



HIV PREVENTION COUNSELING: THE FACTS

HIV Epidemiology March 7, 2019

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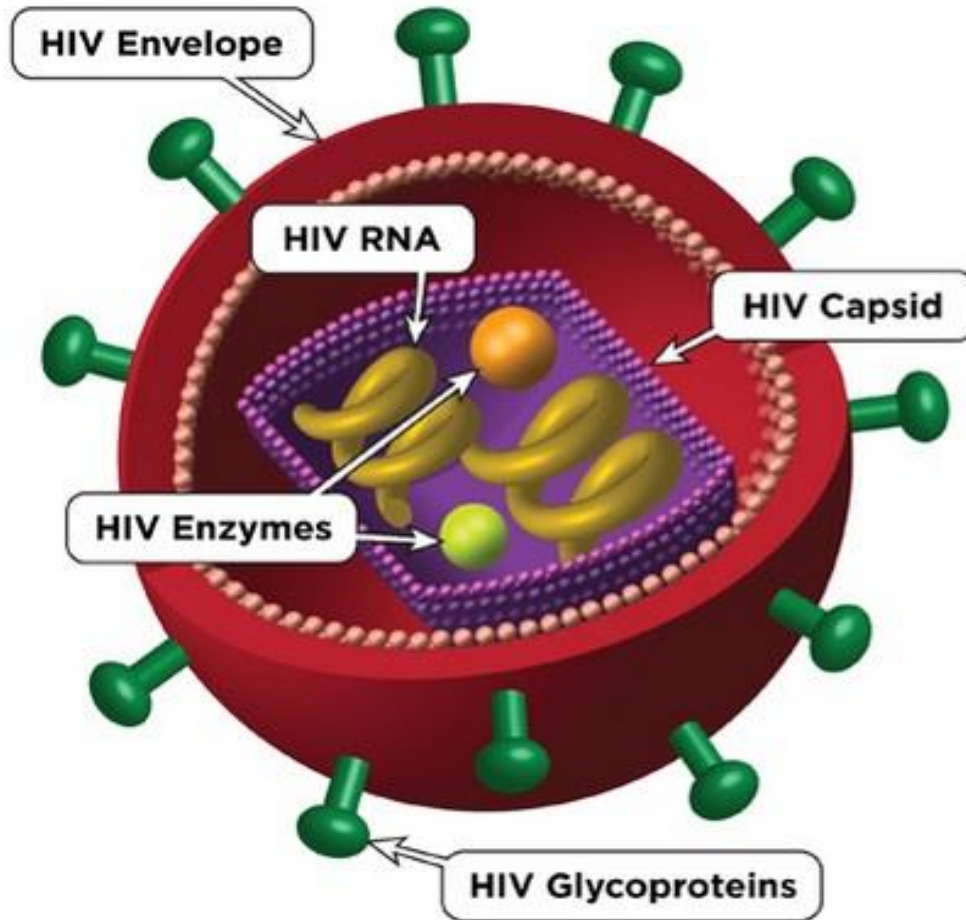


Human Immunodeficiency Virus

- Virus that attacks and weakens immune system
- Can be treated, but not cured
- Transmitted under very specific circumstances

Does not discriminate: rich or poor, gay or straight, male or female, young or old, etc.

Human Immunodeficiency Virus Anatomy



Key to Terms

HIV capsid: HIV's bullet-shaped core that contains HIV RNA

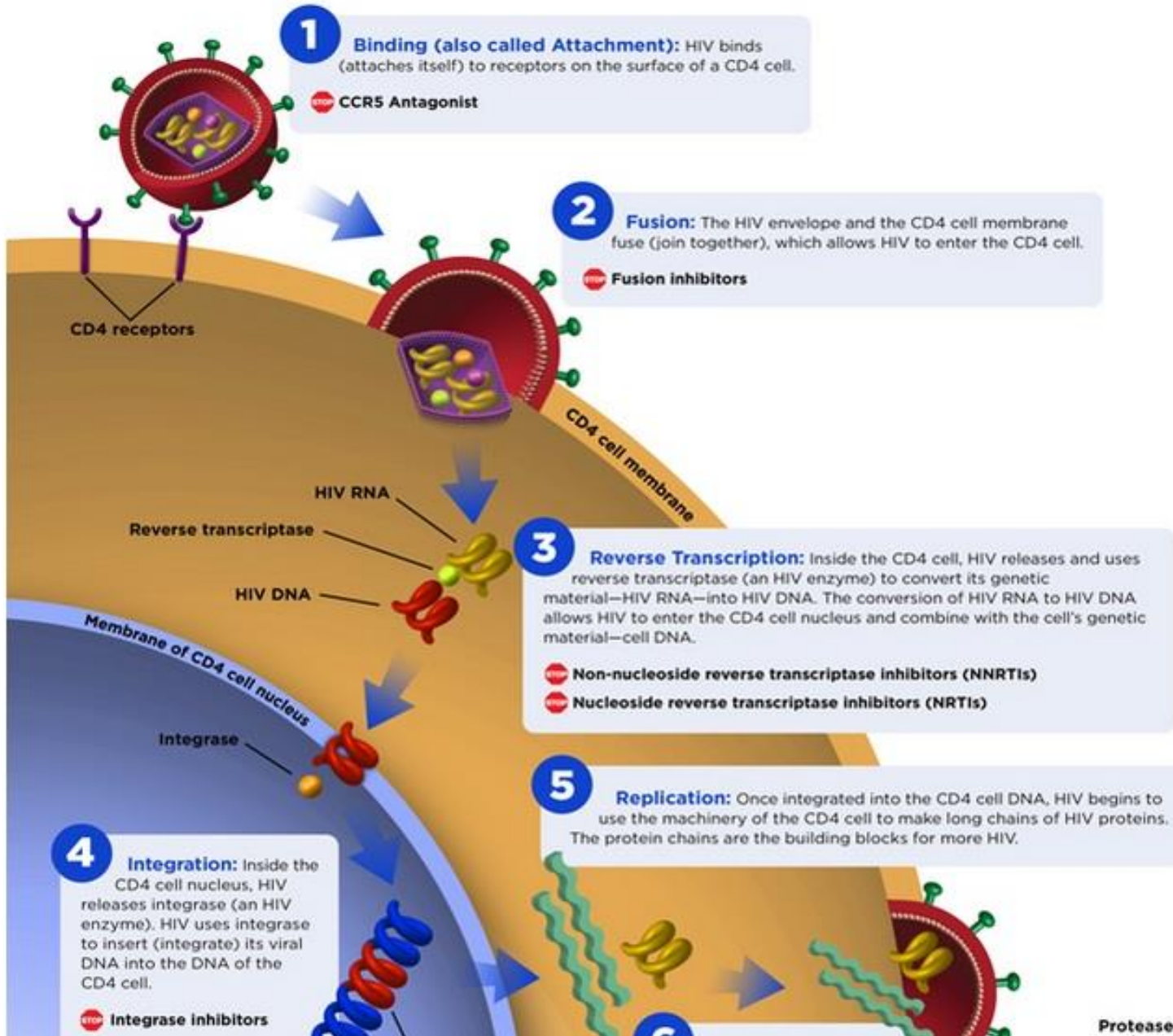
HIV envelope: Outer surface of HIV

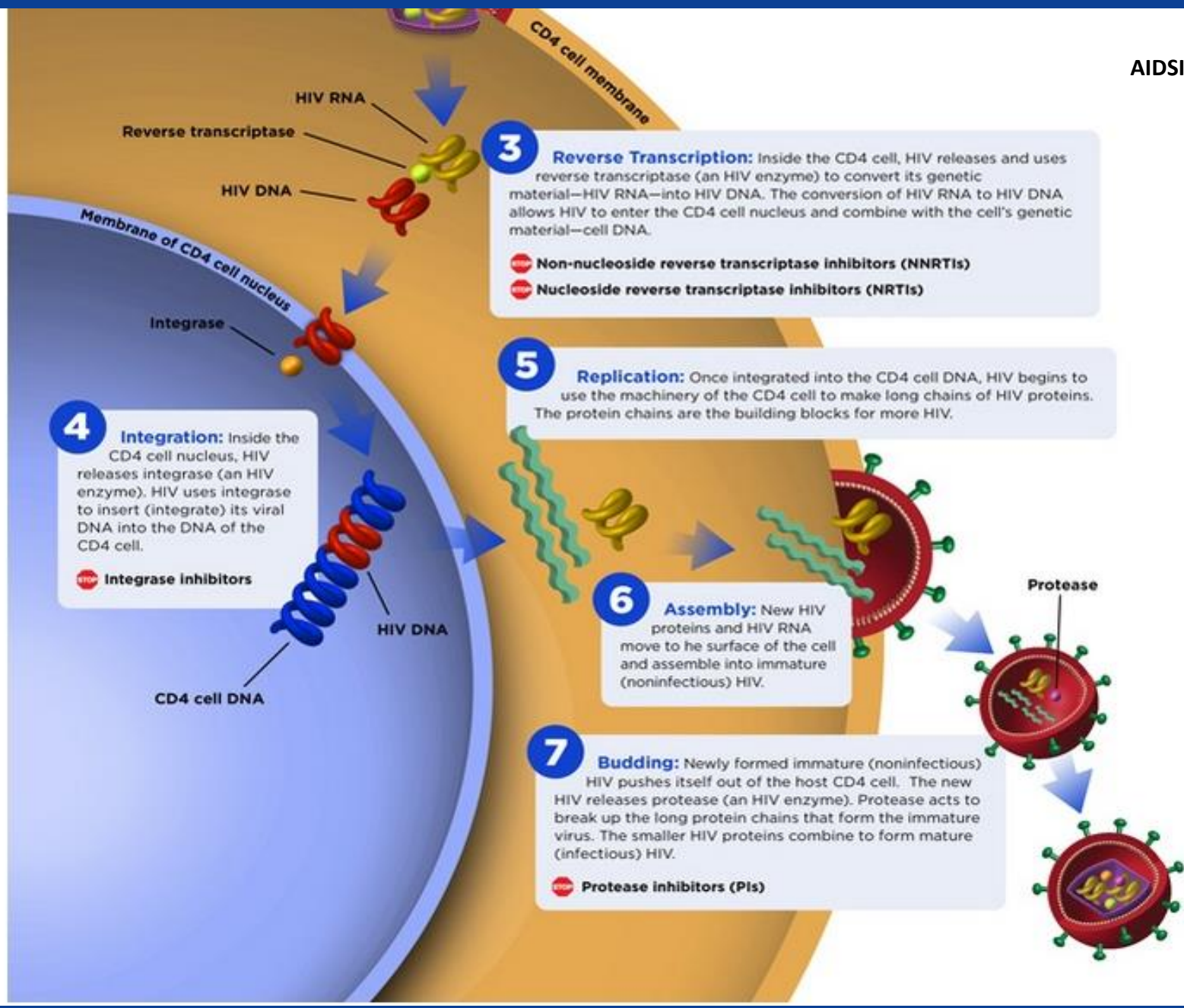
HIV enzymes: Proteins that carry out steps in the HIV life cycle

HIV glycoproteins: Protein "spikes" embedded in the HIV envelope

HIV RNA: HIV's genetic material

AIDSinfo





HIV Transmission

Infectious Body Fluids	Risks
<ul style="list-style-type: none">❖ Blood❖ Semen/Pre-ejaculation Fluid (Precum)❖ Vaginal/Cervical Fluid❖ Breast Milk	<ul style="list-style-type: none">❖ Anal, vaginal, and oral sex❖ Sharing needles and other injection equipment❖ From infected mother to child during pregnancy, delivery, or breastfeeding❖ Occupational exposure



Acquired Immune Deficiency Syndrome



- AIDS is caused by HIV infection
- Infection with HIV *may* or *may not* lead to AIDS
- Progression to AIDS is defined by the CDC:
 - CD4+ cell count below 200 cells per microliter
 - CD4+ cells account for fewer than 14% of all lymphocytes
 - One or more of the 25 AIDS-defining illnesses

