

HIV Epidemiology in New York State and New York City

Lou Smith, MD, MPH

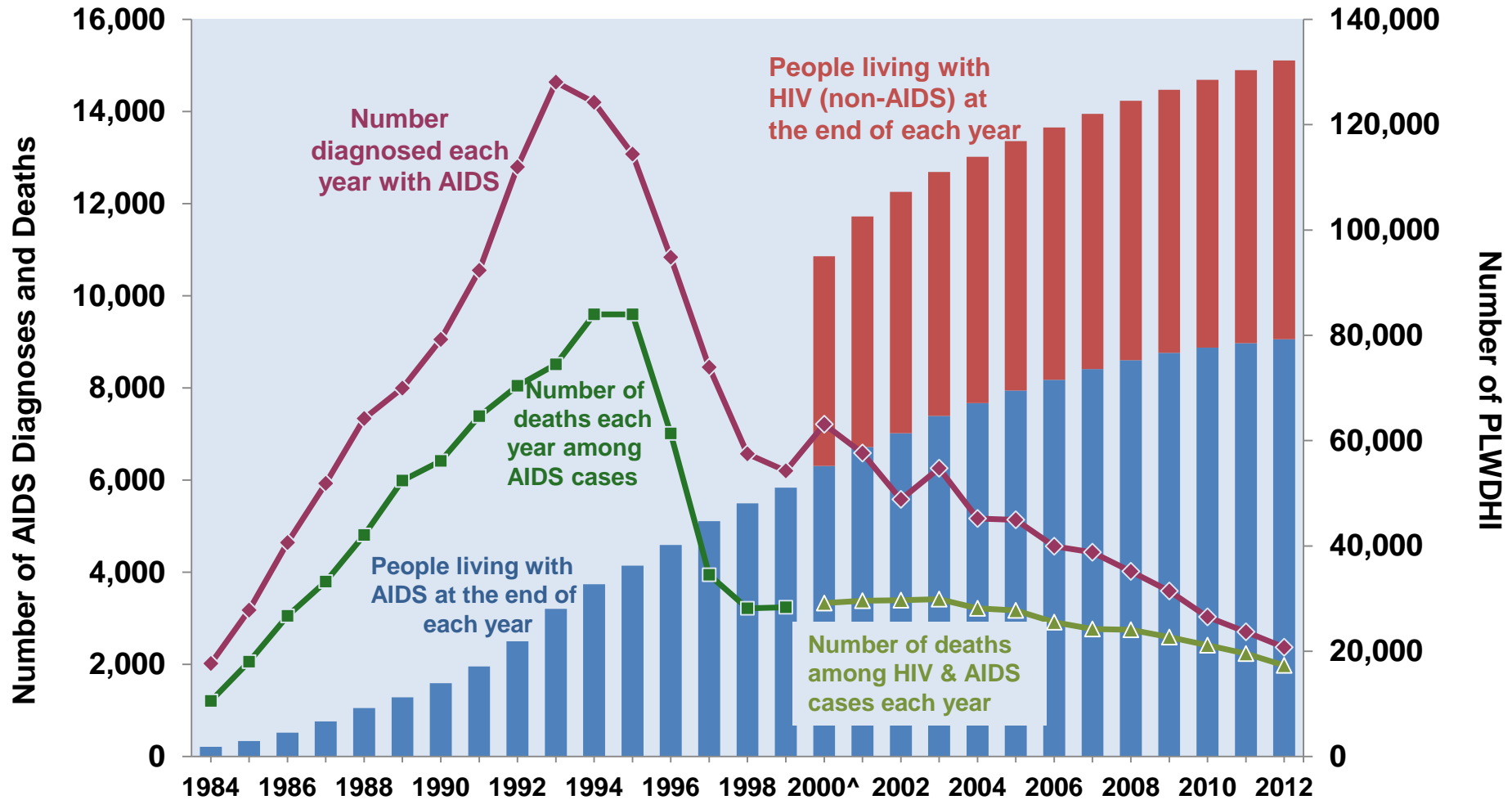
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Trends in HIV and AIDS Cases*

New York State, 1984 - 2012



*Data as of April 2014

^HIV named reporting began in NYS in 2000; deaths among HIV and AIDS cases are reported starting in 2000.

New York State Mother-to-Child HIV Transmission Number and Rate of HIV Infected Infants by Year of Delivery, 1997* - 2013



*1997 data is February – December

n=Number of infected infants identified

Legal Basis for HIV Surveillance in New York State

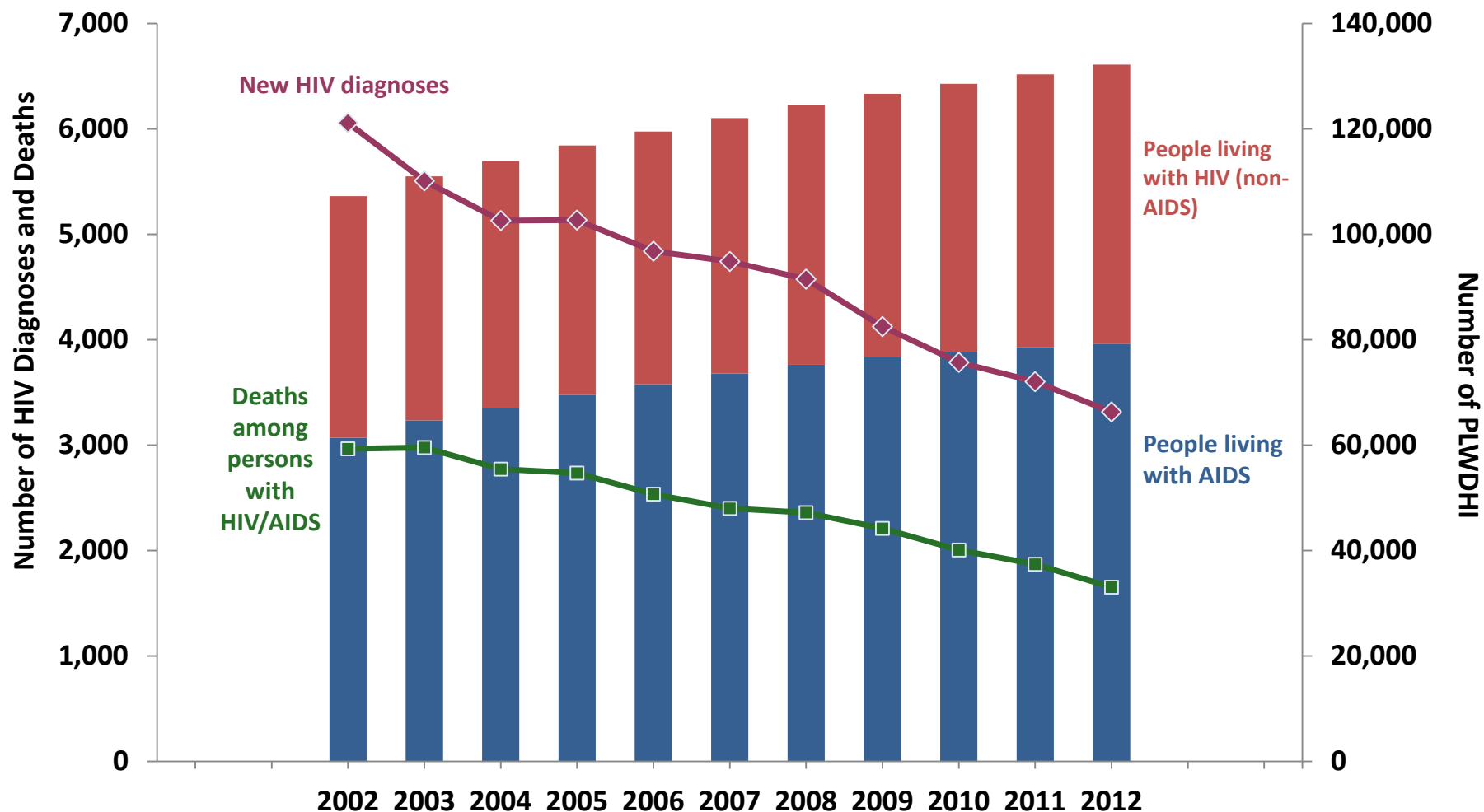
- HIV Reporting and Partner Services Law implemented June 1, 2000, required reporting to New York State
 - Medical providers required to report new diagnoses of HIV, AIDS, and HIV-related illness and known sex or needle-sharing partners
 - Laboratories conducting HIV-related tests required to report results
- Changes in the reporting law have broadened the permissible uses of surveillance data
 - 2000 – 2010: HIV epidemiology, partner notification
 - 2010 – 2014: deduplication, assess comorbidity, direct health department program needs
 - 2014: sharing with medical providers for linkage and retention

New York State HIV Laboratory Reporting

	6/2000 to 6/2005	6/2005 to present
HIV antibody	WB or IFA confirmed (+) tests	WB or IFA confirmed (+) tests
CD4 lymphocytes	<500 cells/mm ³ or <29%	All values
HIV nucleic acid tests	Any detectable value	All values
Resistance and subtype results	Not reportable	Genotype nucleotide sequence

Epidemiology of HIV in New York State

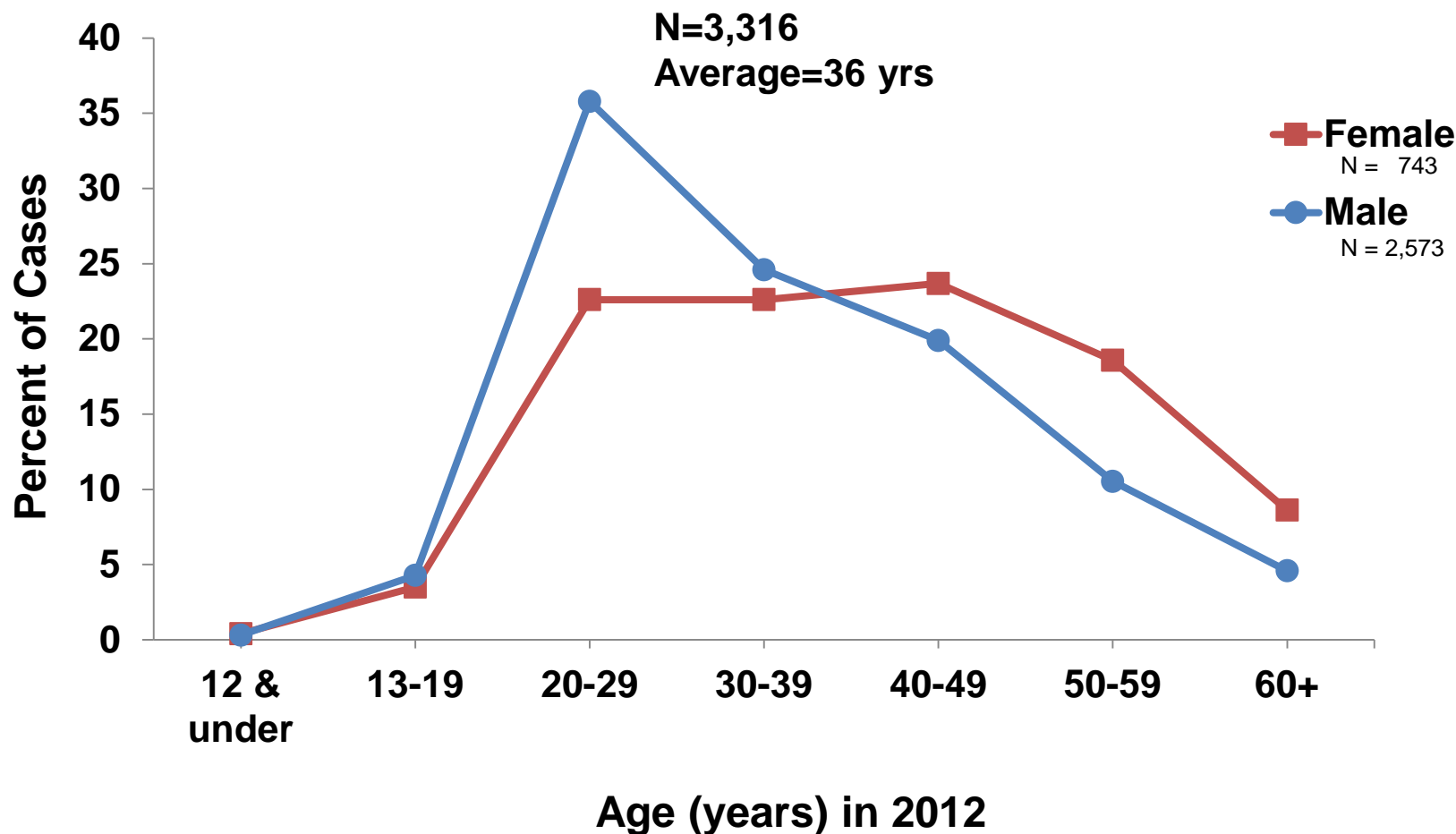
Trends in HIV and AIDS* New York State, 2002-2012



*Data as of April 2014. New HIV diagnoses include those diagnosed concurrently with AIDS.

