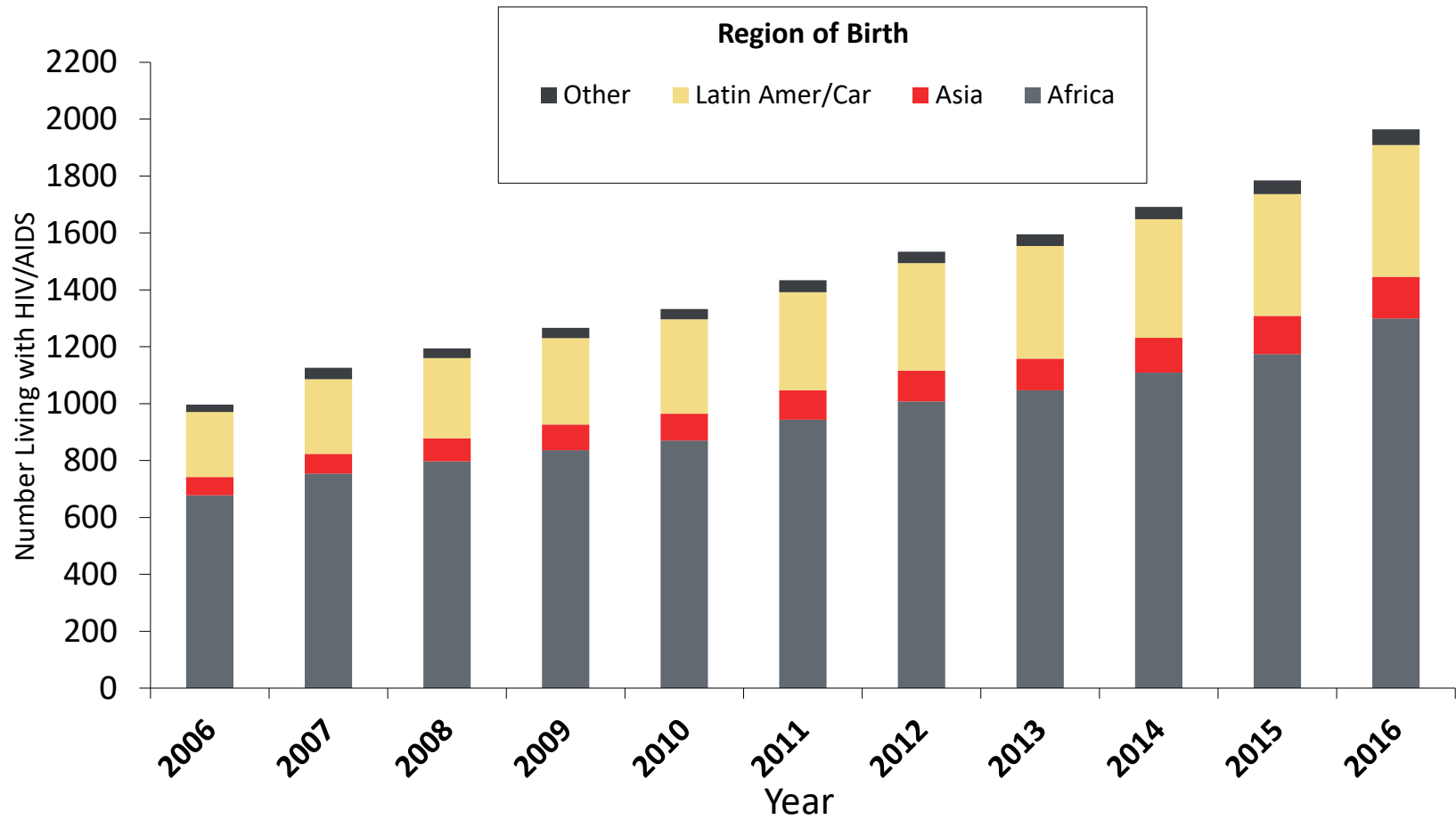
- As of December 31, 2016\* , 8,554 persons are assumed alive and living in Minnesota with HIV/AIDS
  - Of these 8,554 persons, 776 (9%) are co-infected with either Hepatitis B, C or both
    - Of the 776, 316 (41%) are living with HIV and Hep B
    - Of the 776, 416 (53%) are living with HIV and Hep C
    - Of the 776, 44 ( 6%) are living with HIV and Hep B/Hep C

\* This number includes persons who reported Minnesota as their current state of residence, regardless of residence at time of diagnosis. Includes state prisoners and refugees arriving through the HIV+ Refugee Resettlement Program, as well as, HIV+ refugee/immigrants arriving through other programs.

