



Epidemiology of HIV in Los Angeles County

A Web-Presentation with Notes Pages Attached

Division of HIV and STD Programs (DHSP)



- **This presentation is intended to provide a general overview of the epidemiology of Human Immunodeficiency Virus (HIV) Disease in Los Angeles County (LAC).**
- **Data are provided by the Division of HIV and STD Programs (DHSP) located at 600 South Commonwealth Avenue, Suite 1260, Los Angeles, CA 90005.**
- **Notes are provided for each slide, intending to provide a clear interpretation of the data presented on the slides.**
- **Please note that data for years 2012 through 2014 are provisional due to reporting delays.**
- **If you need additional data, please complete our online data request form available on our website at <http://publichealth.lacounty.gov/dhsp/DataRequest.htm>**



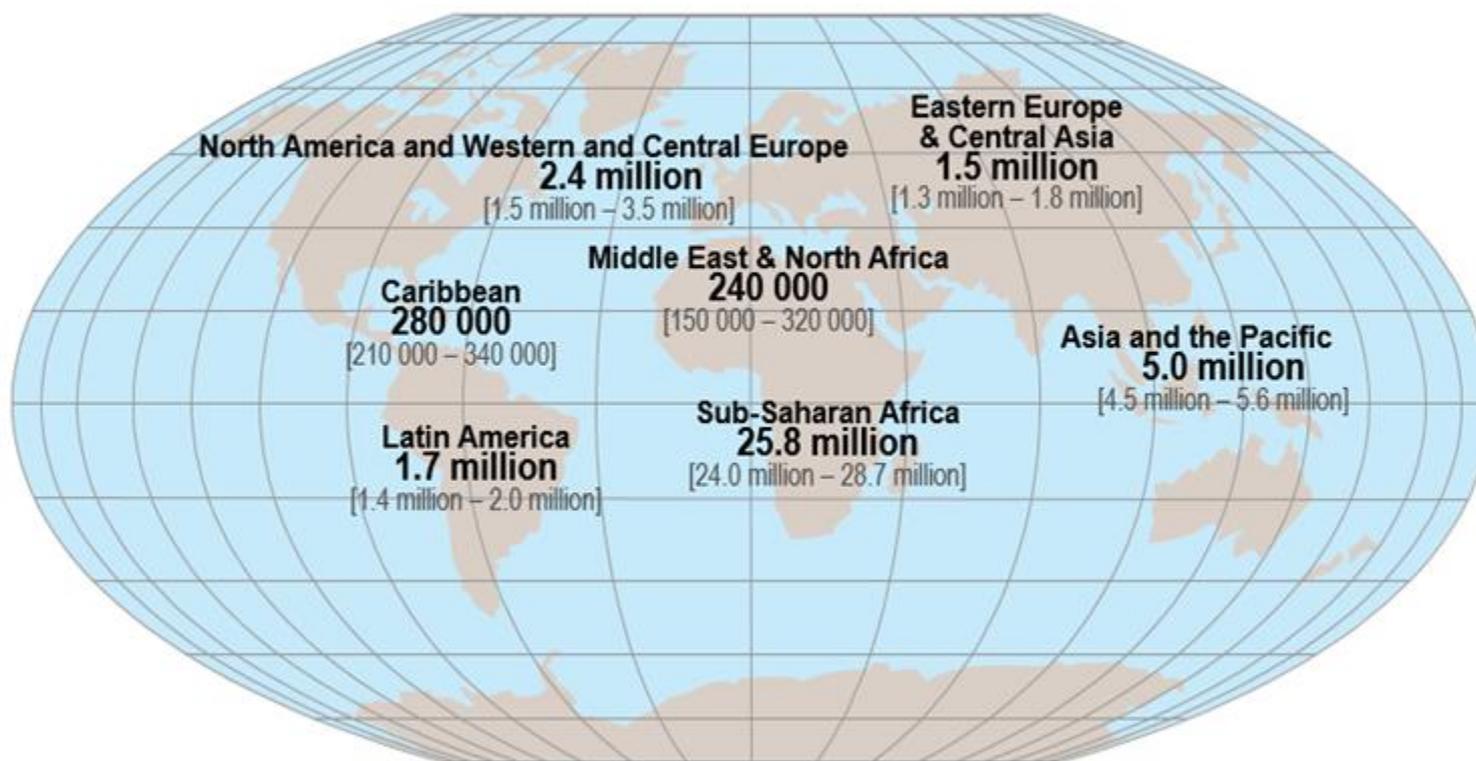
HIV Infection in the World and United States





- **The HIV infection pandemic is a widespread disease that affects all parts of the globe. These first few slides are intended to put the local epidemic into a national and worldwide context.**
- **It is important to note that the HIV infection epidemic in the U.S. is not uniform. The demographics and risk exposures of those affected by HIV infection in the U.S. varies greatly depending upon region -- from injection drug users in the northeast cities to Blacks in the rural South to men who have sex with men (MSM) in the West.**
- **Applying national statistics to localized communities is likely to lead to a misrepresentation of the local epidemic. Therefore, when referencing HIV infection data to describe local groups impacted by HIV infection, be sure to reference local data.**

Adults and children estimated to be living with HIV | 2014



Total: 36.9 million [34.3 million – 41.4 million]

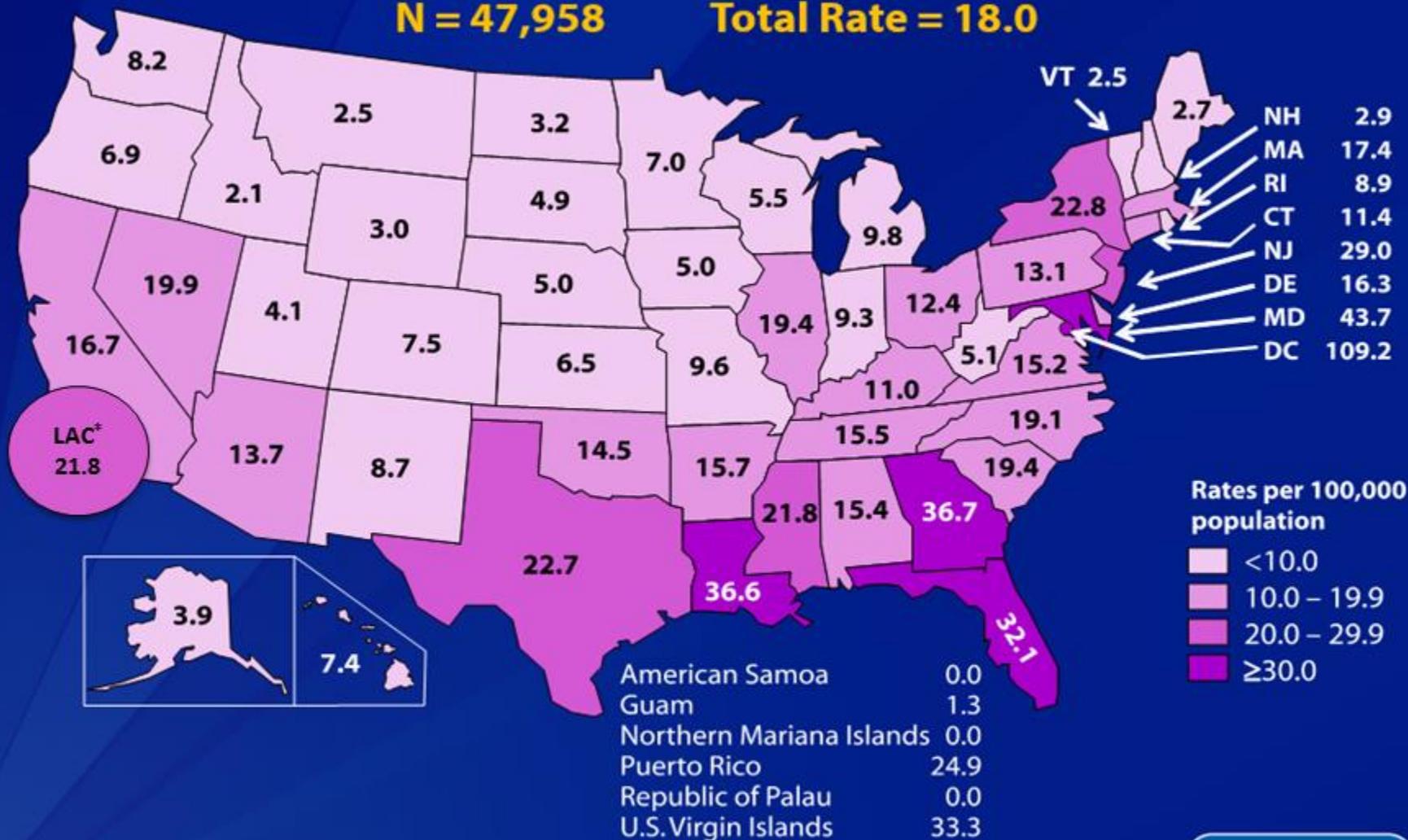


- **This slide shows the estimated number of adults and children living with HIV at the end of 2014, by region of the world.**
- **Globally, Sub-Saharan Africa has been affected the greatest with an estimated 25.8 million adults and children living with HIV infection at year-end 2014. As the reporting of HIV infection in Asian nations begins to gain momentum, higher numbers are expected from these regions as well. North America and Western and Central Europe have 2.4 million and Latin America has 1.7 million people affected.**
- **Please note that this slide does not take into account the proportion of individuals affected within each region. The numbers are total numbers by region. Comparisons are made based on total numbers.**

Rates of Diagnoses of HIV Infection among Adults and Adolescents, 2013—United States and 6 Dependent Areas

N = 47,958

Total Rate = 18.0



Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

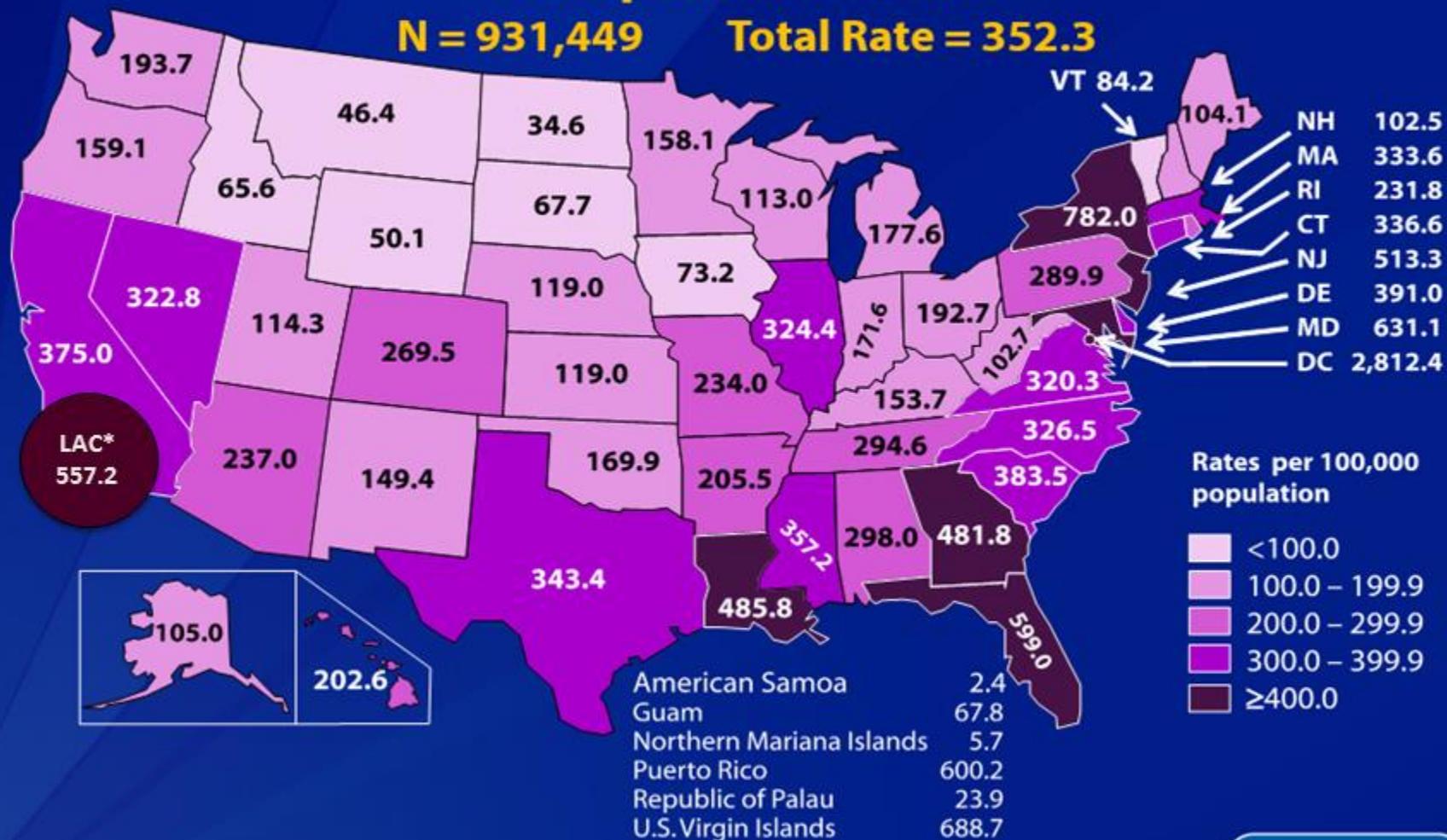




- **This slide from the Centers for Disease Control (CDC) shows the estimated rates of diagnoses of HIV infection among adults and adolescents in 2013 for each state and six dependent areas expressed as the number of reported HIV cases per 100,000 persons.**
- **In 2013, the estimated total rate (for the United States and six dependent areas) of diagnosed HIV infection among adults and adolescents was 18.0 per 100,000 population.**
- **State rates (per 100,000) are displayed using shades of pink, with the darkest pink representing the highest rates (equal to or greater than 30.0 per 100,000), and the lightest pink representing the lowest rates (less than 10.0 per 100,000).**
- **At the end of 2013, among states (not including dependent areas and D.C.), Maryland had the highest rate of diagnoses of HIV infection with 43.7 cases per 100,000, while Idaho had the lowest rate with 2.1 cases per 100,000.**
- **The diagnoses rate of HIV infection among adults and adolescents reported for 2013 in Los Angeles County (LAC) (21.8 per 100,000) is higher than that in California as a whole (16.7 per 100,000) and the national level (18.0 per 100,000).**
- **The District of Columbia (i.e., Washington, DC) is a city; please use caution when comparing the HIV diagnoses rate in DC with the rates in states.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.**

Rates of Adults and Adolescents Living with Diagnosed HIV Infection, Year-end 2012—United States and 6 Dependent Areas

N = 931,449 **Total Rate = 352.3**



Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.





- This slide from the Centers for Disease Control (CDC) shows the estimated rate of adults and adolescents living with diagnosed HIV infection at year-end 2012 in each state and six dependent areas expressed as the number of people living with HIV infection per 100,000 persons.
- At year-end 2012, the estimated total rate (for the United States and 6 dependent areas) of adults and adolescents living with diagnosed HIV infection was 352.3 per 100,000 population.
- State rates (per 100,000) are displayed using a single hue sequential color scheme of pink, with the darkest pink representing the highest rates (equal to or greater than 400.0 per 100,000), and the lightest pink representing the lowest rates (less than 100.0 per 100,000).
- At year-end 2012, among states (not including dependent areas and D.C.), New York had the highest rate of people living with diagnosed HIV infection (782.0 cases per 100,000), and North Dakota had the lowest rate (34.6 cases per 100,000). The rate of people living with a diagnosed HIV infection at year-end 2012 for Los Angeles County (LAC) (557.2 per 100,000) is much greater than that for California as a whole (375.0 per 100,000) and the national level (352.3 per 100,000).
- The District of Columbia (i.e., Washington, DC) is a city; please use caution when comparing the rate of persons living with diagnosed HIV infection in DC with the rates in states.
- Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.
- Persons living with a diagnosis of HIV infection are classified as adult or adolescent based on age at year-end 2012.



Numbers and Rates (per 100,000) for Chlamydia, Gonorrhea, P&S Syphilis and HIV in 9 Large Urban Cities/Counties in the US, 2012

| Geographic Area | Chlamydia Rate (n) ¹ | Gonorrhea Rate (n) ¹ | P&S Syphilis Rate (n) ¹ | HIV Rate (n) ^{1,2} |
|-------------------------------------|---------------------------------|---------------------------------|------------------------------------|-----------------------------|
| Los Angeles County, CA ³ | 521 (48,461) | 123 (11,425) | 9 (878) | 20 (2,012) |
| Chicago, IL ⁴ | 1,032 (27,804) | 360 (9,715) | 22 (585) | 37 (1,008) |
| Detroit, MI ⁵ | 1,985 (13,787) | 801 (5,561) | 20 (137) | 39 (273) |
| Houston, TX ⁶ | 811 (17,561) | 255 (5,519) | 20 (442) | 51 (1,114) |
| King County, WA | 344 (6,772) ⁷ | 77 (1,506) ⁷ | 11 (213) ⁷ | 15 (288) ⁸ |
| Miami-Dade County, FL | 376 (9,612) ⁷ | 94 (2,401) ⁷ | 14 (346) ⁷ | 45 (1,173) ⁹ |
| New York, NY ¹⁰ | 764 (62,460) | 180 (14,747) | 12 (996) | 34 (2,832) |
| San Francisco, CA | 601 (4,883) ⁷ | 305 (2,482) ⁷ | 61 (496) ⁷ | 50 (413) ¹¹ |
| Washington, D.C. | 1,102 (6,808) ⁷ | 389 (2,402) ⁷ | 27 (165) ⁷ | 107 (680) ¹² |
| United States | 454 (1,431,036) ⁷ | 106 (335,399) ⁷ | 5 (15,979) ⁷ | 14 (42,616) ¹² |

¹ Rate per 100,000 population.