HIV named reporting began in NYS in 2000.

Age Distribution of Newly Diagnosed HIV* Cases New York State, 2012**



*Regardless of subsequent or concurrent AIDS diagnosis

**Data as of April 2014

New HIV Diagnoses* by Race/Ethnicity, New York State, 2012**

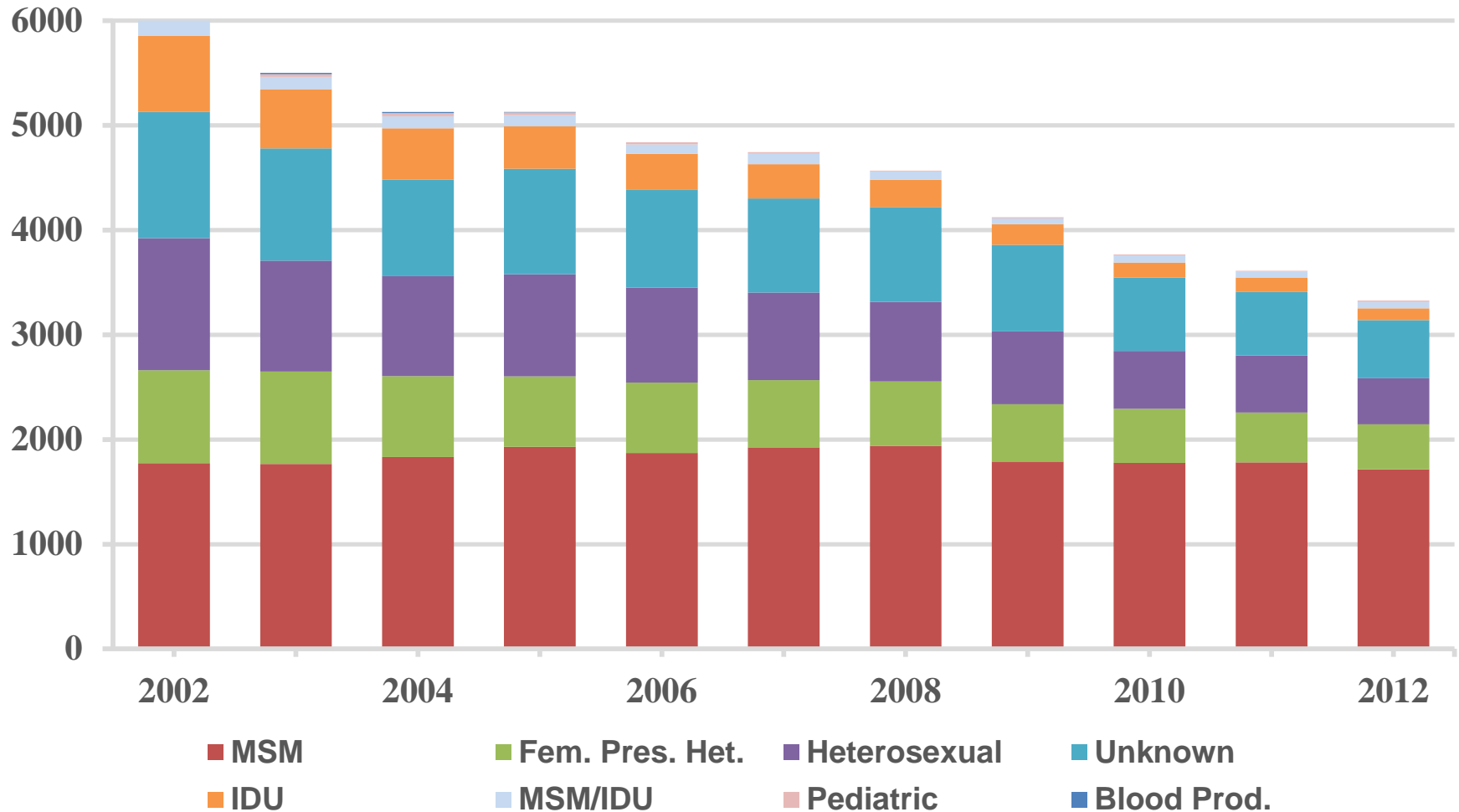
Race/Ethnicity	Number of HIV Diagnoses	% of Total HIV Diagnoses	Rate per 100,000 Population***
NYS Total	3,316	100%	16.7
Non-Hispanic White	672	20.3%	6.1
Non-Hispanic Black	1,393	42.0%	45.4
Hispanic	1,019	30.7%	27.0
Asian/PI	83	2.5%	4.5
Native Am	4	0.1%	5.1
Multi-race	145	4.4%	--

*Regardless of concurrent or subsequent AIDS diagnosis .

**Data as of March 2014

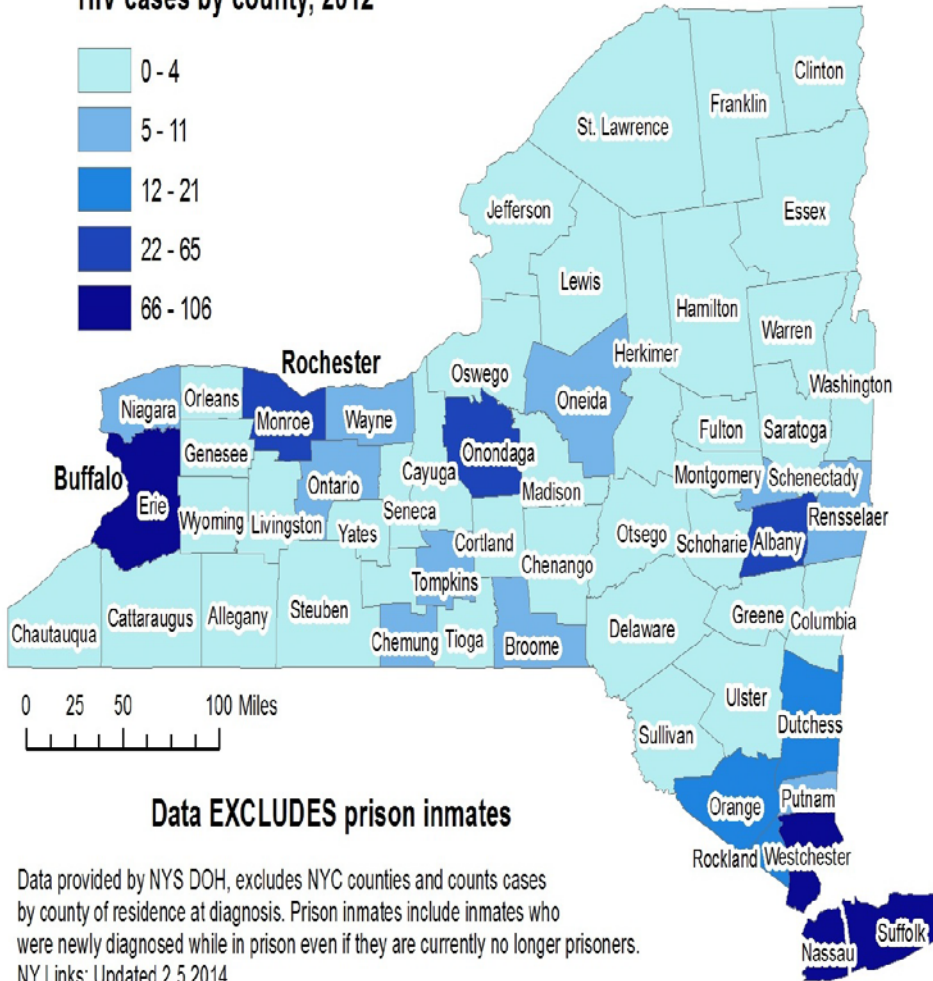
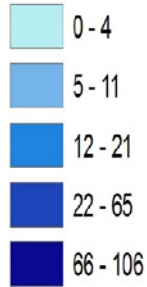
*** Age-standardized

Newly Diagnosed HIV Cases by Transmission Risk New York State, 2002-2012*



Newly diagnosed HIV cases by county, 2012

Number of newly diagnosed HIV cases by county, 2012

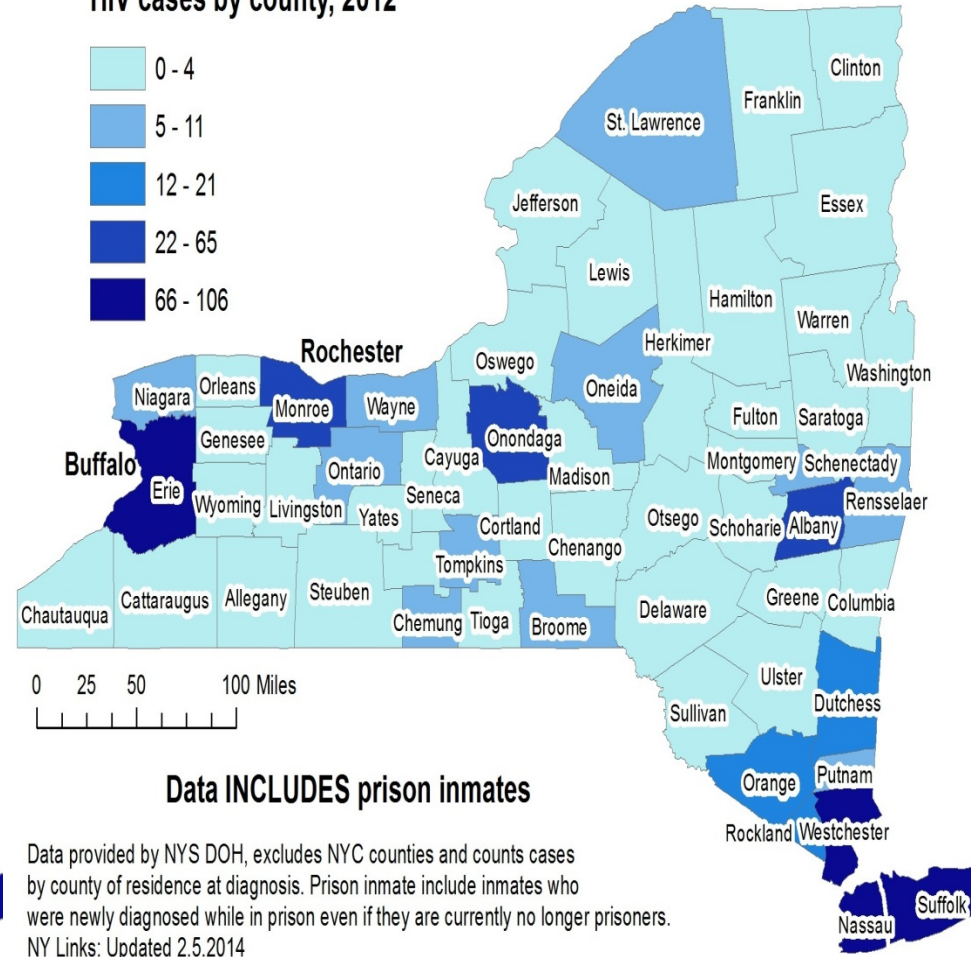
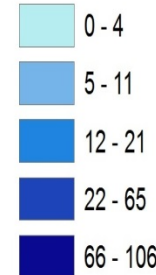


Data EXCLUDES prison inmates

Data provided by NYS DOH, excludes NYC counties and counts cases by county of residence at diagnosis. Prison inmates include inmates who were newly diagnosed while in prison even if they are currently no longer prisoners. NY Links: Updated 2.5.2014

Total # of newly diagnosed cases in NYS, 2012: **697**
(excluding inmates and NYC)

