

Changing Patterns of HIV Epidemiology United States - 2011

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The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control or the National Institutes of Health.



Learning Objectives

Upon completion of this presentation, learners should be better able to:

- Identify populations in whom the incidence of HIV infection is increasing (i.e., men who have sex with men, persons of color, and residents of the southeastern United States) despite the fact that the overall HIV incidence in the US remains stable



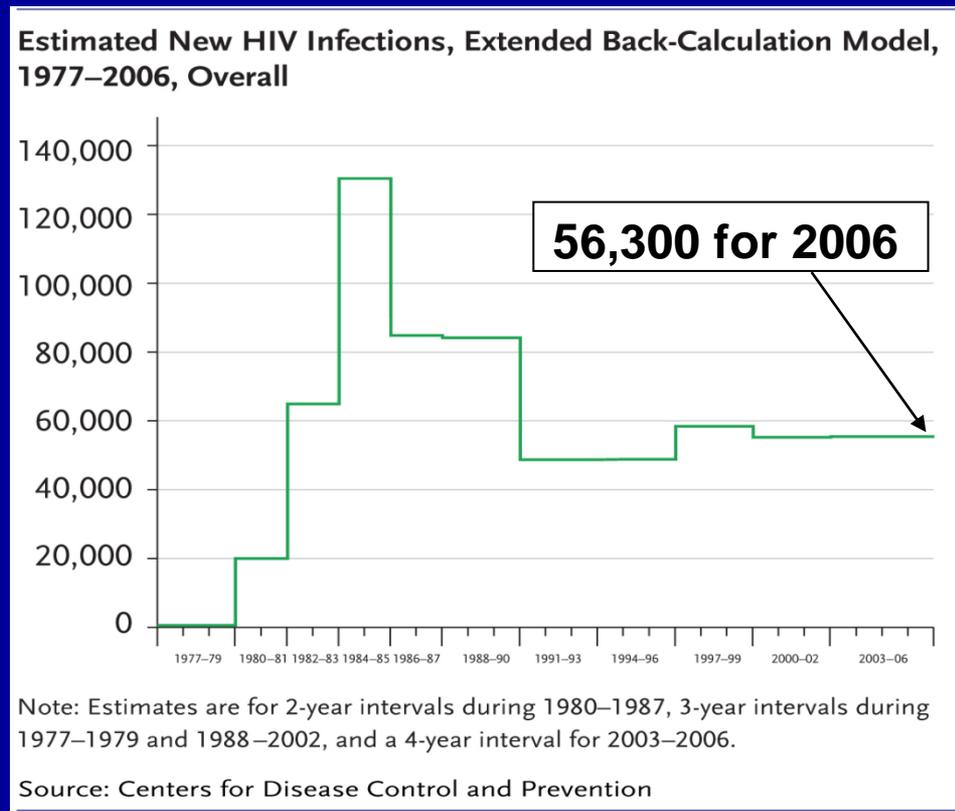
Basic Background Epidemiology

- Estimated 1.1 Americans living with HIV infection



Basic Background Epidemiology

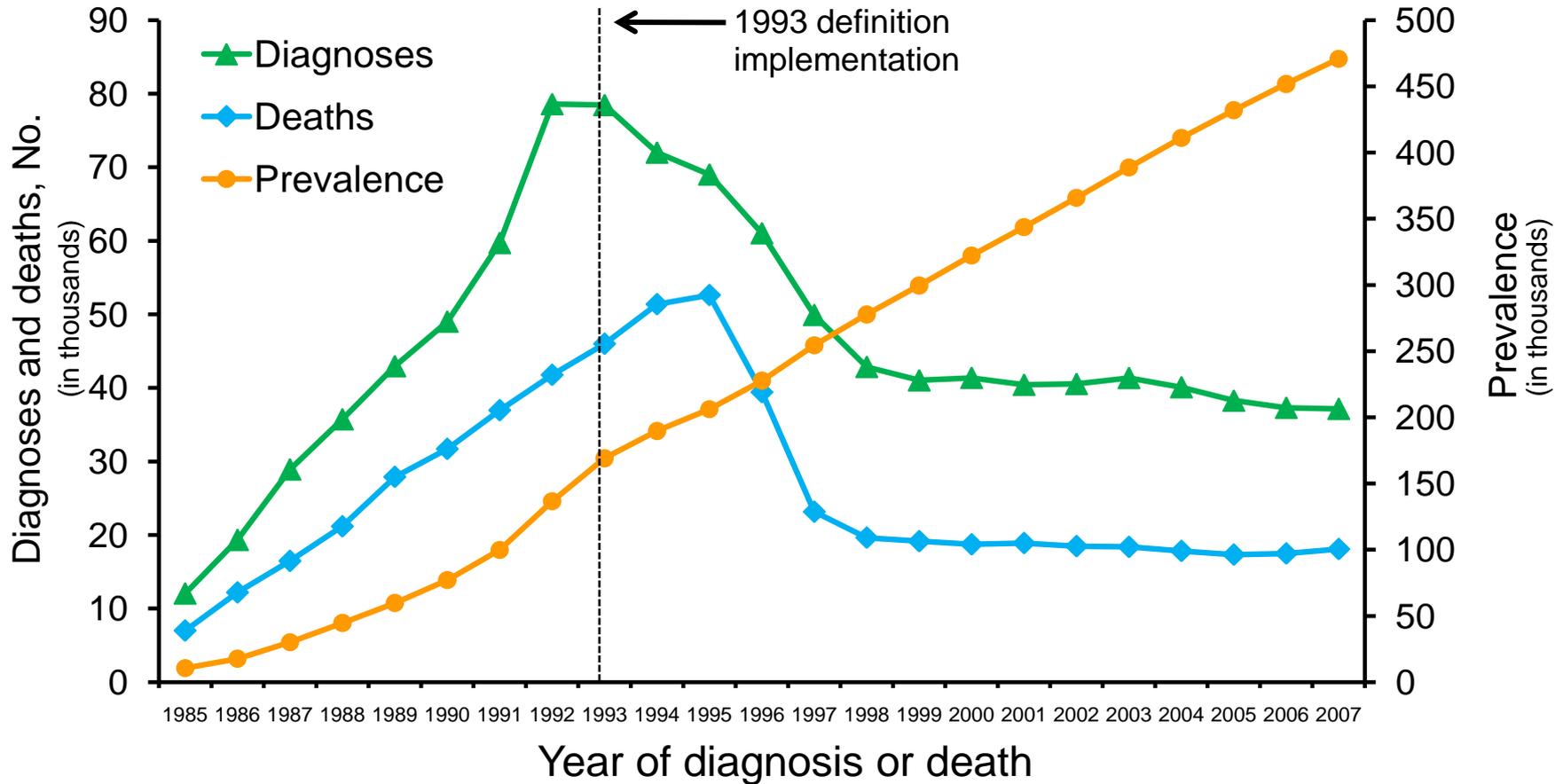
- Estimated 1.1 Americans living with HIV infection
- Incidence estimated about 50,000-60,000 annually



Source: I. Hall et al., JAMA 2008 300(5): 520



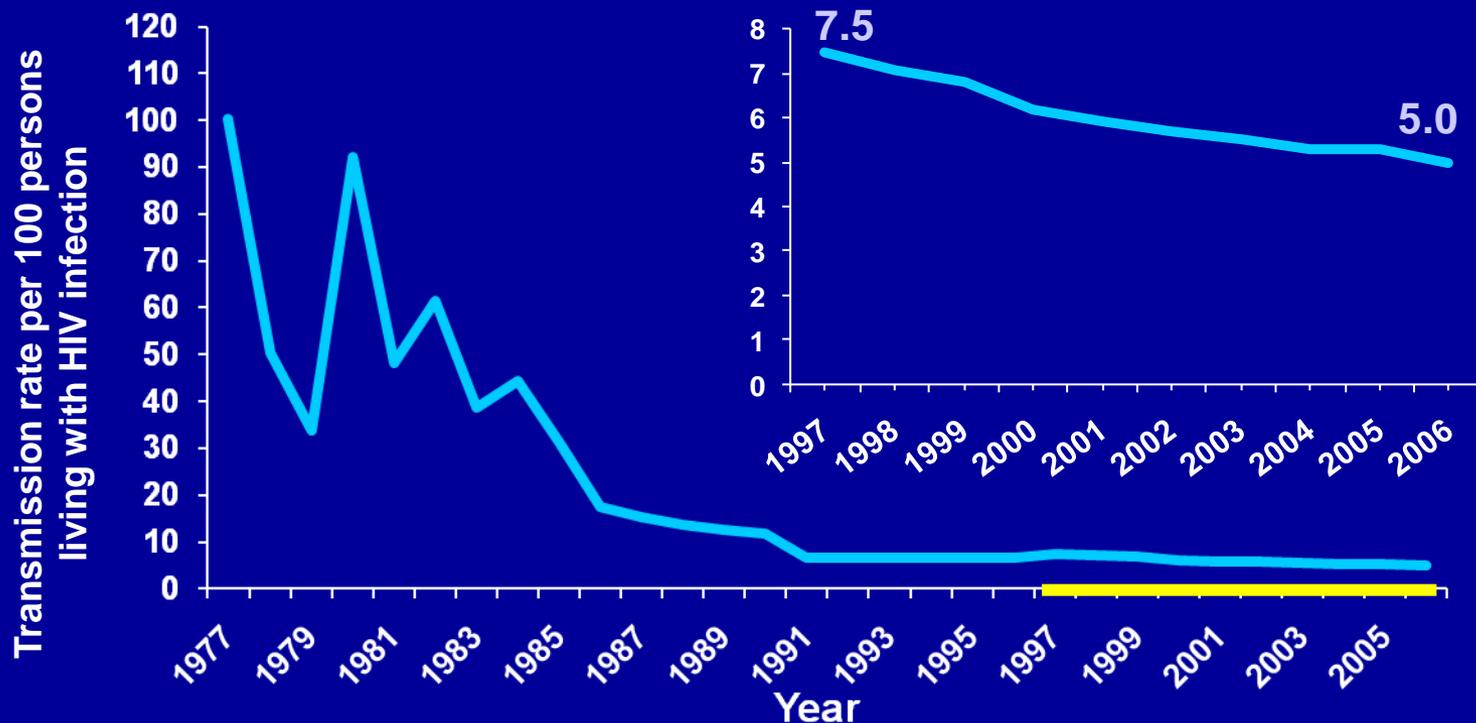
AIDS Diagnoses, Deaths, and Persons Living with AIDS, 1985–2007—United States and Dependent Areas



Note. All displayed data have been estimated. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.