² New HIV diagnosis, regardless of stage of infection.

³ 2012 Sexually Transmitted Disease Morbidity Report. Excludes cases of Chlamydia, Gonorrhea and P&S Syphilis in Long Beach and Pasadena.

⁴ 2012 HIV/STI Surveillance Report, Chicago December 2013.

⁵ 2012 Michigan Department of Health and Human Services. October 15, 2014.

⁶ 2012 Texas STD Surveillance Report does not provide rates. The estimated rates were calculated using the 2012 U.S. Census population.

⁷ CDC Sexually Transmitted Disease Surveillance 2012.

⁸ 2012 King County Public Health HIV/AIDS Epidemiology Report 2014.

⁹ 2012 Miami-Dade County HIV/AIDS Surveillance, January 2015.

¹⁰ 2012 New York City Department of Health and Mental Hygiene Bureau of STD Quarterly Report 2013 and HIV Surveillance Report December 2013.

¹¹ 2012 San Francisco Department of Public Health 2012 HIV/AIDS Epidemiology Annual Report June 2013.

¹² 2012 Washington DC Department of Health 2013 Annual Epidemiology & Surveillance Report September 1, 2013.

¹² CDC HIV Surveillance Report 2013 vol. 25.



- **This slide shows the numbers and rates (per 100,000) for CT, GC, P&S SY and HIV in 9 large urban cities or counties in the US in 2012, the latest year that data are available for many of these areas. Los Angeles County is shown at the top (in red) and the overall U.S. rates are shown at the bottom.**
- **Of the areas shown, LAC and New York have the highest numbers of cases for all three STDs. The number of HIV cases are more evenly distributed with several cities reporting numbers similar to LAC, but well below New York.**
- **However, if we look at rates of disease, which take into account population size, then we see that LAC has lower rates of STDs and HIV than most other large urban areas.**
- **Overall, although LAC has a large HIV infection epidemic, we seem to be faring better than other big cities/counties in the US.**



HIV Infection in L.A. County





History of HIV and AIDS Surveillance in Los Angeles County

- 1982** Stage 3 HIV Disease(AIDS) case surveillance began in LAC
- 2002** Non-AIDS HIV case surveillance began in California using a non-name, code-based system
- 2006** California law revised to require reporting of HIV cases and laboratory test results indicative of HIV infection by name
- 2008** CD4+ T-cell test result reporting mandated by California law
- 2011** California law changed to allow use of HIV surveillance data for public health purposes – such as linking newly infected to care
- 2013** Use of new HIV testing algorithm for California laboratories was approved by a State Emergency Public Health Regulation to allow for better identification of acute HIV



Impact of HIV on Los Angeles County

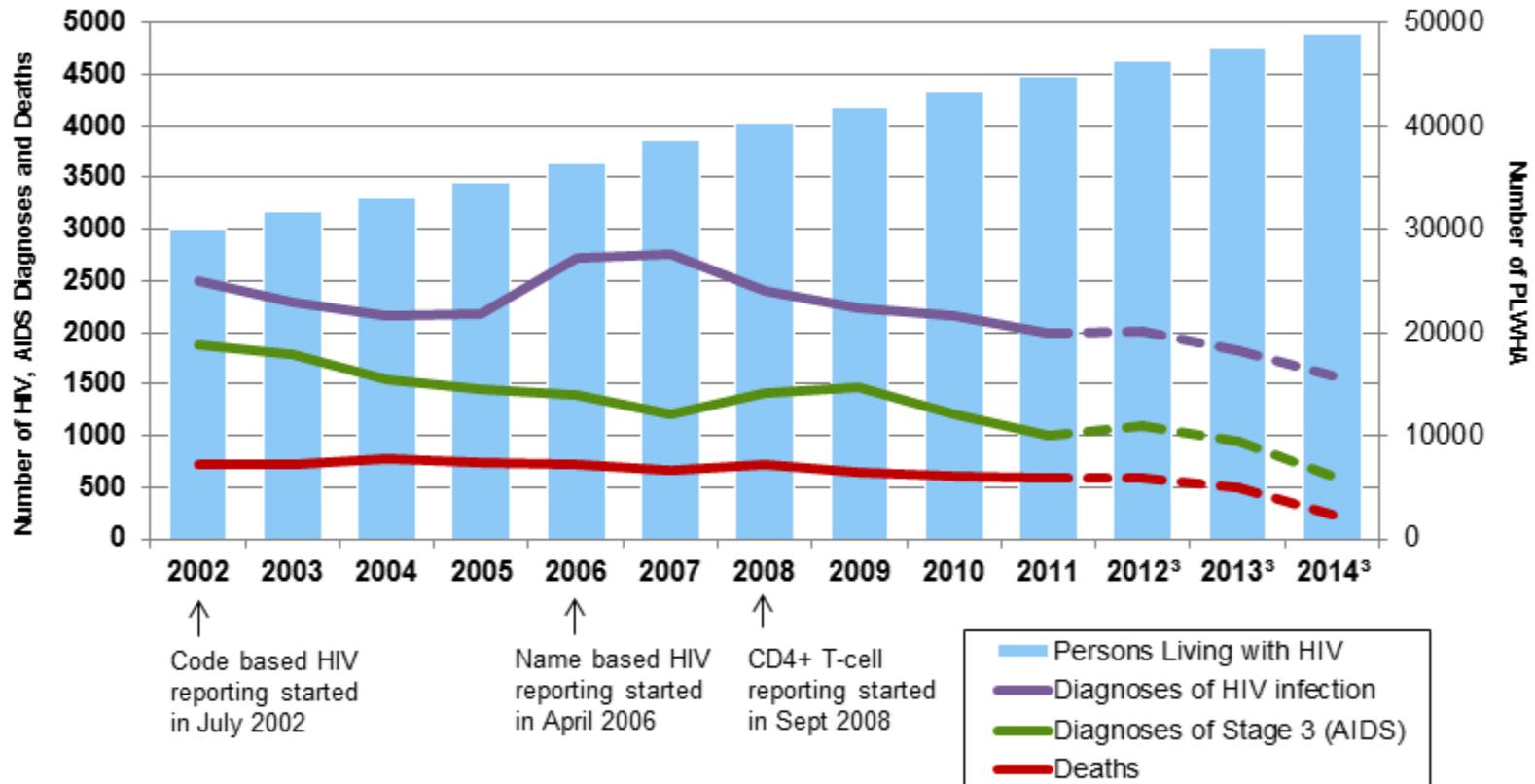
- **Los Angeles County was second only to New York City, among U.S. metropolitan statistical areas, in the number of persons diagnosed with HIV in 2013**
- **Only 5 states (FL, CA, TX, NY, GA) reported more newly diagnosed HIV cases in 2013 than Los Angeles County**
- **4% of all US HIV cases and 38% of all California HIV cases were diagnosed in Los Angeles County in 2013**



- **Impact of HIV - Los Angeles County in 2013**
- **In 2013, Los Angeles County is second only to New York among metropolitan areas in number of persons diagnosed with HIV infection.**
- **In 2013, only five states have diagnosed more HIV cases than Los Angeles County (LAC): Florida (FL), California (CA), Texas (TX), New York (NY) and Georgia (GA).**
- **In 2013, 38 percent of all California HIV cases were diagnosed in Los Angeles County.**
- **The above numbers and comparisons were based on CDC HIV Surveillance Report, Vol. 25.**



Annual Diagnoses of HIV Infection¹, Stage 3 HIV Infection (AIDS), Persons Living with HIV, and Deaths² Among Persons with Diagnosed HIV Infection, Los Angeles County, 2002-2014



¹ Based on named reports for persons with a diagnosis of HIV infection regardless of the disease stage at time of diagnosis.

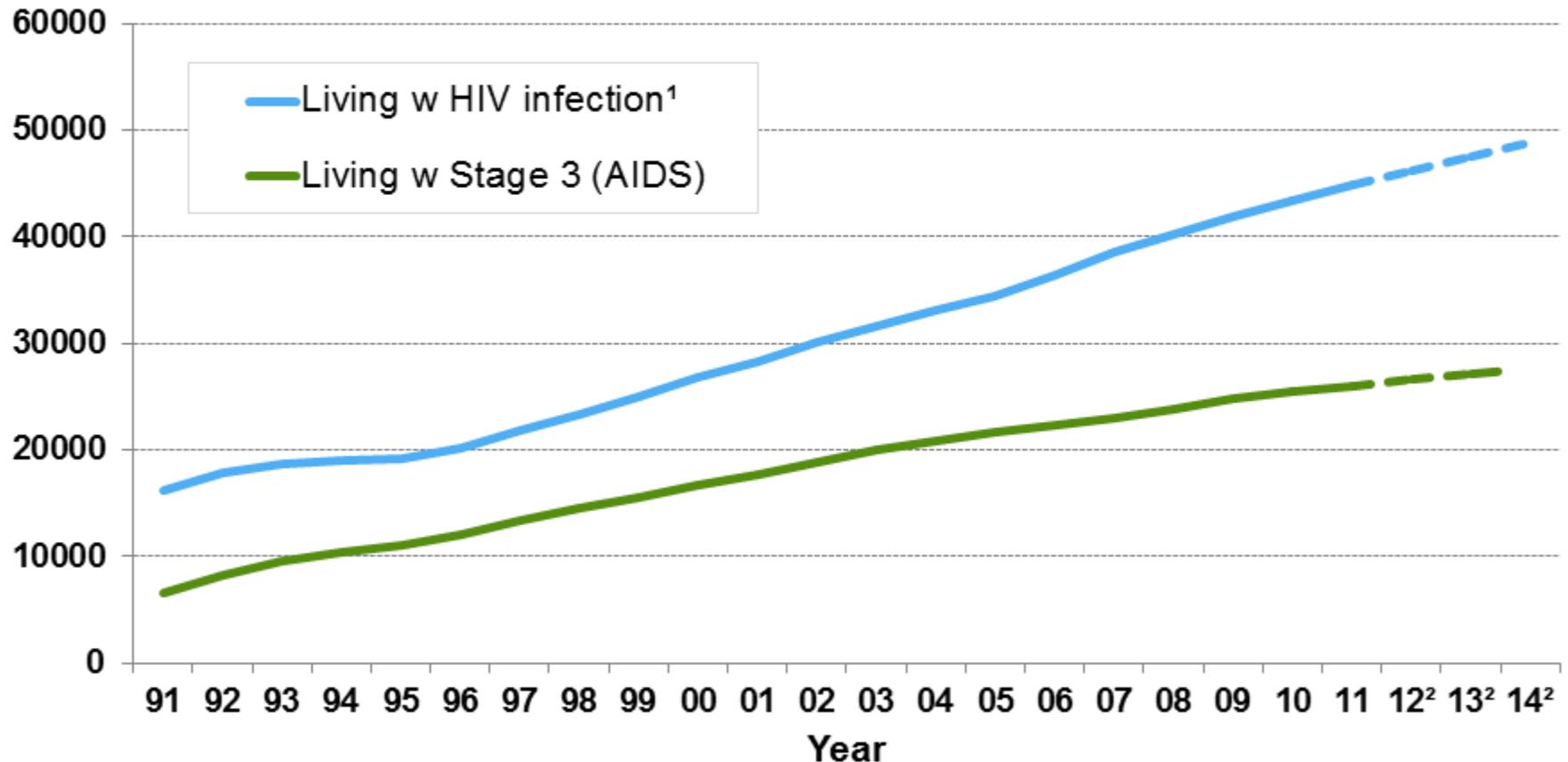
² The number of deaths among persons with HIV infection is based on the date of death report when the actual year of death is unknown.

³ Data are provisional due to reporting delay.



- This slide shows the trends of persons living with HIV, annual diagnoses of stage 3 (AIDS), annual diagnoses of HIV infection, and annual number of deaths among persons with an HIV infection (regardless of disease severity) from 2002 through 2014 in Los Angeles County. Data for 2012 through 2014 are provisional due to reporting delays.
- The number of persons living with HIV, depicted by the blue vertical bars, has a steadily increasing trend from 30,000 in 2002 to about 49,000 in 2014.
- The annual number of persons diagnosed with an HIV infection, as depicted by the purple line, has fluctuated over time.
- In California, non-named code HIV case reporting began in July 2002 and named HIV case reporting began in April 2006. During the first few years of HIV reporting, many HIV cases (persons who had been diagnosed with HIV prior to 2006) were likely misclassified as a new HIV diagnosis in recent years (especially in 2006 and 2007), since a complete patient history on HIV might not have been available to the persons who completed the case report forms. Therefore, the “bump” in the number of reported cases seen for years 2006 and 2007 could likely be caused by the change in reporting regulations and should not be interpreted as a real increase in newly diagnosed HIV disease. Therefore, the data cannot be used to draw conclusions on the trends for HIV infection.
- Annual stage 3 (AIDS) diagnoses, depicted by the green line, have been steadily decreasing since 2002. A slight increase in the number of new stage 3 (AIDS) diagnoses 2008 through 2009 may be attributed to the implementation of CD4 T-cell count reporting in California in September 2008.
- Annual death among persons diagnosed with HIV infection, depicted by the red line, has a decreasing trend since 2008.

Number of Persons Living with HIV Infection and Stage 3 (AIDS) by Year, Los Angeles County, 1991-2014



¹ Data on persons living with HIV infection in year 2006 or earlier may be incomplete as non-AIDS HIV only became reportable by name in April 17, 2006. The number for living with HIV infection includes both HIV and Stage 3 (AIDS) cases.

² Data are provisional for 2012-2014.



- **This slide shows the trends of the number of persons living with HIV infection and stage 3 (AIDS) alone, by year, in Los Angeles County, from 1991 through 2014.**
- **The number of persons living with HIV infection and stage 3 (AIDS) alone, depicted by the blue and green lines, respectively, has grown steadily since 1991.**
- **Beginning in 1996, there is an increasingly widening gap between the number of persons living with stage 3 (AIDS) and those living with HIV infection. It is due in part to the success of highly active antiretroviral therapies, introduced in 1996, which has delayed the time of persons with HIV progress to stage 3 (AIDS). The other reason is in California, non-AIDS HIV case surveillance was not in place prior to 2002. Therefore, some reported persons diagnosed with HIV infection prior to 2002 may have been misclassified as recent HIV diagnoses (after 2002).**
- **Data for 2012 through 2014 are provisional due to reporting delays.**



Number of Person living with HIV infection in the United States, California and Los Angeles County

| Jurisdiction | N |
|---------------------------|----------------------------|
| United States | 929,646¹ |
| California | 119,878² |
| Los Angeles County | 47,547³ |

¹ CDC. HIV Surveillance Report, 2013; vol. 25.

<http://www.cdc.gov/hiv/library/reports/surveillance/>. Published February 2015.

Persons living with diagnosed HIV infection as of 2012.

² CA DPH, Office of AIDS, HIV/AIDS Surveillance Section, data as of December 23, 2014.

Persons living with diagnosed HIV infection as of 2013.

³ LAC/DPH, DHSP, HIV surveillance data as of December 31, 2014.

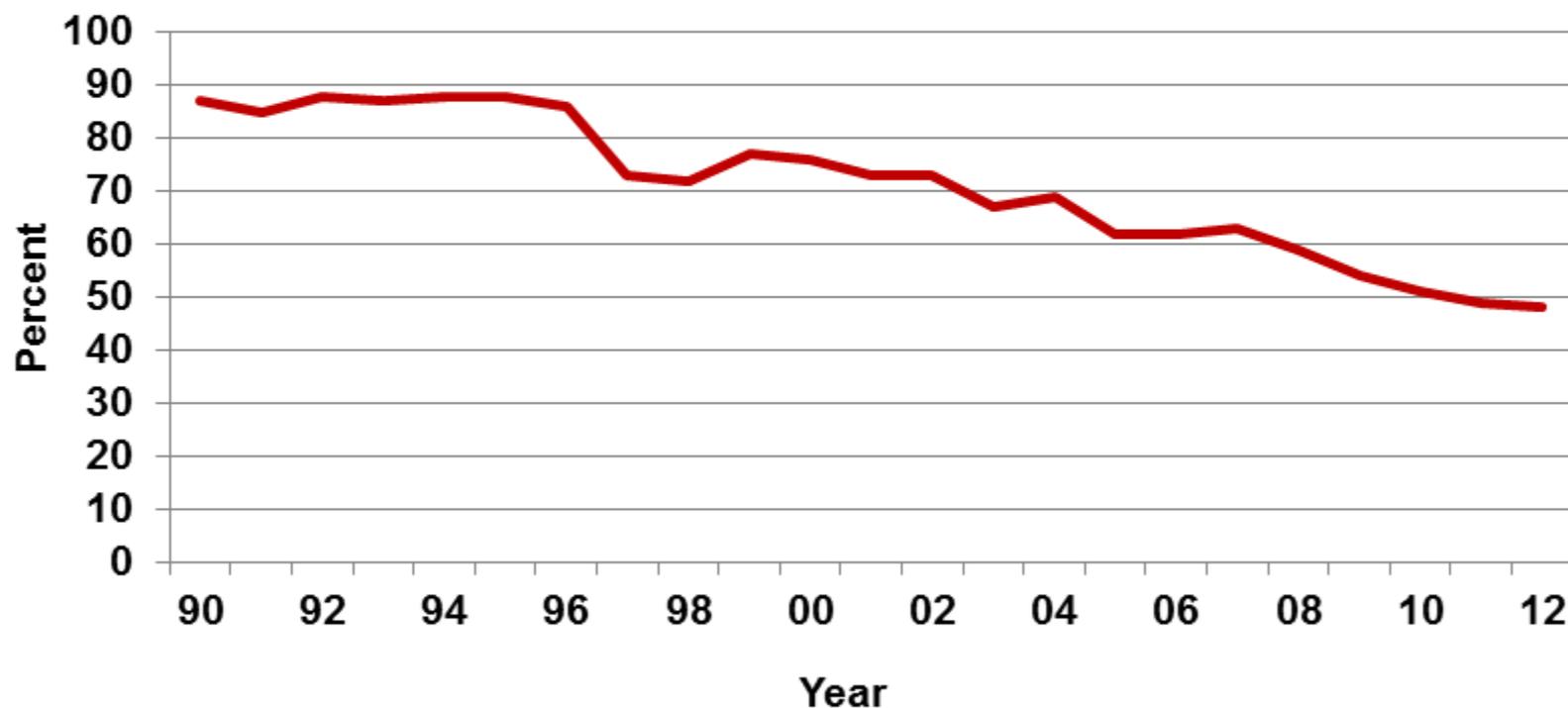
Persons living with diagnosed HIV infection as of 2013.