HIV Epidemiological Overview

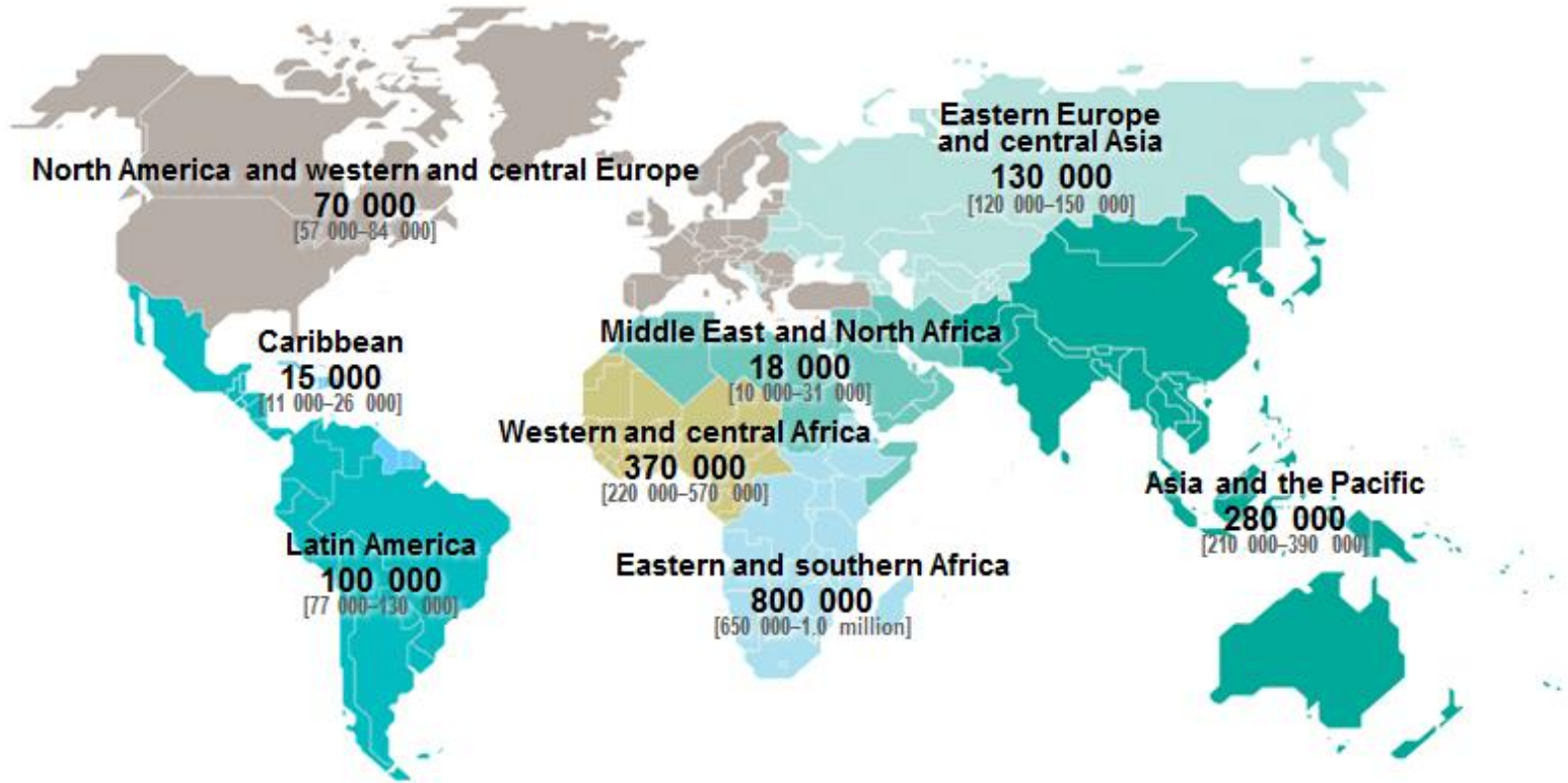


“Epidemiology is the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems”

-Centers for Disease Control and Prevention (CDC)



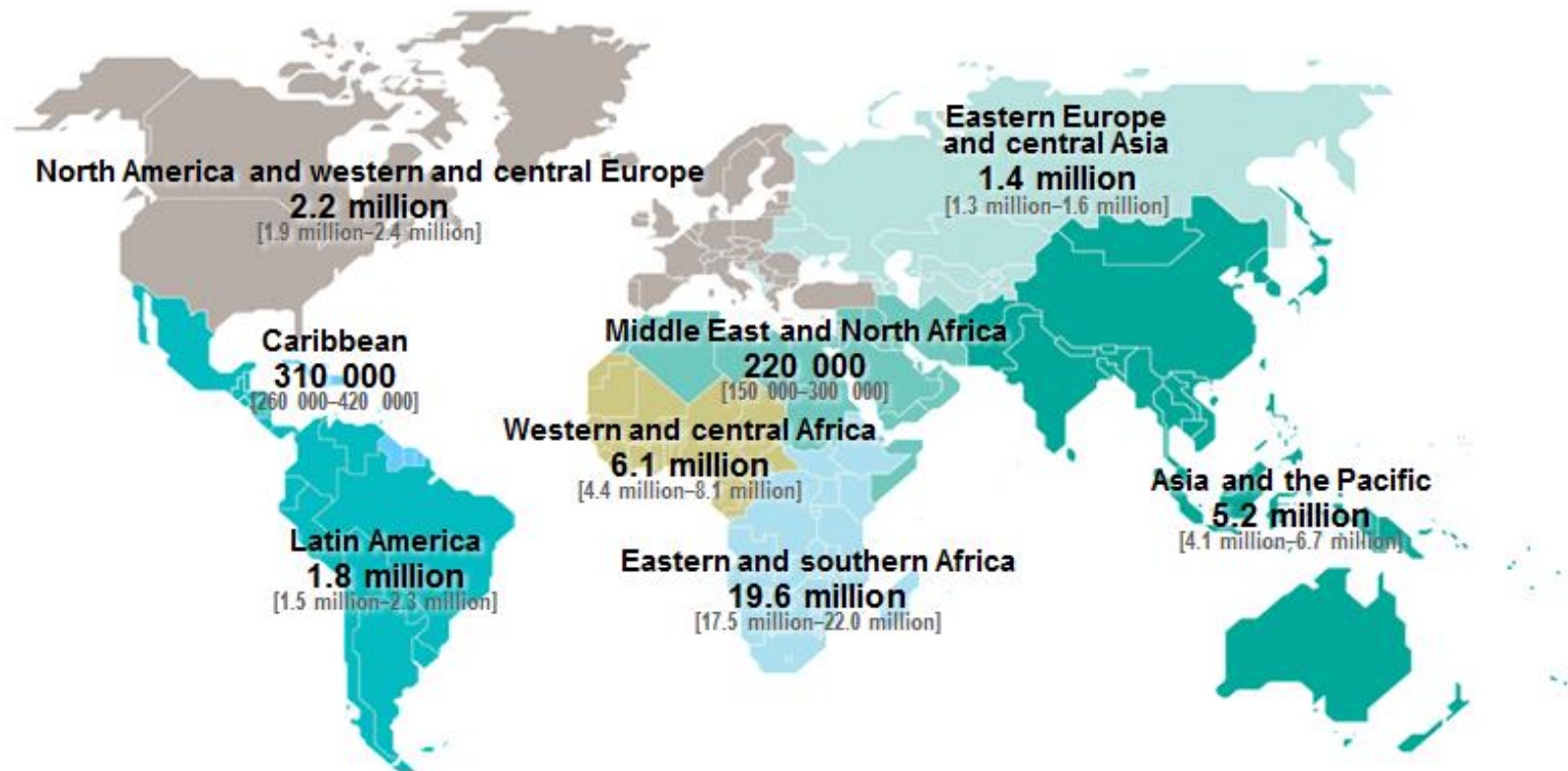
Estimated number of adults and children newly infected with HIV | 2017



Total: 1.8 million [1.4 million–2.4 million]



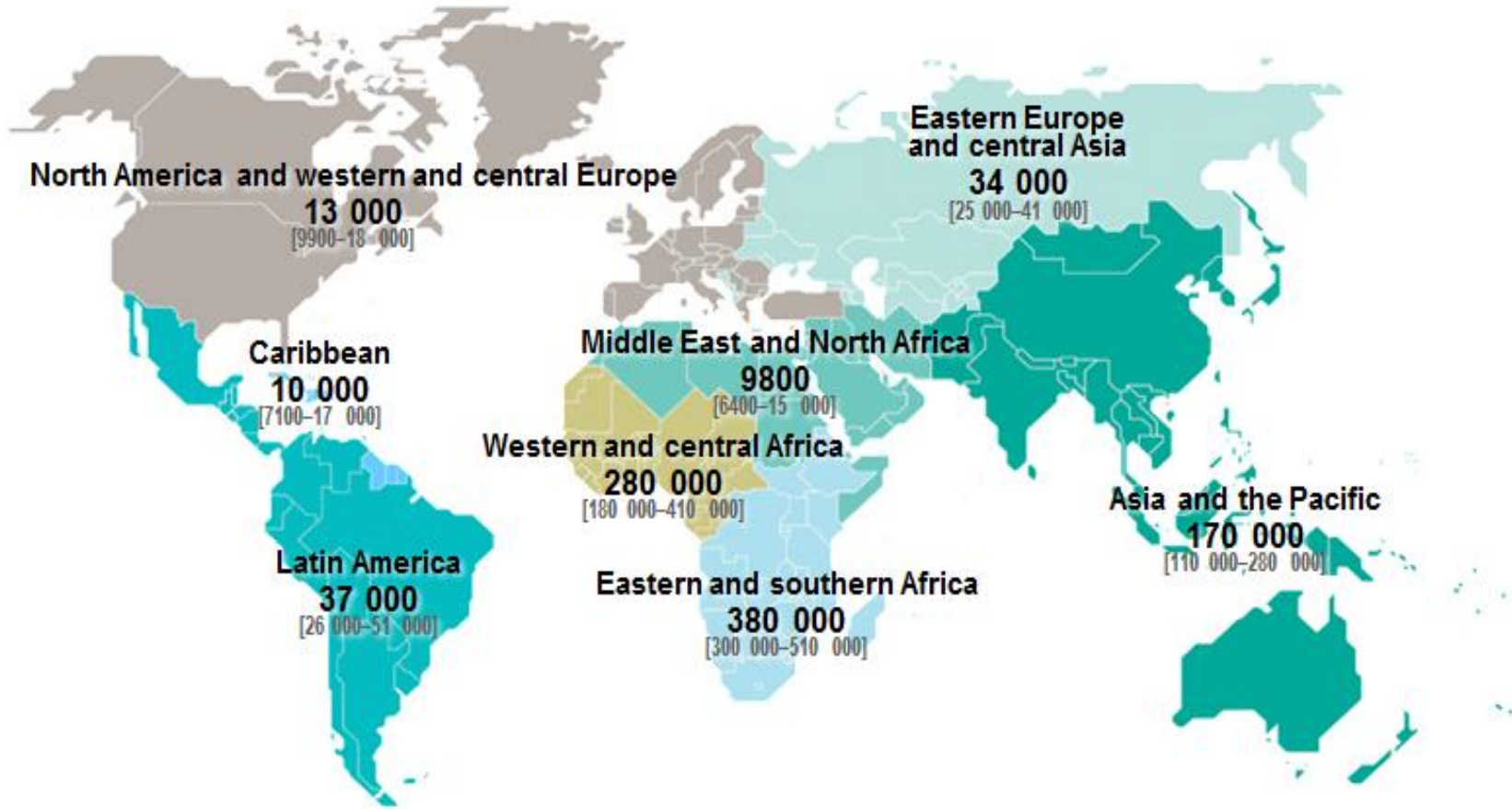
Adults and children estimated to be living with HIV | 2017



Total: 36.9 million [31.1 million–43.9 million]