Basic Background Epidemiology

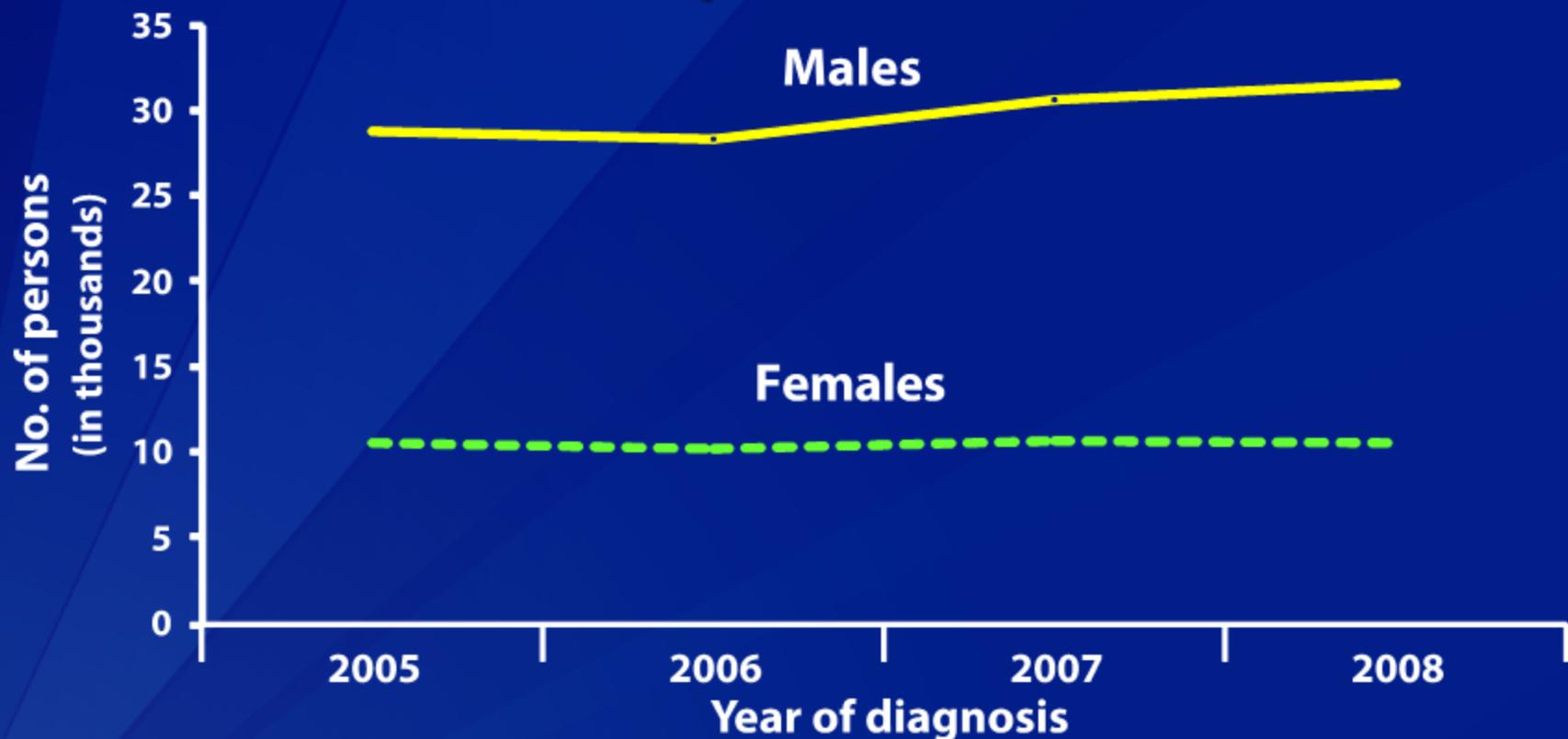
- Estimated 1.1 Americans living with HIV infection
- Incidence estimated about 50,000-60,000 annually
- Transmission rates stable and slowly declining



Sources: D. Holtgrave et al., JAIDS 2009 50(2): 236-8



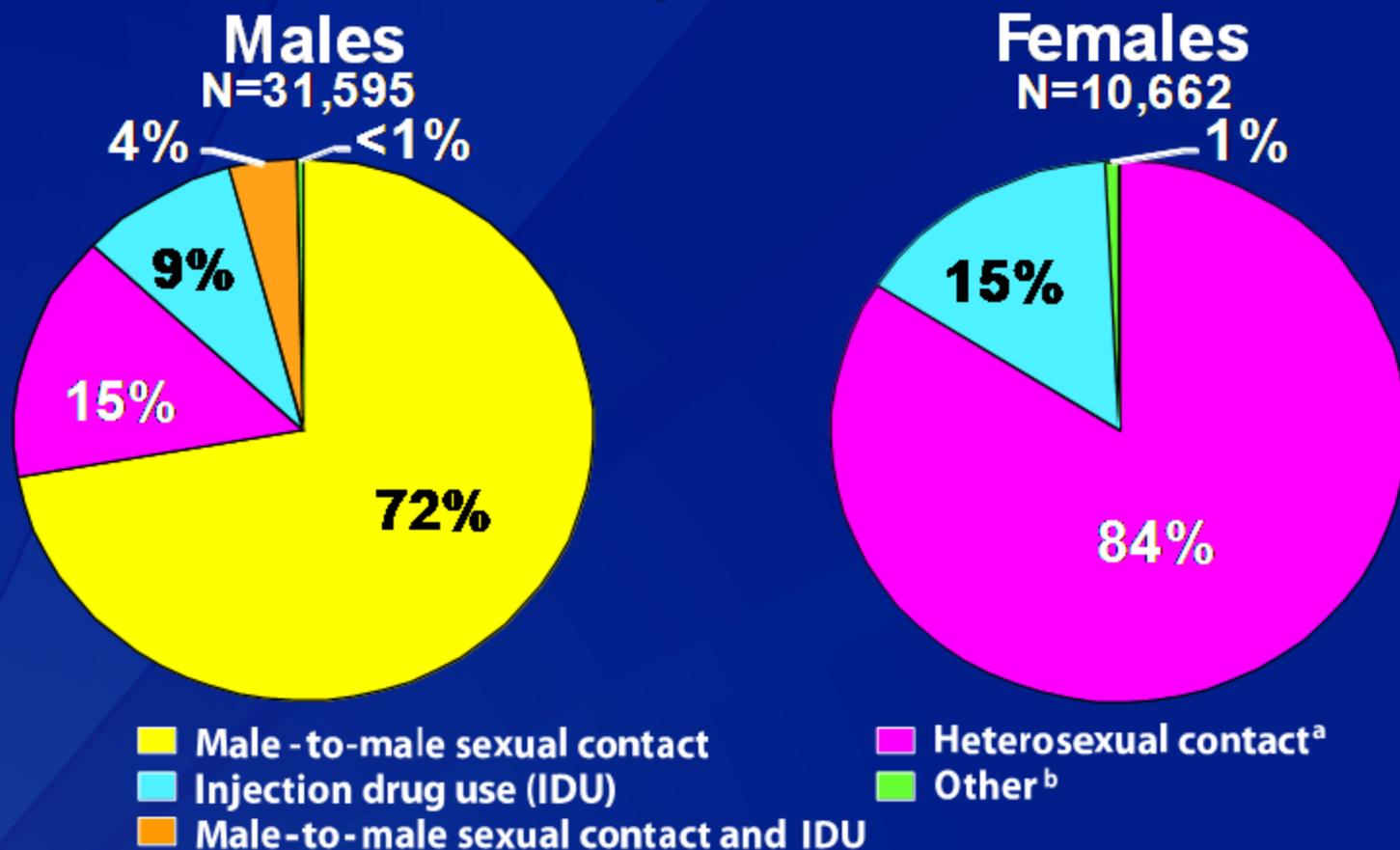
Diagnoses of HIV Infection among Adults and Adolescents, by Sex, 2005–2008—37 States and 5 U.S. Dependent Areas



Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data from 37 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting since at least January 2005. All displayed data have been estimated. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.