- **This slide shows the number of persons living with diagnosed HIV infection, regardless of disease severity, in the United States(including 6 U.S. dependent areas), California and Los Angeles County (LAC). The number for the United States is as of 2012, and the numbers for California and Los Angeles County are as of 2013.**
- **CDC reported 929,646 persons living with HIV infection in the US at year-end 2012. California Department of Public Health Office of AIDS reported 119,878 persons living with HIV infection in California at year-end 2013. Los Angeles County reported 47,547 persons living with HIV infection, which represents 40% of reported persons living with diagnosed HIV infection in California at year-end 2013.**
- **Data for California and LAC are provisional due to reporting delays.**



Proportion of HIV-Related Deaths¹ among Deceased Persons with an HIV infection, Los Angeles County, 1990-2012



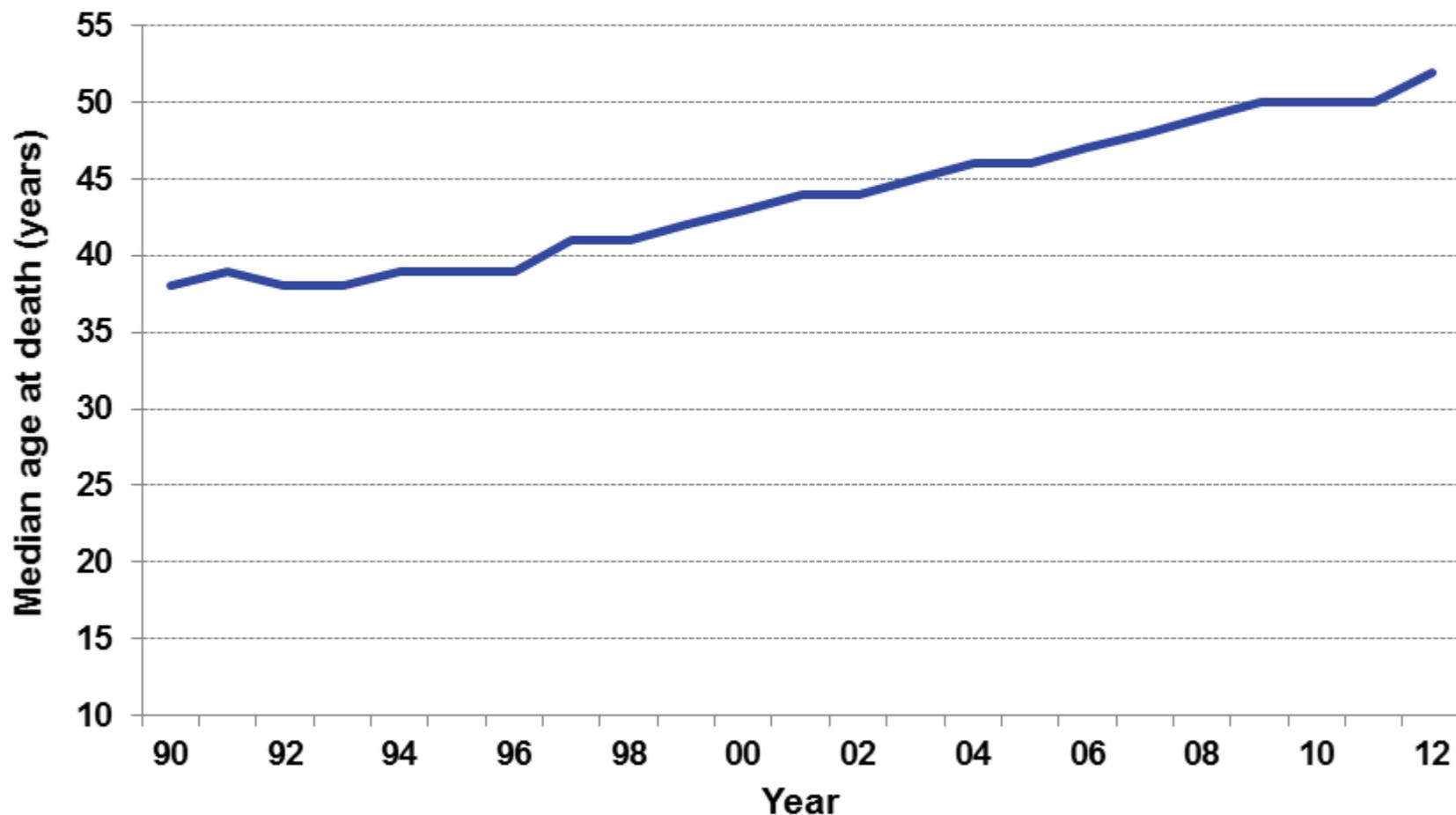
¹ Cause of death due to HIV determined by using ICD-9 & ICD-10 codes.



- **This line graph shows the proportion of mortality among HIV infected individual with HIV selected as the underlying cause of deaths by year in LAC from 1990 to 2012.**
- **The proportion dropped from 87% in 1990 to 48% in 2012.**
- **Data for 2011 and 2012 are provisional due to reporting delays.**



Median Age at Death among Persons with an HIV Infection, Los Angeles County, 1987-2012





- **This graph shows the median age at death among those who had been reported with an HIV infection and were deceased, by year in Los Angeles County from 1987 through 2012.**
- **The median age at death increased almost linearly from 37 years in 1987 to 52 years in 2012. This is a reflection of the postponement to older ages among persons with HIV. The median age at death due to HIV infection varied little by racial/ethnic group.**
- **Data for 2011 and 2012 are provisional due to reporting delays.**

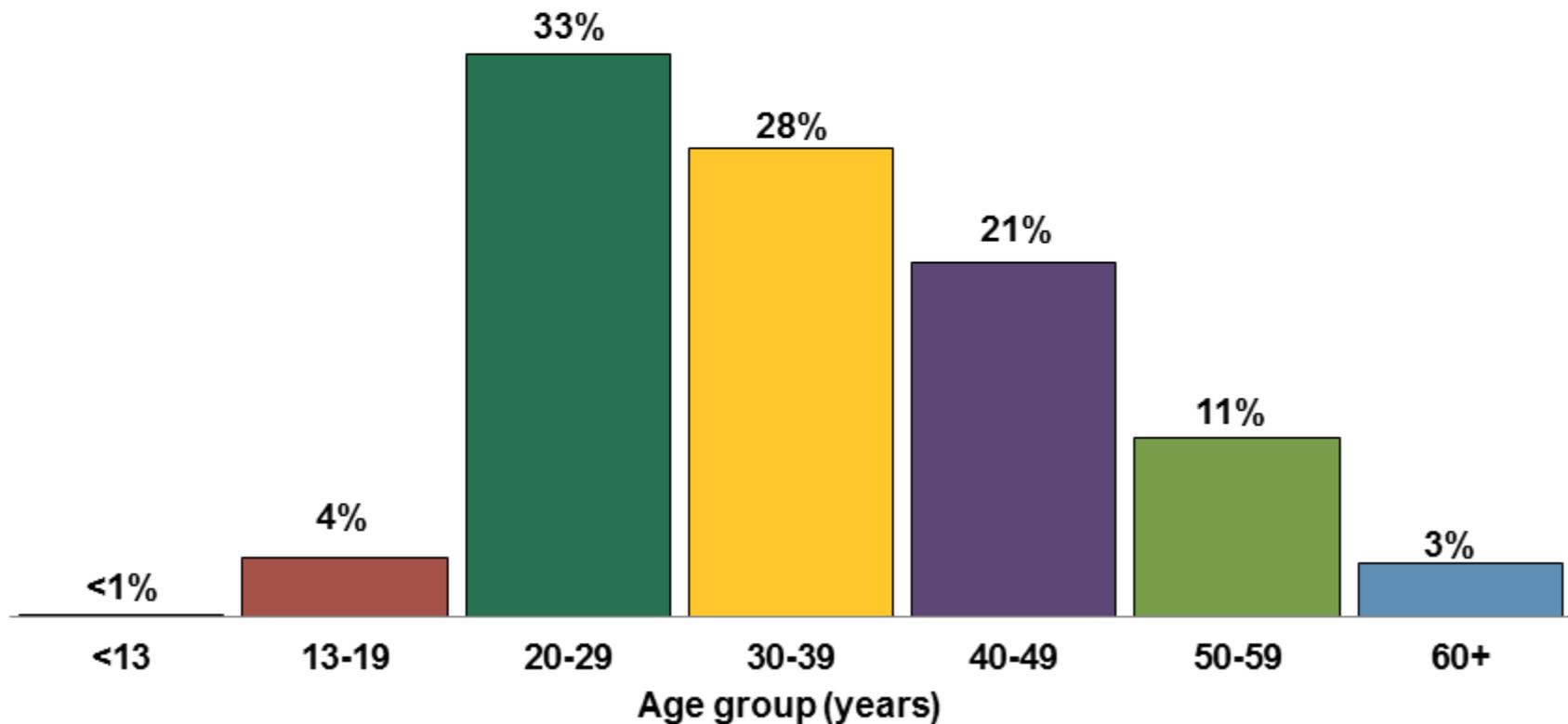


New HIV Diagnoses





New HIV Diagnoses by Age Group Los Angeles County, 2013¹ (n=1,820)



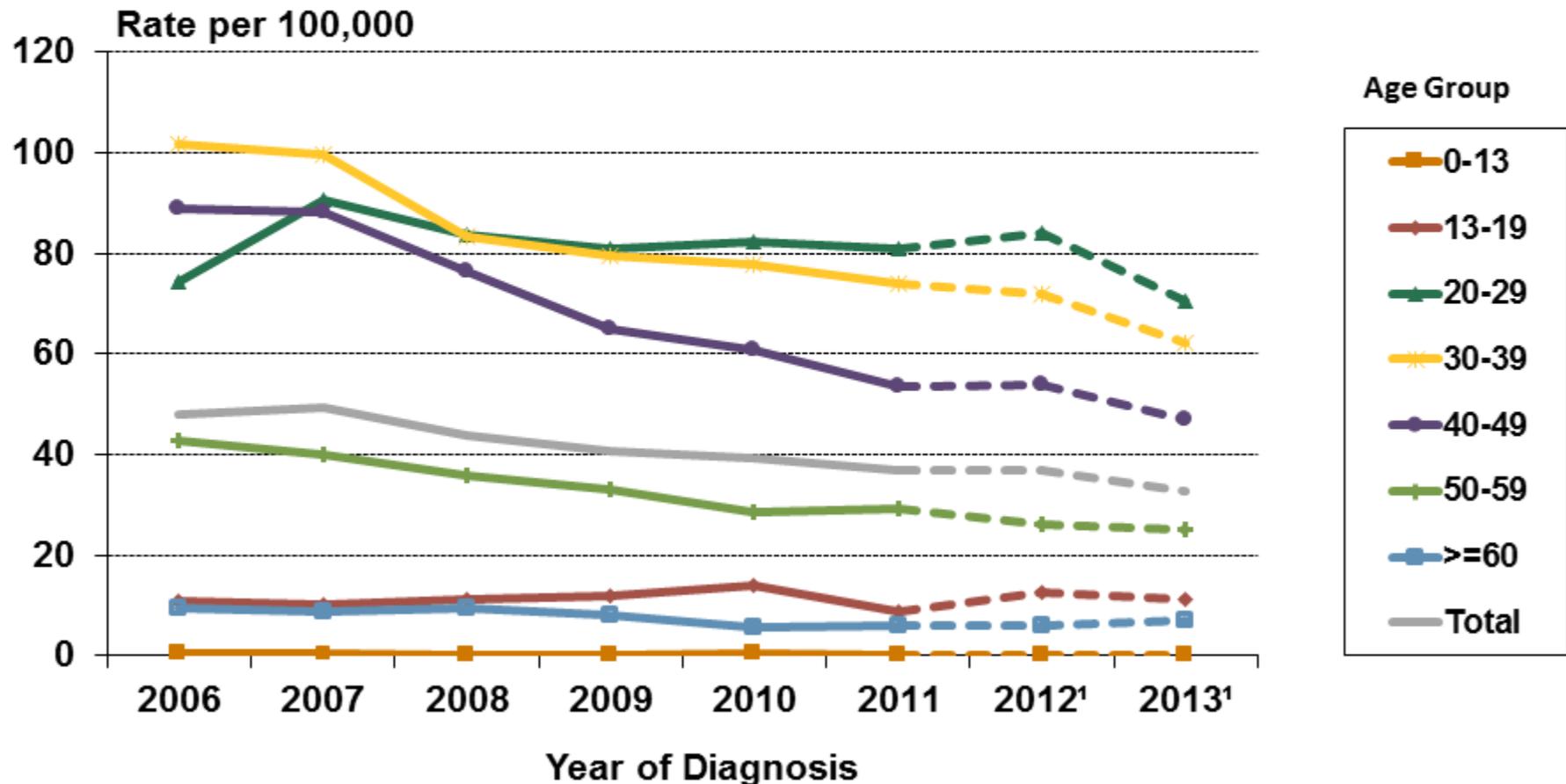
¹ Data are provisional due to reporting delay.



- **This slide shows the age distribution of new HIV diagnoses in Los Angeles County in 2013, reported as of December 31, 2014.**
- **There were 1,820 persons diagnosed with HIV infection in the year 2013. Most (61%) cases of HIV were diagnosed among persons 20-39 years of age, followed by persons 40-49 years of age (21%), and 14% among persons 50 years or older. Youth, age 13-19 years, represented only 4% of new diagnoses in 2013. Less than one percent were diagnosed with HIV infection before age 13 (pediatric HIV infection cases).**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are provisional due to reporting delays.**



Rates of HIV Diagnoses among Males by Age Group, Los Angeles County, 2006-2013

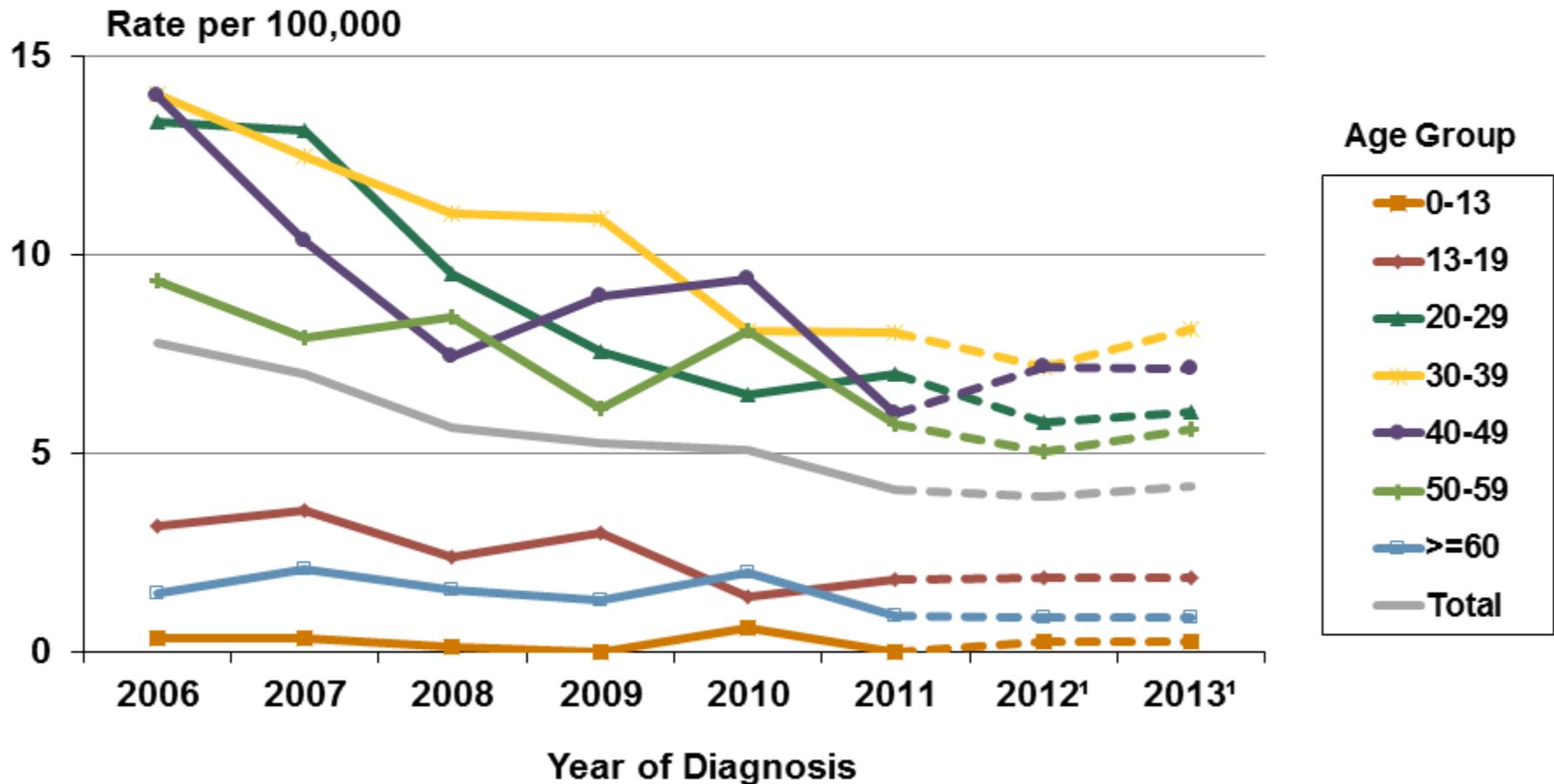


¹ Data are provisional due to reporting delay.