Number of newly diagnosed HIV cases by county, 2012

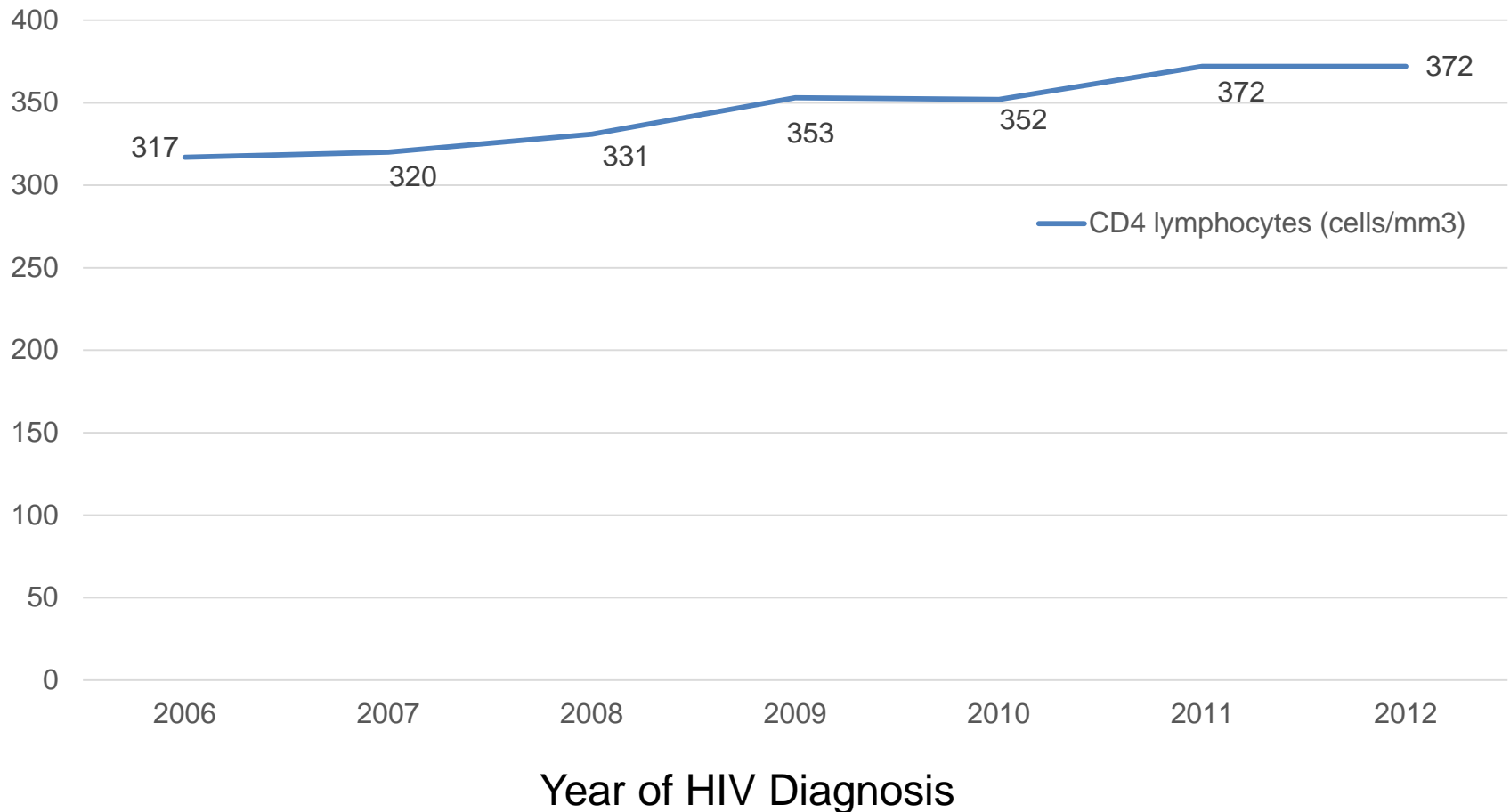


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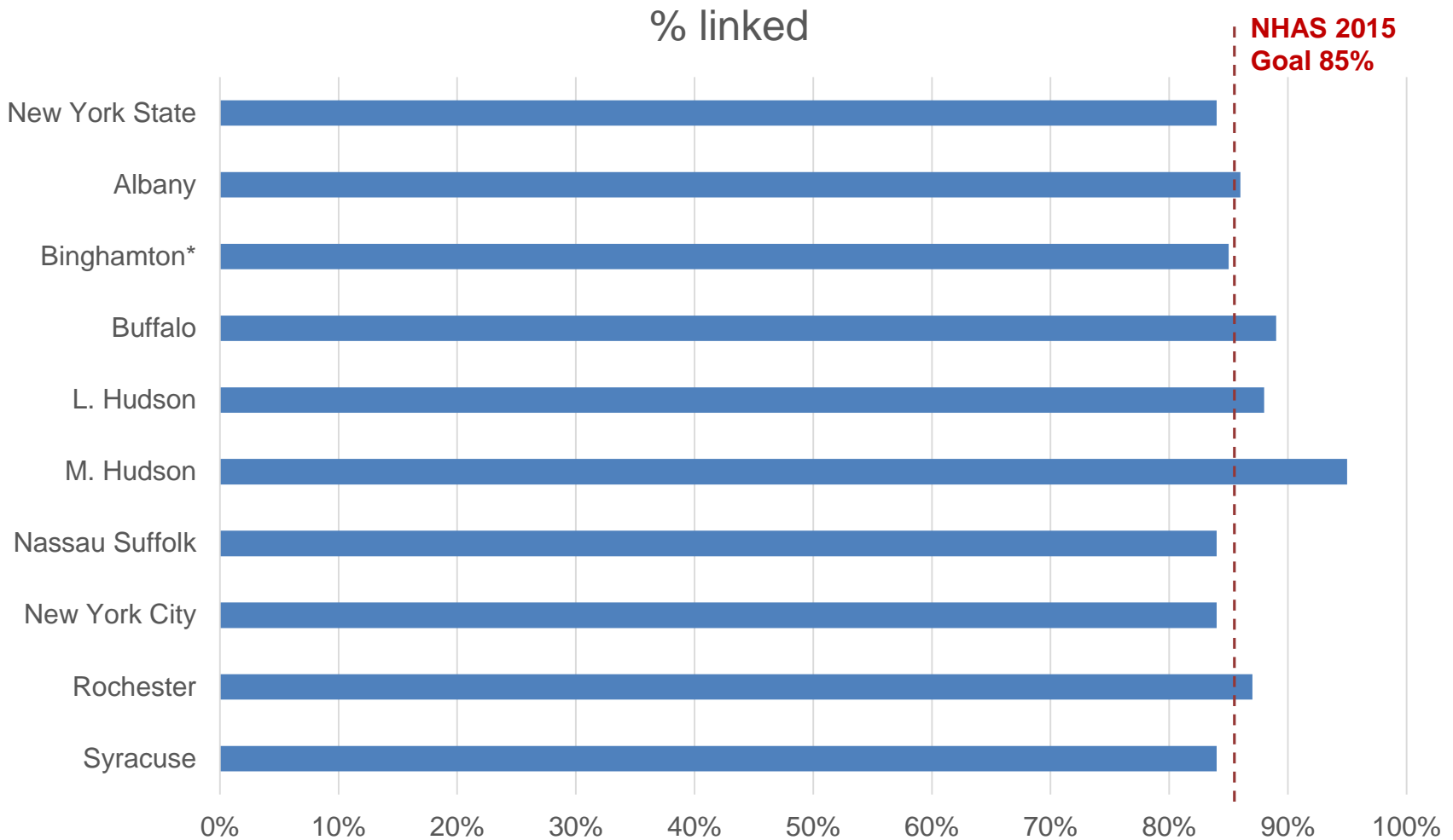
Total # of newly diagnosed cases in NYS, 2012: **726**
(including inmates, excludes NYC)

Median Initial* CD4 Count of Persons Newly Diagnosed with HIV: New York State 2006-2012



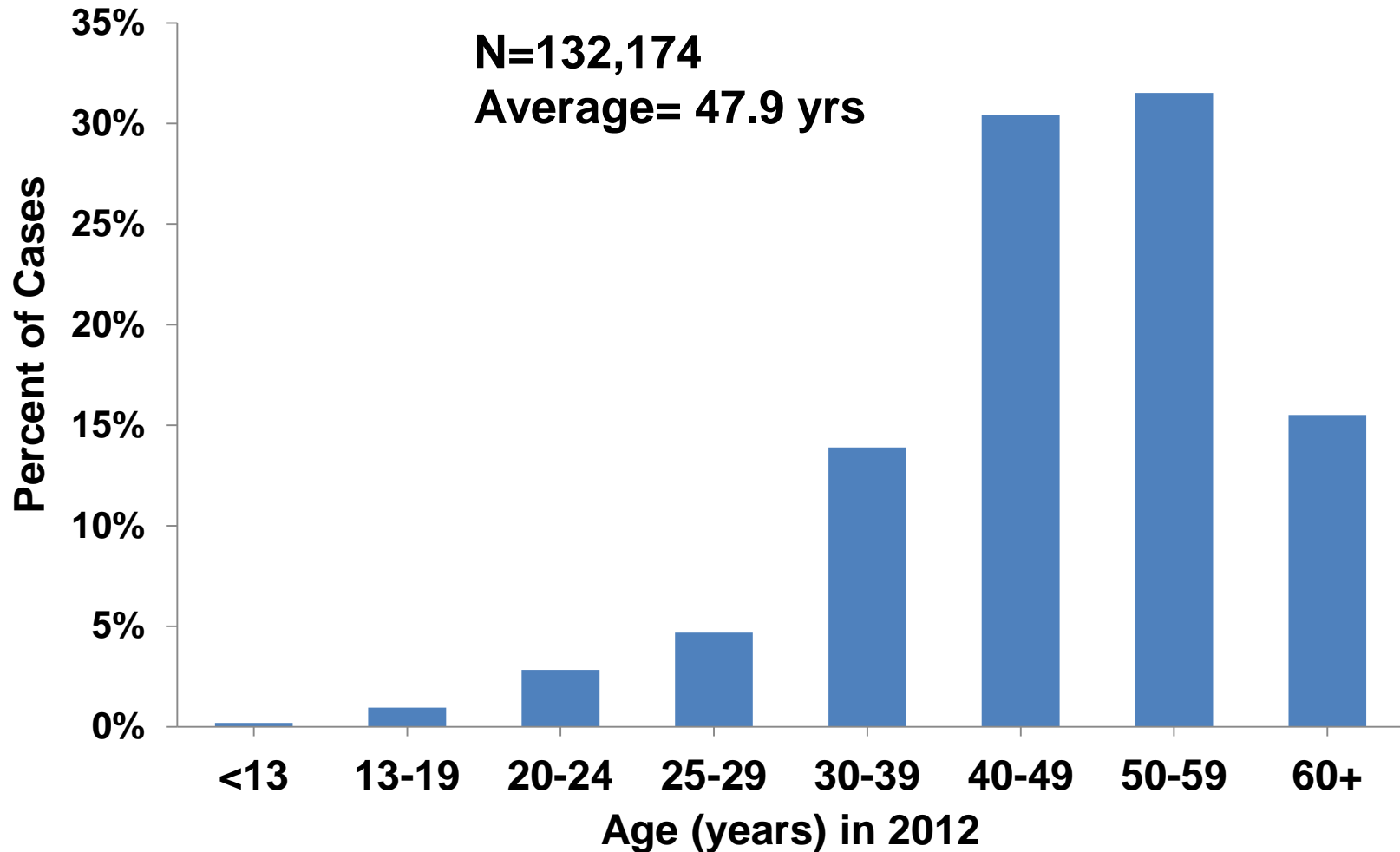
*Includes only cases with CD4 count within 3 months of diagnosis. Cases that developed AIDS with 30 days of HIV diagnosis are included. Case data as of September 2013 with laboratory data as of November 2013.