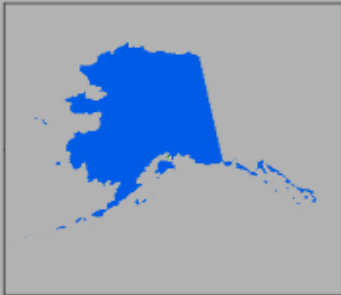
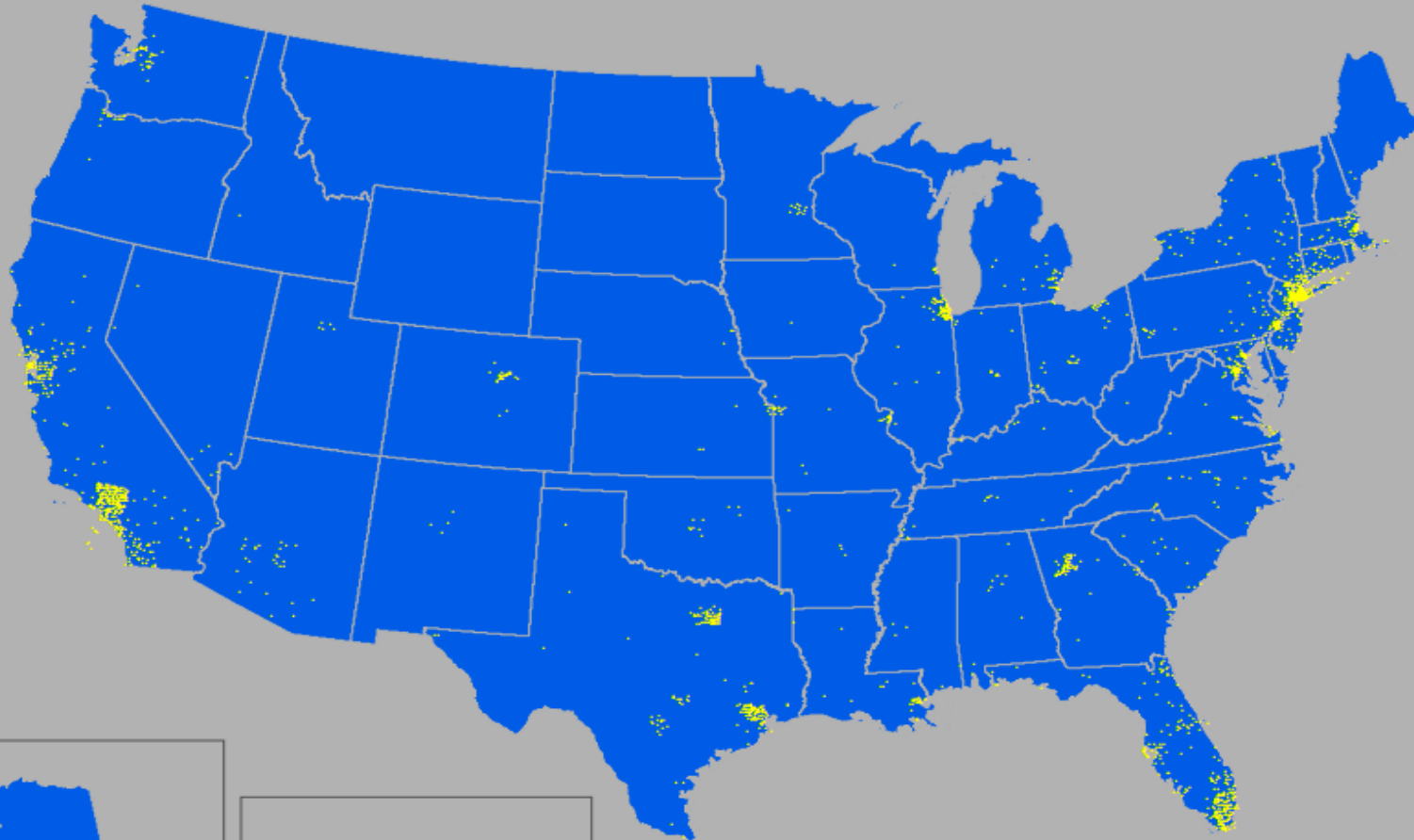
Estimated adult and child deaths from AIDS | 2017



Total: 940 000 [670 000–1.3 million]

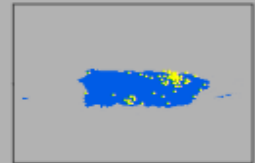


Estimated AIDS Diagnoses in the United States and Puerto Rico Cumulative through 1989 N = 150,455



Each Dot Represents 50 Cases

Notes: All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting. Data are cumulative AIDS diagnoses through the end of 1989, reported to CDC by June 2010.



Ongoing National Trends

■ People of Color

- In 2017, Blacks/AAs accounted for 13% of the US population, but 43% of all new HIV diagnosis
- Hispanics made up 18% of the US population and were 26% of those newly diagnosed with HIV
- Black/AA women are disproportionately affected accounting for 6 in 10 diagnosis among women

■ Heterosexual transmission

- accounted for 24% of estimated new HIV infections in 2017

■ Young MSM*

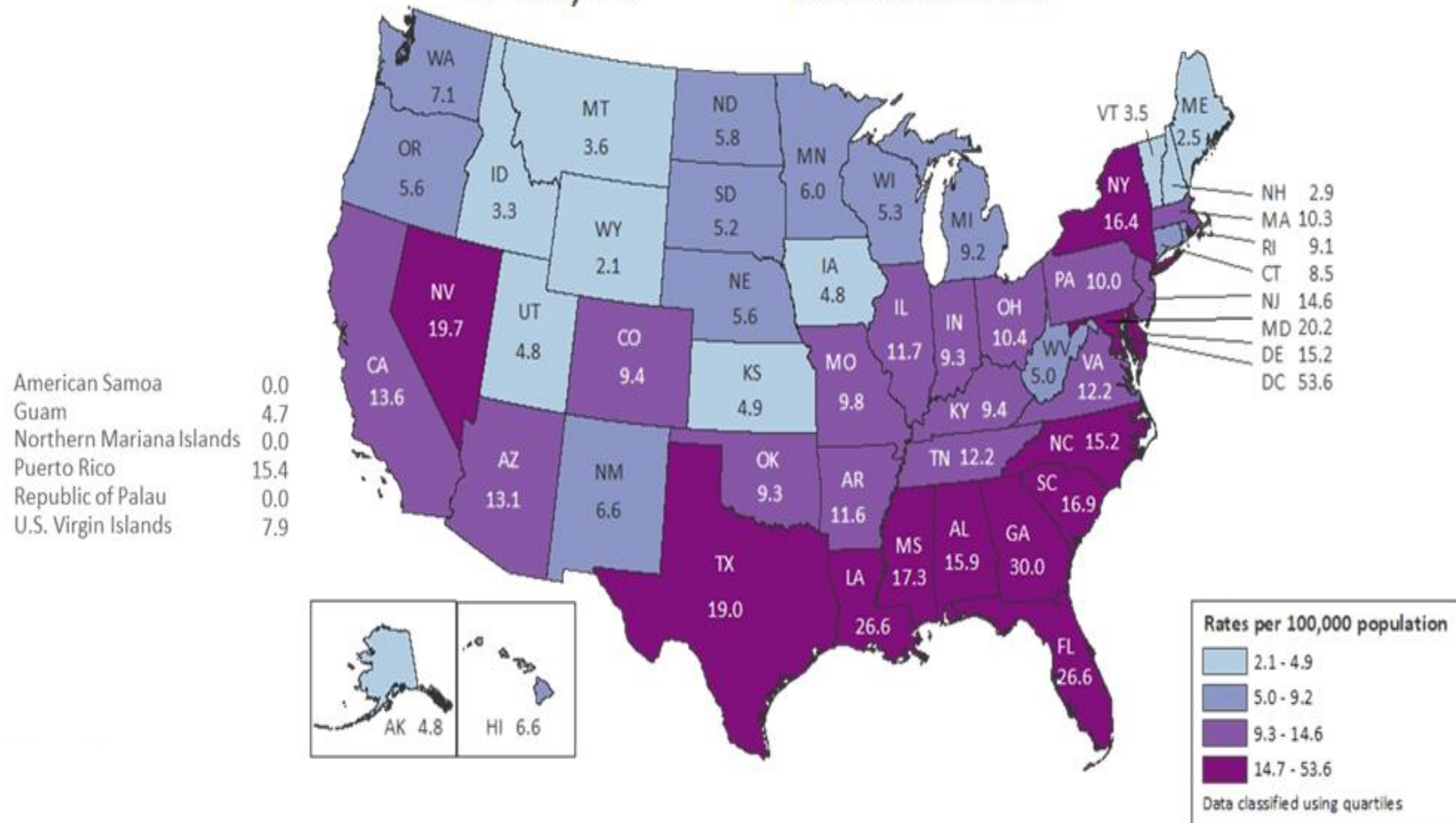
- Particularly young MSM of color have seen a stabilization or increase since 2008



Rates of Diagnoses of HIV Infection among Adults and Adolescents, by Area of Residence, 2017—United States and 6 Dependent Areas

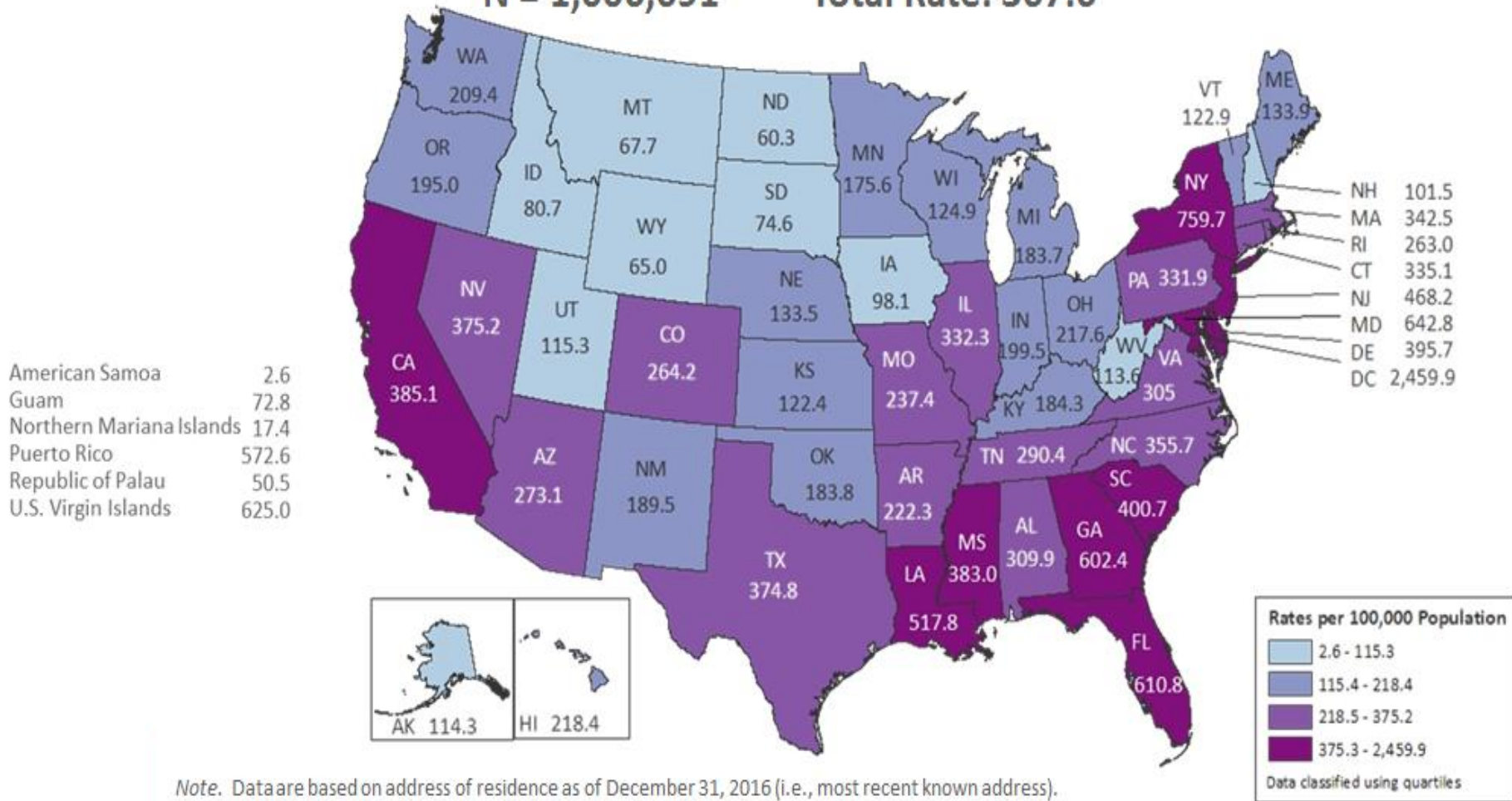
N = 38,640

Total Rate: 14.0



Rates of Adults and Adolescents Living with Diagnosed HIV Infection, by Area of Residence, Year-end 2016—United States and 6 Dependent Areas