- **This slide shows the rates (per 100,000 population) of diagnoses of HIV infection by age group among males in Los Angeles County from 2006 to 2013, reported as of December 31, 2014.**
- **Males aged 20 to 49 years accounted for the highest rates of diagnoses of HIV infection each year; whereas males aged 0-13 years and ≥ 60 years accounted for the lowest rates of diagnoses of HIV infection each year.**
- **From 2006 through 2013, rates of diagnoses of HIV infection decreased among males in all age groups except for 13-19 years (increased by 1.8%). The rate of diagnoses among male overall decreased 31.9%.**
- **Data include males with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are provisional for the years 2012 through 2013 due to reporting delays.**

Rates of HIV Diagnoses among Female by Age Group, Los Angeles County, 2006-2013

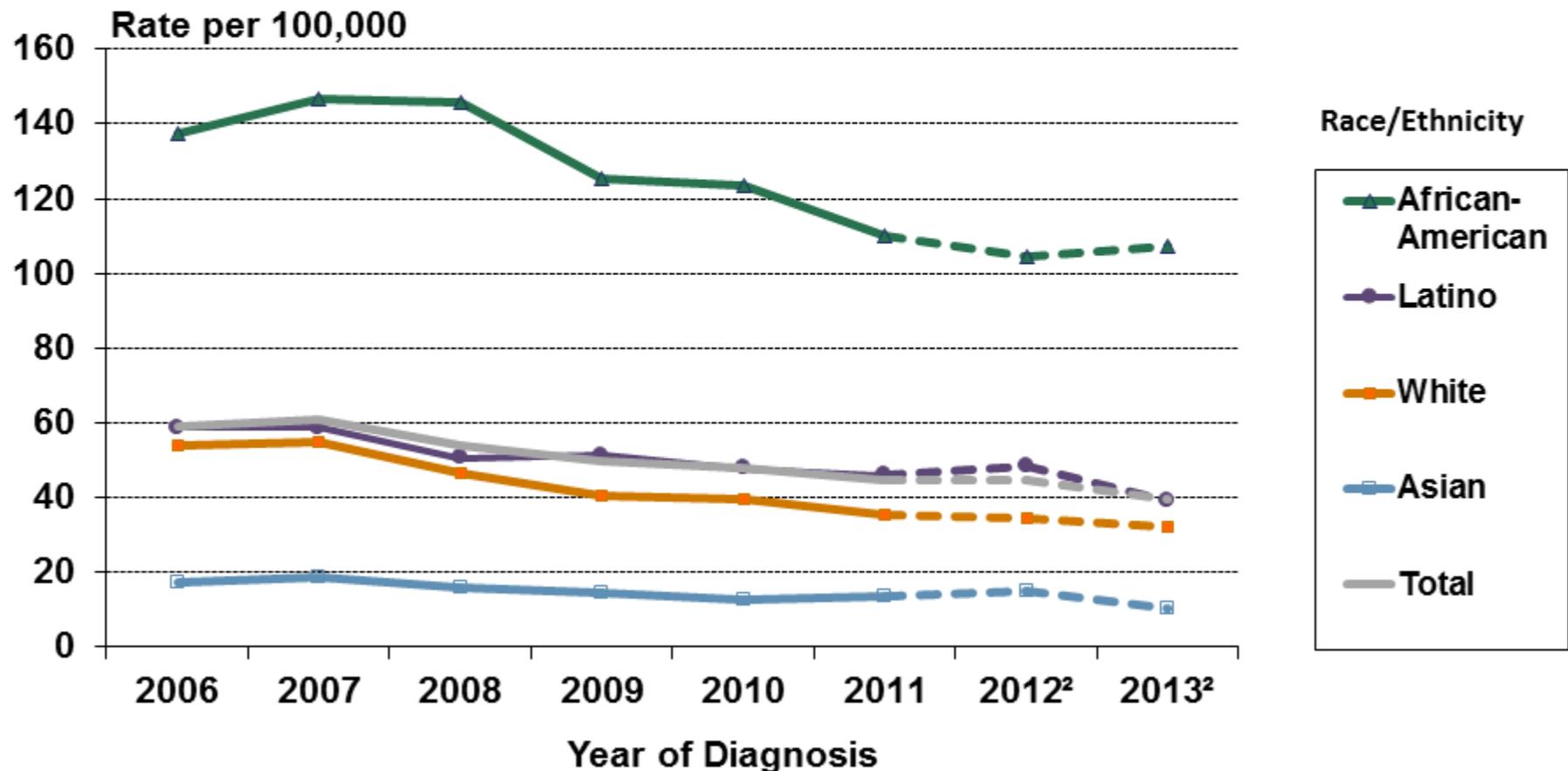


¹ Data are provisional due to reporting delay.



- **This slide shows the rates (per 100,000 population) of diagnoses of HIV infection by age group among females in Los Angeles County from 2006 to 2013, reported as of December 31, 2014.**
- **Females aged 20 to 49 years accounted for the highest rates of diagnoses of HIV infection each year; whereas females aged 0-13 years and ≥ 60 years accounted for the lowest rates of diagnoses of HIV infection each year.**
- **From 2006 through 2013, rates of diagnoses of HIV infection decreased among females in all age groups. The rate of diagnoses among female overall decreased 46.7%.**
- **Data include females with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are provisional for the years 2012 through 2013 due to reporting delays.**

Rates of HIV Diagnoses among Adult/Adolescent Males by Race/Ethnicity¹, Los Angeles County, 2006-2013



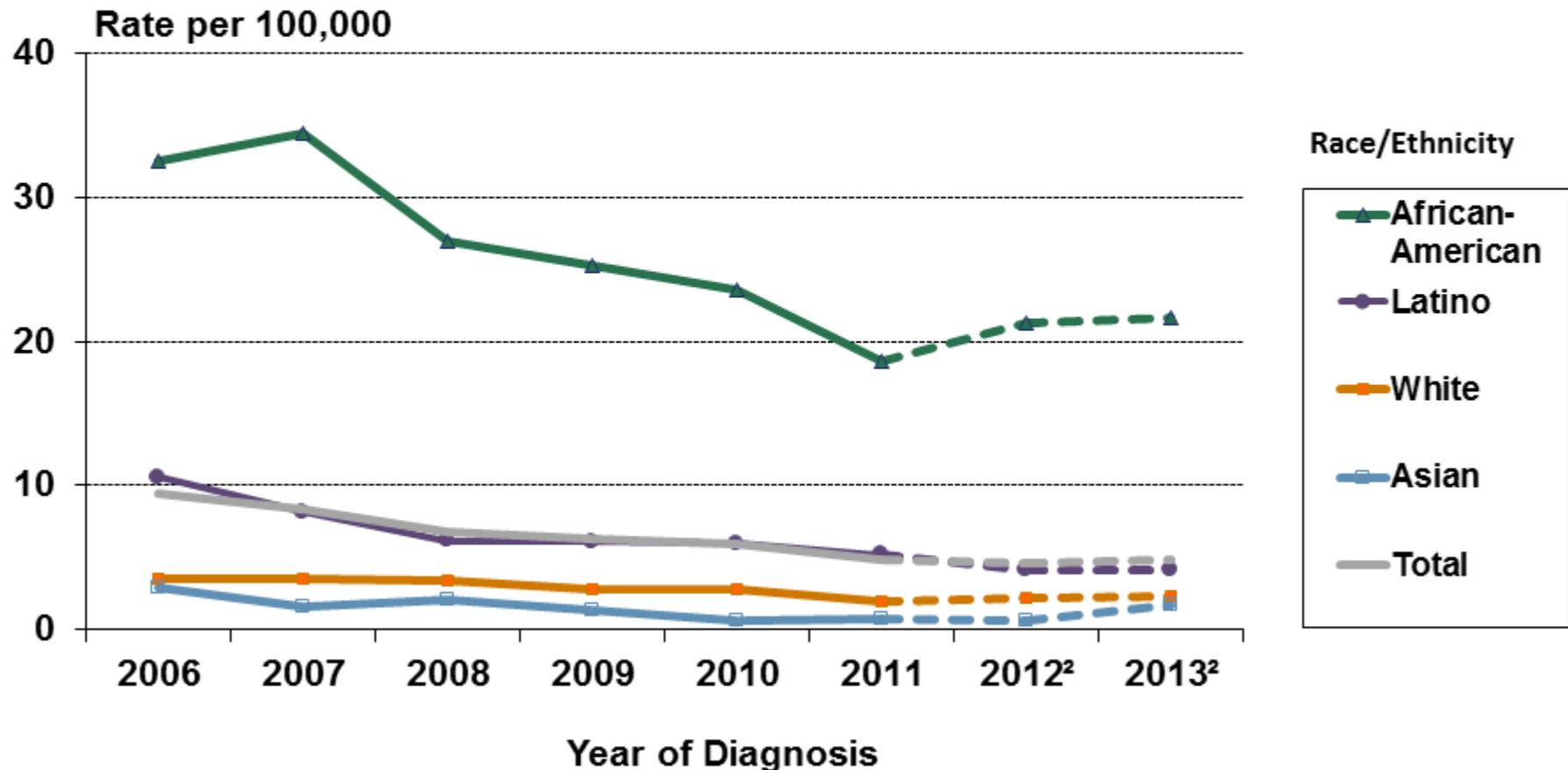
¹ American Indian and Alaskan Native are not presented due to small numbers that may cause unstable estimates.

² Data are provisional due to reporting delay.



- **This slide shows the rates (per 100,000 population) of HIV diagnoses among adult and adolescent males by race/ethnicity in Los Angeles County from 2006 to 2013. Although the rate of HIV diagnoses among African-Americans decreased overall from 137.6 in 2006 to 107.1 in 2013, these rates continue to be much higher than those of all other races/ethnicities.**
- **The trends in the rates of diagnoses among other races/ethnicities from 2006 through 2013 were; from 58.7 in 2006 to 39.1 in 2013 for Latinos; from 54.0 in 2006 to 32.2 in 2013 for Whites; and from 17.2 in 2006 to 10.3 in 2013 for Asians. The rates of diagnoses among all races/ethnicities were from 59.2 in 2006 to 39.4 in 2013.**
- **Data include males with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are provisional for the years 2012 through 2013 due to reporting delays.**
- **Latinos can be of any race.**

Rates of HIV Diagnoses among Adult/Adolescent Females by Race/Ethnicity¹, Los Angeles County, 2006-2013



¹ American Indian and Alaskan Native are not presented due to small numbers that may cause unstable estimates.

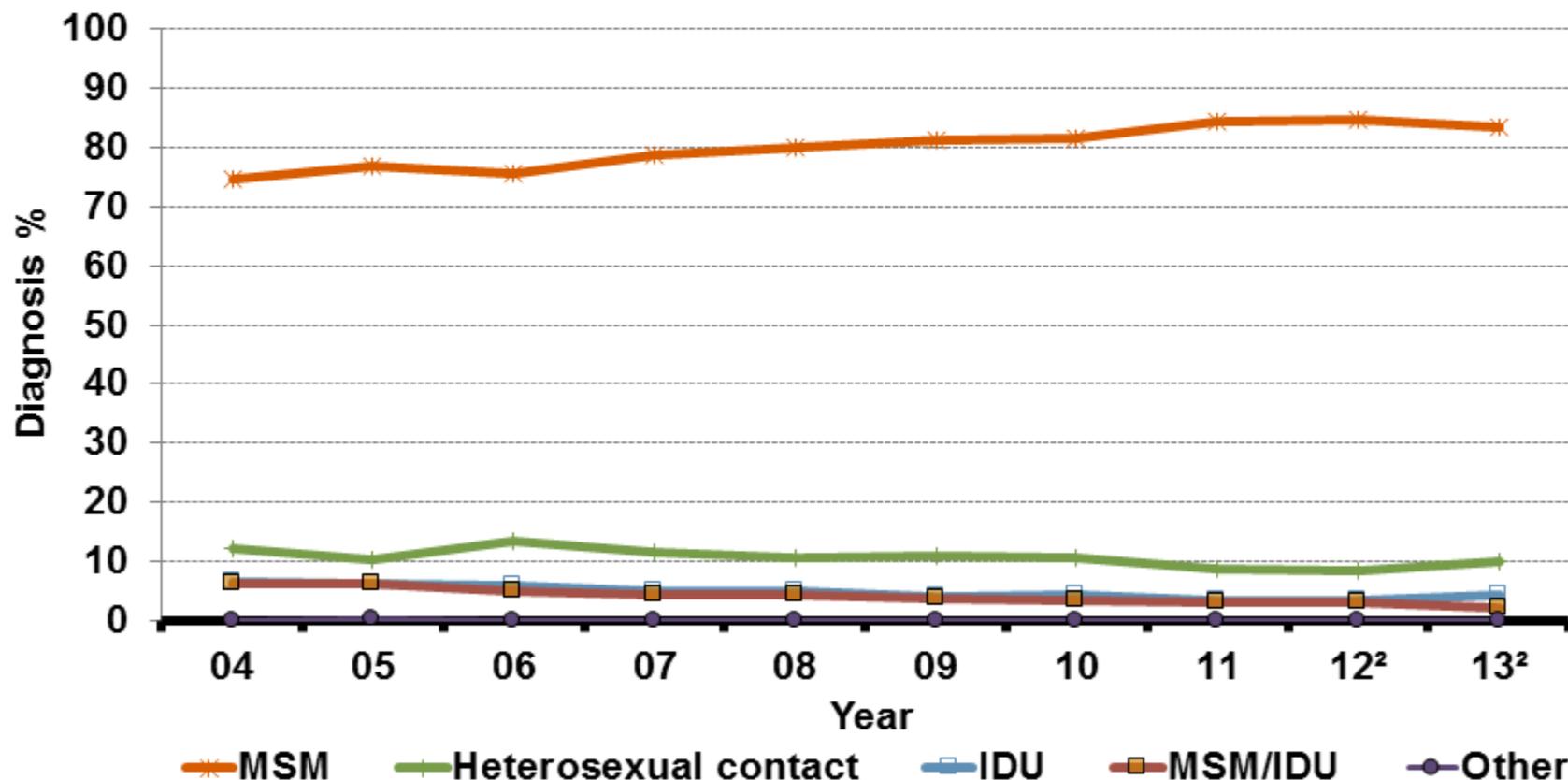
² Data are provisional due to reporting delay.