Diagnoses of HIV Infection among Adults and Adolescents, by Sex and Transmission Category, 2008—37 States and 5 U.S. Dependent Areas



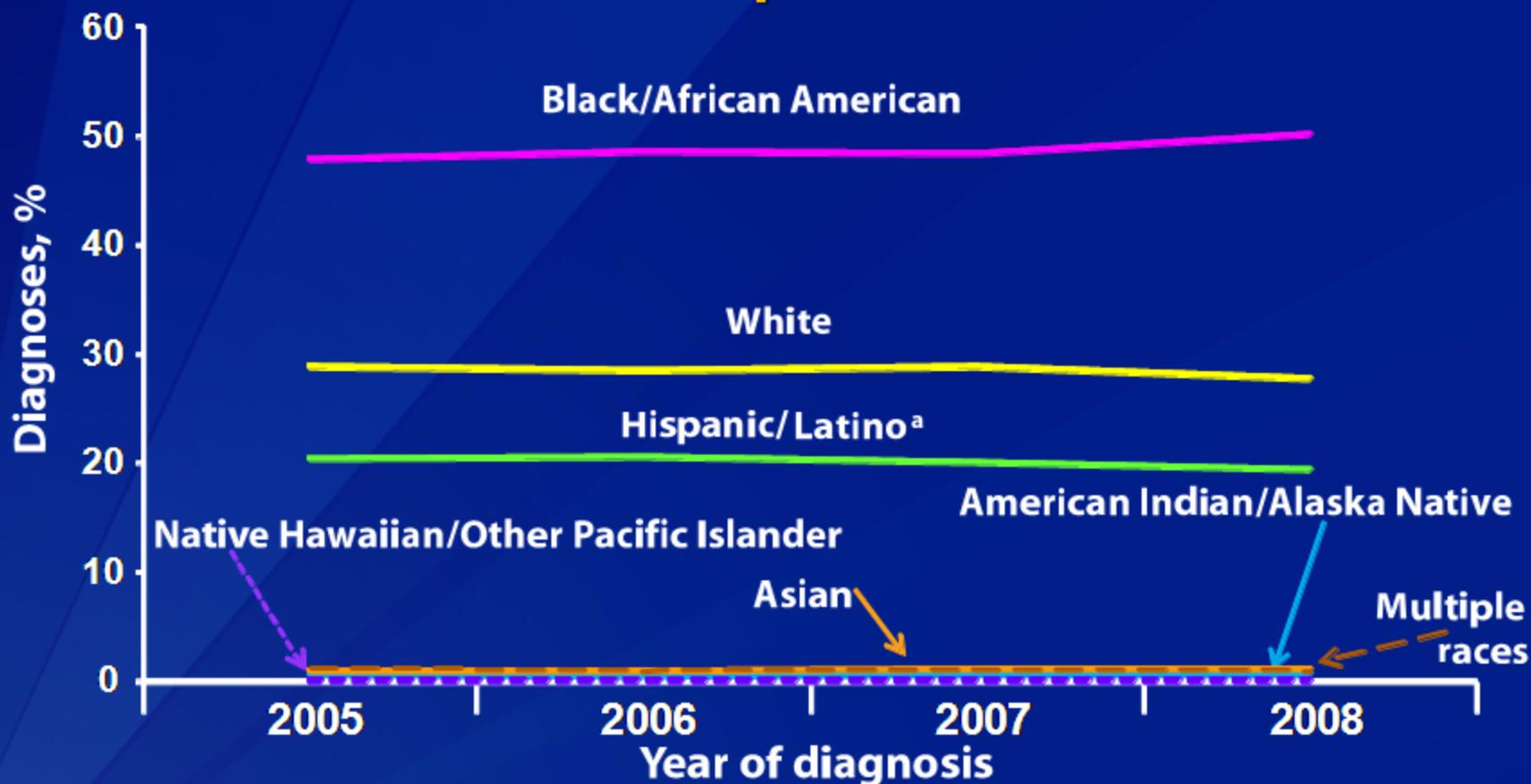
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^a Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

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



Diagnoses of HIV Infection among Adults and Adolescents, by Race/Ethnicity, 2005–2008—37 States and 5 U.S. Dependent Areas

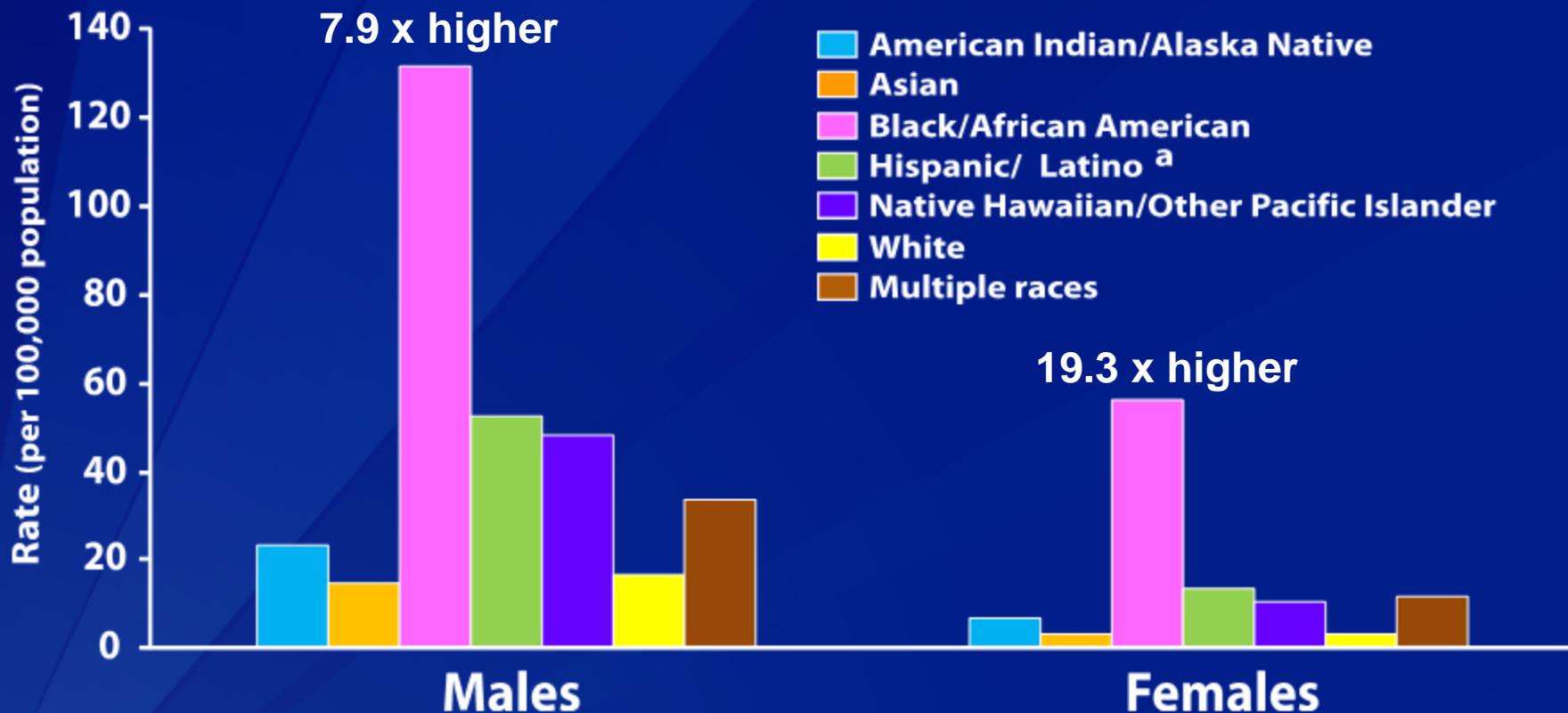


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^aHispanics/Latinos can be of any race.



Rates of Diagnoses of HIV Infection among Adults and Adolescents, by Sex and Race/Ethnicity, 2008—37 States

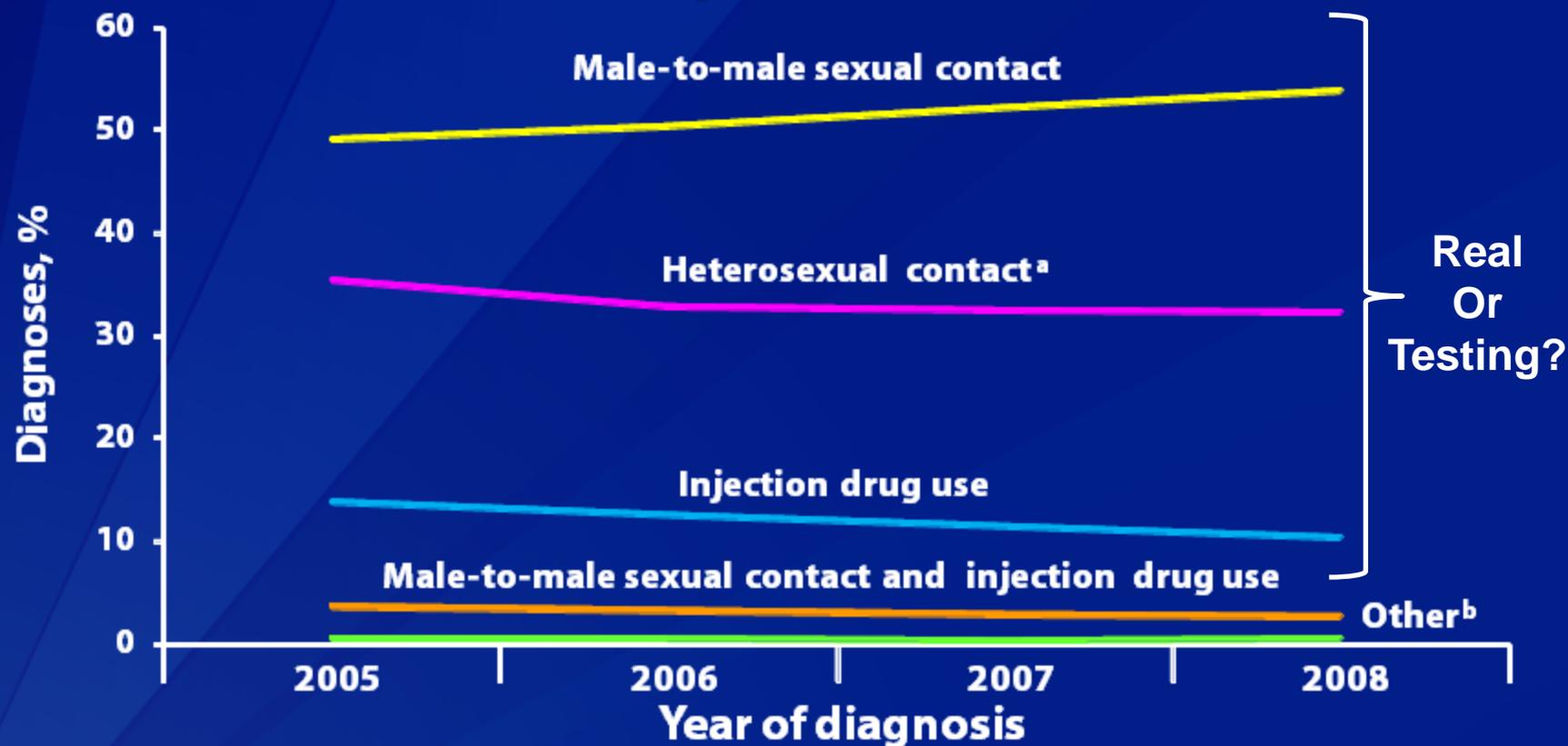


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Diagnoses of HIV Infection among Adults and Adolescents, by Transmission Category, 2005–2008—37 States and 5 U.S. Dependent Areas



Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data from 37 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting since at least January 2005. All displayed data have been estimated. Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing risk-factor information, but not for incomplete reporting.