Linkage to Care within 3 Months of HIV Diagnosis by Region: New York State - 2012

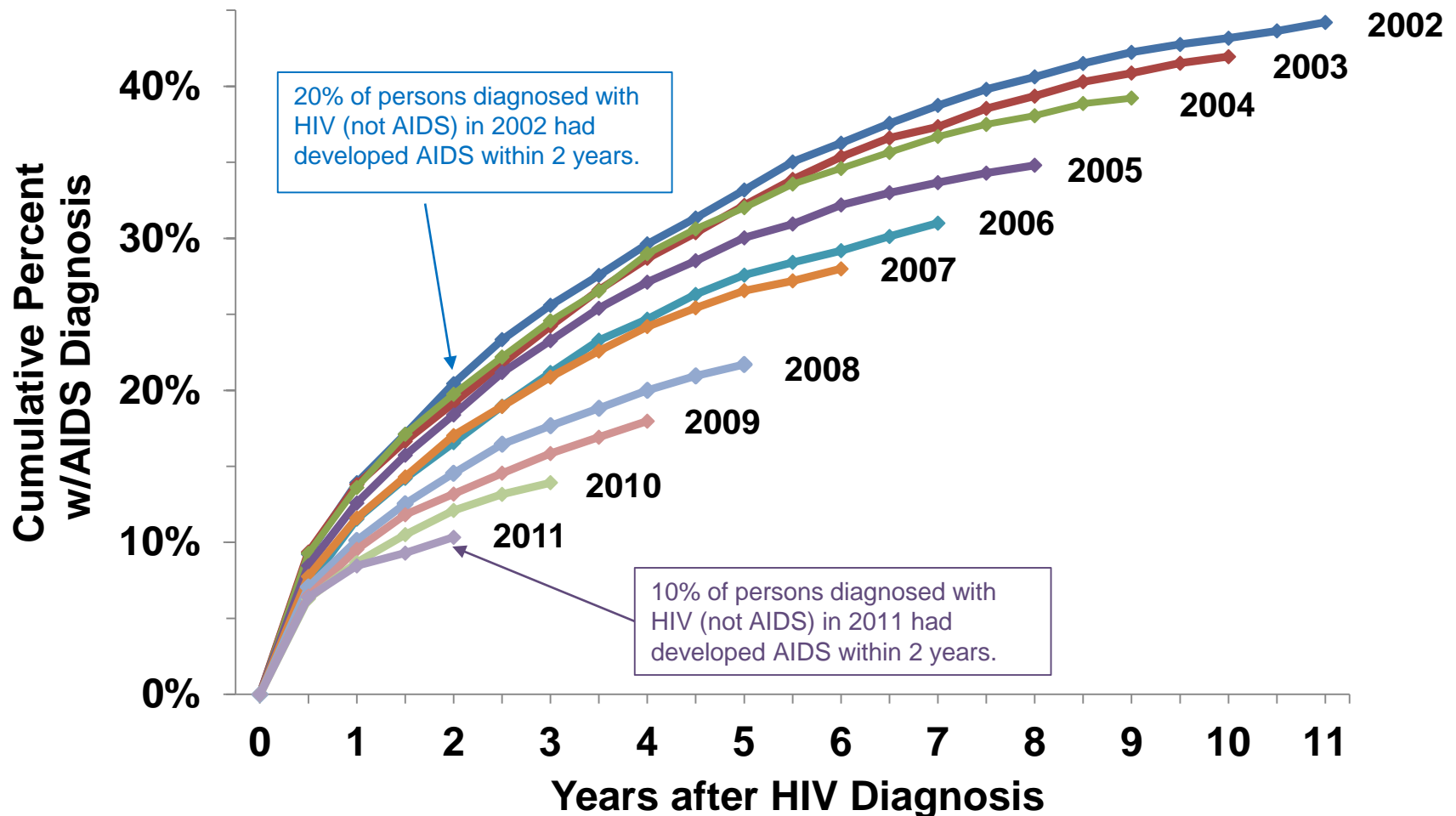


*Based on less than 20 persons.

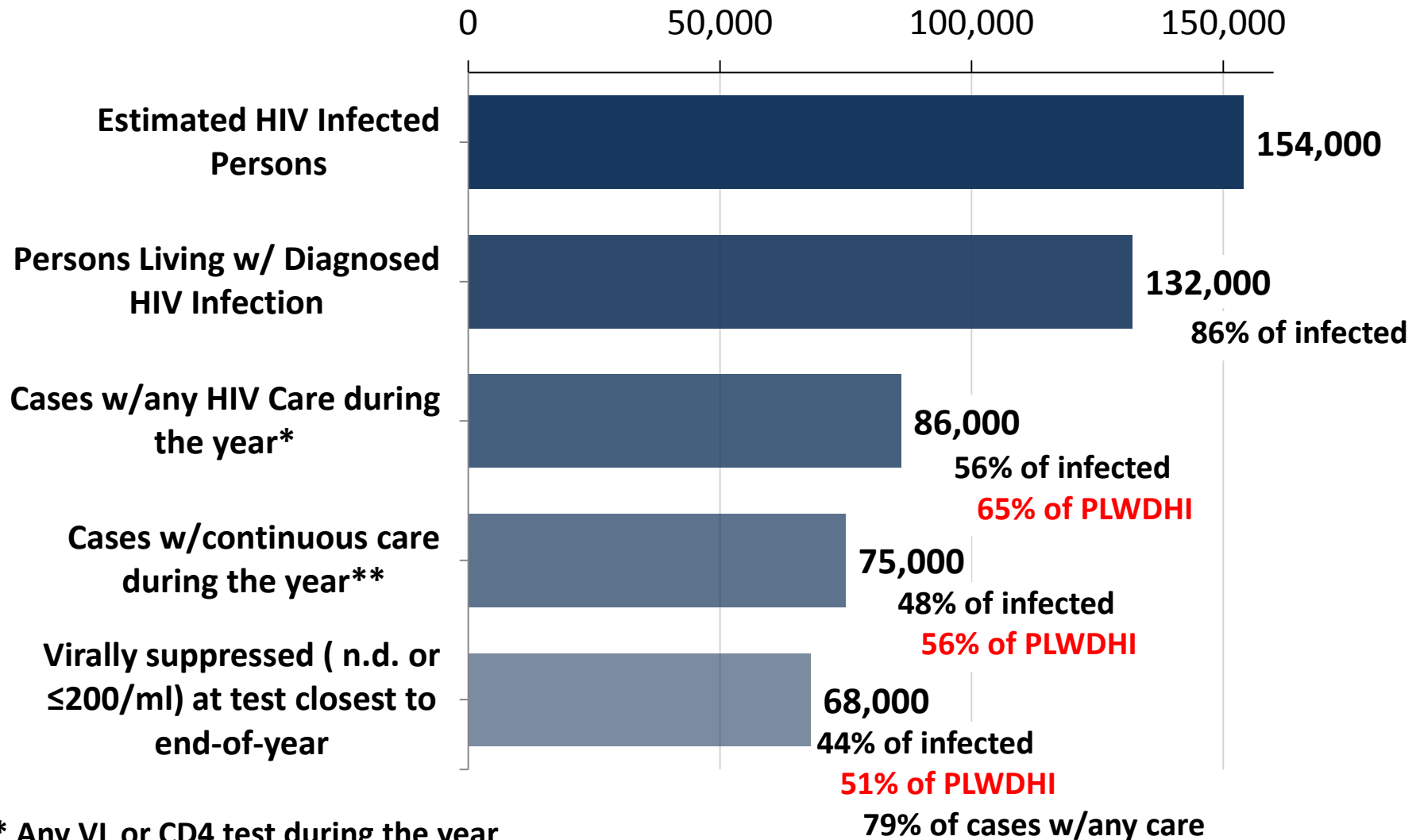
Age Distribution of Persons Living with Diagnosed HIV Infection: New York State, December 2012*



Time to AIDS Diagnosis for New HIV Cases that Were Not Concurrent HIV/AIDS Diagnoses, NYS by Year of HIV Diagnosis



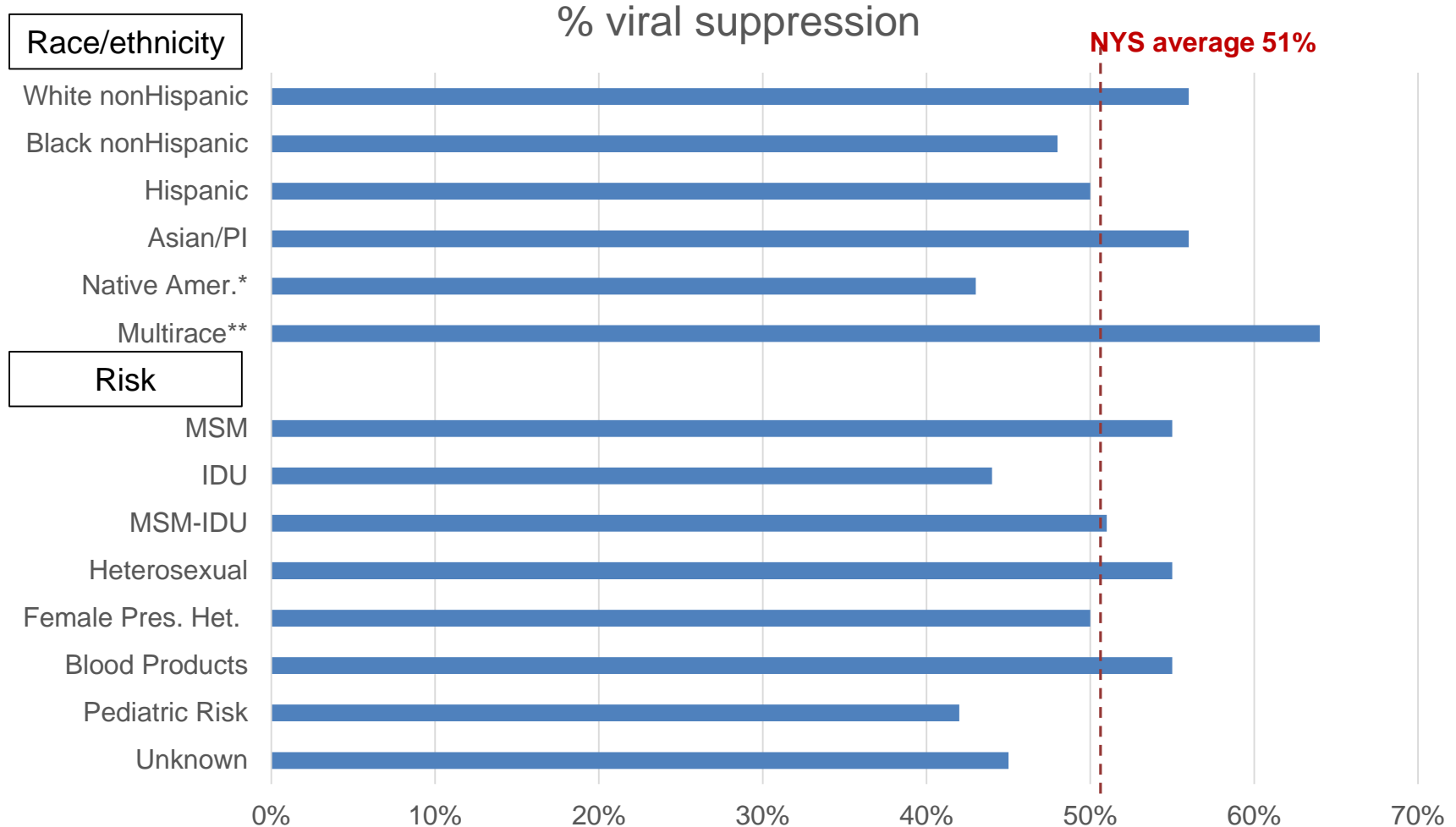
Cascade of HIV Care New York State, 2012