- **This slide shows the rates (per 100,000 population) of HIV diagnoses among adult and adolescent females by race/ethnicity in Los Angeles County from 2006 to 2013. Although the rate of HIV diagnoses among African-Americans decreased overall from 32.5 in 2006 to 21.7 in 2013, these rates continue to be much higher than those of all other races/ethnicities.**
- **The trends in the rates of diagnoses among other races/ethnicities from 2006 through 2013 were; from 10.6 in 2006 to 4.1 in 2013 for Latinos; from 3.5 in 2006 to 2.4 in 2013 for Whites; and from 3.0 in 2006 to 1.8 in 2013 for Asians. The rates of diagnoses among all races/ethnicities were from 9.4 in 2006 to 4.9 in 2013.**
- **Data include males with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Data are provisional for the years 2012 through 2013 due to reporting delays.**
- **Latinos can be of any race.**



Diagnoses of HIV Infection Among Adults/Adolescents by Transmission Category¹, Los Angeles County, 2004 – 2013



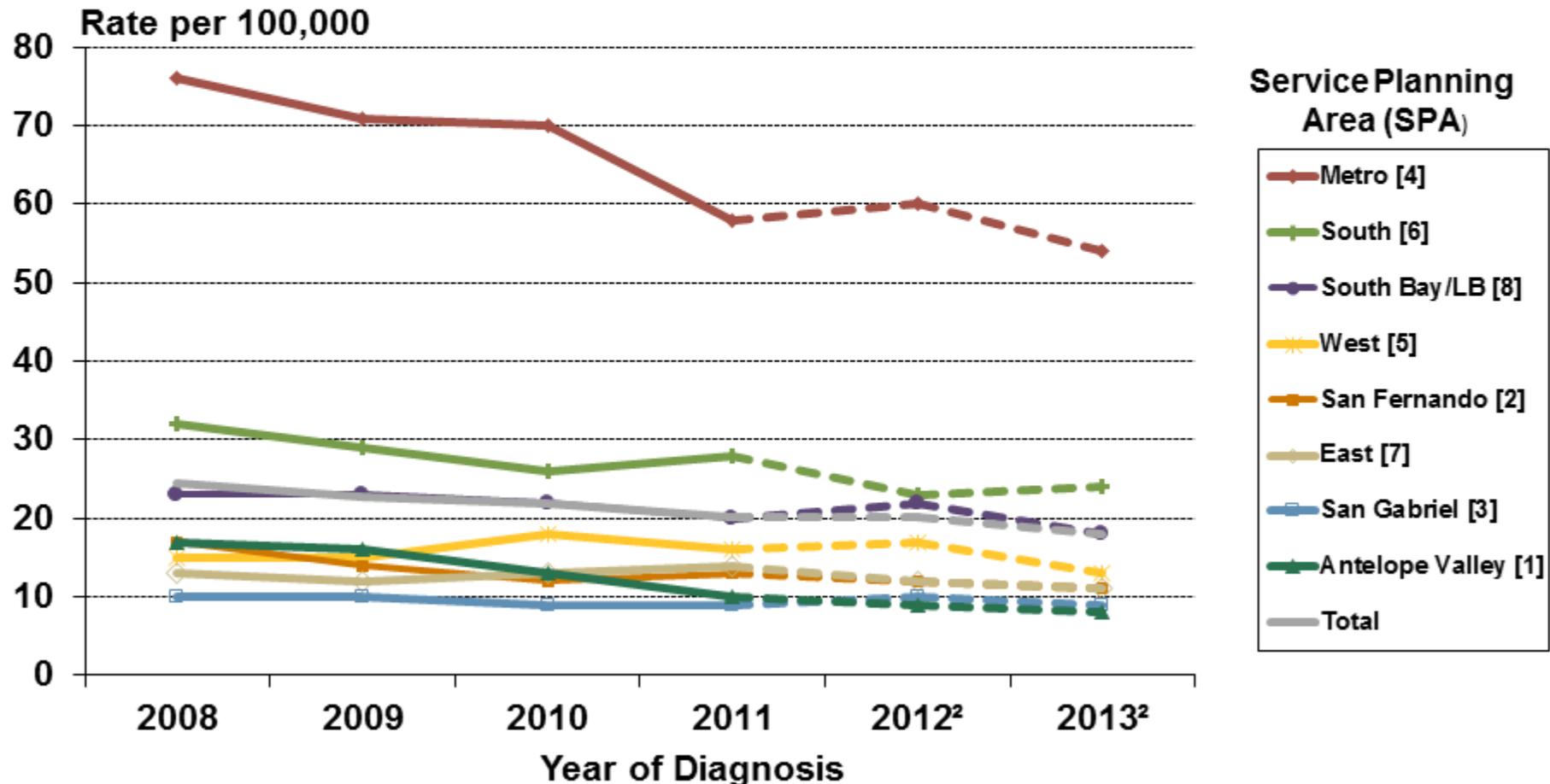
¹ Persons without an identified risk factor are assigned a risk factor using multiple imputation (MI) methods. Other risks include hemophilia, blood transfusion, perinatal exposure, and risk factors not reported or not identified.

² Data are provisional due to reporting delay.



- **This slide presents the distribution of diagnoses of HIV infection among adults and adolescents diagnosed from 2004 through 2013, by transmission category in Los Angeles County.**
- **The percentage of adults and adolescents with diagnosed HIV infection attributed to male-to-male sexual contact increased from 75% in 2004 to 83% in 2013. The percentages of diagnosed HIV infections attributed to injection drug use, male-to-male sexual contact *and* injection drug use, and heterosexual contact remained relatively stable (less than a 5% increase or decrease) from 2004 through 2013. A very small percentage of diagnosed infections each year were attributed to other transmission categories.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are redistributed using the CDC-recommended multiple imputation methods to adjust for persons with risk factor not reported or not identified.**
- **Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.**
- **Other transmission categories include hemophilia, blood transfusion, perinatal exposure, and risk factors not reported or not identified.**
- **Data are provisional for the years 2012 through 2013 due to reporting delays.**

Rates of HIV Diagnoses by Service Planning Area¹, Los Angeles County, 2008-2013



¹ Service Planning Areas are based on residence at the time of HIV or AIDS diagnosis.

² Data are provisional due to reporting delay.



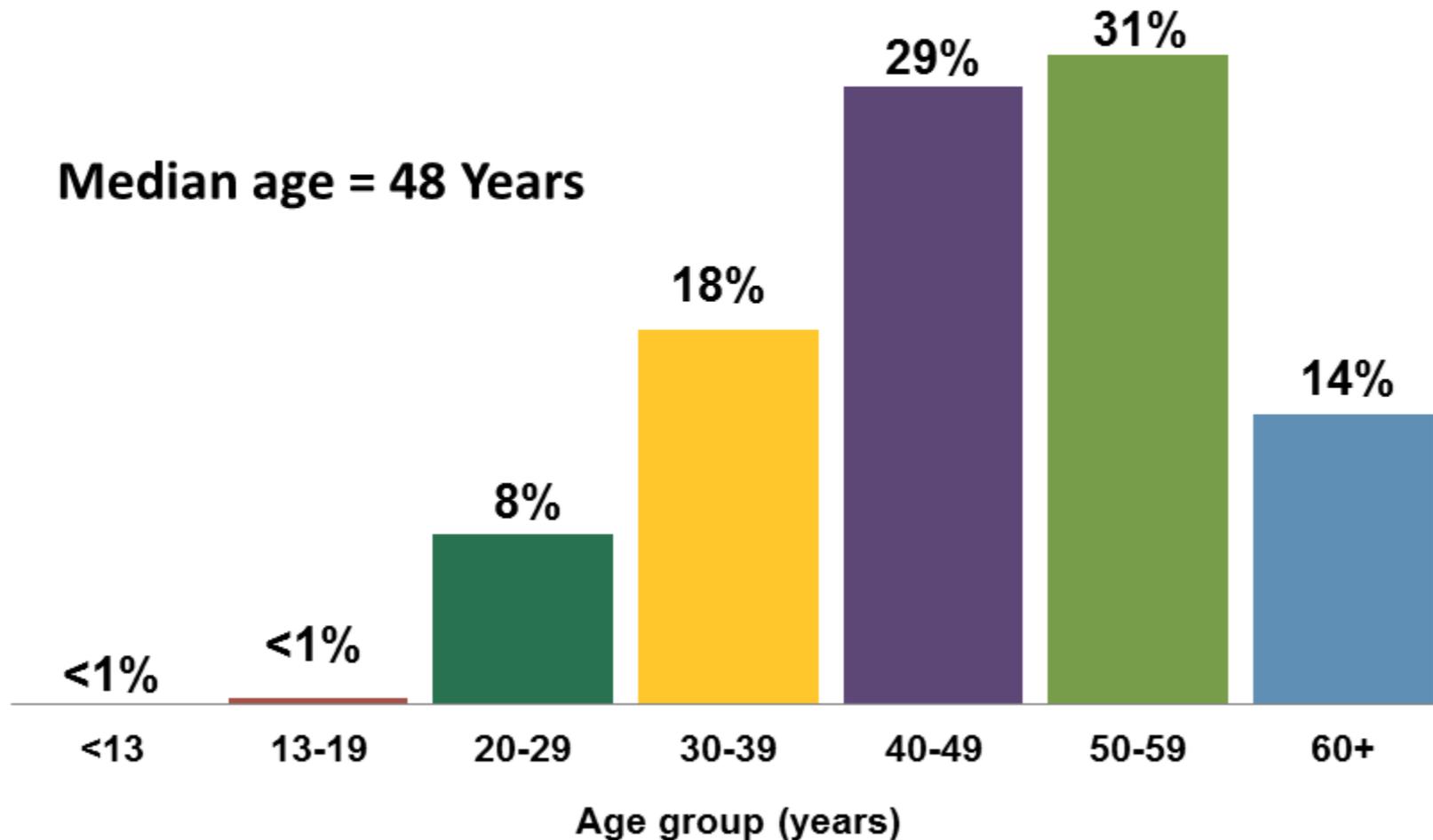
- **This slide presents the rates (per 100,000 population) of HIV diagnoses by Service Planning Area (SPA) in Los Angeles County from 2008 to 2013. Although the rate of HIV diagnoses in the Metro service planning area decreased overall from 76 in 2008 to 54 in 2013, these rates continue to be much higher than those of all other service planning areas.**
- **The trends in the rates of diagnoses among other service planning areas from 2008 through 2013 were; from 32 in 2008 to 24 in 2013 for South; from 23 in 2008 to 18 in 2013 for South Bay/Long Beach, from 15 in 2008 to 13 in 2013 for West; from 17 in 2008 to 11 in 2013 for San Fernando; from 13 in 2008 to 11 in 2013 for East; from 10 in 2008 to 9 in 2013 for San Gabriel; and from 17 in 2008 to 8 in 2013 for Antelope Valley. The rates of diagnoses among all service planning areas decreased from 24 in 2008 to 18 in 2013.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.**
- **Data are provisional for the years 2012 through 2013 due to reporting delays.**



Persons Living with HIV (PLWH)



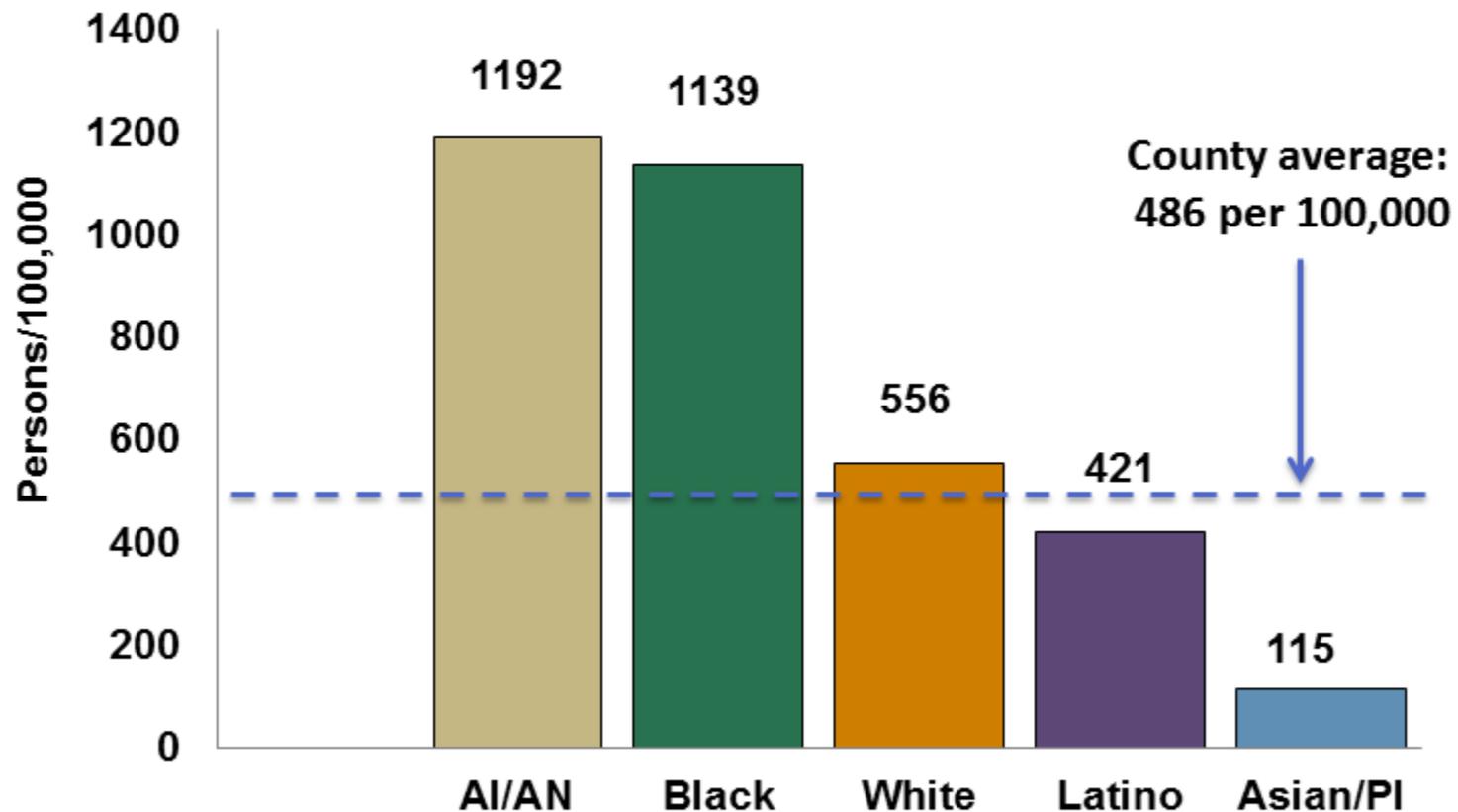
Current Age of Persons Living with HIV in Los Angeles County, Year-end 2014 (n=48,908)





- **This slide presents the current age of persons living with HIV infection in Los Angeles County (LAC) as of December 31, 2014.**
- **At year-end 2014, a total of 48,908 persons were living with HIV infection in Los Angeles County. The largest proportion of persons living with HIV was among the 50 to 59 year-olds (31%), followed by the 40 to 49 year-olds (29%), 30 to 39 year-olds (18%), the 60 and over year-olds (14%), and the 20 to 29 year-olds (8%). The less than 13 and the 13 to 19 age groups combined make up less than 1 percent of persons living with HIV infection.**
- **The fact that almost three-fourths of all persons living with HIV infection in LAC were aged 40 years and over has implications for HIV care and treatment planning-especially with regard to combining care for HIV with care for other conditions associated with aging.**

Persons Living with HIV per 100,000 Population¹ by Race/Ethnicity, Los Angeles County, Year-end 2014²



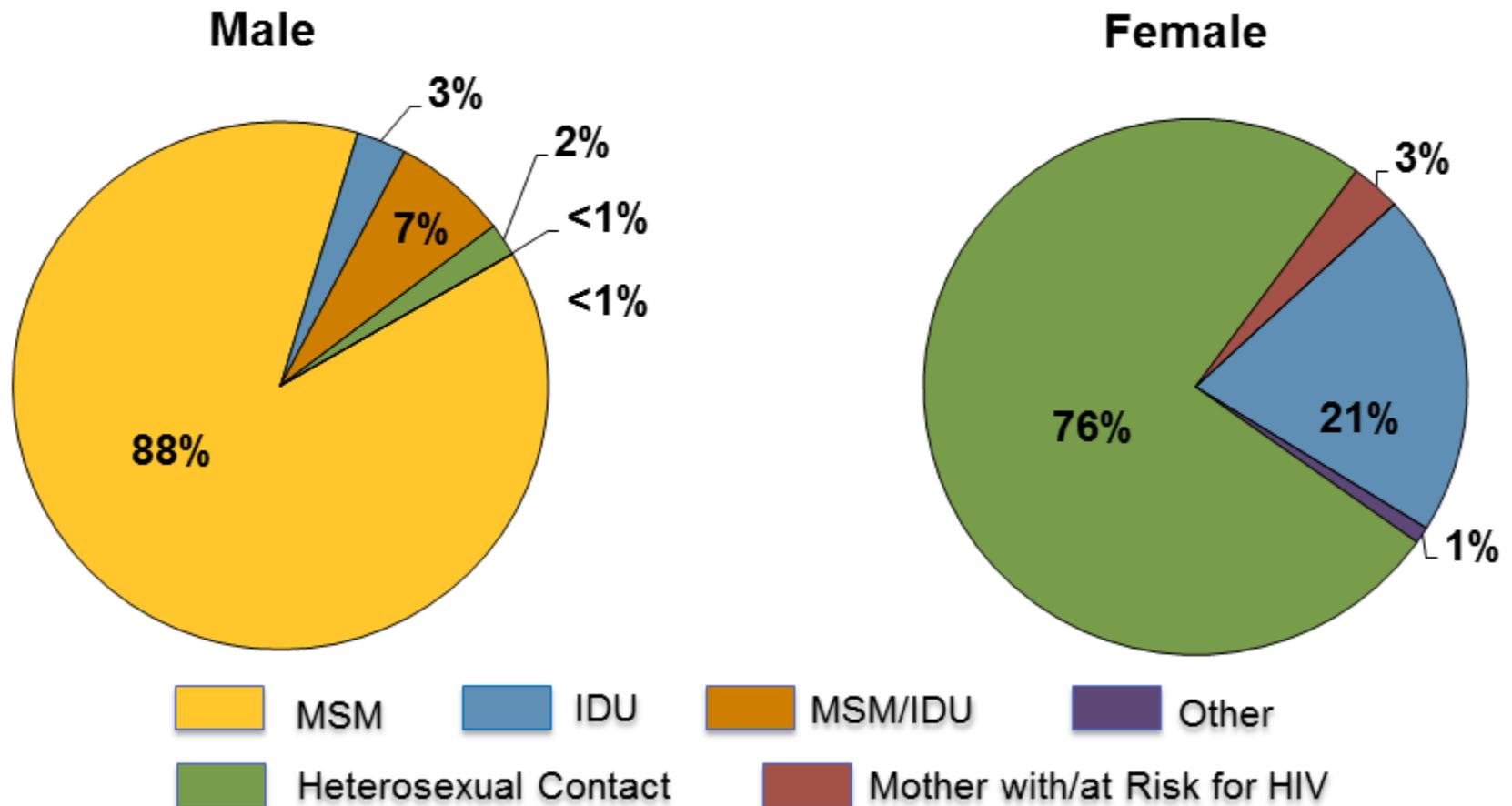
¹ Persons Living with HIV (PLWH) = Prevalence.