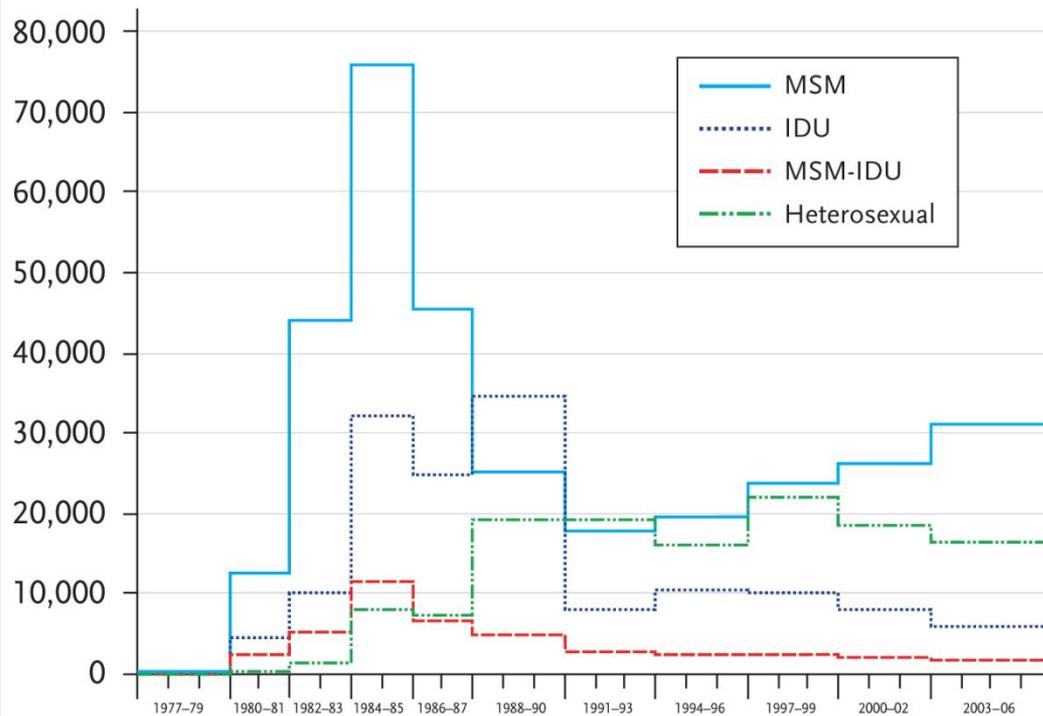
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Are Prevalence Trends an Artifact of Increased Testing?

Estimated Number of New HIV Infections, Extended Back-Calculation Model, 1977–2006, by Transmission Category



↑ MSM
↓ IDU

Note: Estimates are for 2-year intervals during 1980–1987, 3-year intervals during 1977–1979 and 1988–2002, and a 4-year interval for 2003–2006.

Source: Centers for Disease Control and Prevention

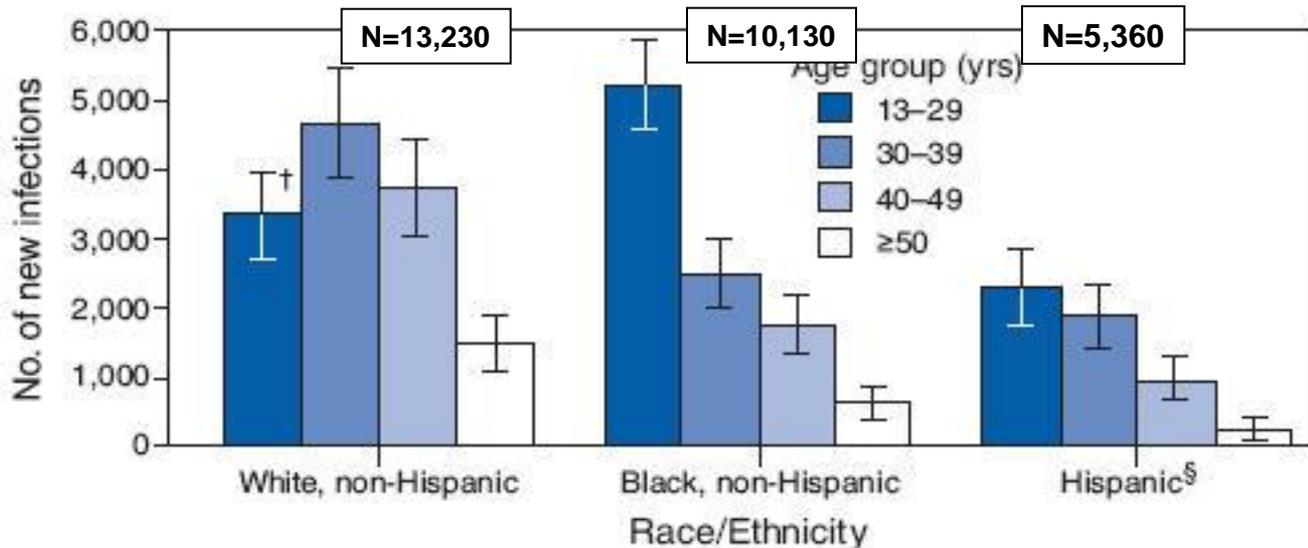


Source: I. Hall et al., JAMA 2008 300(5): 520



Trends in HIV Incidence, MSM, 2006

FIGURE. Estimated number* of persons with new human immunodeficiency virus (HIV) infections among men who have sex with men, by race/ethnicity and age group — United States, 2006



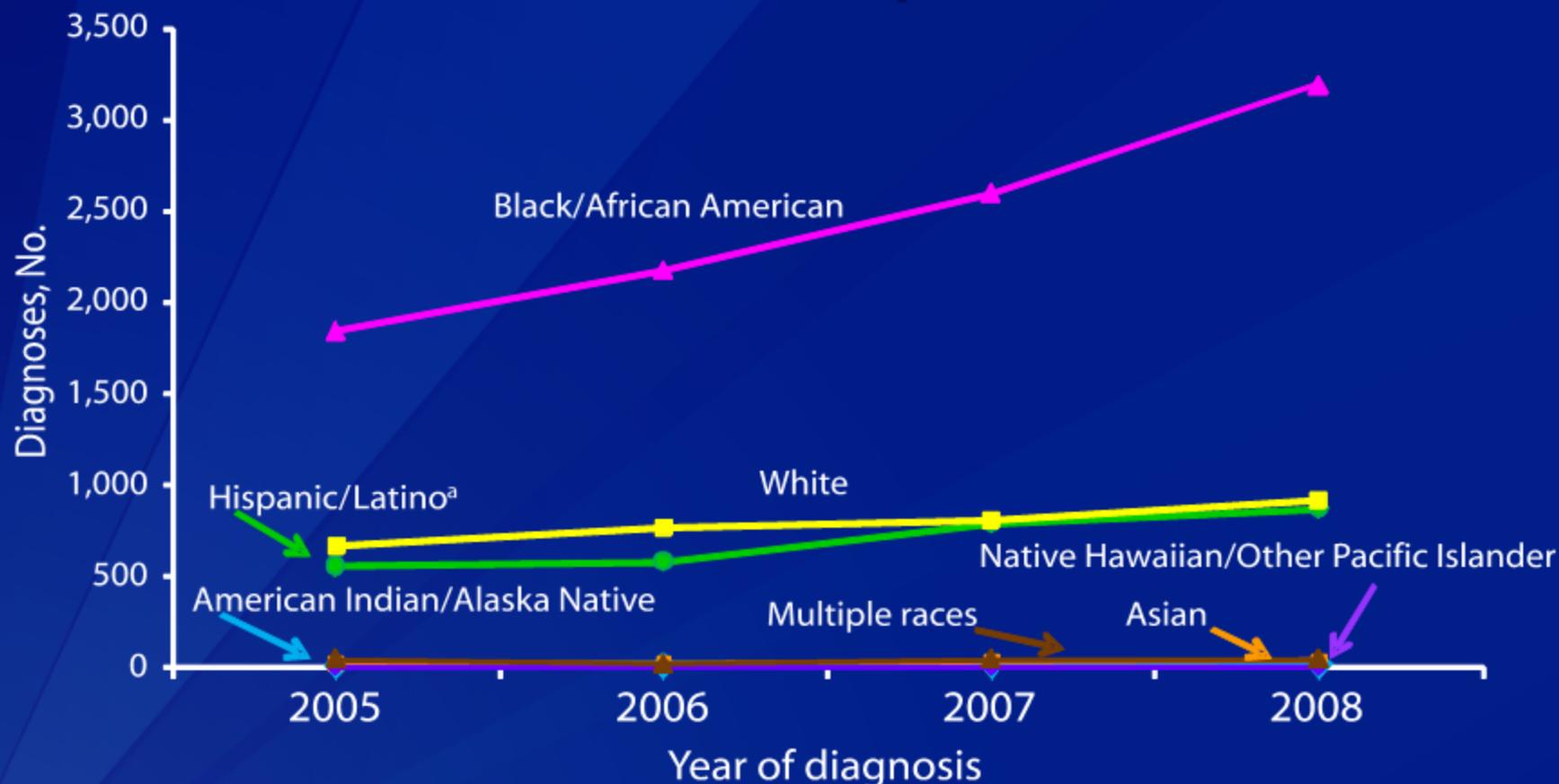
* Incidence estimates are adjusted for reporting delays and reclassification of cases reported without information regarding an HIV transmission category but are not adjusted for underreporting.

† 95% confidence interval.