* Any VL or CD4 test during the year

** At least 2 tests, at least 3 months apart

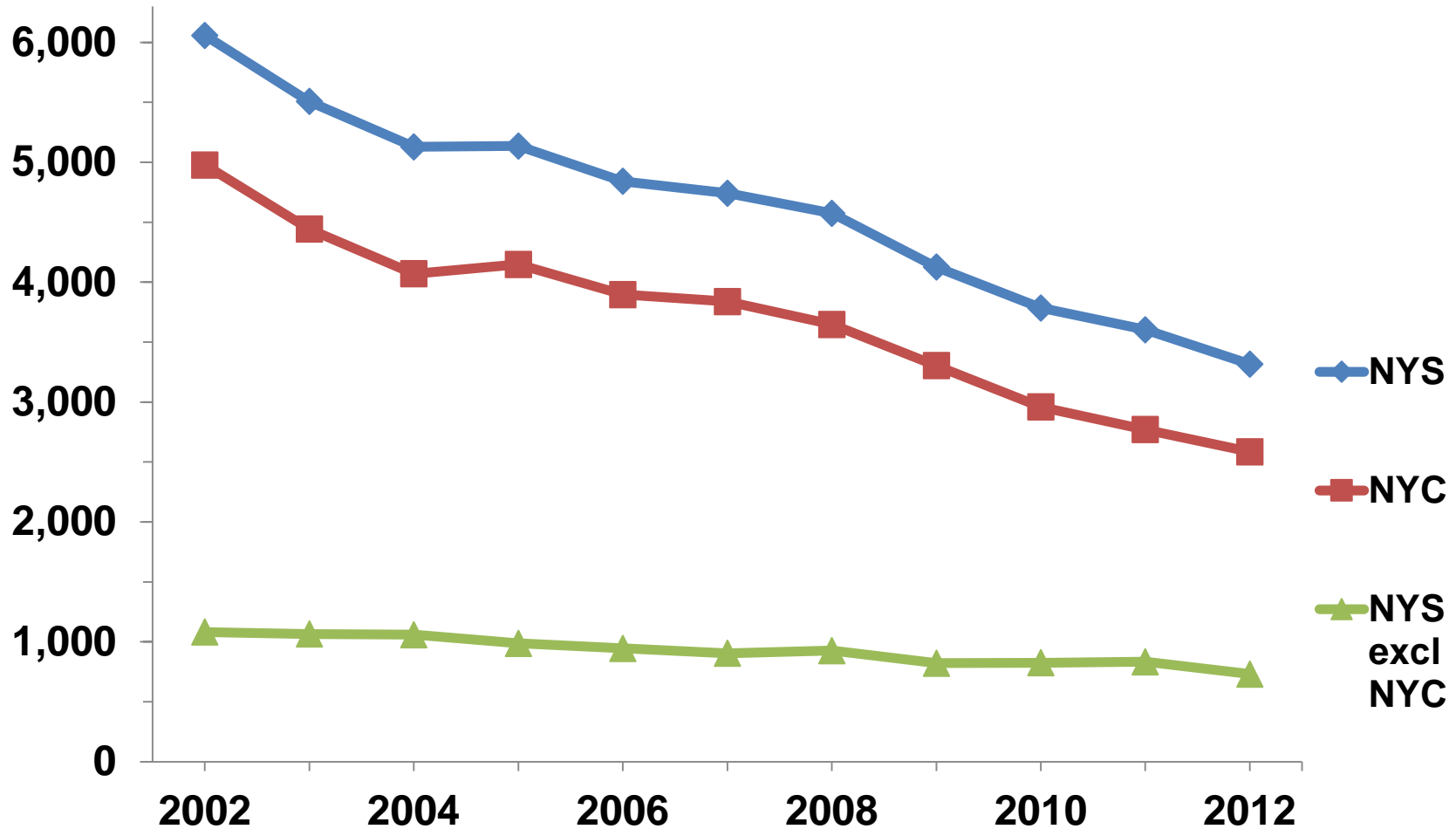
Viral Suppression among Persons Living with Diagnosed HIV Infection by Risk and Race/Ethnicity: New York State, 2012



*Based on a small number of persons (n=100).

**Multirace care measures are likely less reliable due to the method used to calculate multirace status.

Newly Diagnosed HIV Cases New York State, 2002-2012

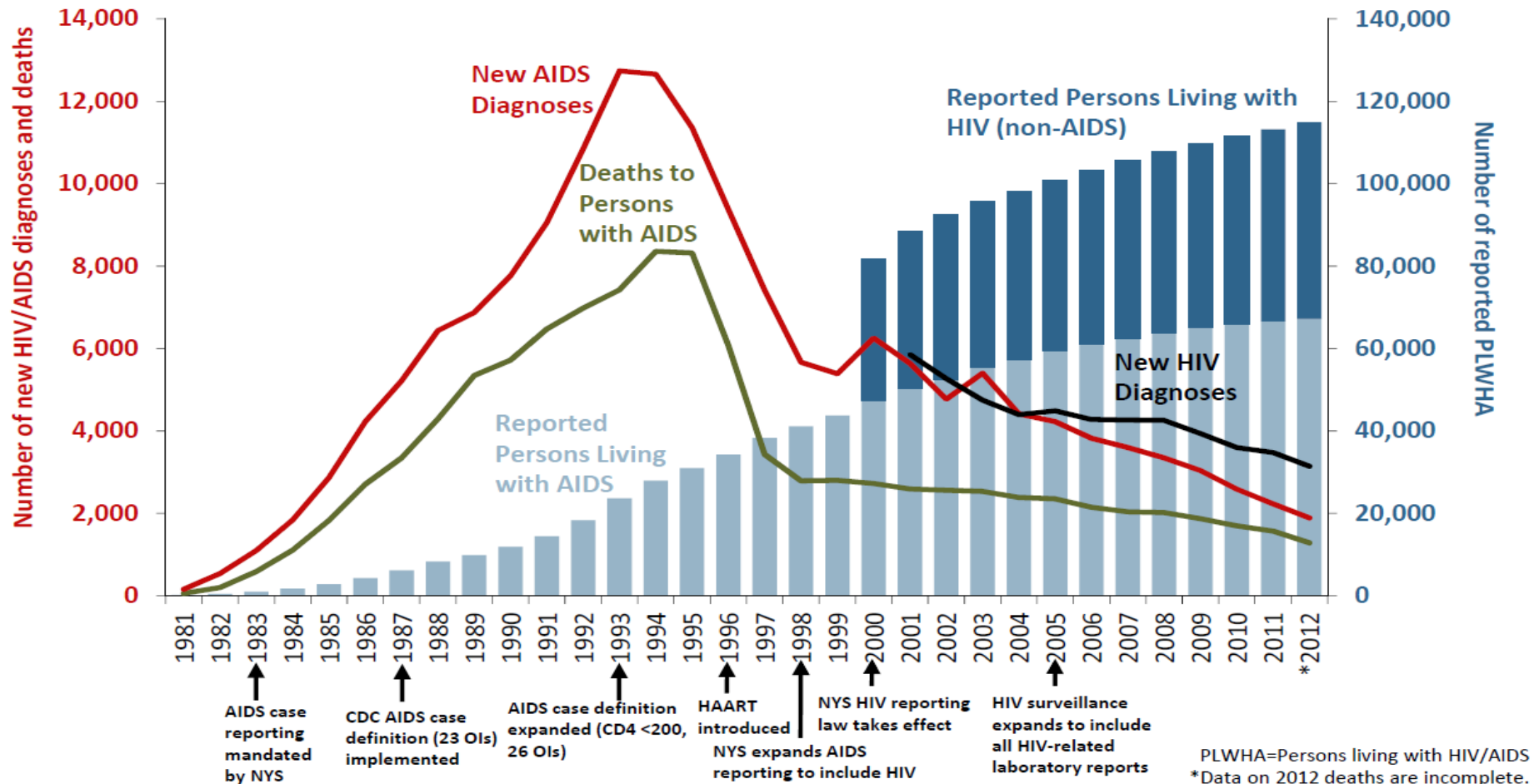


Monitoring Progress Toward the End of the HIV Epidemic in New York State: *The view from NYC*

Sarah L. Braunstein, PhD MPH

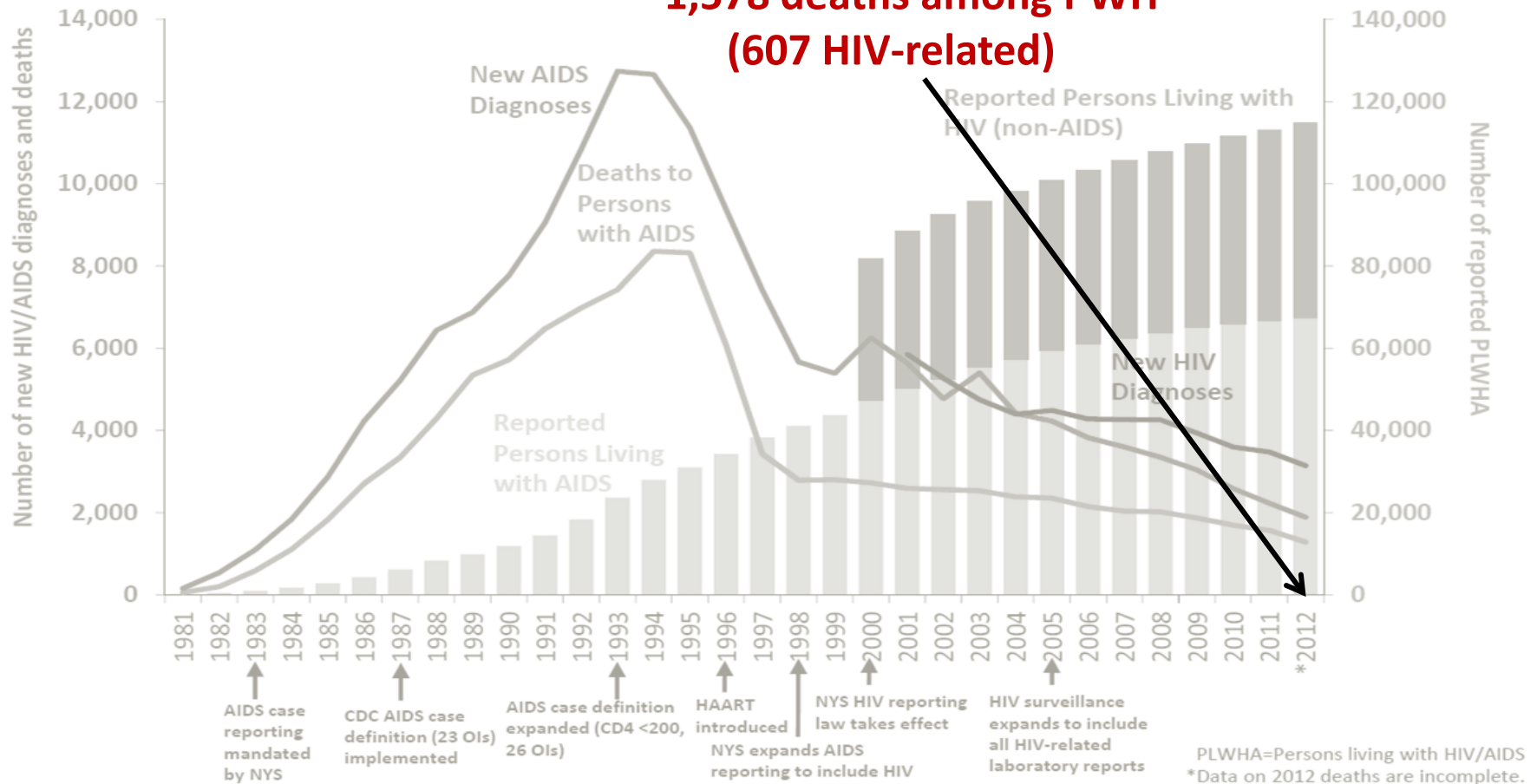
Director, HIV Epidemiology and Field Services Program,
NYC Department of Health and Mental Hygiene