² Data are provisional due to reporting delay.



- **This slide shows the number of persons living with diagnosed HIV infection at the end of 2014 by race/ethnicity in Los Angeles County, expressed as a “rate” per 100,000 population.**
- **At year-end 2014, 48,908 persons were living with diagnosed HIV infection in Los Angeles County (LAC) with an average prevalence rate of 486 per 100,000 population.**
- **Remember, a rate measures the impact of a disease in a given area because it takes into account the size of each population. Therefore, although far more Whites and Hispanics/Latinos are living with HIV infection in Los Angeles County, American Indians/Alaskan Natives, while comprising a very small percentage of the population, have been most impacted with the highest rate of persons living with HIV infection at 1,192 per 100,000 population. Blacks/African Americans who represent less than 10 percent of the general population in this county account for the second highest prevalence rate at 1,139 per 100,000 population, nearly twice the rate of Whites and almost three times that of Hispanics/Latinos.**
- **Data include persons living with diagnosed HIV infection regardless of stage of disease at diagnosis.**
- **Hispanics/Latinos can be of any race.**

Persons Living with HIV by Transmission Risk Category¹ Los Angeles County, Year-end 2014²



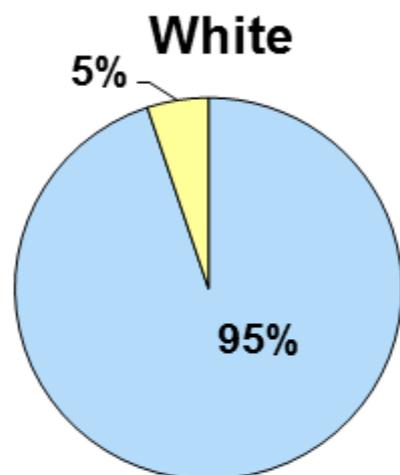
¹ Persons without an identified risk factor were assigned a risk factor using multiple imputation (MI) methods. Other risks include hemophilia, coagulation disorder, blood transfusion, perinatal exposure and confirmed other risk.

² Data are provisional due to reporting delay.

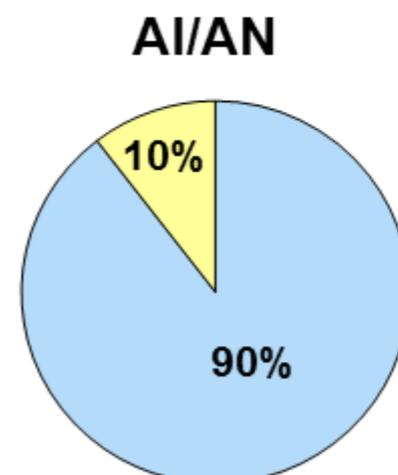
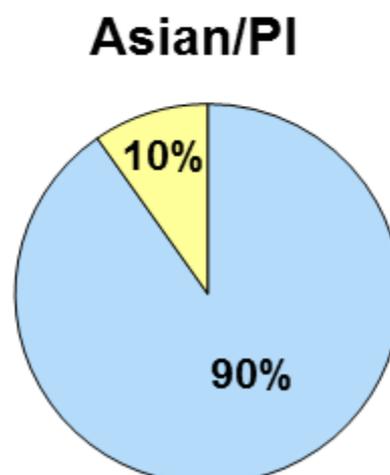
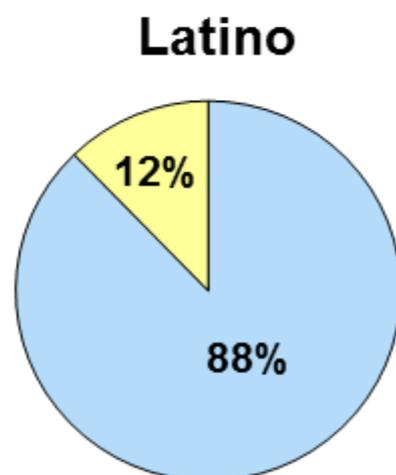
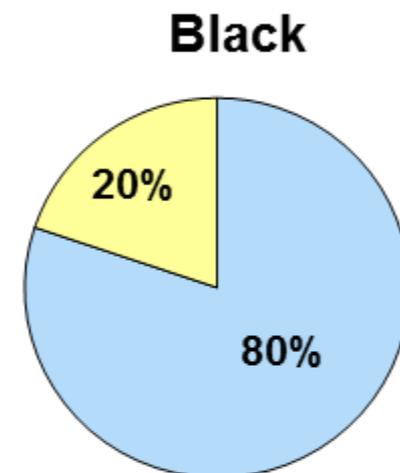


- **This slide shows the distribution of transmission categories among males and females living with diagnosed HIV infection in Los Angeles County at year-end 2014.**
- **All displayed data are redistributed using the CDC-recommended multiple imputation methods to adjust for persons with risk factors not reported or not identified.**
- **Among males living with diagnosed HIV infection at the end of 2014, 88% of infections were attributed to male-to-male sexual contact, 3% of infections were attributed to injection drug use, 7% to male-to-male sexual contact *and* injection drug use, and 2% to heterosexual contact. Approximately 1% of infections were attributed to perinatal exposure and other transmission categories.**
- **Among females living with diagnosed HIV infection at the end of 2014, 76 percent were attributed to heterosexual contact, 21% were attributed to injection drug use, 3 percent were attributed to perinatal transmission—that is, from an HIV-infected mother, and 1 percent were attributed to other transmission categories.**
- **Other transmission categories include hemophilia, blood transfusion, and risk factor not reported or not identified.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.**
- **Data are provisional due to reporting delays.**

Proportion of Persons Living with HIV by Race/Ethnicity and Sex at Birth, Los Angeles County, 2014



Male
Female

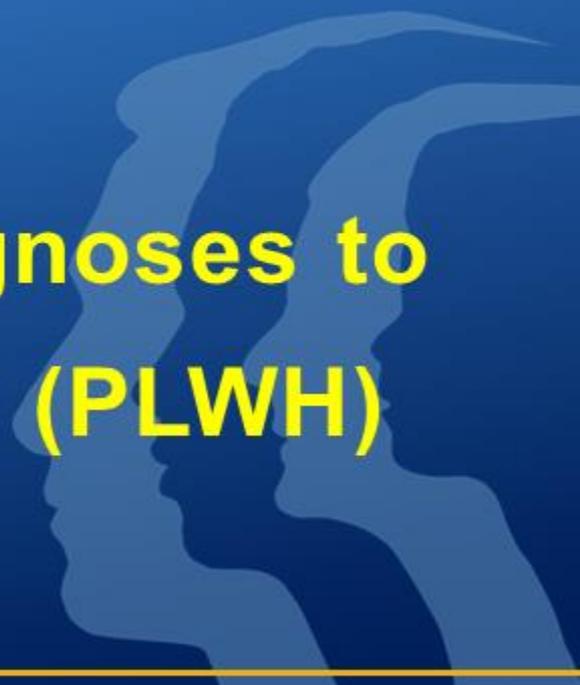




- **This slide presents the proportion of males and females living with diagnosed HIV infection by race/ethnicity in LA County as of 2014.**
- **Whites have the greatest proportion of males living with HIV infection (95%), and the smallest proportion of females affected (5%). Blacks have the greatest proportion of females affected (20%), and the smallest proportion of males affected (80%). Latinos, Asians/Pacific Islanders and American Indians/Alaska Natives have similar proportions of males and females affected. Ninety percent of Asians/Pacific Islanders living with HIV are men, and 10% are women. Ninety percent of American Indians/Alaska Natives living with HIV are men, and 10% are women. Eighty-eight percent of Hispanics/Latinos living with HIV are men, and 12% are women.**

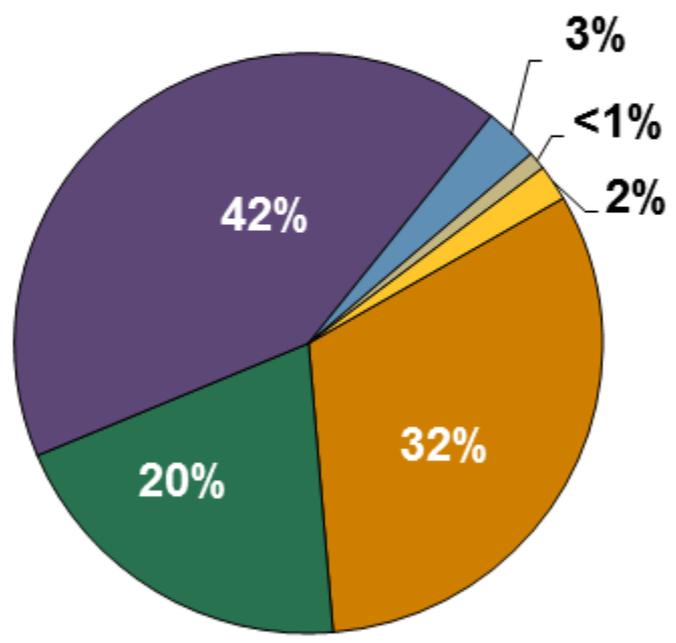


Comparing New HIV Diagnoses to Persons Living with HIV (PLWH)

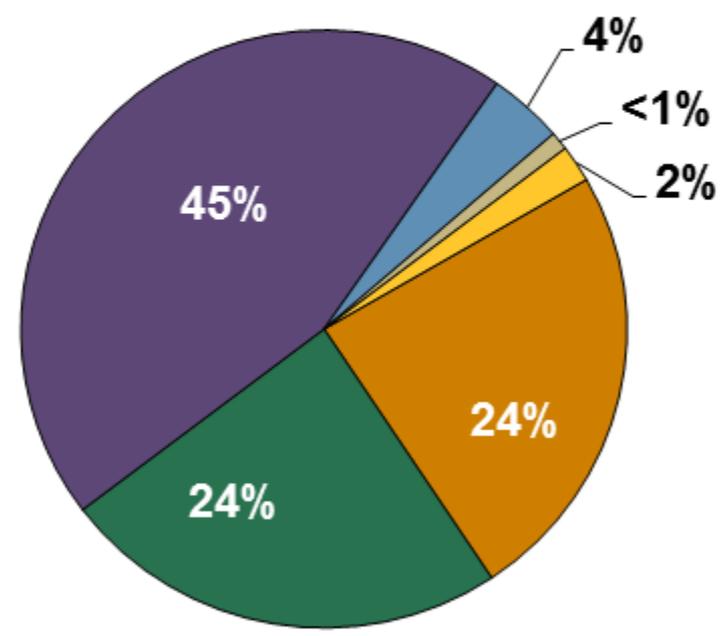


Comparison of Persons Living with HIV at Year-end 2014 and HIV Diagnoses in 2013, by Race/Ethnicity, Los Angeles County

Living with HIV in 2014



Diagnosed in 2013

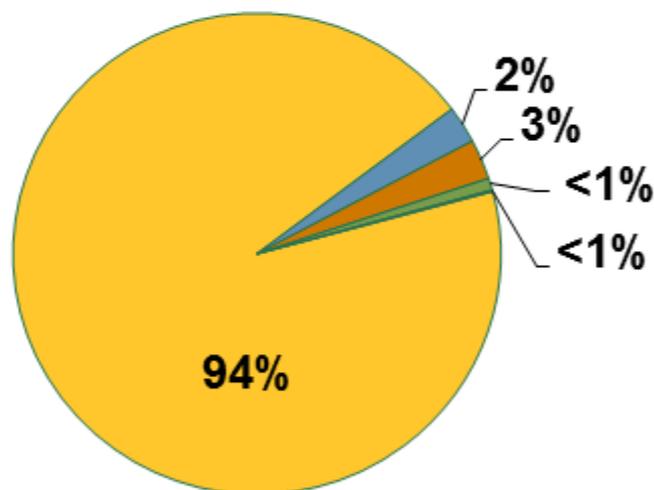




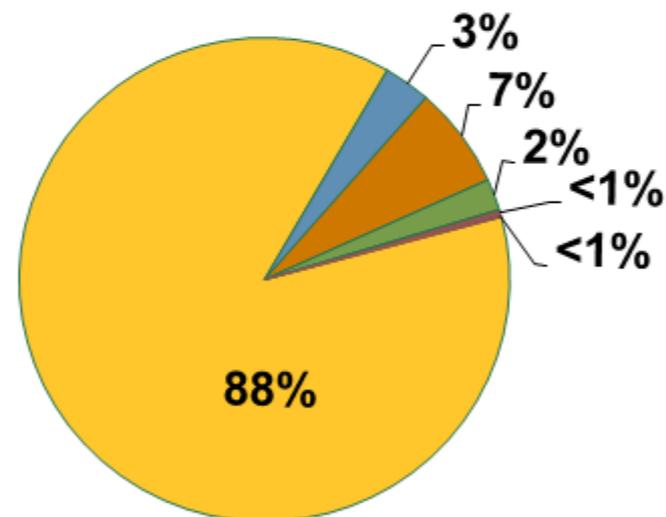
- **This slide presents the percentage distribution of persons living with diagnosed HIV infection at year-end 2014 and persons diagnosed with HIV infection in 2013 by race/ethnicity in Los Angeles County.**
- **Among persons living with HIV infection at year-end 2014, 42% were Latino, 32% White, 20% Black, 3% Asian/Pacific Islander (Asian/PI), less than 1% were American Indian/Alaska Native (AI/AN) and 2% were of Other races (multi-race and unknown races).**
- **Persons newly diagnosed with HIV infection in 2013 follow a similar trend: Latinos comprised the largest proportion of cases and American Indian/Alaska Natives comprised the smallest proportion of cases. In 2013, Latinos accounted for 45% of the diagnosed cases, followed by Whites with 24%, Blacks with 24%, Asians/Pacific Islanders with 4% and American Indian/Alaska Natives with <1%. Two percent were of Other race/ethnicity.**
- **Overall, persons of color represented a larger proportion among persons newly diagnosed with HIV infection when compared to the proportion among persons living with HIV infection.**
- **Data are provisional due to reporting delays.**

Transmission Risk Category¹ among Males Living with HIV infection at Year-end 2014 and HIV diagnoses in 2013, Los Angeles County

New HIV Diagnoses Among Male, 2013² (n=1,609)



Male Living with HIV Infection, 2014² (n=43,382)



¹Persons without an identified risk factor are assigned a risk factor using CDC recommended multiple imputation (MI) methods.

²Data are provisional due to reporting delay.

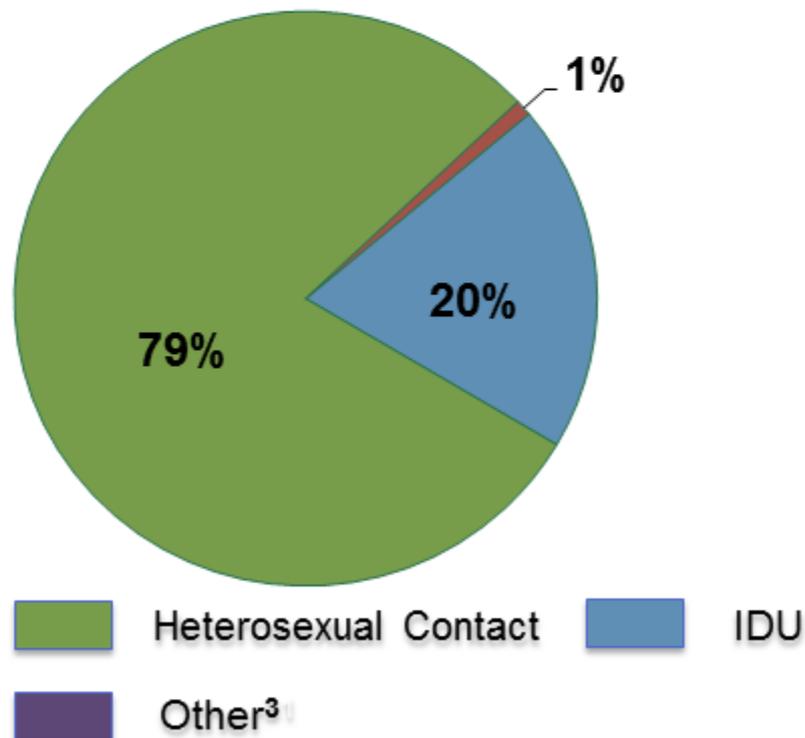
³Other risks include hemophilia, coagulation disorder, blood transfusion, and risk factor not reported/identified.