Data Sources: Minnesota HIV/AIDS Surveillance System and Minnesota Hepatitis Surveillance System



# Foreign-Born Persons Living with HIV/AIDS in Minnesota by Region of Birth, 2006-2016



Latin Amer/Car – Includes Mexico, Caribbean, and Central/South American countries

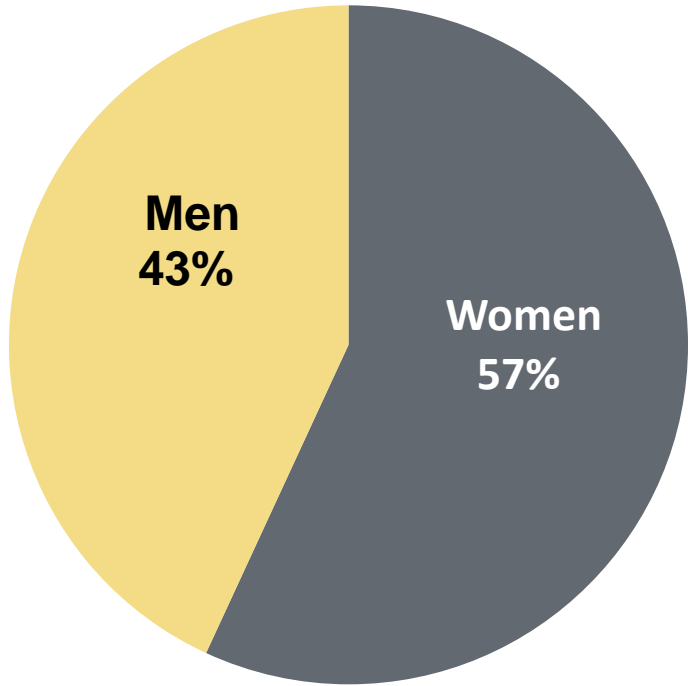
Data Source: Minnesota HIV/AIDS Surveillance System

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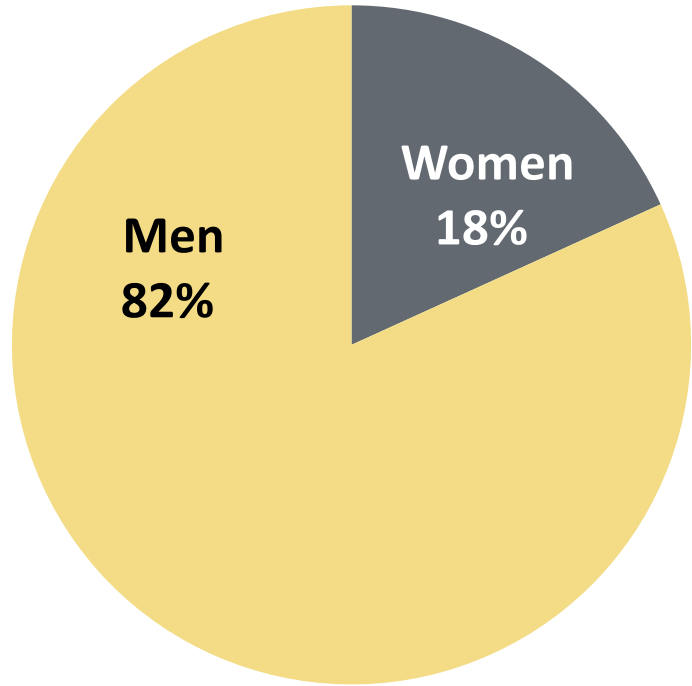