HIV in New York City, 1981-2012

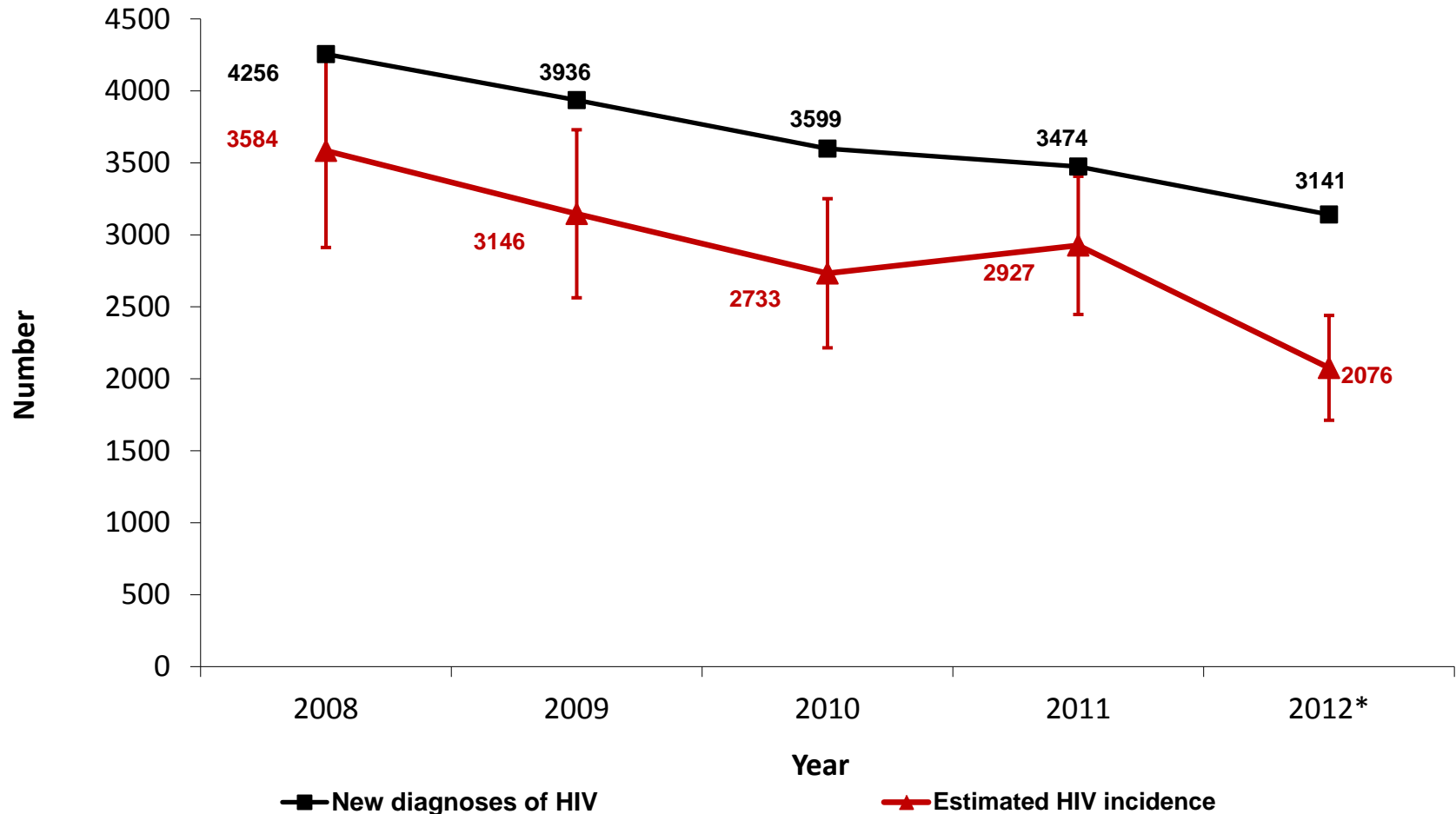


HIV in New York City, 1981-2012

**2012: 3,141 new HIV diagnoses
1,889 new AIDS diagnoses
1,578 deaths among PWH
(607 HIV-related)**



New Diagnoses and Estimated Incidence in NYC, 2008-2012

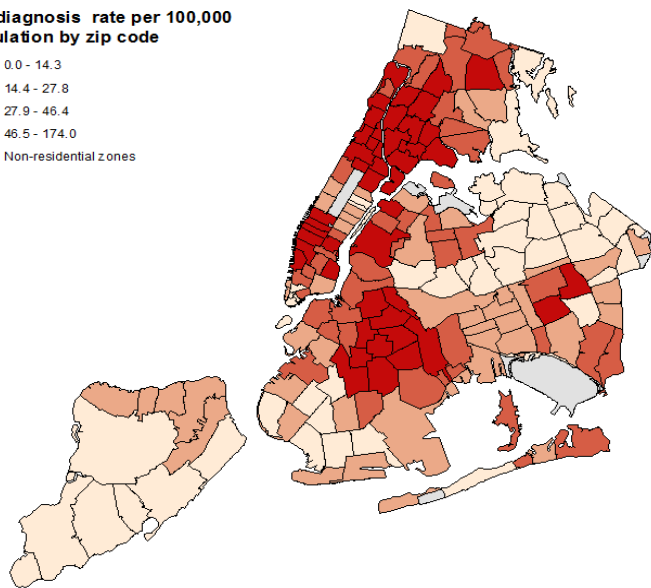
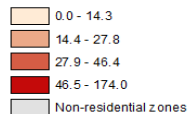


*2012 incidence data are preliminary.

Estimates generated September 2013, by the CDC Stratified Extrapolation Approach (SEA). SEA combines results from the Serologic Testing Algorithm for Recent Seroconversion (STARHS) with data on demographic characteristics, risk factor, initial diagnosis date, testing and treatment history from the HIV surveillance registry. Unknown risk factor was imputed using the Multiple Imputation procedure in SAS v9.2.

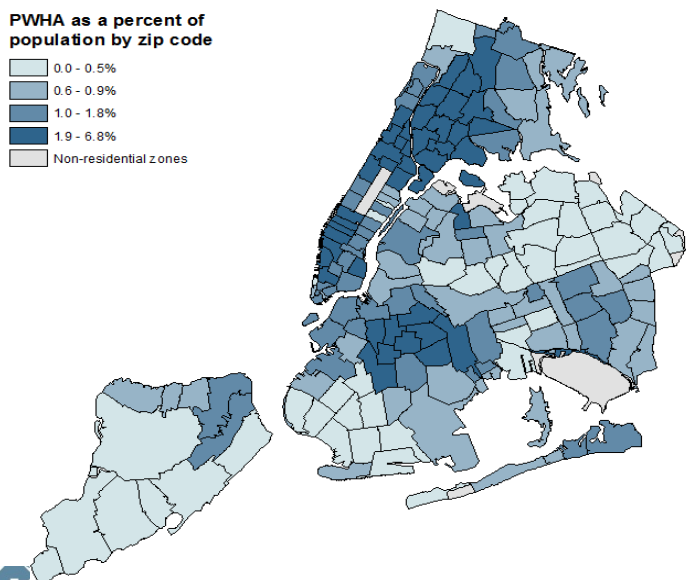
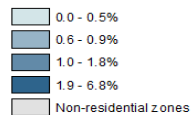
Geographic Distribution of HIV in NYC, 2012

HIV diagnosis rate per 100,000 population by zip code

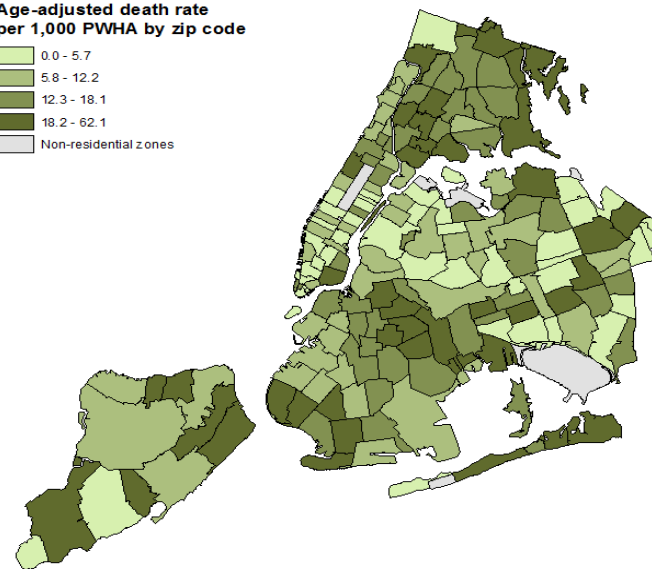
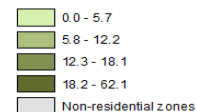


- ZIP codes in the Chelsea-Clinton, Central Harlem-Morningside Heights and Washington Heights-Inwood neighborhoods had the highest HIV diagnosis rates.
- ZIP codes in Chelsea-Clinton, West Queens and East Harlem had the highest HIV prevalence
- ZIP codes in Bayside-Little Neck, Port Richmond and Canarsie-Flatlands had the highest mortality among persons with HIV.

PWHA as a percent of population by zip code



Age-adjusted death rate per 1,000 PWHA by zip code

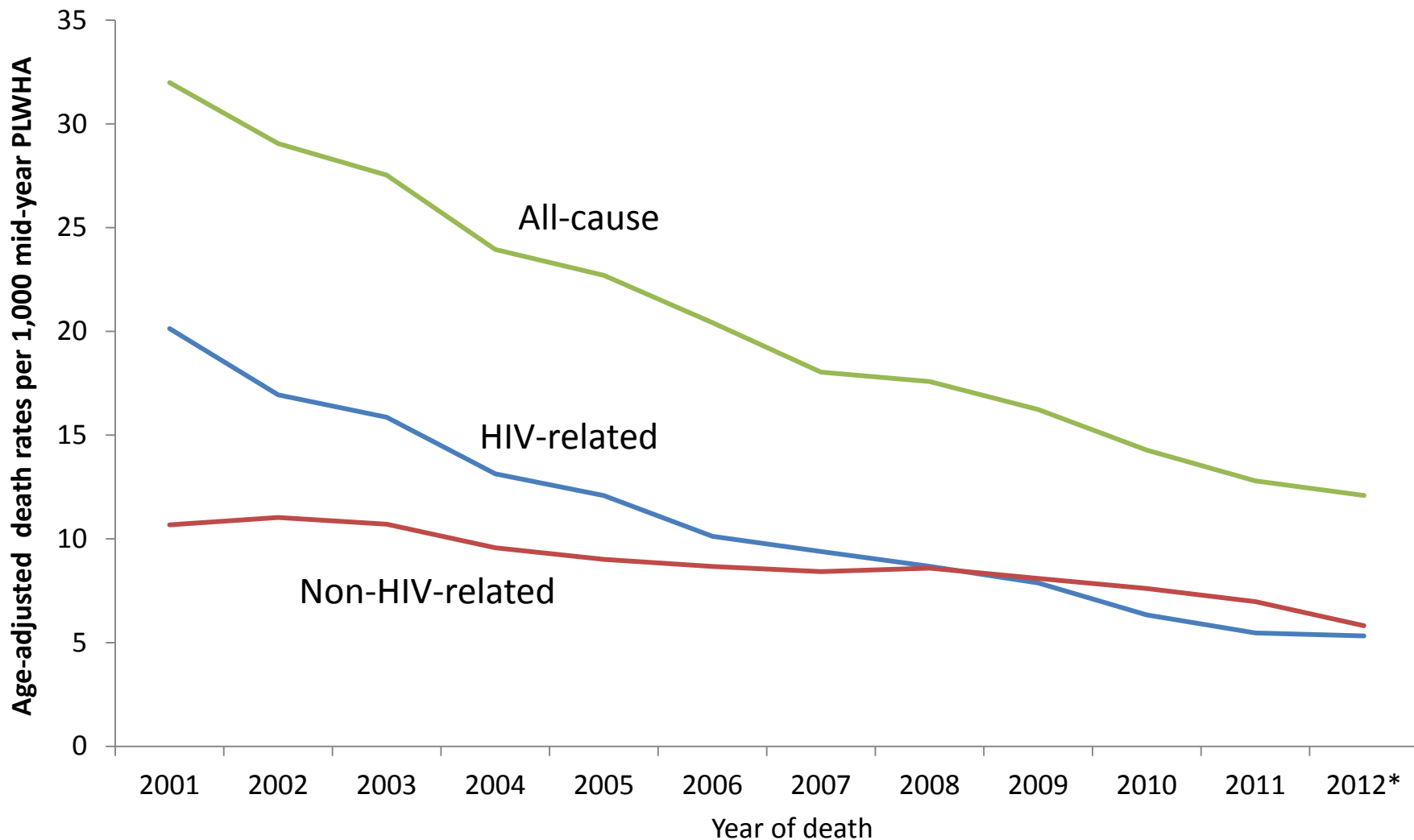


Data as reported to NYC DOHMH by June 30, 2013.

HIV diagnoses includes diagnoses of HIV without AIDS and HIV concurrent with AIDS.

Death rates are age-adjusted to the citywide population of PWHA in 2012. 2012 death data are incomplete.

Age-adjusted Death Rates Among Persons with HIV in NYC, 2001-2012

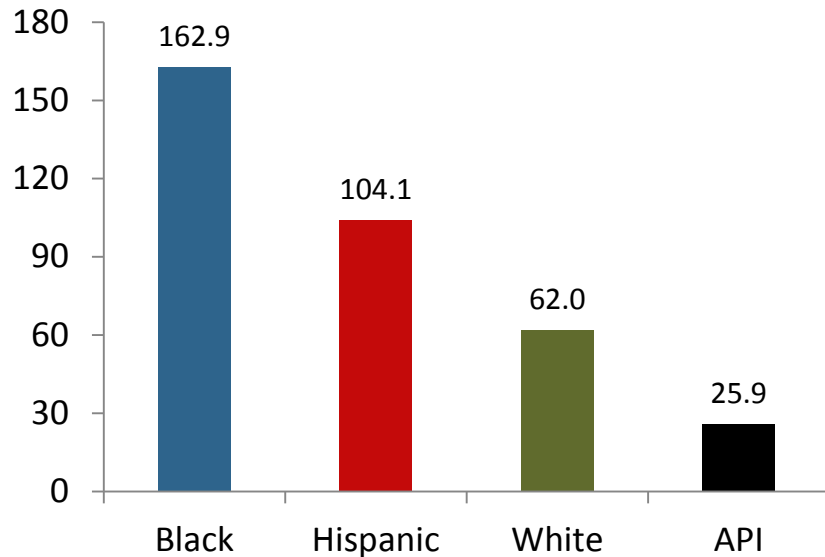


Data reported to NYC DOHMH by June 30, 2014.