§ Might be of any race.

Source: MMWR 57(36); 985-89, 2008

Diagnoses of HIV Infection among Men Who Have Sex with Men Aged 13–24, by Race/Ethnicity, 2005–2008—37 States and 5 U.S. Dependent Areas

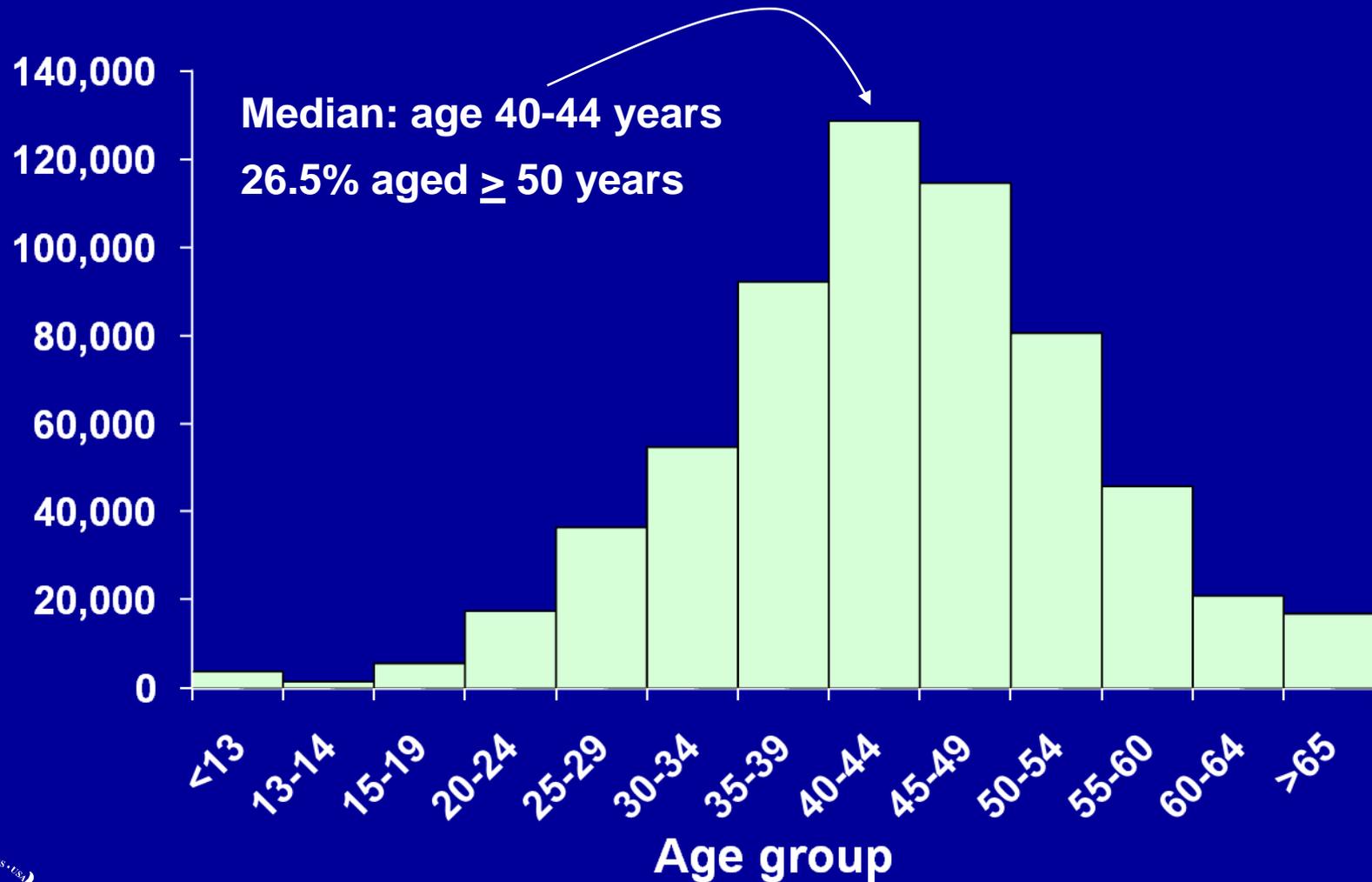


Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data from 37 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting since at least January 2005. All displayed data have been estimated. Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing risk-factor information, but not for incomplete reporting. Data exclude men who reported sexual contact with other men and injection drug use.

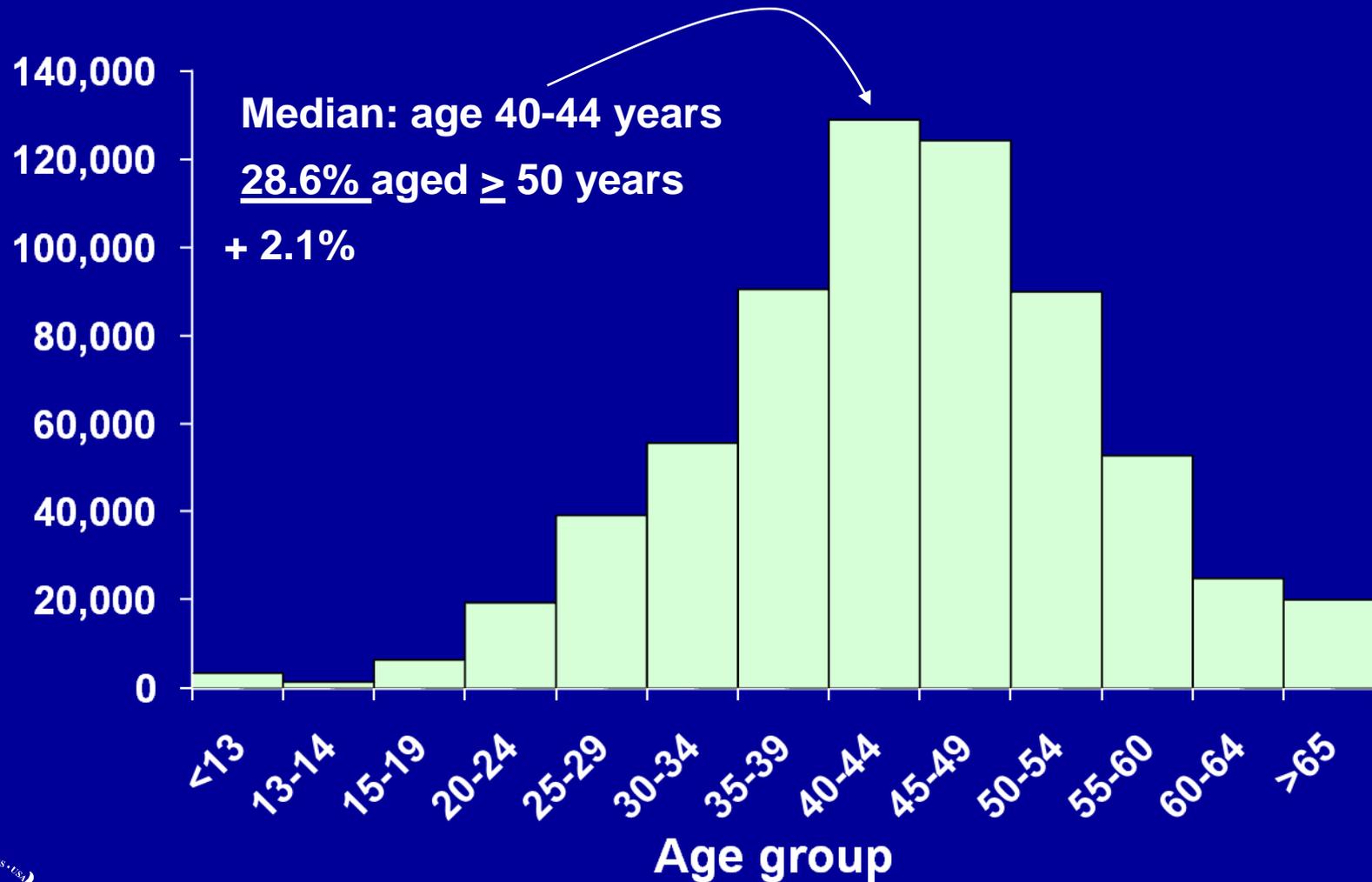
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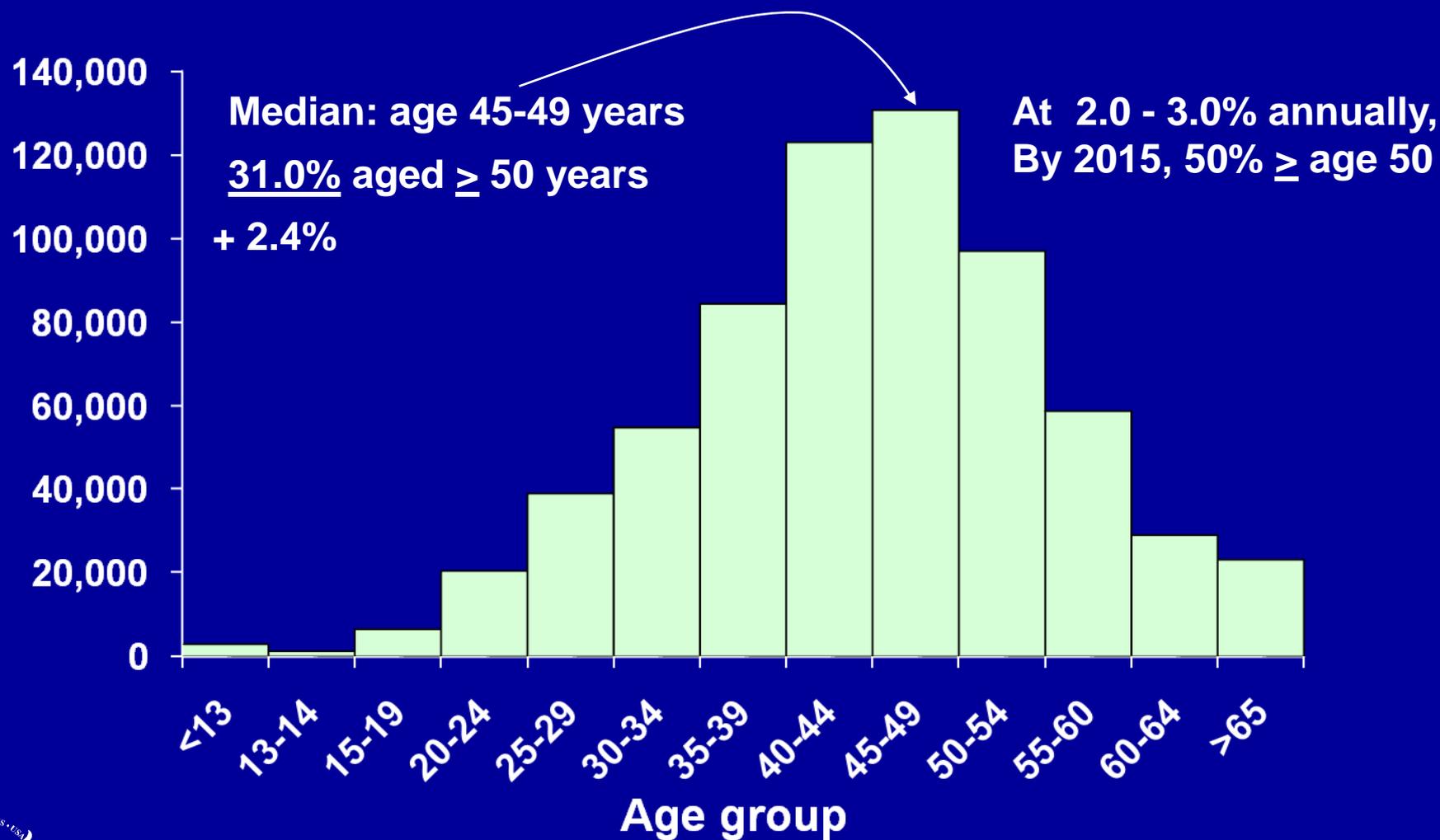
Estimated numbers of persons living with HIV/AIDS, by year and selected characteristics, 2006 – 40 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting



Estimated numbers of persons living with HIV/AIDS, by year and selected characteristics, 2007 – 40 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting

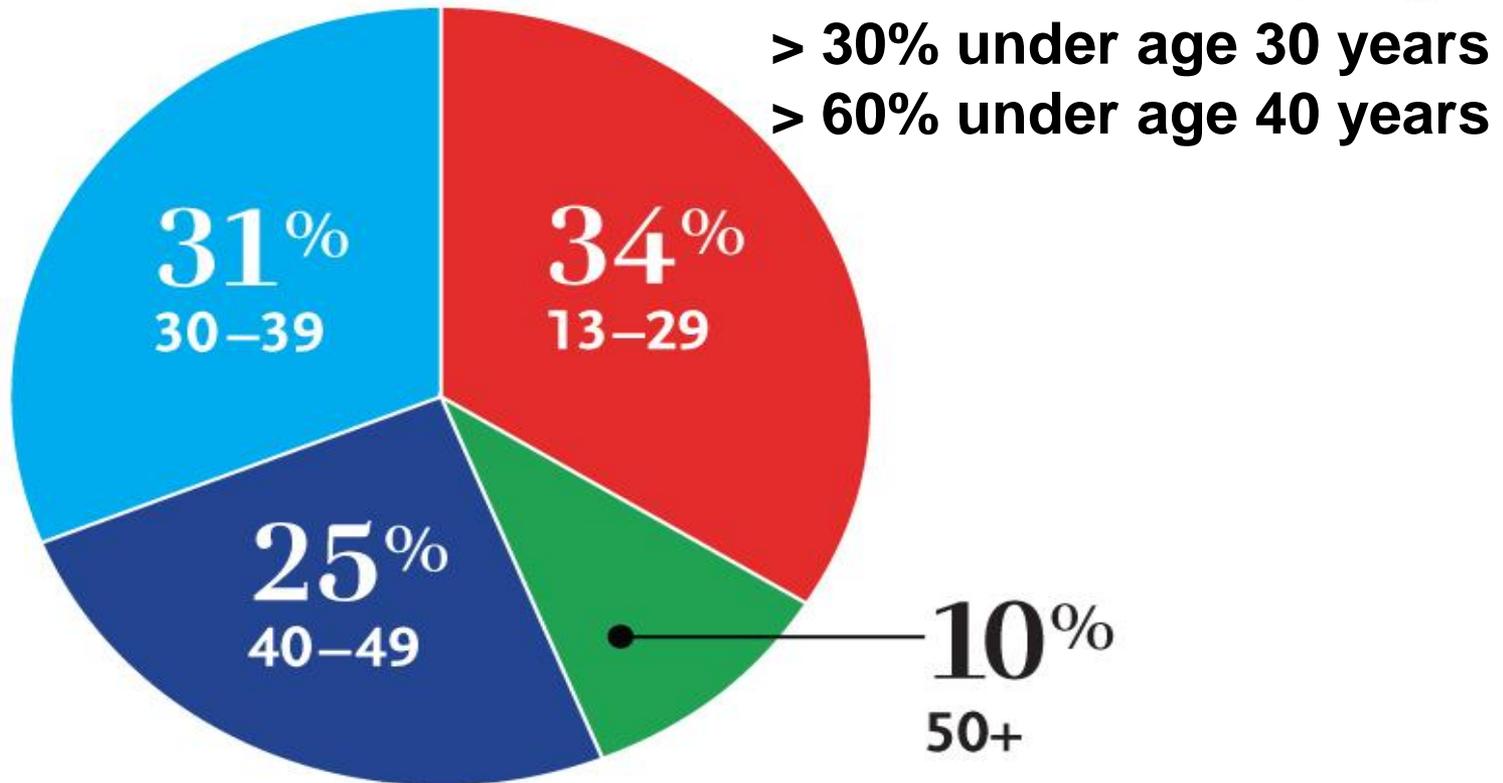


Estimated numbers of persons living with HIV/AIDS, by year and selected characteristics, 2008 – 40 states and 5 U.S. dependent areas with confidential name-based HIV infection reporting



HIV Incidence by Age, 2006

Estimated New HIV Infections, 2006, by Age



Source: Centers for Disease Control and Prevention

Geography

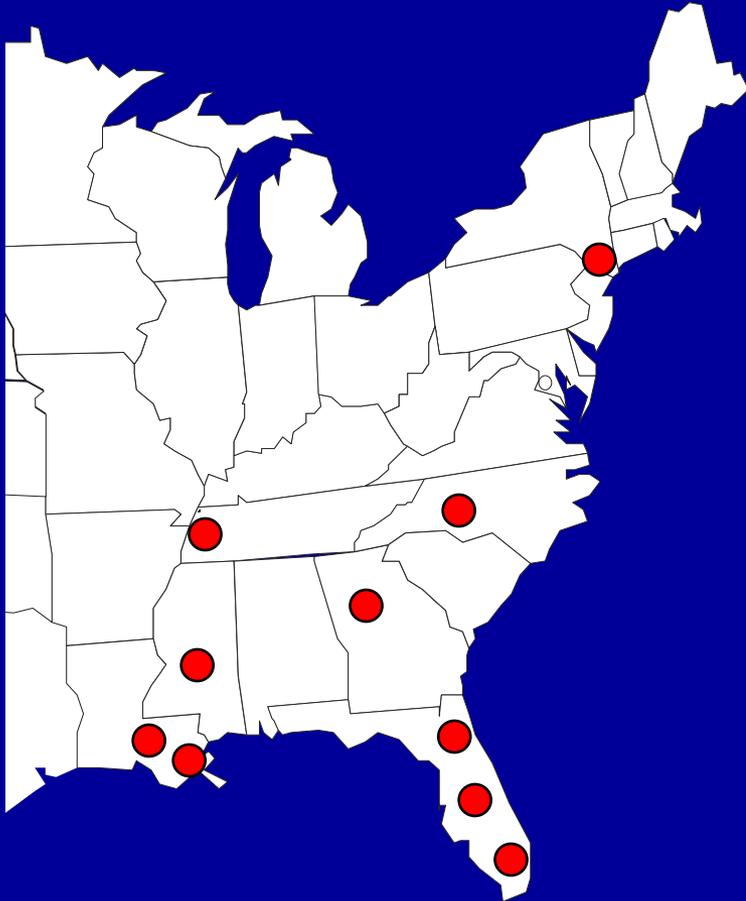
- Four states are home to 51% persons living HIV
 - New York, California, Florida, and Texas
- Numbers and rates highest in urban areas

MSA*	Number new diagnoses, 2008	Rates of new diagnoses, 2008
≥ 500,000	23,934	15.1
50,000 – 499,999	3,451	7.5
< 50,000	2,168	5.1