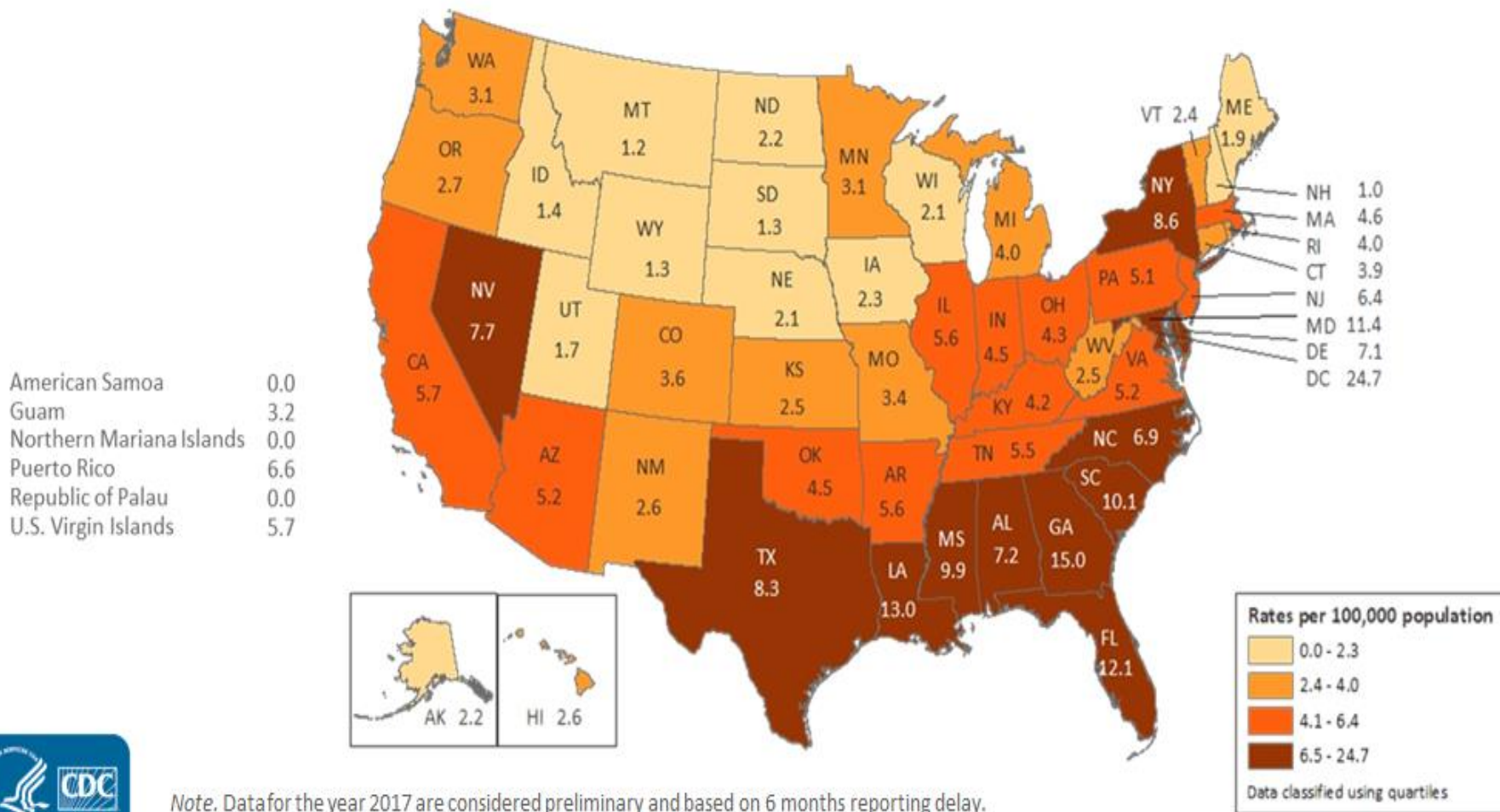
N = 1,006,691 Total Rate: 367.6



Rates of Diagnosed HIV Infection Classified as Stage 3 (AIDS) among Adults and Adolescents, by Area of Residence, 2017—United States and 6 Dependent Areas

N = 17,770

Total Rate: 6.4

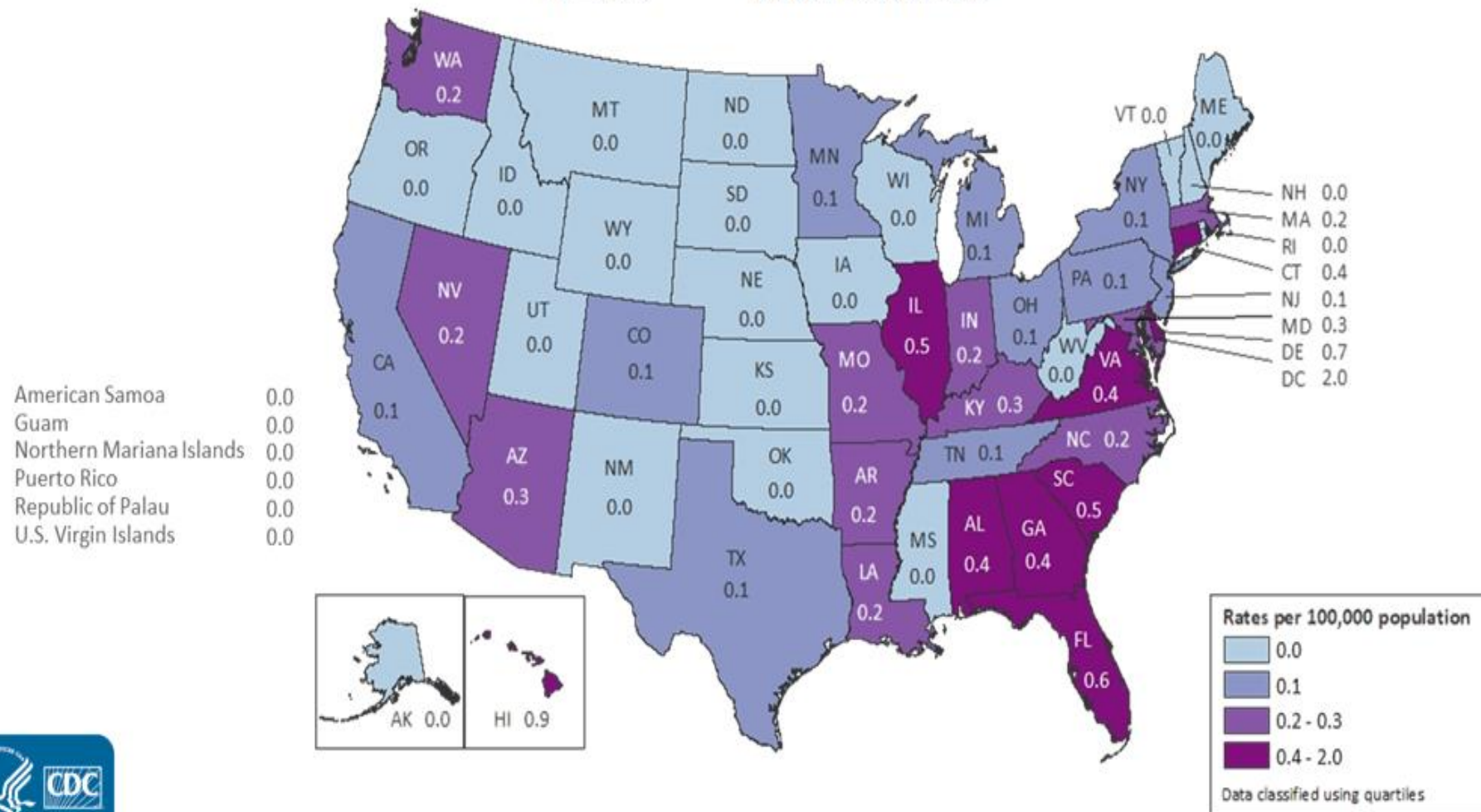


Note. Data for the year 2017 are considered preliminary and based on 6 months reporting delay.



Rates of Diagnoses of HIV Infection among Children, by Area of Residence 2017—United States and 6 Dependent Areas

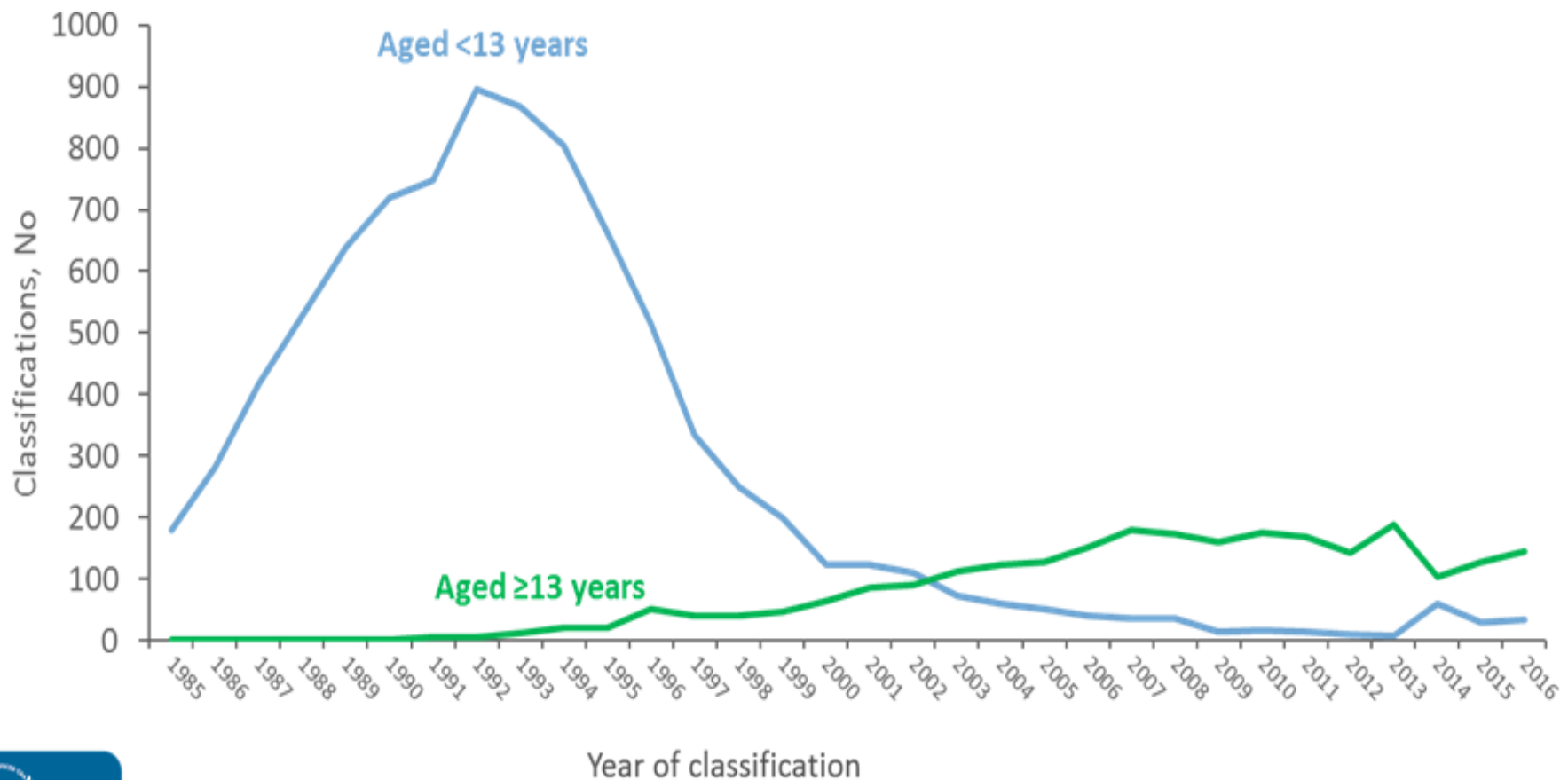
N = 99 Total Rate: 0.2



Note: Data for the year 2017 are considered preliminary and based on 6 months reporting delay.

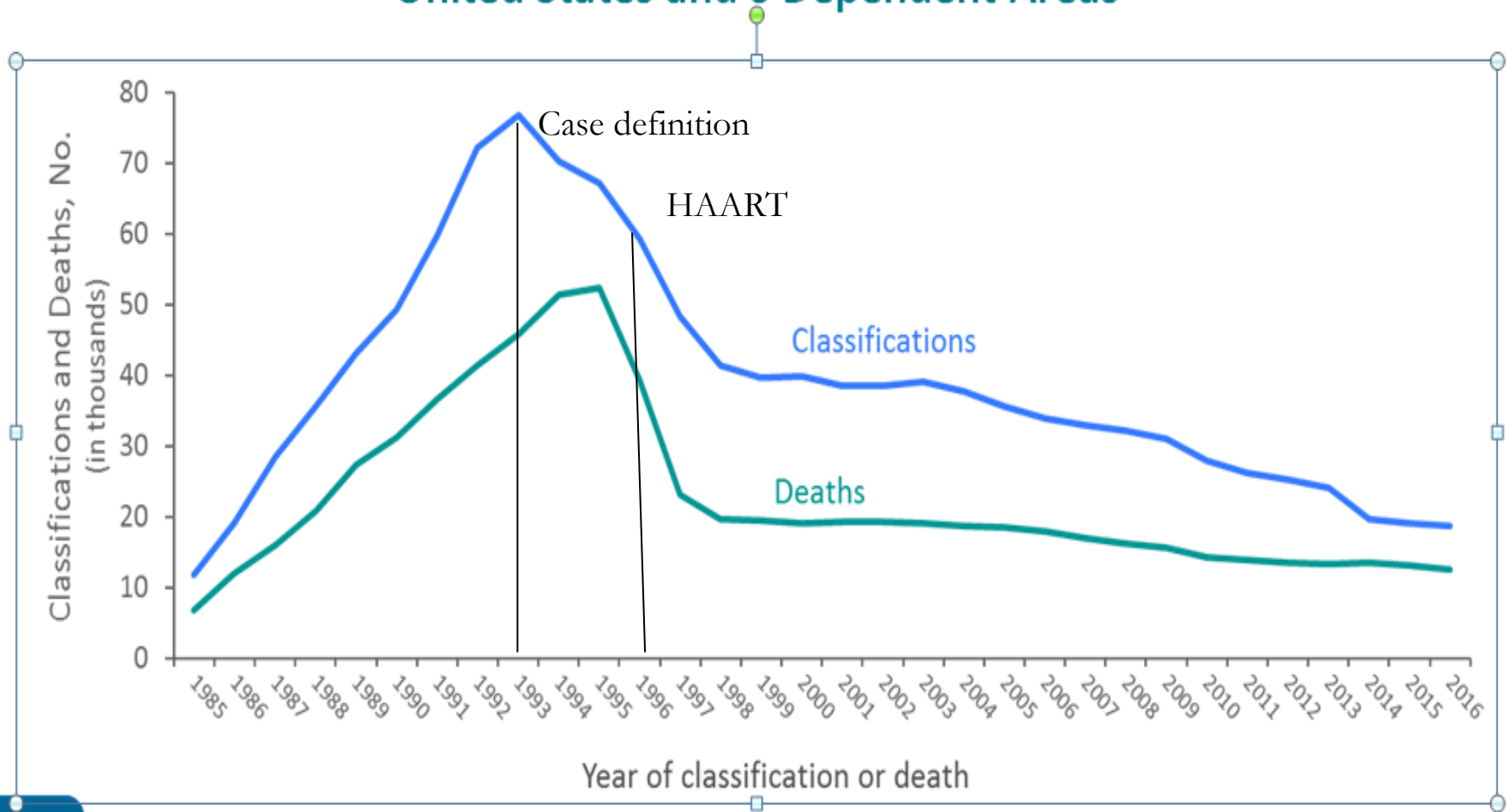


Stage 3 (AIDS) Classifications among Persons with Perinatally Acquired HIV Infection, 1985–2016—United States and 6 Dependent Areas