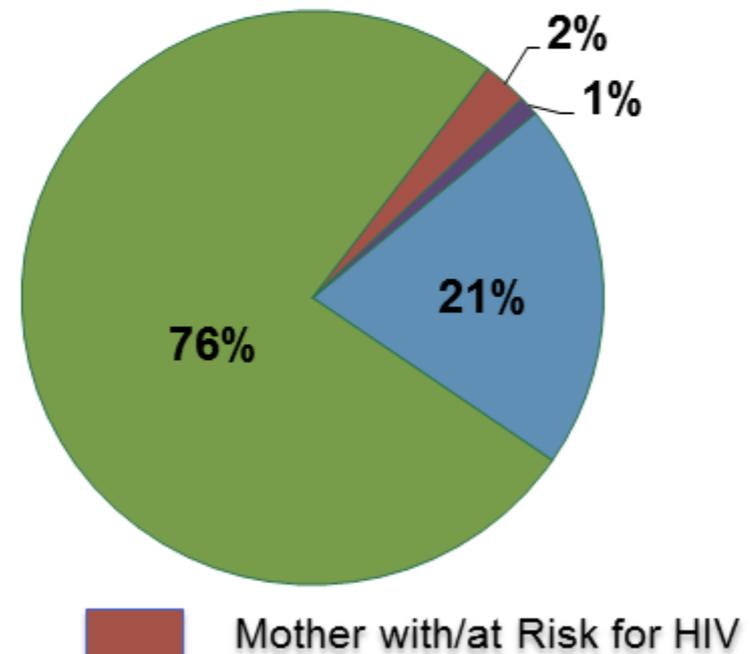
- **This slide presents the distribution of transmission categories among males living with HIV infection at year-end 2014 and persons diagnosed with HIV infection in 2013, in Los Angeles County.**
- **All displayed data are redistributed using the CDC-recommended multiple imputation methods to adjust for persons with unreported or unidentified risk factors.**
- **In 2013, among males diagnosed with HIV infection in Los Angeles County, 94% of infections were attributed to male-to-male sexual contact, 2% of infections were attributed to injection drug use, 3% to male-to-male sexual contact *and* injection drug use, and 1% to heterosexual contact. Less than 1% of infections were attributed to perinatal exposure, and other transmission categories.**
- **Among males living with diagnosed HIV infection at the end of 2014, 88% of infections were attributed to male-to-male sexual contact, 3% to injection drug use, 7% to male-to-male sexual contact *and* injection drug use, 2% to heterosexual contact, and less than 1% to perinatal exposure and other transmission categories.**
- **Other transmission categories include hemophilia, blood transfusion, and risk factor not reported or not identified.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.**
- **Data are provisional due to reporting delays.**

Transmission Risk Category¹ among Females Living with HIV infection at Year-end 2014 and HIV diagnoses in 2013, Los Angeles County

New HIV Diagnoses Among Female, 2013² (n=211)



Female Living with HIV Infection, 2014² (n=5,526)



¹ Persons without an identified risk factor are assigned a risk factor using CDC recommended multiple imputation (MI) methods.

² Data are provisional due to reporting delay.

³ Other risks include hemophilia, coagulation disorder, blood transfusion, and risk factor not reported/identified.



- **This slide presents the distribution of transmission categories among females living with HIV infection at year-end 2014 and persons diagnosed with HIV infection in 2013, in Los Angeles County.**
- **All displayed data are redistributed using the CDC-recommended multiple imputation methods to adjust for persons with unreported or unidentified risk factors.**
- **In 2013, among females diagnosed with HIV infection in Los Angeles County, 79% of infections were attributed to heterosexual contact, 20% of infections were attributed to injection drug use and 1% of infections were attributed to perinatal exposure.**
- **Among females living with diagnosed HIV infection at the end of 2014, 76% of infections were attributed to heterosexual contact, 21% to injection drug use, 2% to perinatal exposure, and less than 1% to other transmission categories.**
- **Other transmission categories include hemophilia, blood transfusion, and risk factor not reported or not identified.**
- **Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.**
- **Data are provisional due to reporting delays.**



HIV Care Continuum in Los Angeles County





Methods

- **Data Source:** HIV Surveillance data (Enhanced HIV/AIDS Reporting System-eHARS)
- **Linkage to care defined as:** ≥ 1 CD4/VL/genotype test within 3 months of HIV diagnosis in 2013
- **Engaged in care defined as:** ≥ 1 CD4/VL/genotype test in 2013
- **Retained in care defined as:** ≥ 2 CD4/VL/genotype tests at least 3 months apart in 2013
- **Viral suppression:** Last VL in 2013 ≤ 200 copies/ml



Linkage to Care

➤ **Numerator:**

- Persons ≥ 18 diagnosed with HIV in 2013 with at least 1 CD4/VL/genotype test within 3 months of HIV diagnosis

➤ **Denominator:**

- Persons ≥ 18 years of age diagnosed with HIV in 2013 and living at the end of 2014



Engagement, Retention and VL Suppression

➤ Numerators:

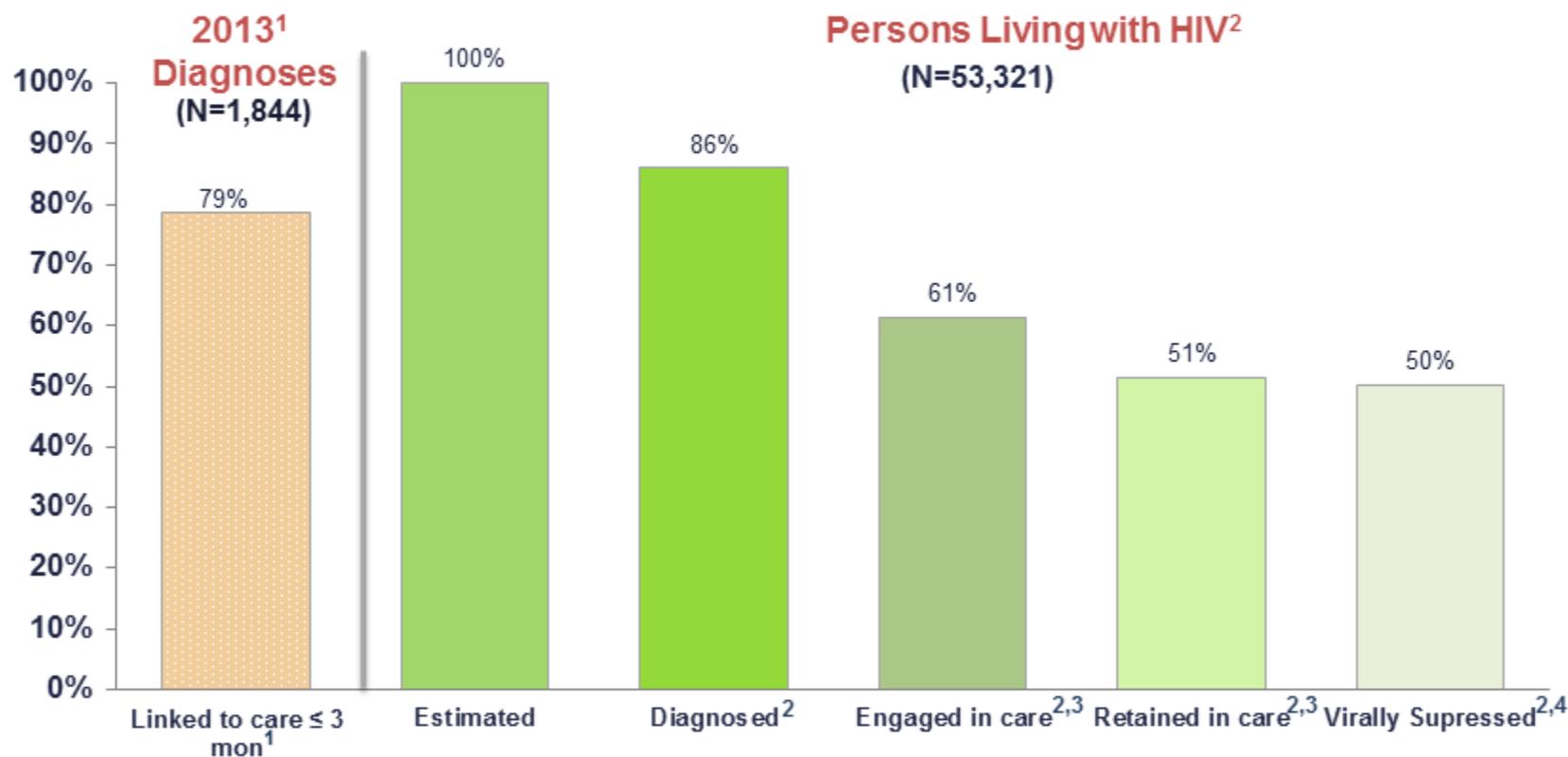
- **Engaged in care:** PLWH with ≥ 1 CD4/VL/genotype test in 2013
- **Retained in Care:** PLWH with ≥ 2 CD4/VL/genotype tests at least 3 months apart in 2013
- **Viral suppression:** PLWH among whom the last VL in 2013 was ≤ 200 copies/ml

➤ Denominator:

- Persons ≥ 18 with diagnosed or undiagnosed HIV in LAC through 12/31/2012 and living with HIV at the end of 2013
- Derived including an additional 14% that CDC estimates are unaware of their HIV infection
- Includes 5,667 persons who moved to LAC and excludes 4,511 who moved from LAC



2013 LAC Cascade for Persons Diagnosed and Living with HIV and Persons Unaware of HIV Infection



¹ Data for 2013 are provisional due to reporting delay; linked to care within 3 months of HIV diagnosis; denominator includes persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014

² Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence plus an additional 14% that CDC estimates are unaware of HIV status; excludes 4,511 persons who no longer live in LAC and includes 5,677 persons who moved to LAC after their initial HIV diagnosis

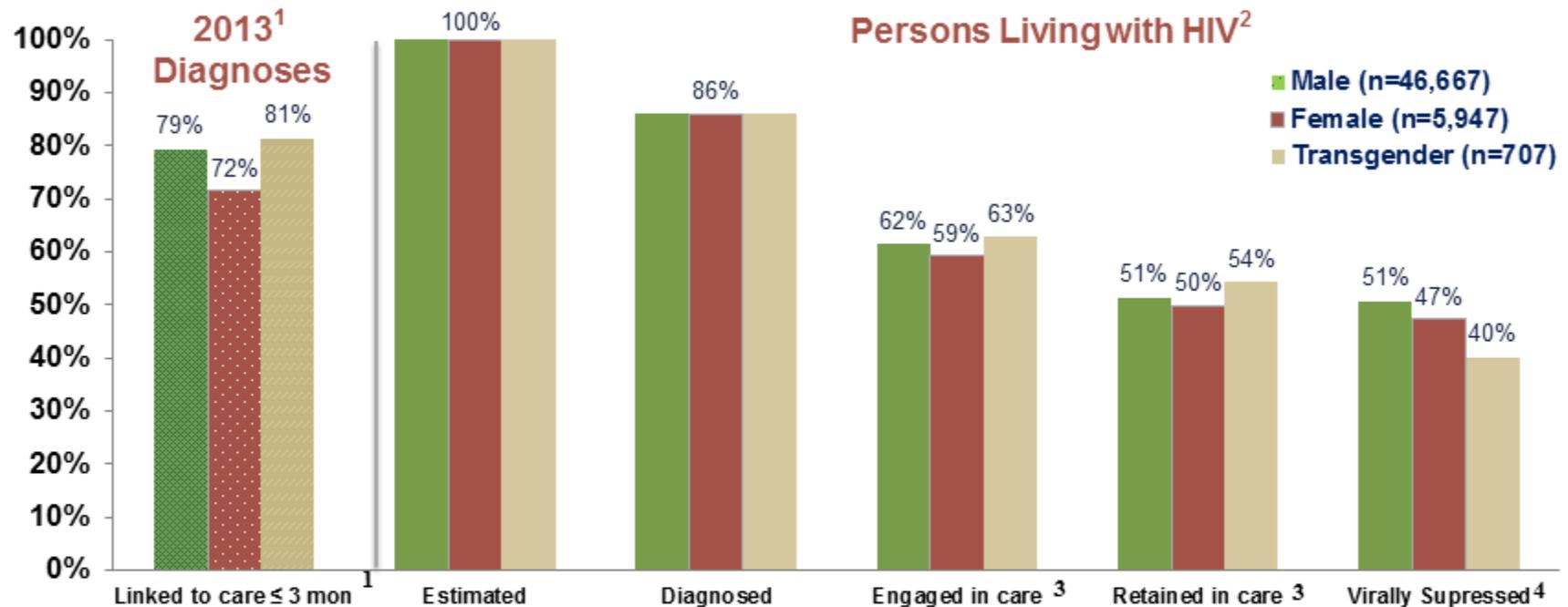
³ Engaged in care: ≥1 CD4/VL/Geno tests in 2013; retained in care: ≥2 CD4/VL/Geno tests at least 3 months apart in 2013

⁴ Viral suppression defined as ≤ 200 copies/ml



- **This slide presents data on five HIV care continuum: HIV diagnosis, linked to care, engaged in care, retained in care and viral suppression.**
- **Among persons ≥ 18 years of age diagnosed with HIV in 2013 and living at the end of 2014 in Los Angeles County, the proportion of linked to care was 79%.**
- **Of estimated persons ≥ 18 with diagnosed or undiagnosed HIV through 12/31/2012 and living with HIV at the end of 2013 in Los Angeles County, 86% had been diagnosed. Subsequently, 61% were engaged in care and 51% were retained in care, and 50% achieved viral suppression.**

HIV Care Continuum by Gender, Los Angeles County, 2013

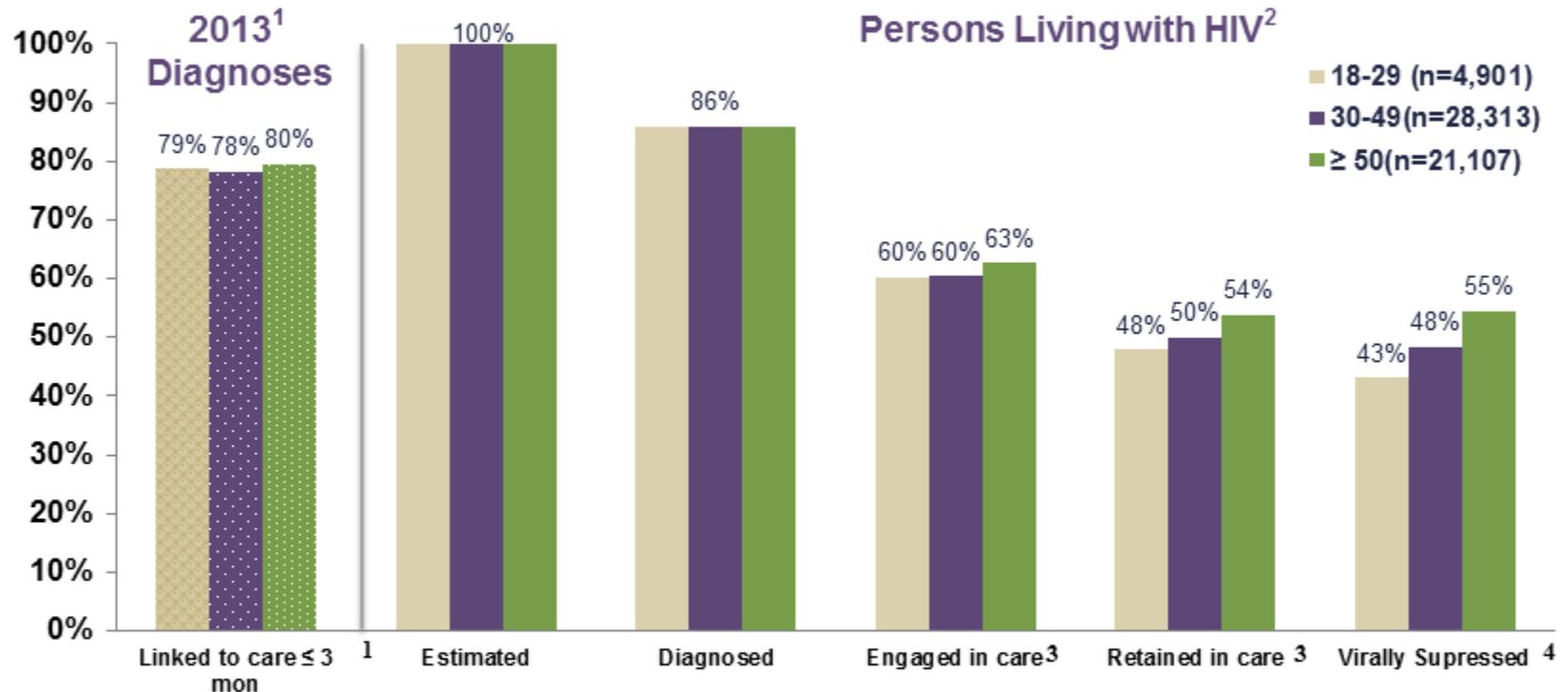


- ¹ Data for 2013 are provisional; denominator includes 1,617 men, 200 women, and 27 transgender persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.
- ² Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC are not included and 5,667 persons who moved to LAC were included.
- ³ Engaged in care : ≥ 1 CD4/VL/Geno test in 2013; Retained in care: ≥ 2 CD4/VL/Geno test at least 3 months apart.
- ⁴ Viral suppression defined as VL \leq 200 copies/ml.