# African-Born<sup>†</sup> Persons Living with HIV/AIDS Compared to Other Minnesota Cases by Gender, 2016

African-born Persons  
Total Number = 1,299



U.S.-born Cases  
Total Number = 6,590

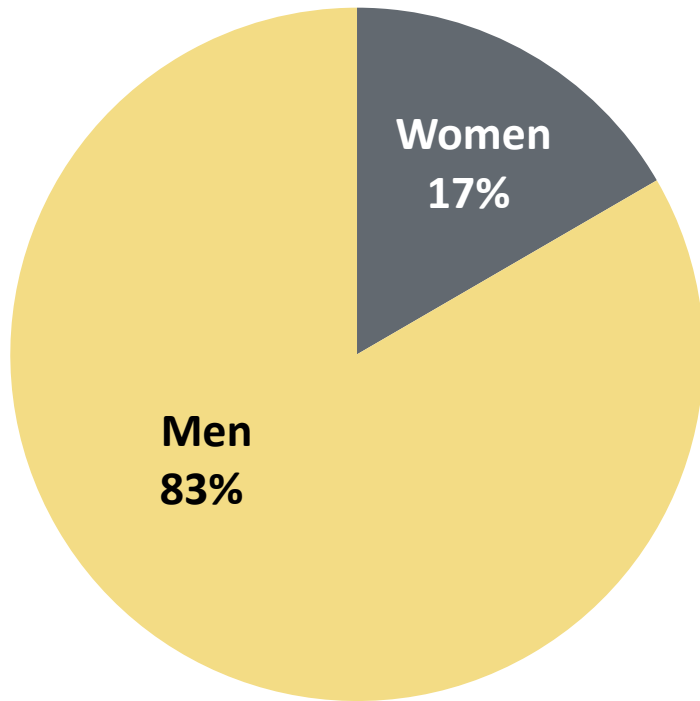


<sup>†</sup> Includes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program and other refugee/immigrant programs. Also includes 1 White African-born persons and 2 multi-racial African-born person.

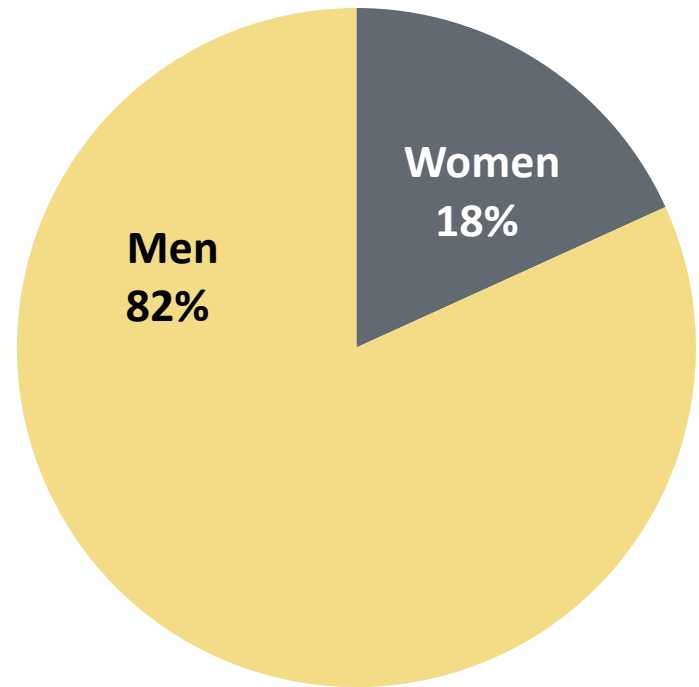


# Persons Living with HIV/AIDS born in Latin America/Caribbean† Countries Compared to Other Minnesota Cases by Gender, 2016

Latin/Caribbean Persons  
Total Number = 463



U.S.-born Cases  
Total Number = 6,590



† Includes Mexico and all Central/South American and Caribbean countries.