Stage 3 (AIDS) Classifications and Deaths of Persons with Diagnosed HIV Infection Ever Classified as Stage 3 (AIDS), among Adults and Adolescents, 1985–2016

United States and 6 Dependent Areas

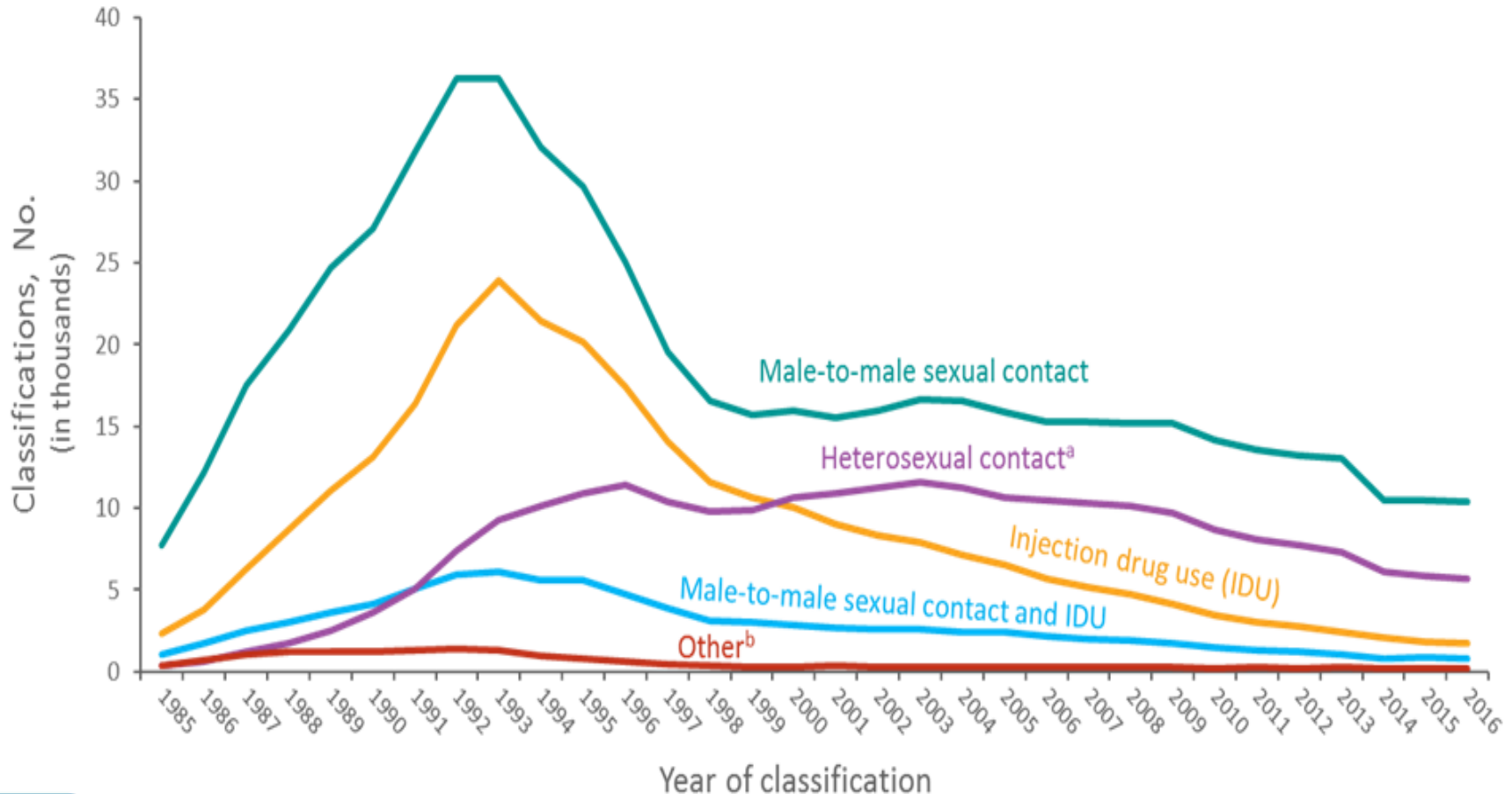


Note. Deaths of persons with HIV infection, stage 3 (AIDS) may be due to any cause.



Stage 3 (AIDS) Classifications among Adults and Adolescents with Diagnosed HIV Infection, by Transmission Category and Year of Classification, 1985–2016

United States and 6 Dependent Areas



Note. Data have been statistically adjusted to account for missing transmission category.

^a Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

^b Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.



Number of cases of transfusion-transmitted HIV infection from contaminated blood products 1985-2008

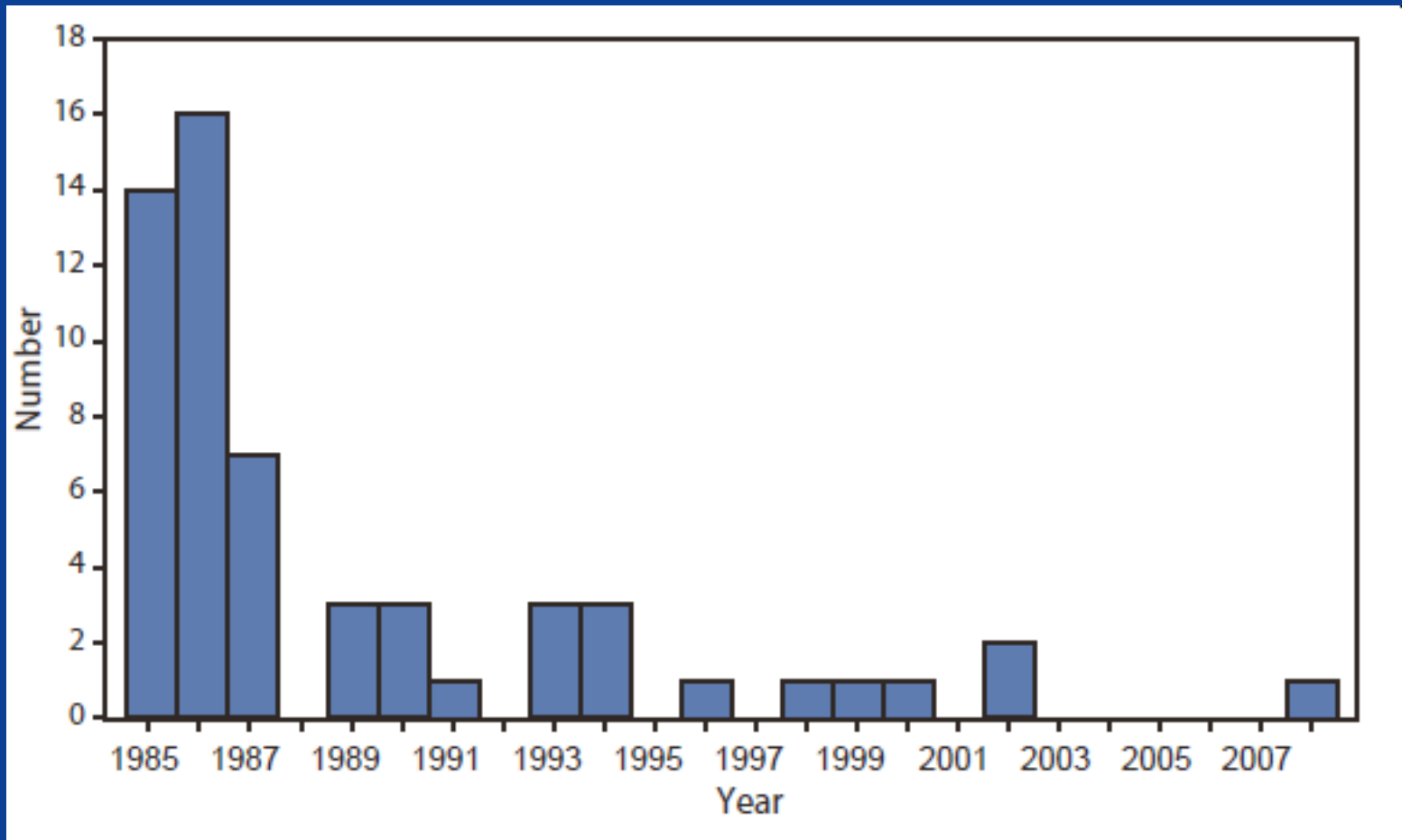
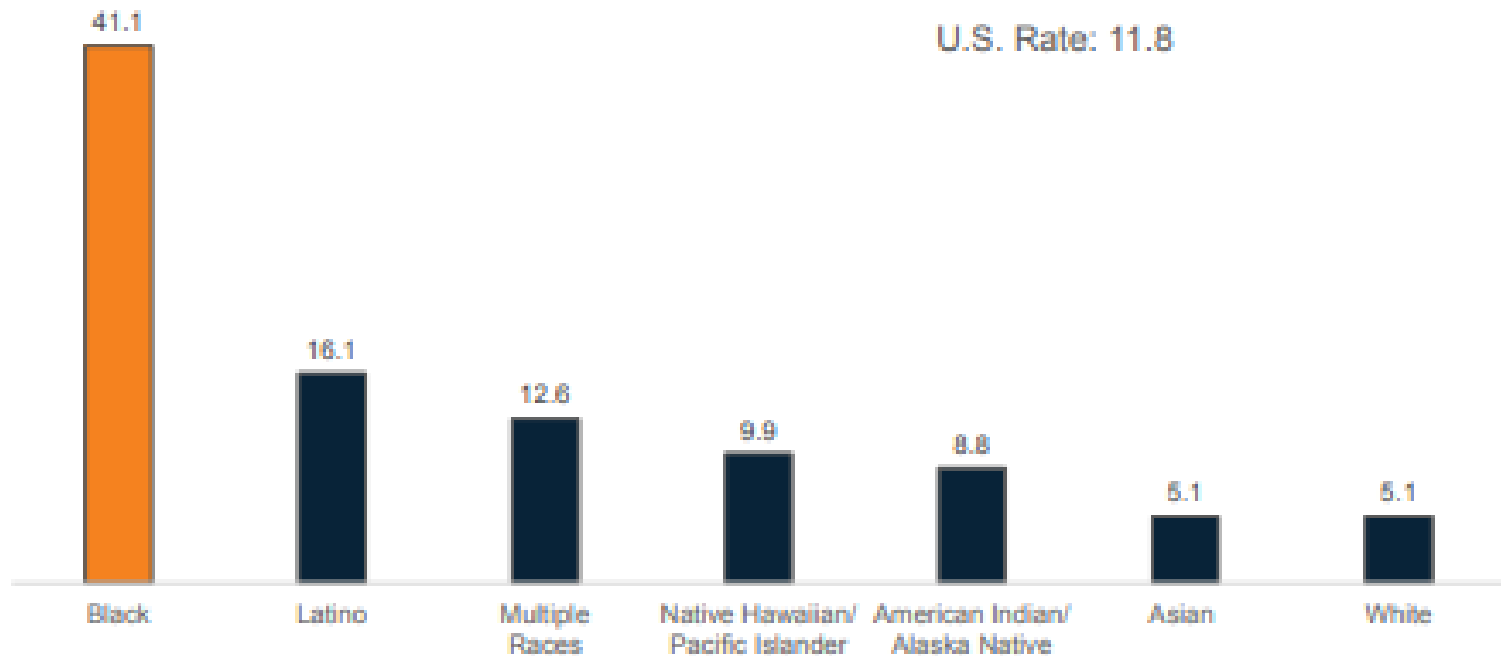


Figure 2

Rates of New HIV Diagnoses per 100,000, by Race/Ethnicity, 2017



NOTES: HIV diagnosis data are preliminary estimates and do not include U.S. dependent areas.