- **This slide presents data on five HIV care continuum: HIV diagnosis, linked to care, engaged in care, retained in care and viral suppression.**
- **Among persons ≥ 18 years of age diagnosed with HIV in 2013 and living at the end of 2014 in Los Angeles County, the proportion of linked to care for transgender was 81%, followed by males(79%) and females(72%).**
- **Of estimated persons ≥ 18 with diagnosed or undiagnosed HIV through 12/31/2012 and living with HIV at the end of 2013 in Los Angeles County, 86% had been diagnosed among all gender. The largest proportion of persons engaged in care was among transgender(63%), followed by male(63%) and female(59%). Similarly, the largest proportion of persons retained in care was among transgender(54%), followed by male(51%) and female(50%). Males had a higher proportion of achieved viral suppression (51%), than female(47%) and transgender(40%).**

HIV Care Continuum by Age, Los Angeles County, 2013

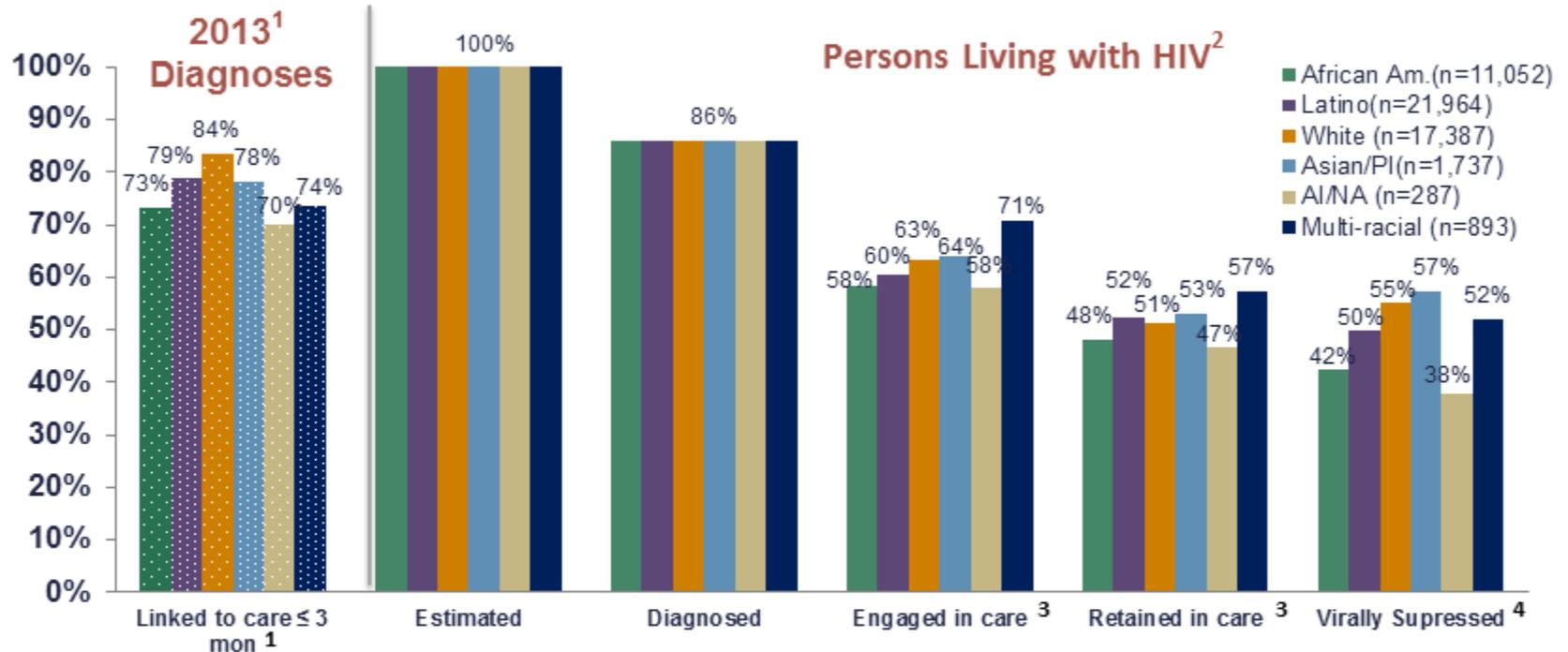


- ¹ Data for 2013 are provisional; denominator includes 1,617 men, 200 women, and 27 transgender persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.
- ² Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC are not included and 5,667 persons who moved to LAC were included.
- ³ Engaged in care : ≥1 CD4/VL/Geno test in 2013; Retained in care: ≥2 CD4/VL/Geno test at least 3 months apart.
- ⁴ Viral suppression defined as VL ≤ 200 copies/ml.



- **This slide presents data on five HIV care continuum: HIV diagnosis, linked to care, engaged in care, retained in care and viral suppression.**
- **Among persons ≥ 18 years of age diagnosed with HIV in 2013 and living at the end of 2014 in Los Angeles County, the proportion of linked to care for the ≥ 50 age group was 80%, followed by the 18-29 age group(79%) and the 30-49 age group(78%).**
- **Of estimated persons ≥ 18 with diagnosed or undiagnosed HIV through 12/31/2012 and living with HIV at the end of 2013 in Los Angeles County, 86% had been diagnosed among all ages. The largest proportion of persons engaged in care was among the ≥ 50 age group(63%), followed by the 18-29 and 30-49 age groups(both 60%). Similarly, the largest proportion of persons retained in care was among the ≥ 50 age group(54%), followed by the 30-49 age group(50%) and the 18-29 age group(48%). The ≥ 50 age group also had a higher proportion of achieved viral suppression(55%) than the 30-49 age group(48%) and the 18-29 age group(43%).**

HIV Care Continuum by Race/Ethnicity, Los Angeles County, 2013



¹ Data for 2013 are provisional. Denominators include 324 African Americans, 658 Latinos, 378 whites, 61 Asians/Pis, 7 American Indian/Alaskan Native, and 25 multi-racial persons who were reported with a new HIV diagnosis in 2013 and were living in LAC as of 12/31/2014.

² Includes persons diagnosed through 2012 and living in LAC as of 12/31/2013 based on most recent residence and an additional 14% that CDC estimates are unaware of HIV status; 4,511 persons who no longer live in LAC were not included and 5,667 persons who moved to LAC were included.

³ Engaged in care: ≥ 1 CD4/VL/Geno test in 2013; Retained in Care: ≥ 2 CD4/VL/Geno tests at least 3 months apart.

⁴ Viral suppression defined as VL ≤ 200 copies/ml.



- **This slide presents data on five HIV care continuum: HIV diagnosis, linked to care, engaged in care, retained in care and viral suppression.**
- **Among persons ≥ 18 years of age diagnosed with HIV in 2013 and living at the end of 2014 in Los Angeles County, the proportion of linked to care for Whites was 84%, followed by Latinos(79%), Asians/Pacific Islanders(78%), Multi-racial persons(74%), African-Americans(73%) and American Indians/Alaskan Natives(70%).**
- **Of estimated persons ≥ 18 with diagnosed or undiagnosed HIV through 12/31/2012 and living with HIV at the end of 2013 in Los Angeles County, 86% had been diagnosed among all ages. The largest proportion of persons engaged in care was among Multi-racial persons(71%), followed by Asians/Pacific Islanders(64%), Whites(63%), Latinos(60%), and African-Americans and American Indians/Alaskan Natives(both 58%). Similarly, the largest proportion of persons retained in care was among Multi-racial persons(57%), followed by Asians/Pacific Islanders(53%), Latinos(52%), Whites(51%), African-Americans(48%) and American Indians/Alaskan Natives(47%). Asians/Pacific Islanders had a higher proportion of achieved viral suppression(57%) then Whites(55%), Multi-racial persons(52%), Latinos(50%), Asians/Pacific Islanders(42%) and American Indians/Alaskan Natives(38%).**



Significant Differences in Linkage and Engagement in Care, LAC 2013

- **Linkage to HIV Care¹**
 - Lower among African Americans compared to whites
- **Engagement in Care²**
 - Lower in African Americans compared to whites
 - Lower in 18-29 year olds and 30-49 year olds compared to 50+
 - Higher among Latinos, Asians/Pacific Islanders and mixed race persons compared to whites

¹ Based on adjusted prevalence ratios and 95% confidence interval estimates from a Poisson generalized linear regression model adjusted for age, race, gender, HIV transmission category, county of birth, type of diagnostic facility (public, federal or private), lifetime homelessness and number of years living with HIV

² Based on adjusted prevalence ratios and 95% confidence interval estimates from a log binomial generalized linear regression model adjusted for age, race, gender, HIV transmission category, county of birth, type of diagnostic facility (public, federal or private) and number of years living with HIV



Significant Differences in Retention in Care, LAC 2013

- **Retention in Care¹**
 - Lower in 18-29 year olds and 30-49 year olds compared to persons 50+
 - Higher in females compared to males
 - Higher in Latinos, Asian/Pacific Islander and persons of mixed race/ethnicity compared to whites

¹ Based on adjusted prevalence ratios and 95% confidence interval estimates from a log binomial generalized linear regression model adjusted for age, race, gender, HIV transmission category, county of birth, type of diagnostic facility (public, federal or private), lifetime homelessness and number of years living with HIV



Significant Differences in Viral Load Suppression in LAC in 2013¹

- **Suppressed Viral Load**¹
 - Lower among transgender persons compared to males
 - Lower among African Americans and American Indians/Alaska Natives compared to whites
 - Lower among persons ages 18-29 and 30-49 compared to 50+
 - Higher among Asians/Pacific Islanders compared to whites

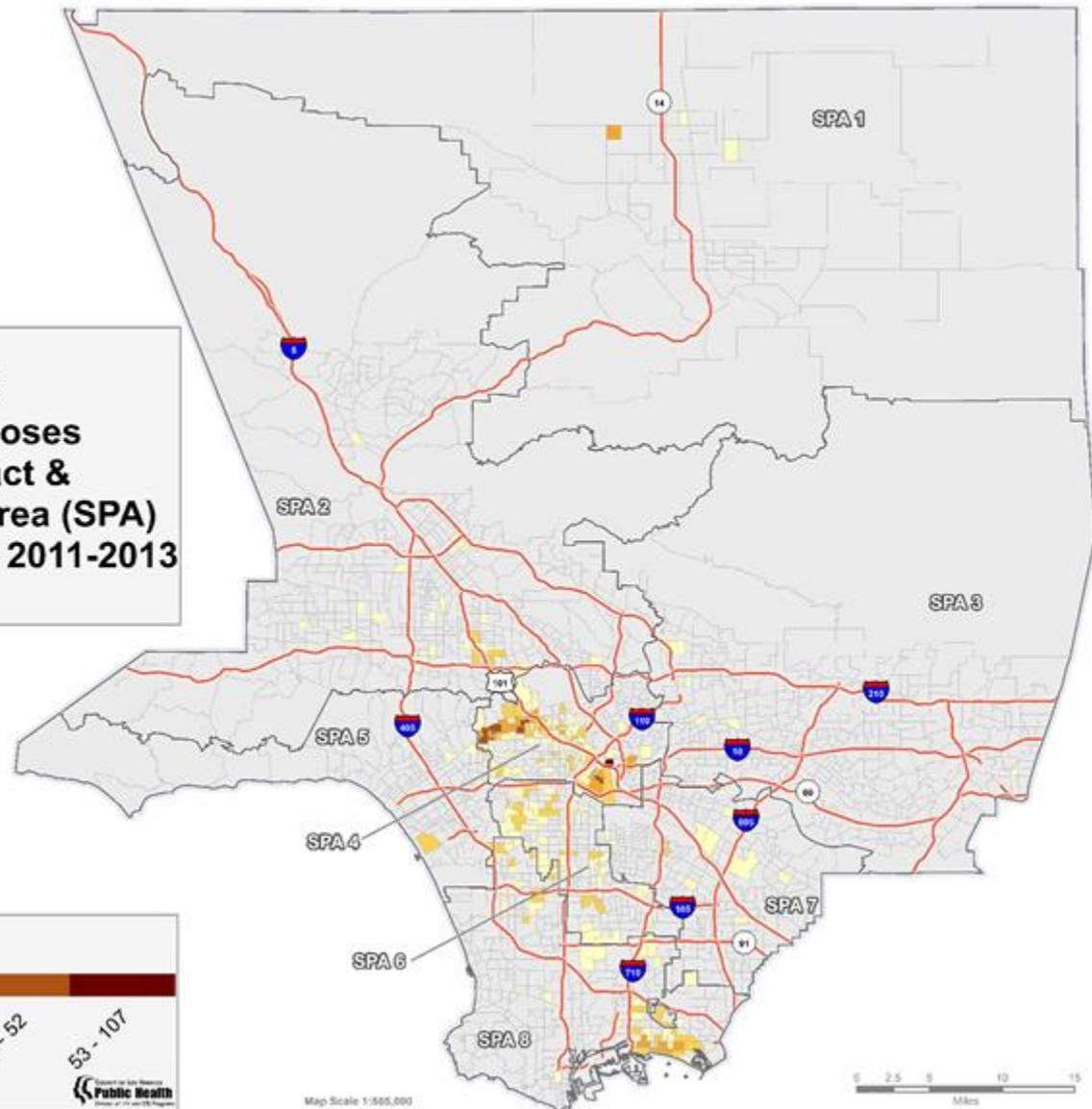
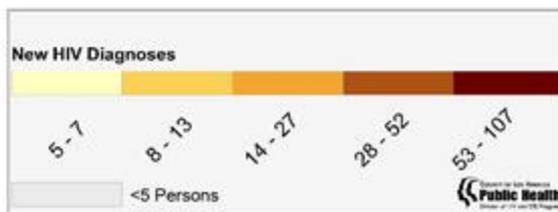
¹ Based on adjusted prevalence ratios and 95% confidence interval estimates from a log binomial generalized linear regression model adjusted for age, race, gender, HIV transmission category, county of birth, type of diagnostic facility (public, federal or private), lifetime homelessness and number of years living with HIV



Geographic Distribution of HIV in Los Angeles County

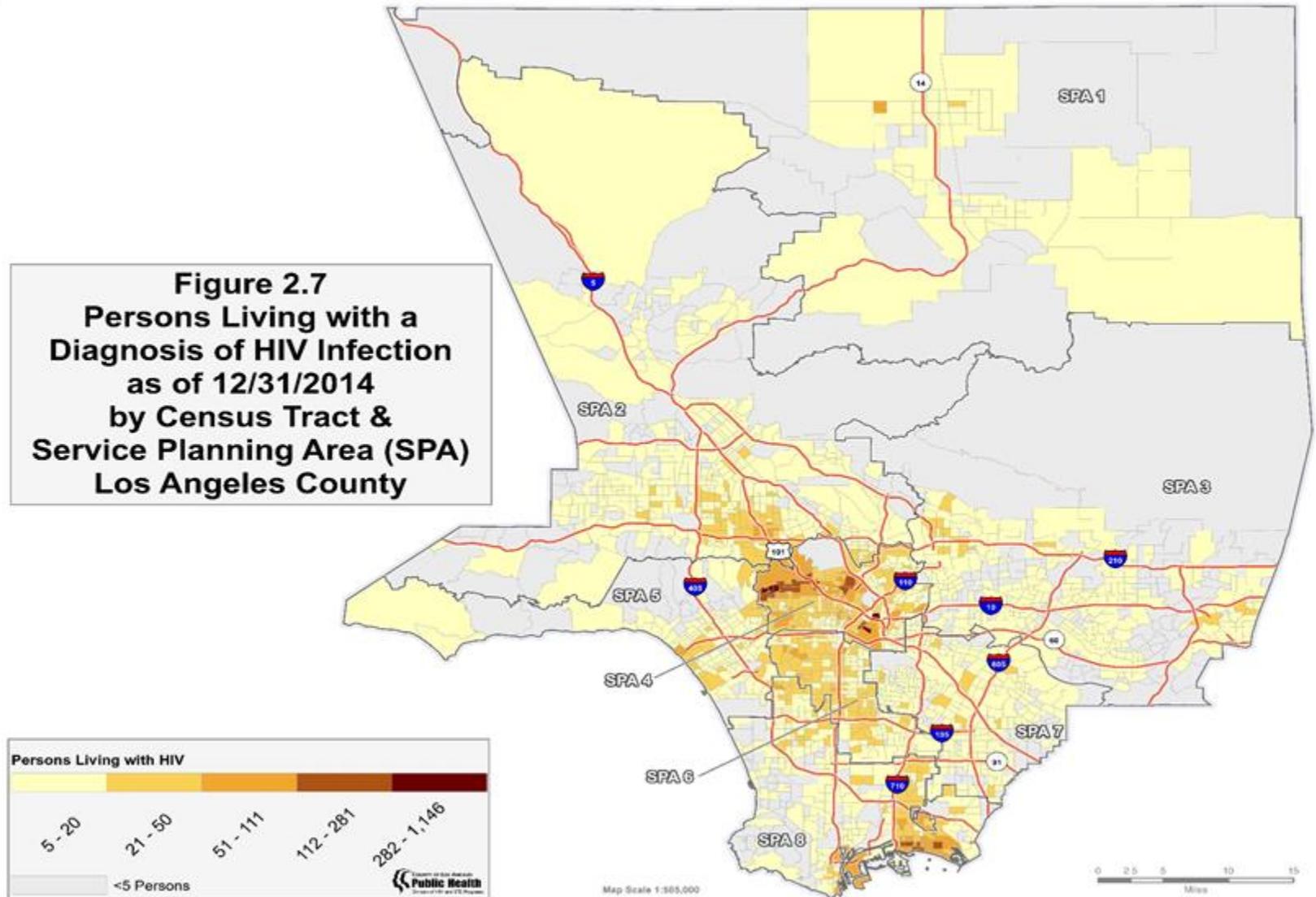


Figure 2.6
New HIV Diagnoses
by Census Tract &
Service Planning Area (SPA)
Los Angeles County 2011-2013



¹ Map does not include 3.4% of persons with insufficient location information. Census Tract Data, 2010 U.S. Census Tract U.S. Dept. of Commerce. 2013 data are provisional due to reporting delay.

Figure 2.7
Persons Living with a
Diagnosis of HIV Infection
as of 12/31/2014
by Census Tract &
Service Planning Area (SPA)
Los Angeles County



¹ Census tract information is based on person's most recent address as of 12/31/2014. In the case of an unavailable street address, the most recent zip code is used. Map does not include 144 (0.3%) of persons with insufficient location information. Census Tract Data, 2010 U.S. Census Tract U.S. Dept. of Commerce.



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Or contact DHSP, LAC DPH DHSP HIV Surveillance at
Tel. (213) 351-8196