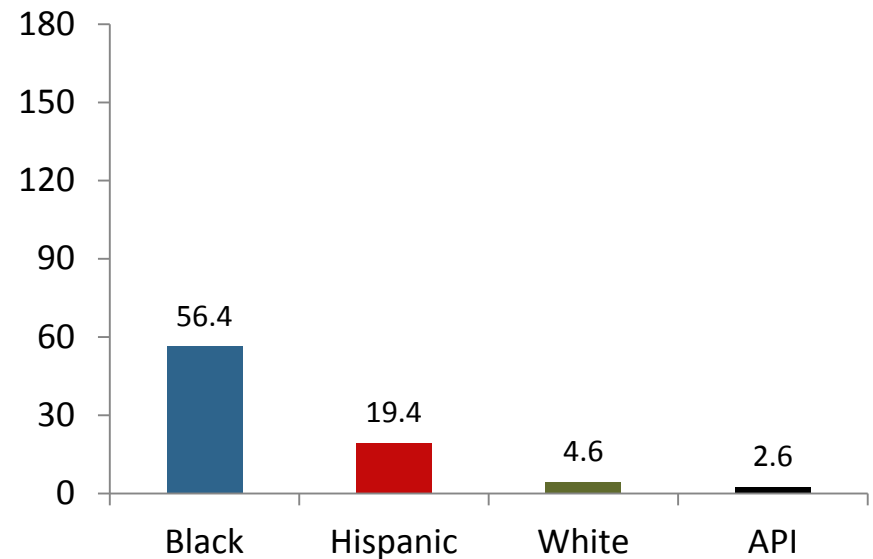
*2012 Deaths are incomplete – deaths among persons with HIV occurring outside NYC are not included.

HIV Diagnosis Rates Among Males and Females by Race/ethnicity in NYC, 2012

The HIV diagnosis rate among black males was over 1.5 times higher than the rate among Hispanic males and over 2 times higher than the rate among white males.



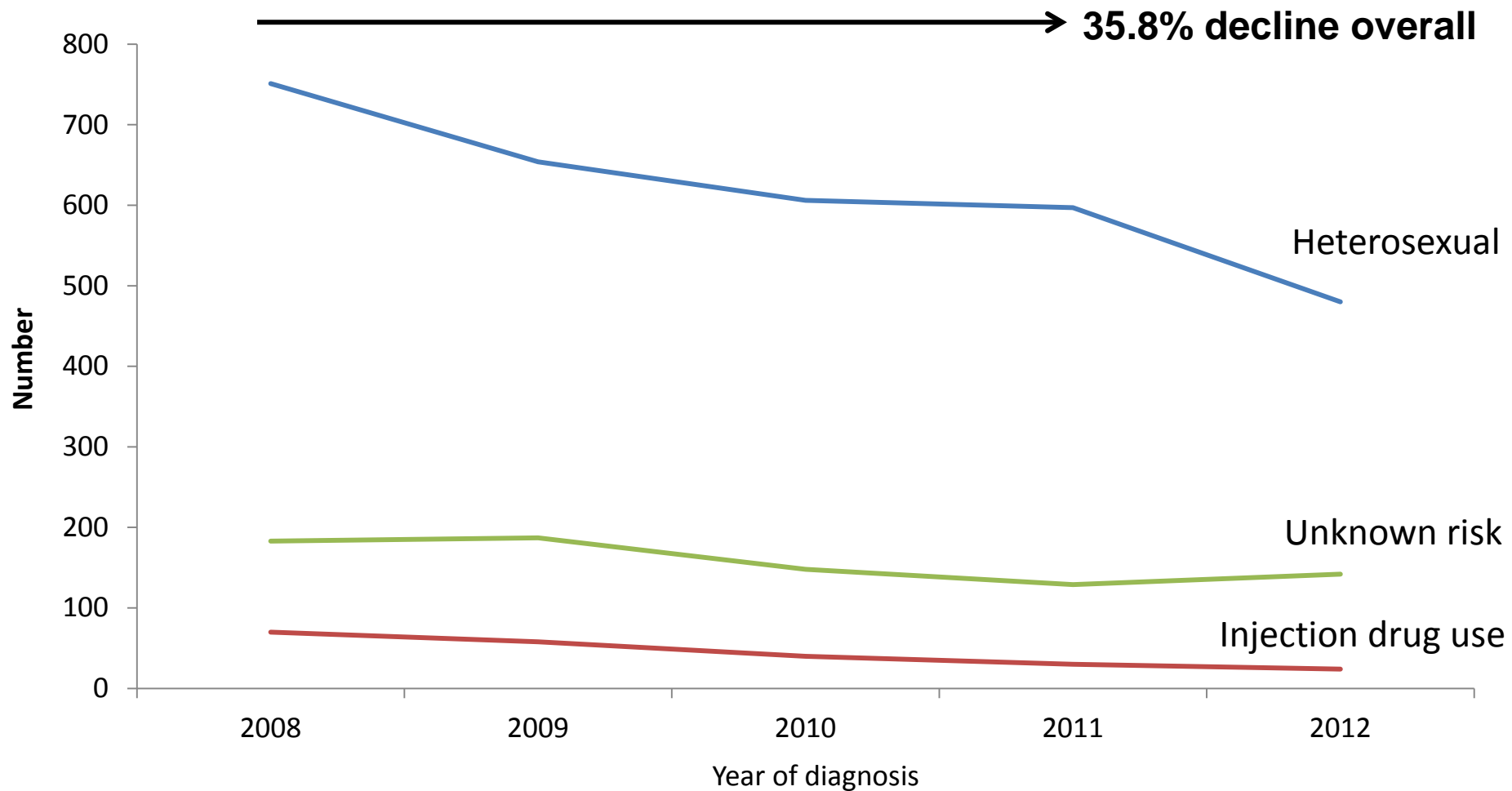
The HIV diagnosis rate among black females was over 3 times higher than the rate among Hispanic females and over 12 times higher than the rate among white females.



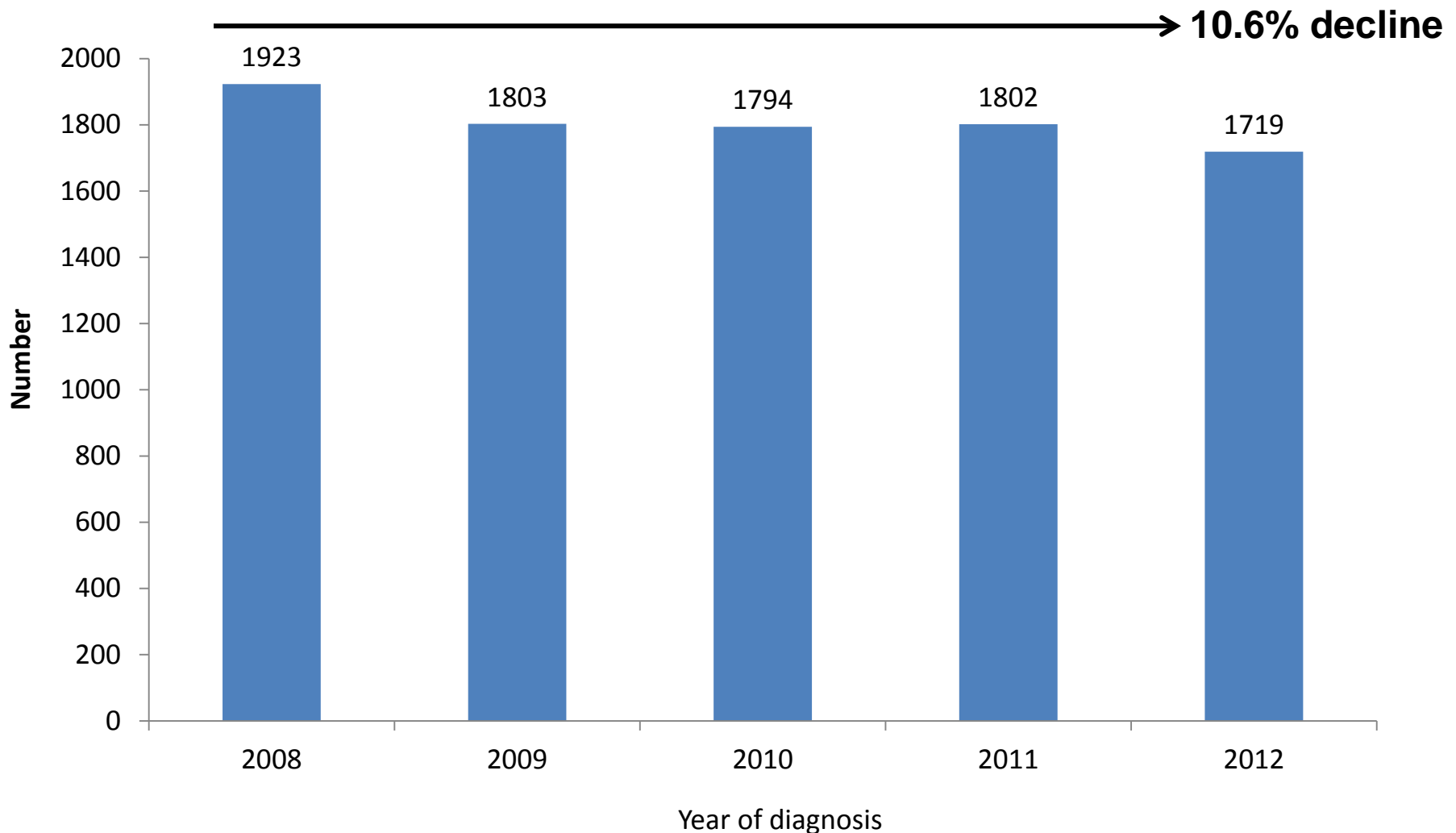
Data as reported to NYC DOHMH by June 30, 2013.

API=Asian/Pacific Islander

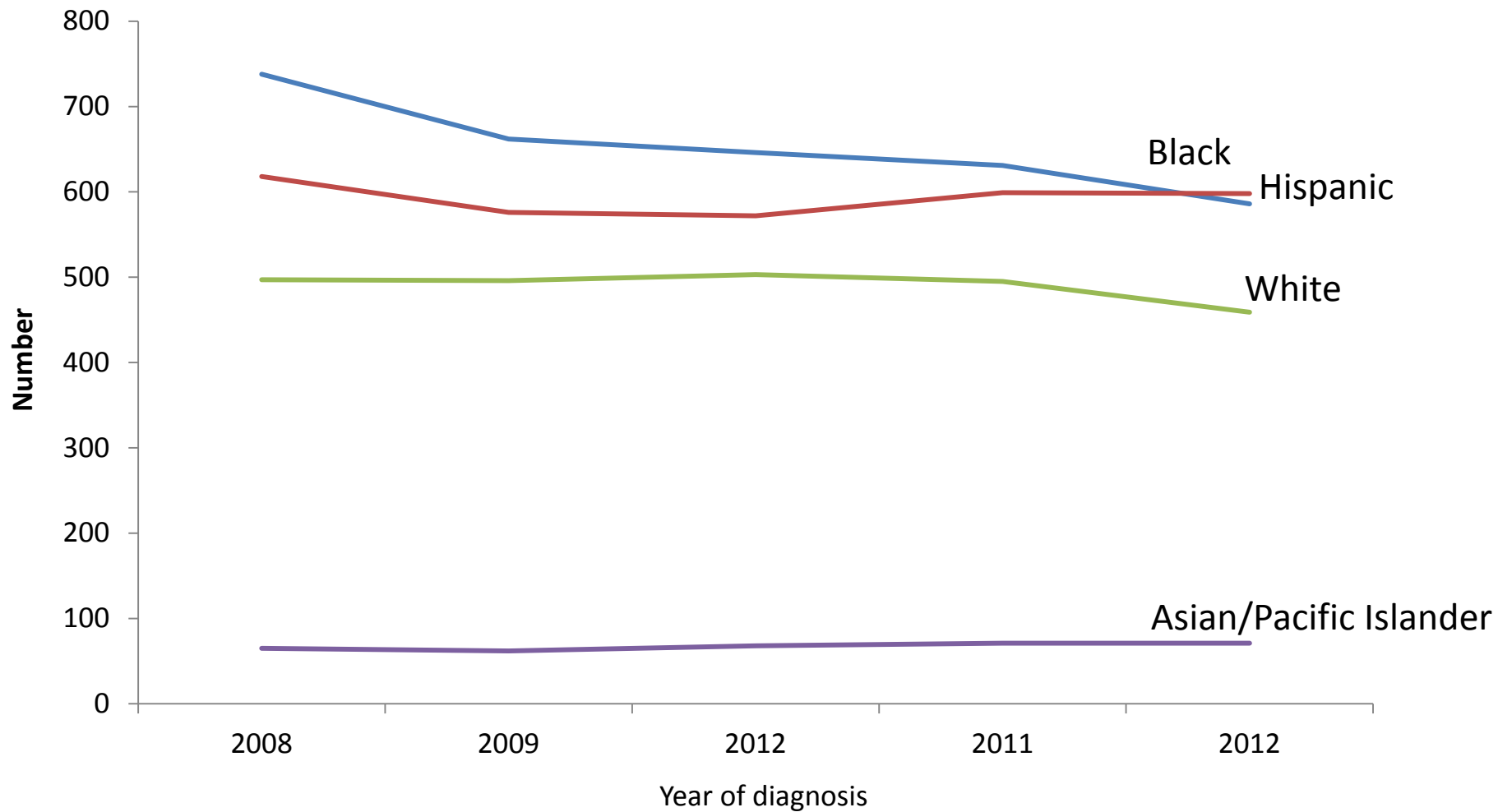
New HIV Diagnoses Among Women in NYC, 2012