SOURCE: CDC. HIV Surveillance Report, Diagnoses of HIV Infection in the United States and Dependent Areas, 2017, Vol. 29; November 2018.



<http://kff.org/hiv/aids/fact-sheet/black-americans-and-hiv-aids-the-basics/>



Black Gay Men

Figure 2. Black gay men are only 0.2% of the total U.S. population, but one in four new HIV infections nationally.

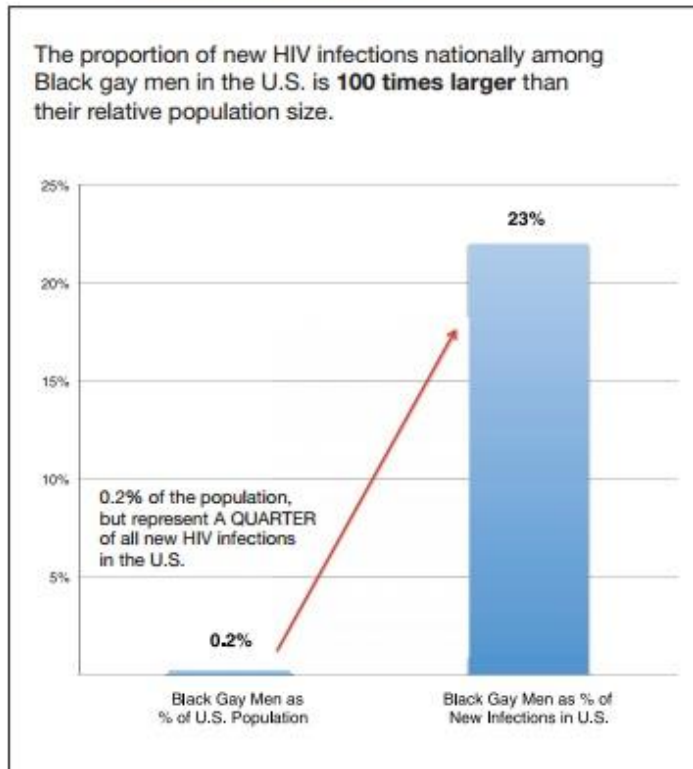
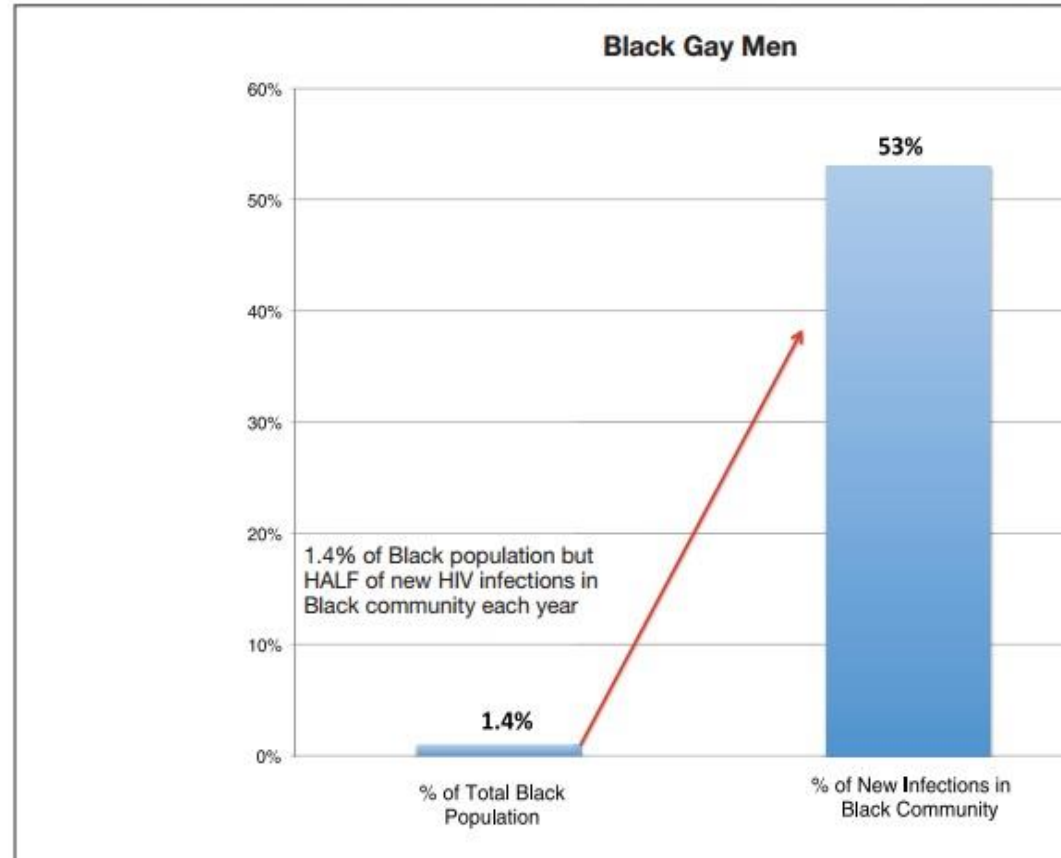


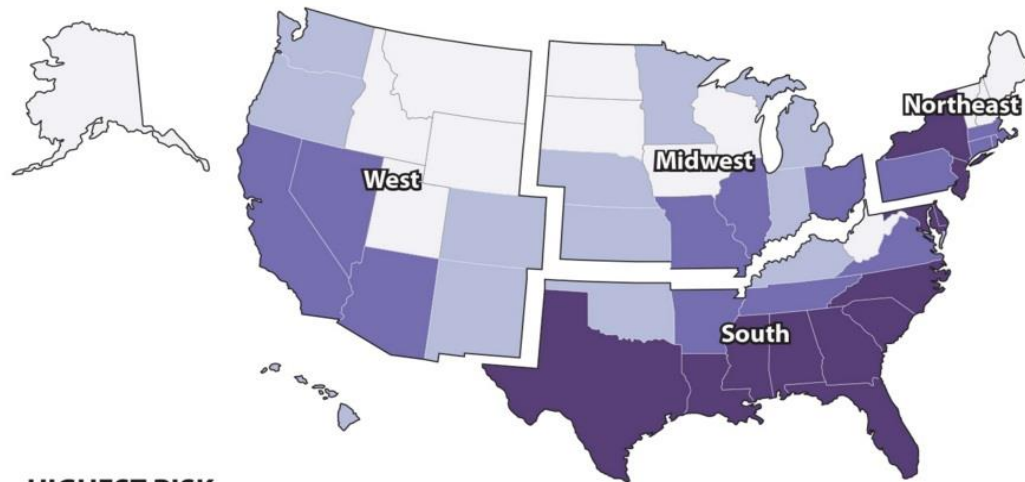
Figure 3. Black gay men are only 1.4% of the Black population, but they account for one in two new HIV infections among Black Americans each year.



<http://kff.org/hiv/aids/fact-sheet/black-americans-and-hiv/aids-the-basics/>

Lifetime Risk of HIV Diagnosis in the U.S.

Lifetime Risk of HIV Diagnosis by State



HIGHEST RISK

LOWEST RISK

State	One in "n"	State	One in "n"	State	One in "n"	State	One in "n"
District of Columbia	13	Nevada	98	Michigan	167	West Virginia	302
Maryland	49	Illinois	101	Oklahoma	168	Wisconsin	307
Georgia	51	California	102	Kentucky	173	Iowa	342
Florida	54	Tennessee	103	Indiana	183	Utah	366
Louisiana	56	Pennsylvania	115	Washington	185	Maine	373
New York	69	Virginia	115	Colorado	191	Alaska	384
Texas	81	Massachusetts	121	New Mexico	196	South Dakota	402
New Jersey	84	Arizona	138	Hawaii	202	New Hampshire	411
Mississippi	85	Connecticut	139	Oregon	214	Wyoming	481
South Carolina	86	Rhode Island	143	Minnesota	216	Vermont	527
North Carolina	93	Ohio	150	Kansas	262	Idaho	547
Delaware	96	Missouri	155	Nebraska	264	Montana	578
Alabama	97	Arkansas	159			North Dakota	670

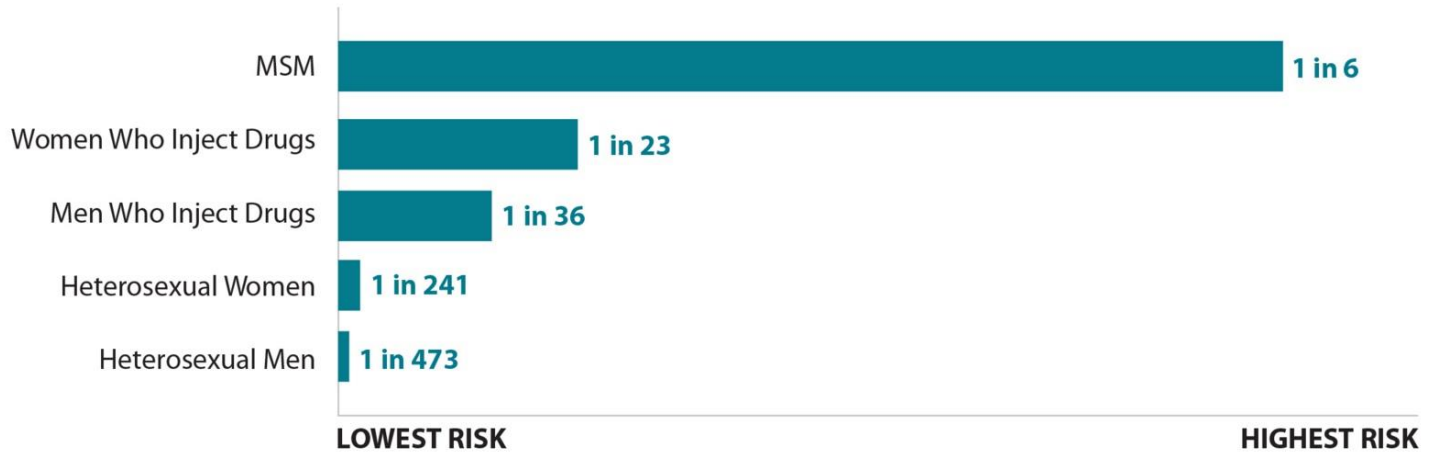
Source: Centers for Disease Control and Prevention

CDC released study Feb 2016



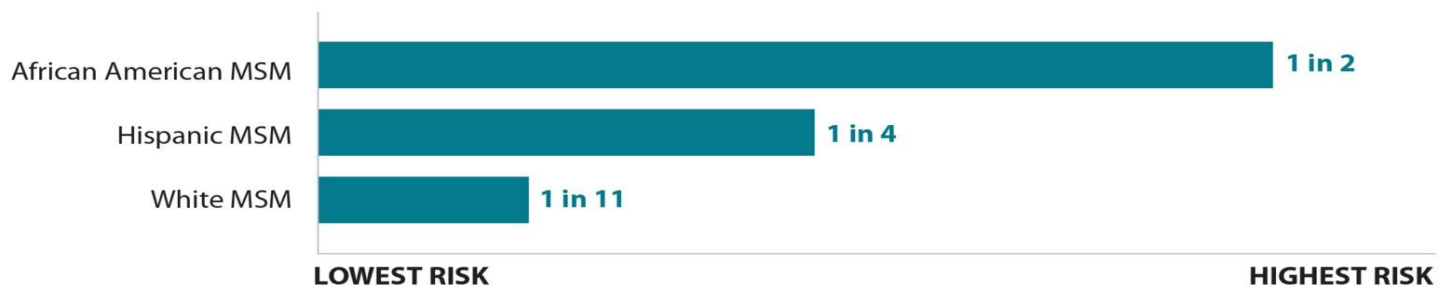
Lifetime Risk of HIV Diagnosis in the U.S.