* Metropolitan statistical area

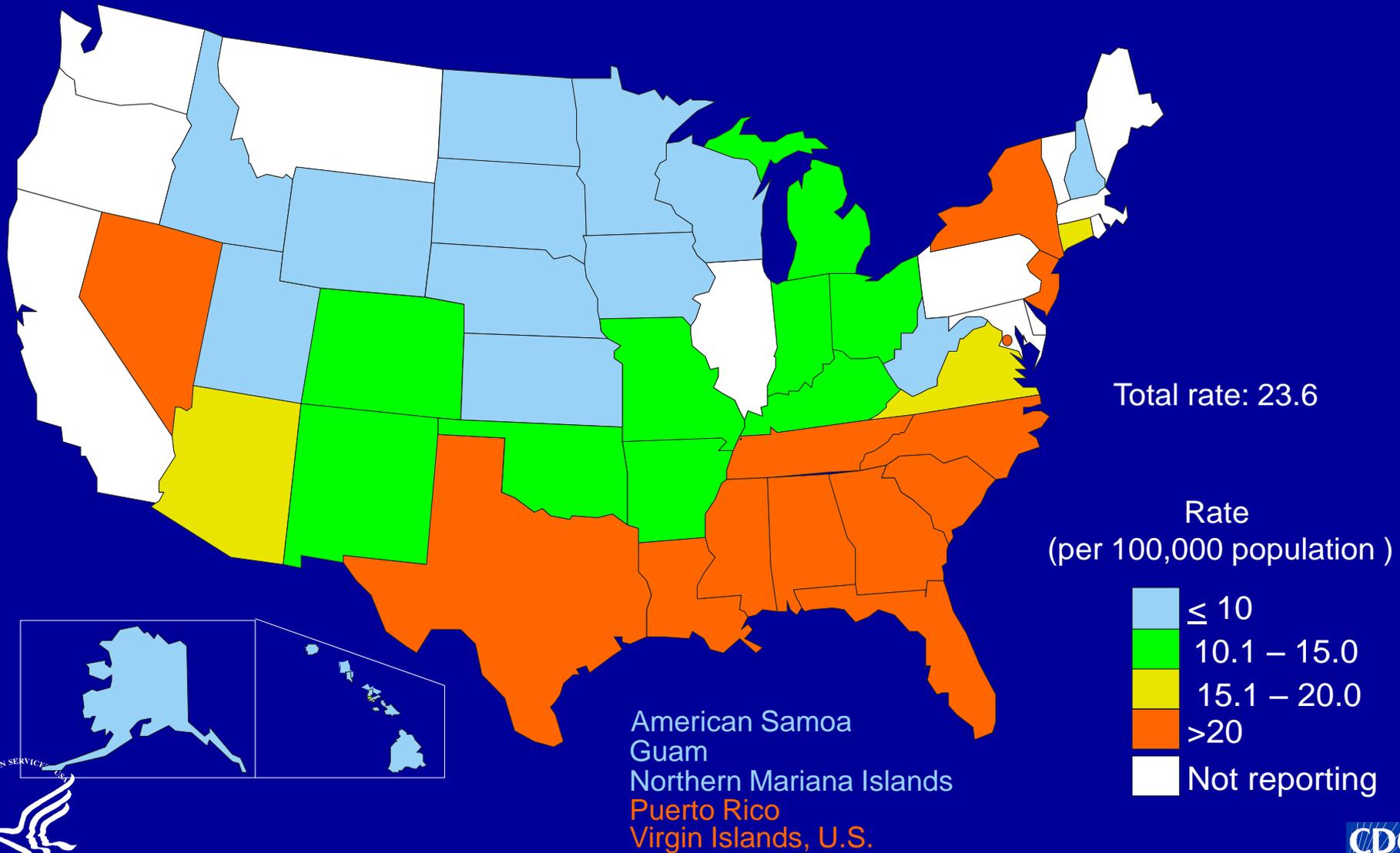


Ten Cities with Highest Rates of New HIV Diagnoses - 2008



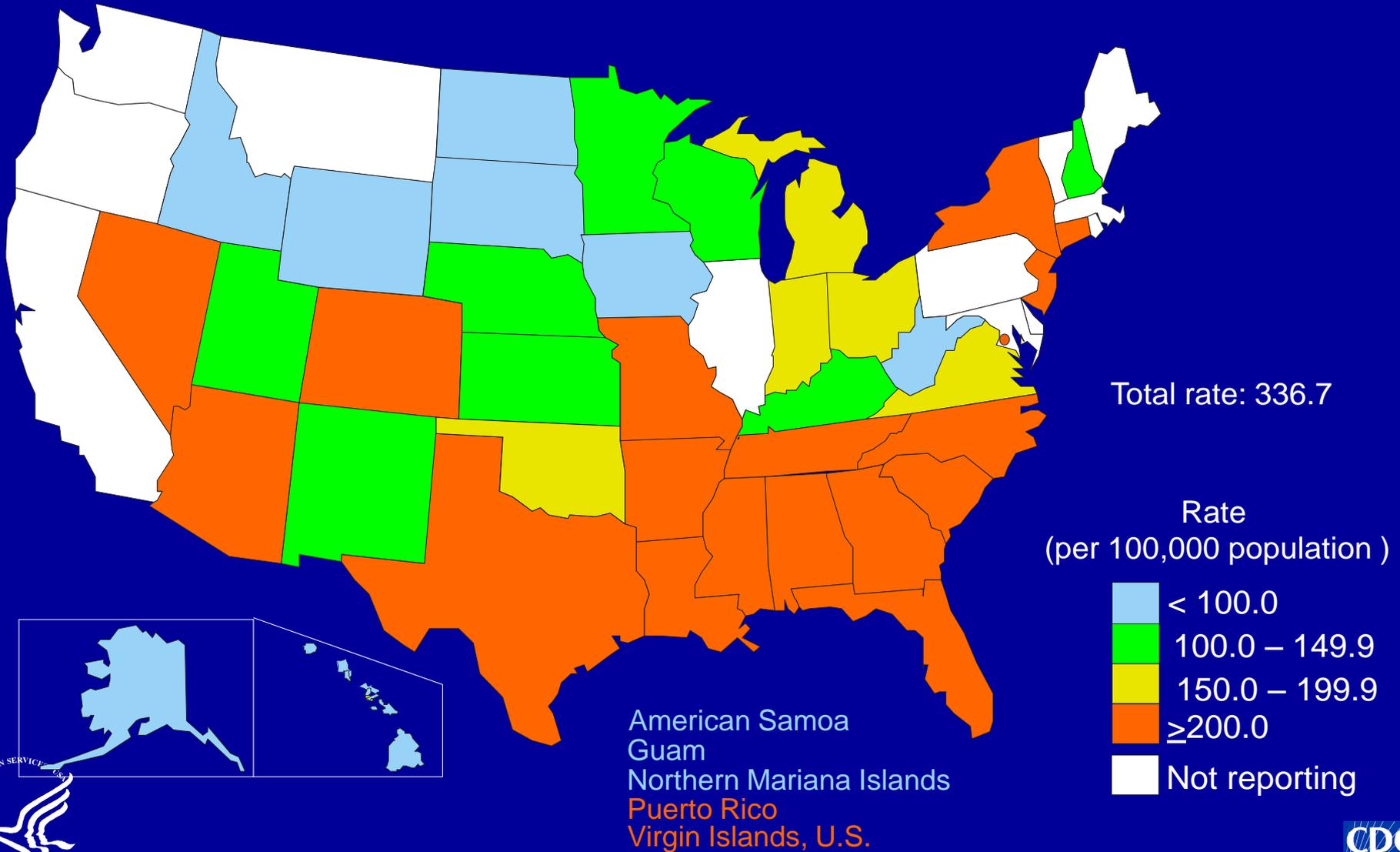
<u>City</u>	<u>Rate</u>
1. Miami	70.3
2. Atlanta	47.0
3. Memphis	45.1
4. Jacksonville	44.1
5. Baton Rouge	44.0
6. Orlando	41.0
7. New Orleans	41.0
8. New York	36.7
9. Charlotte	36.6
10. Jackson	33.9
U.S. total	19.6

Rates of New HIV Diagnoses for Adults and Adolescents, 2008 37 States and 5 Dependent Areas

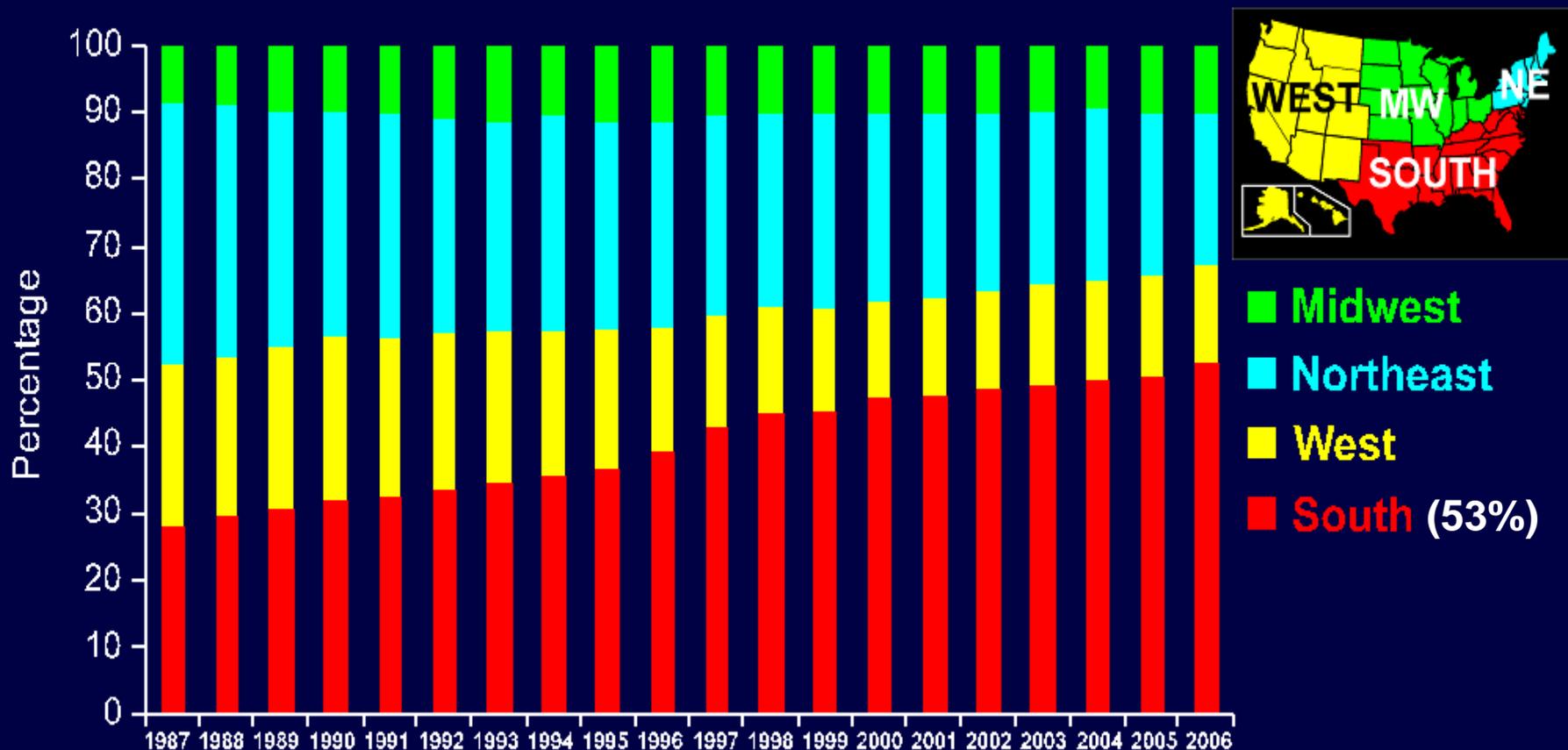


Rates of Persons Living with a Diagnoses of HIV Infection for Adults and Adolescents, Year-End 2007