## Countries of Birth Among Foreign-Born Persons<sup>†</sup> Living with HIV/AIDS, Minnesota, 2016

- Ethiopia/Oromia (n=291)
- Mexico (n=267)
- Liberia (n=219)
- Kenya (n=166)
- Somalia (n=132)
- Cameroon (n=101)
- Sudan (n=73)
- Other<sup>^</sup> (n=748)

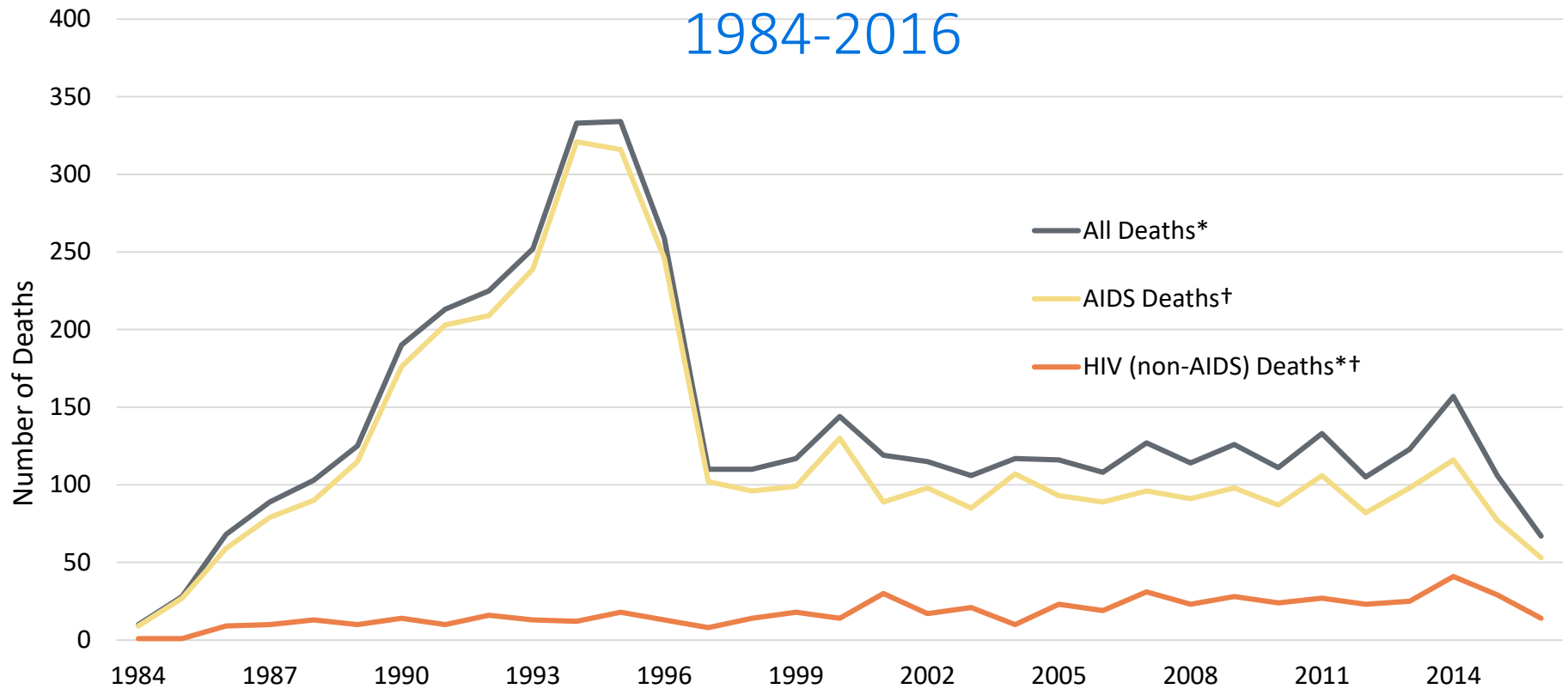
<sup>†</sup> Includes persons arriving to Minnesota through the HIV+ Refugee Resettlement Program, as well as other refugee/immigrants with an HIV diagnosis prior to arrival in Minnesota.

<sup>^</sup> Includes 100 additional countries.

# Mortality



# Reported Deaths among persons with HIV in Minnesota , 1984-2016



\* Number of deaths known to have occurred among all people living with HIV infection in Minnesota, regardless of location of diagnosis and cause of death.

† Number of deaths known to have occurred among people living with AIDS in Minnesota in a given calendar year, regardless of location of diagnosis and cause of death

\* † Number of deaths known to have occurred among people living with HIV (non-AIDS) in Minnesota in a given calendar year, regardless of location of diagnosis and cause of death