Lifetime Risk of HIV Diagnosis by Transmission Group



Source: Centers for Disease Control and Prevention

Lifetime Risk of HIV Diagnosis among MSM by Race/Ethnicity

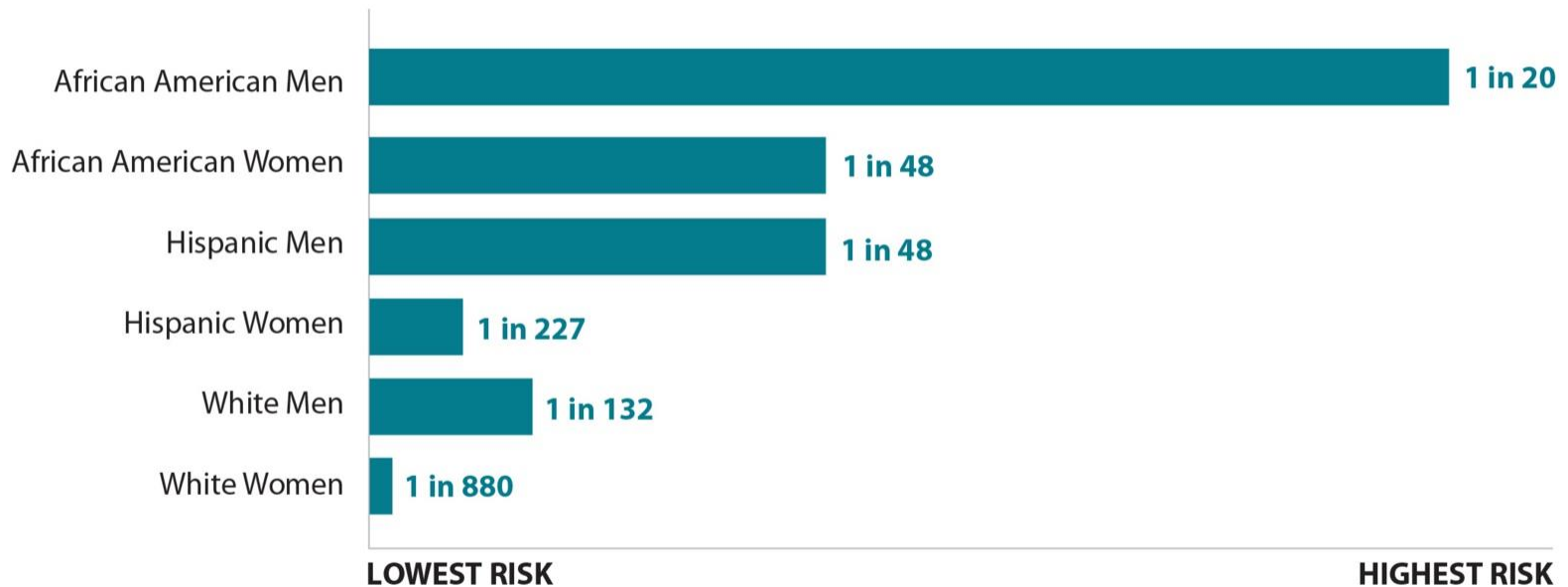


Source: Centers for Disease Control and Prevention



Lifetime Risk of HIV Diagnosis in the U.S.

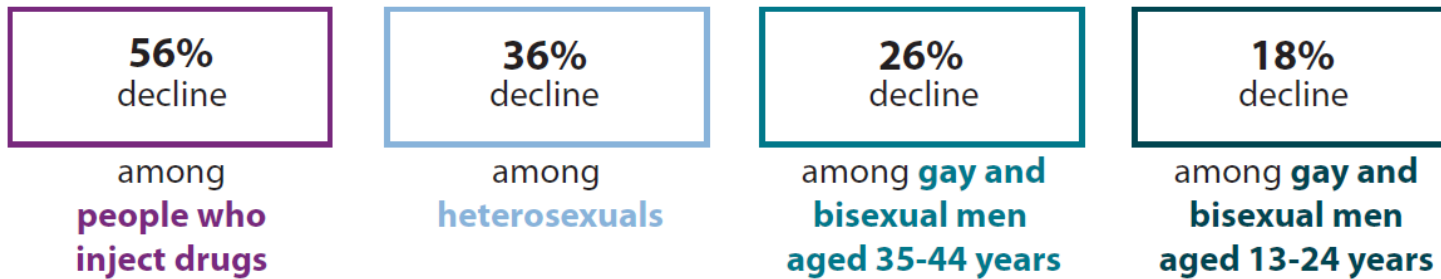
Lifetime Risk of HIV Diagnosis by Race/Ethnicity



Source: Centers for Disease Control and Prevention

CROI - February 14, 2017

Estimated annual HIV infections in the U.S.
declined **18%** from 2008-2014

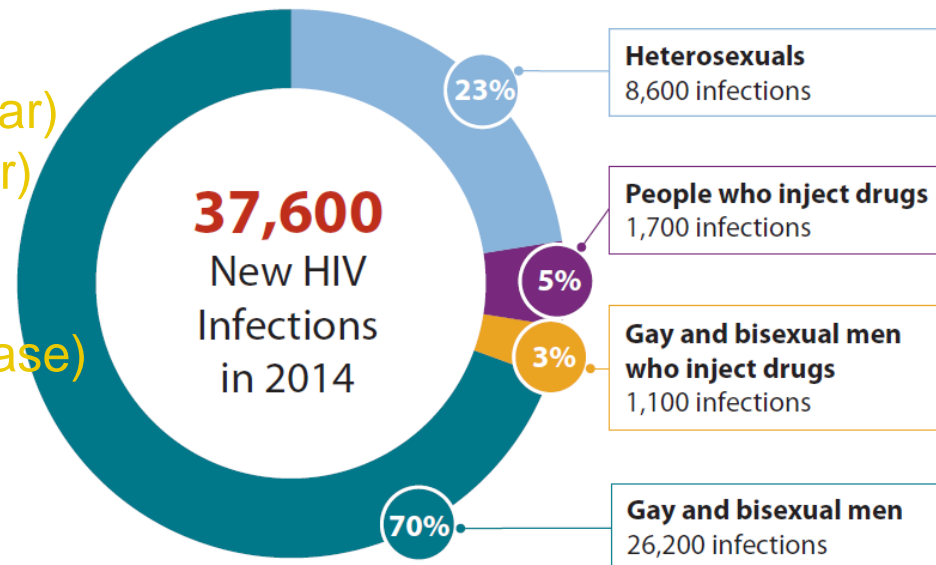


Stable Infection Rates:

Gay and Bisexual Men overall (26,000/year)
Black Gay and Bisexual Men (10,100/year)

Increasing Infection Rates:

Latino Gay and Bisexual Men (20% increase)
Gay and Bisexual Men 25-34 years old



2018 Virginia Newly Diagnosed HIV Cases

There were 831 reported new cases of HIV in 2018

○ By gender

- 671 Males
- 160 Females

○ By Age

- 20-24 there were 146 cases
- 25-29 there were 154 cases
- 30-34 there were 131 cases

○ By Race/Ethnicity

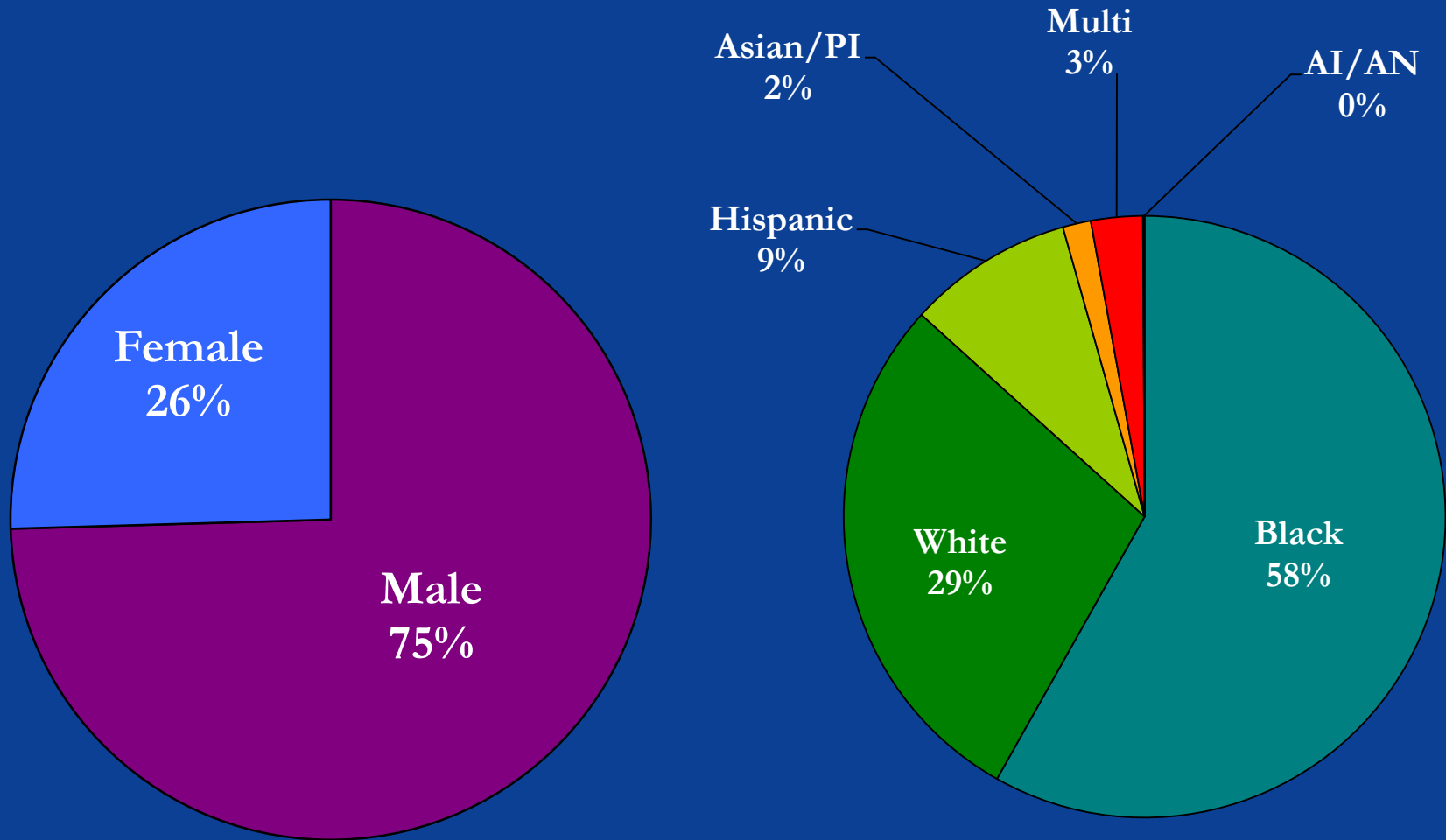
- Black, non-Hispanic 480 cases
- White, non-Hispanic 220 cases
- Hispanic (all races) 95 cases

○ By transmission category

- MSM 352 cases
- IDU 9 cases
- MSM & IDU 15 cases
- Heterosexual contact 67 cases
- No risk factor reported 382 cases