37 States and 5 Dependent Areas



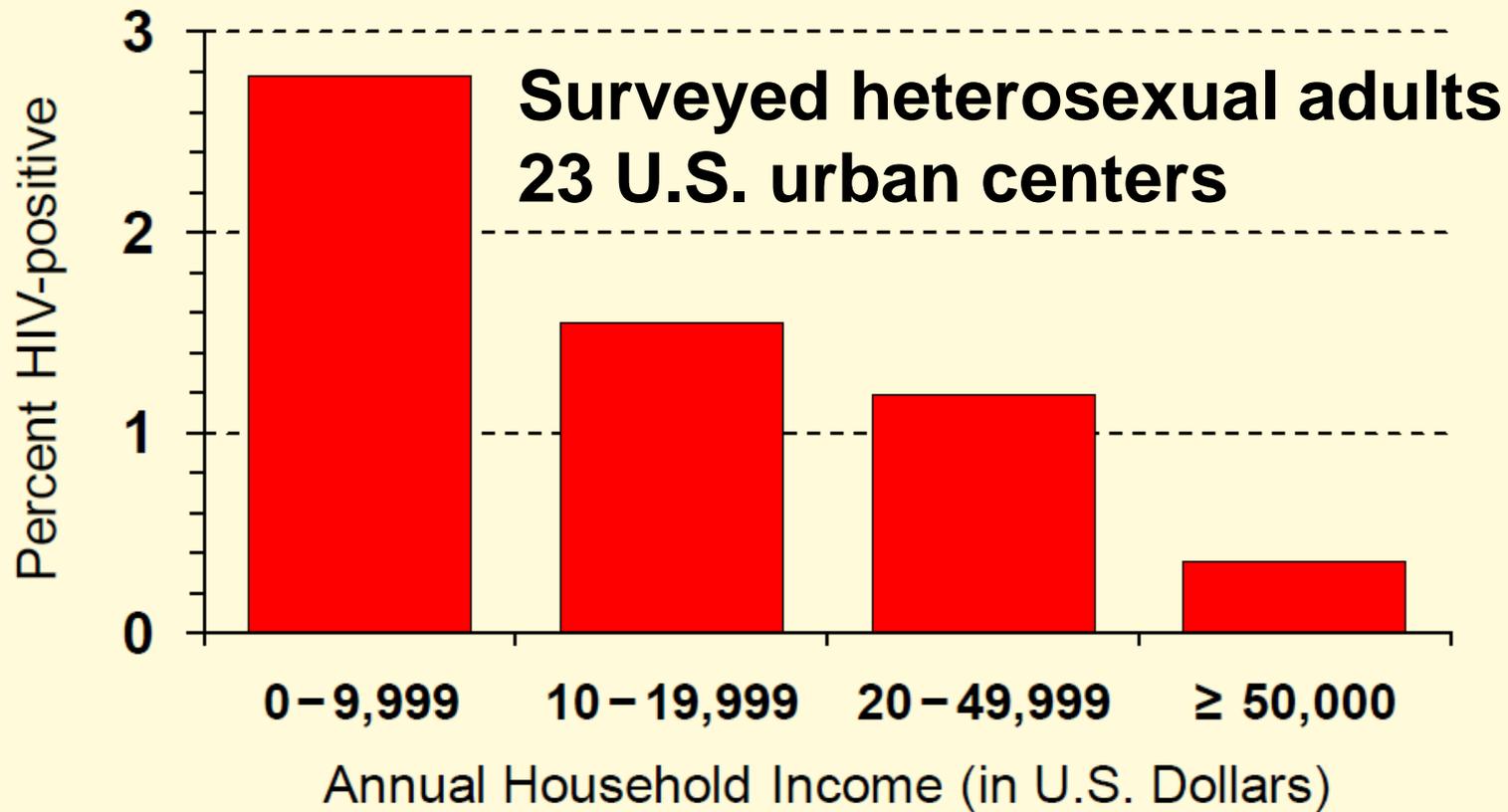
Trends in the Percentage Distribution of Deaths due to HIV Disease by Geographic Region, United States, 1987–2006



Note: For comparison with data for 1999 and later years, data for 1987–1998 were modified to account for ICD-10 rules instead of ICD-9 rules.



U.S. HIV Prevalence Rate - NHBS

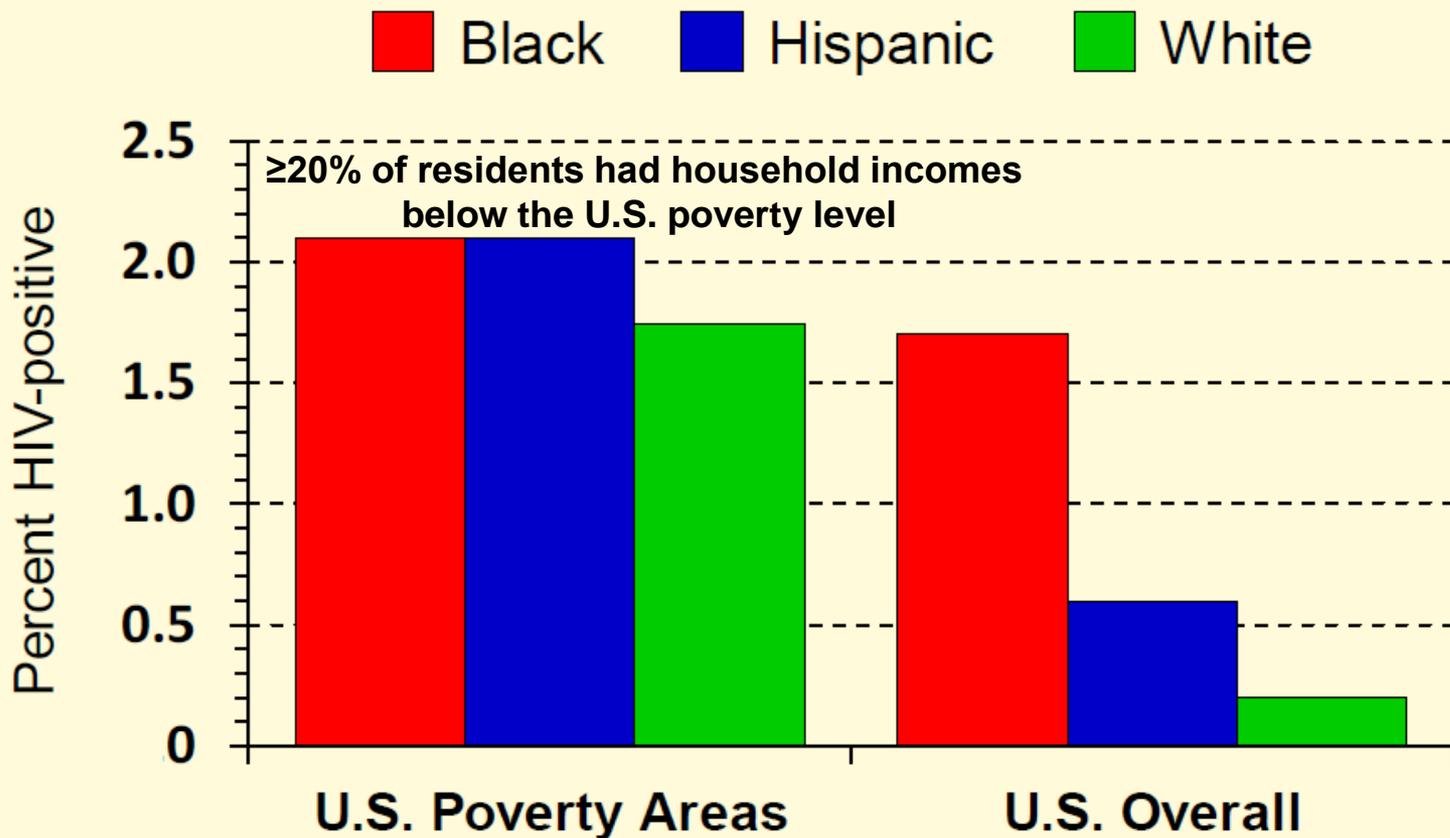


Data Source: NHBS-HET-1 2006 - 2007.

Source: Denning et al., AIDS 2010 Conference, Vienna Austria, July 2010, Abstract WEPDD101
NHBS – National HIV Behavioral Surveillance System



U.S. HIV Prevalence Rate - NHBS



Data Sources: NHBS-HET-1 2006 – 2007 and U.S. HIV Prevalence Estimates 2006.²

Source: Denning et al., AIDS 2010 Conference, Vienna Austria, July 2010, Abstract WEPDD101
NHBS – National HIV Behavioral Surveillance System



Trends in U.S. HIV Infections, 2011

- Incidence stable at 50,000 – 60,000 new infections/year
- Prevalence steadily climbing
- Transmission rate slowly declining
- Disproportionately affecting
 - Blacks and Hispanics: Women > Men
 - Men who have sex with men: especially young MSM
 - Rates of new infections are climbing again
 - Southern U.S. region
 - Urban poor
- Epidemic is aging: implications of longer survival to contribution of non-AIDS-defining illness and deaths

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