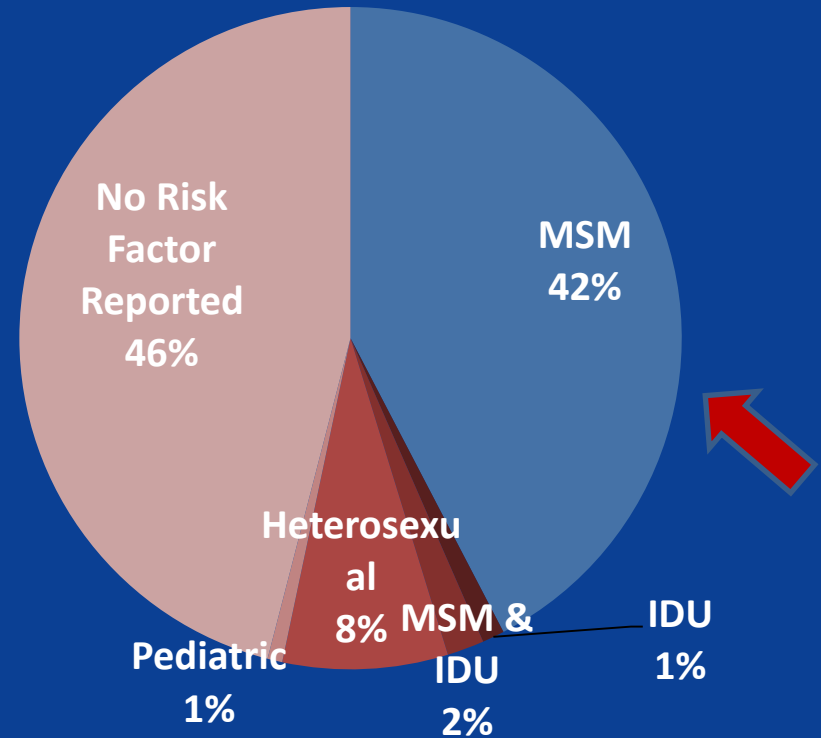
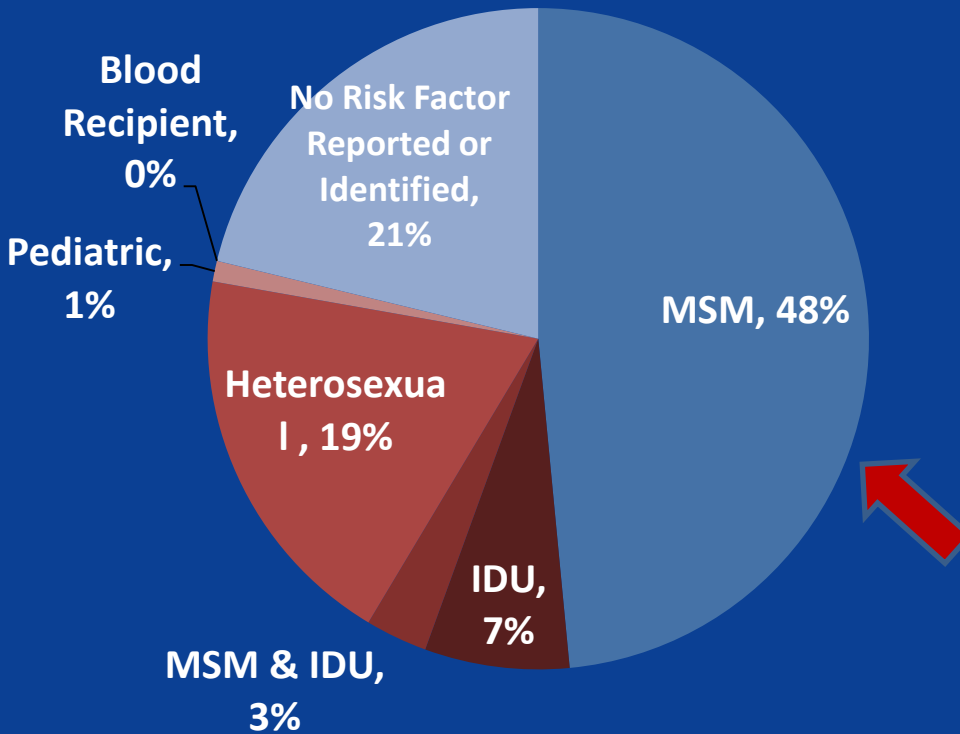
Living with HIV/AIDS in VA



Men Who Have Sex With Men

Persons Living with HIV/AIDS as of 12/31/2018 (n=24,906)

Newly Diagnosed HIV Cases as of 12/31/2018 (n=831)

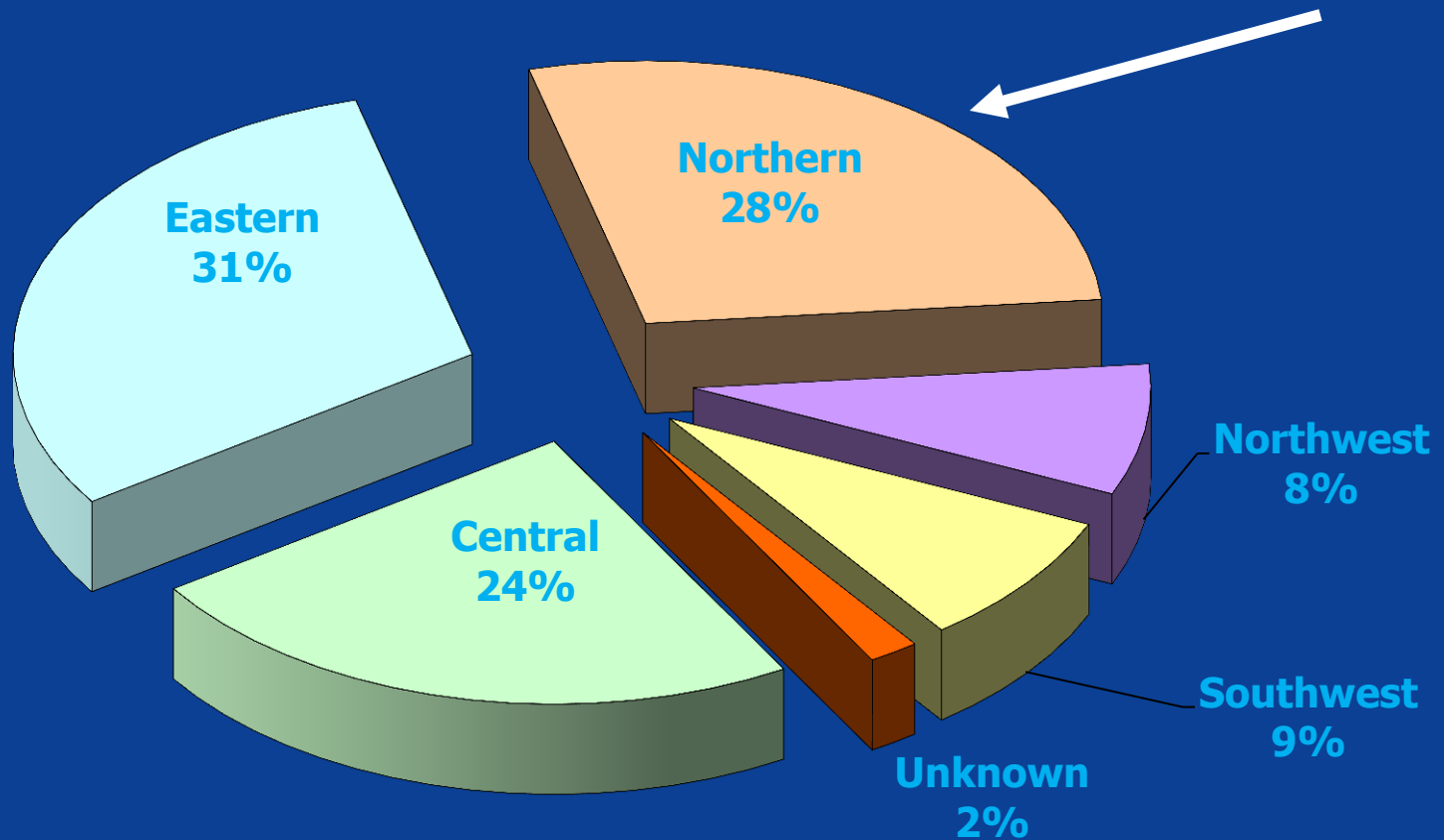


Virginia HIV Surveillance Annual Report 12/31/2018



HIV/AIDS Cases by Region

Virginia 24,906 living cases of HIV Disease
(as of 12/31/2018)



Virginia HIV Surveillance Annual Report 12/31/2018

Northern Region of Virginia

Estimated number of people living with HIV or AIDS
in Northern Virginia = **6,862**

About 28% of those living with HIV/AIDS in Virginia live in the Northern
Region of VA

- 75% male, 25% female
- 46% black, 31% white, 18% Hispanic, 4% Asian/PI, 2% Multi-Race/Unknown
- 50% MSM (highest in state), 17% Het. Contact, 5% IDU (lowest in state)
- 2% 15-24, 13% 25-34, 21% 35-44, 33% 45-54, 32% 55+

Virginia HIV Surveillance Annual Report 12/31/2018

VDH VIRGINIA
DEPARTMENT
OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov



HIV Care Continuum

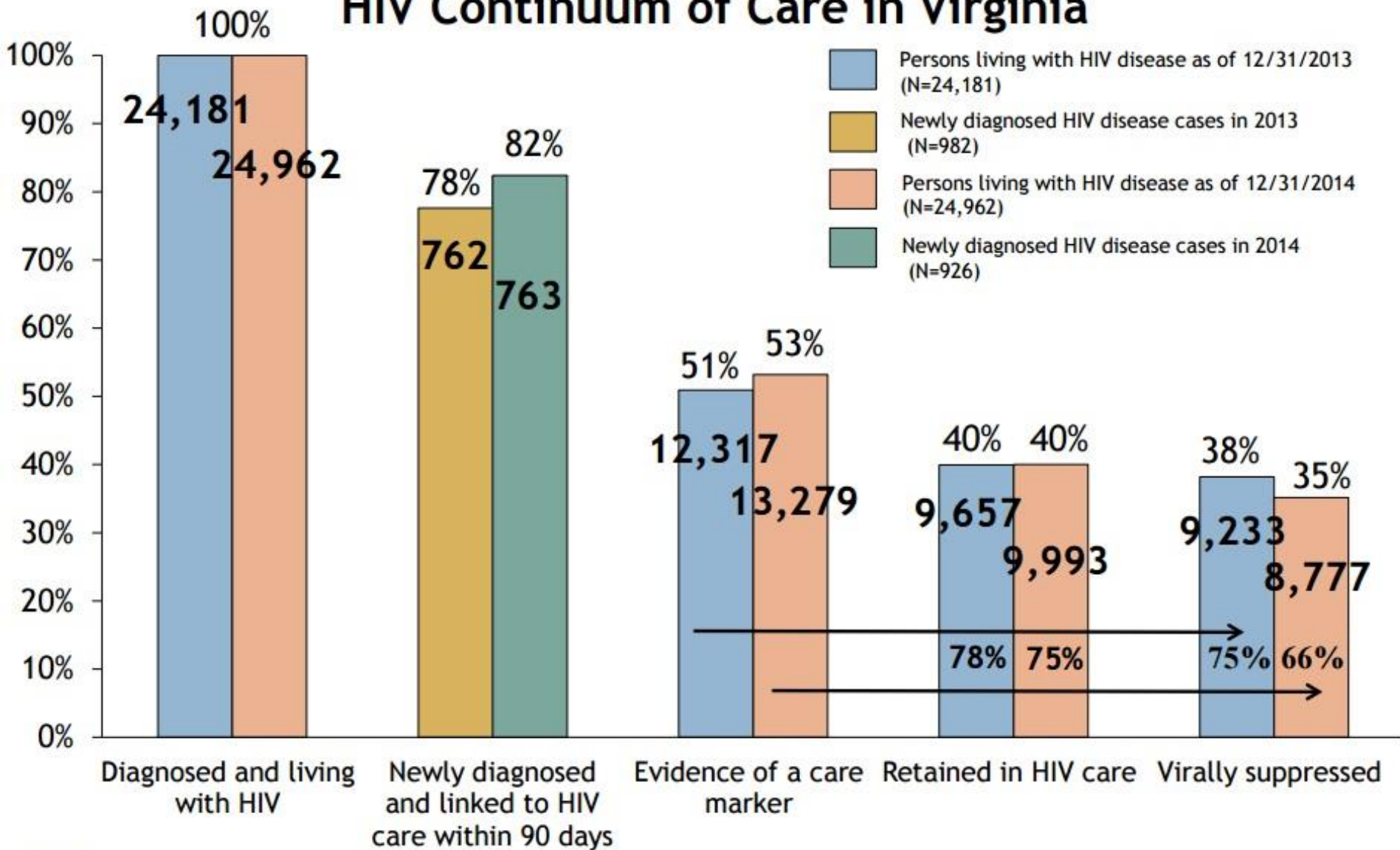
The ultimate goal of HIV treatment is to **achieve viral suppression, meaning the amount of HIV in the body is very low or undetectable**. This is important for people with HIV to stay healthy, live longer and reduce their chances of passing HIV to others.

- The HIV care continuum consists of several steps required to achieve viral suppression.
 1. Diagnosed with HIV infection
 2. Linked to care, meaning they visited a health care provider within three months after learning they were HIV positive
 3. Engaged or retained in care, meaning they received medical care for HIV infection
 4. Prescribed antiretroviral therapy to control their HIV infection
 5. Virally suppressed, meaning that their HIV viral load – the amount of HIV in the blood – is at a very low level

Source: Understanding the HIV Care Continuum, CDC Dec 2014



HIV Continuum of Care in Virginia



Definitions:

Newly diagnosed and linked to HIV care within 90 days: Diagnosed with HIV disease in calendar year (CY) 2013 or 2014 and first care marker (CD4 or viral load test, HIV medical care visit, or antiretroviral (ART) prescription) post-diagnosis was within 90 days; *Evidence of a care marker in 2013/2014:* Evidence of at least one care marker in CY 2013 or 2014; *Retained in HIV care in 2013/2014:* Having at least two or more care markers in CY 2013 or 2014 at least 3 months apart; *Virally suppressed in 2013/2014:* Last viral load taken in CY 2013 or 2014 was <200 copies/mL. Data: Current as of July 2015; Accessed August 2015; Care Markers Database, HIV Surveillance, Division of Disease Prevention, Virginia Department of Health; 2014 data may be incomplete due to reporting delays.

Virginia

HIV/AIDS, Sexually Transmitted Disease (STD), and Tuberculosis Data and Statistics

Updated stats are available at:

<http://www.vdh.virginia.gov/disease-prevention/sexually-transmitted-diseases-std-surveillance-operations-data-administration/hiv-data-statistics/>



Questions



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