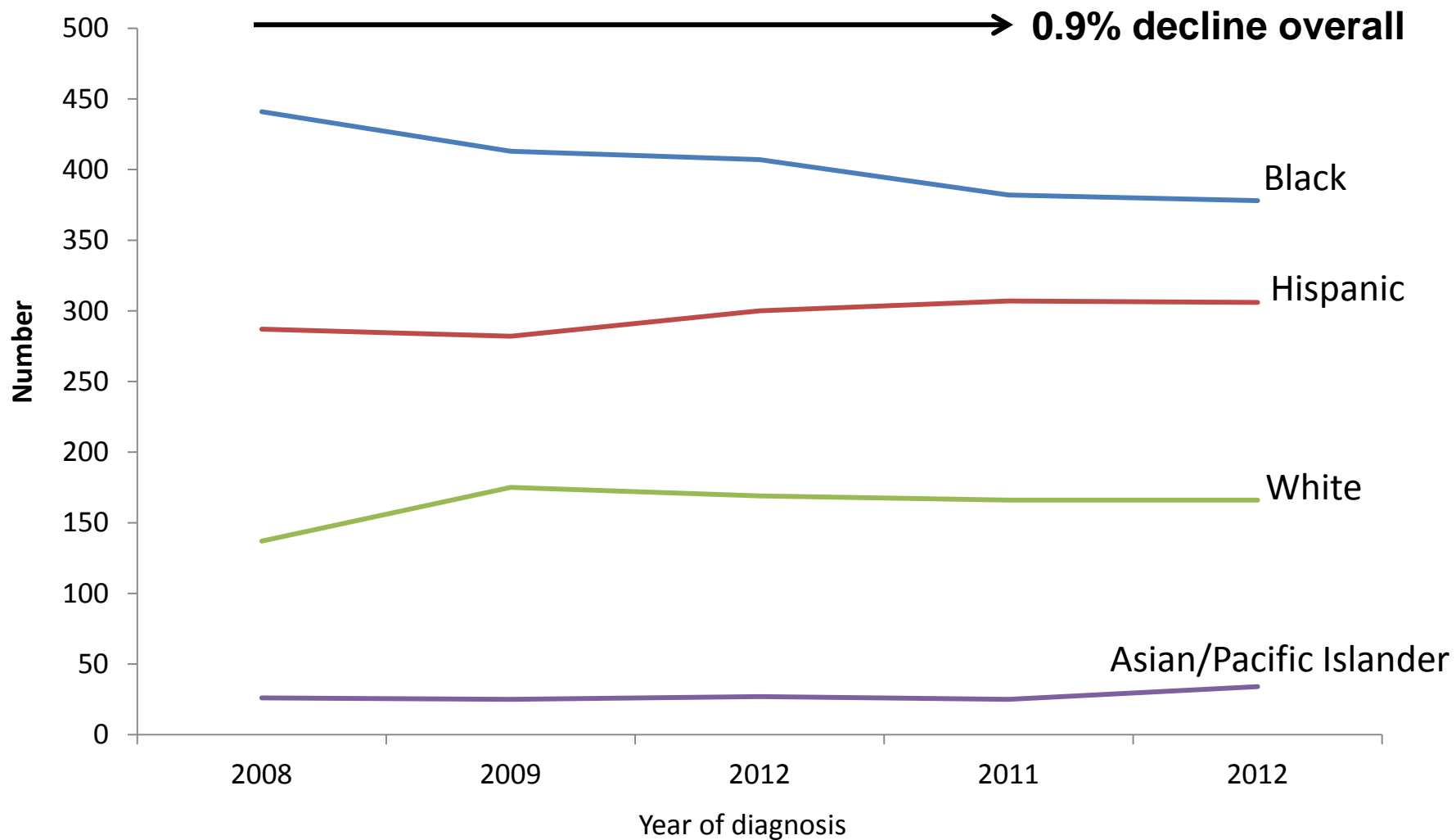
New HIV Diagnoses Among MSM in NYC, 2008-2012



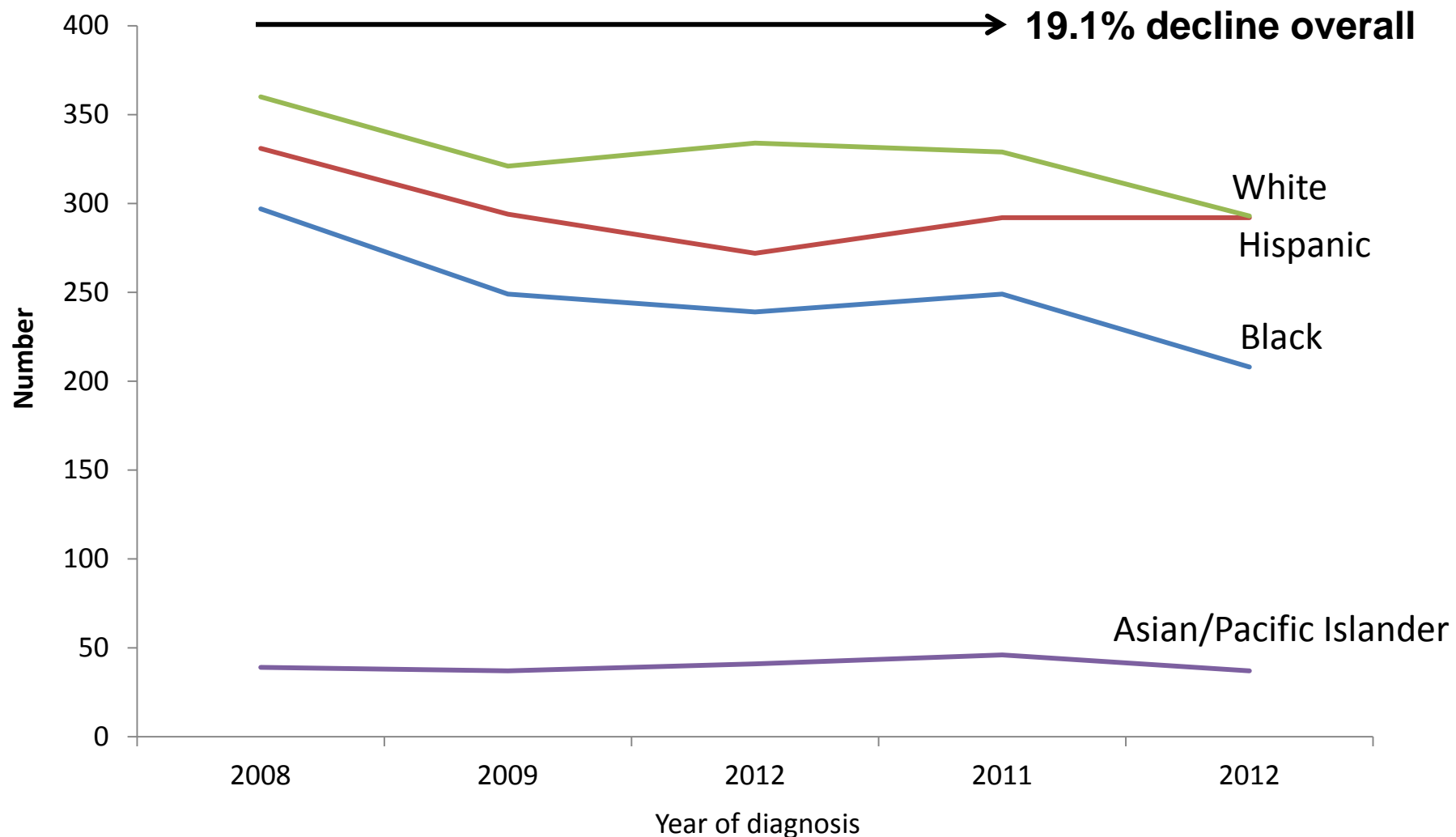
New HIV Diagnoses Among MSM by Race/Ethnicity in NYC, 2008-2012



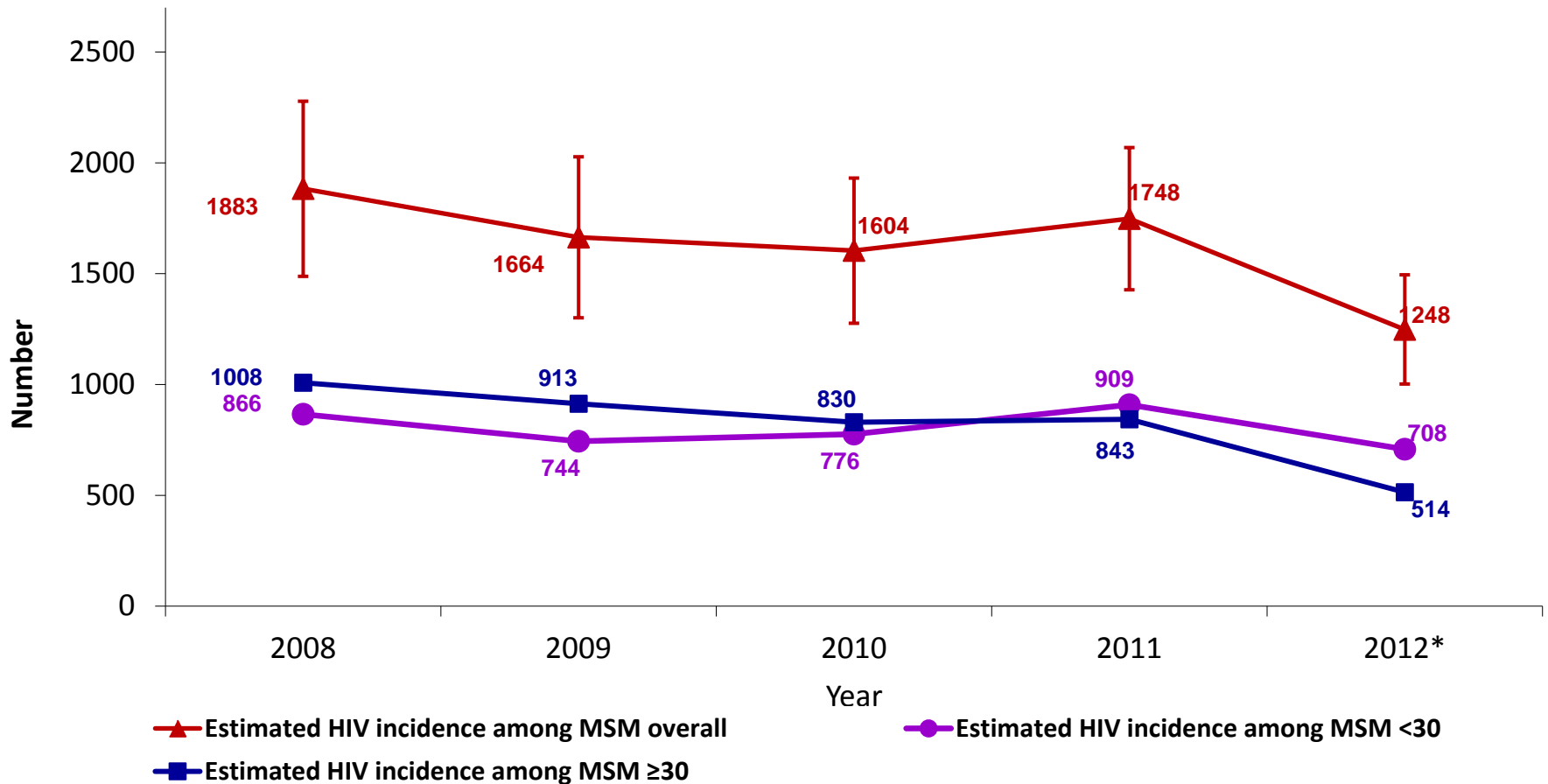
New HIV Diagnoses Among MSM <30 in NYC, 2008-2012



New HIV Diagnoses Among MSM ≥ 30 in NYC, 2008-2012



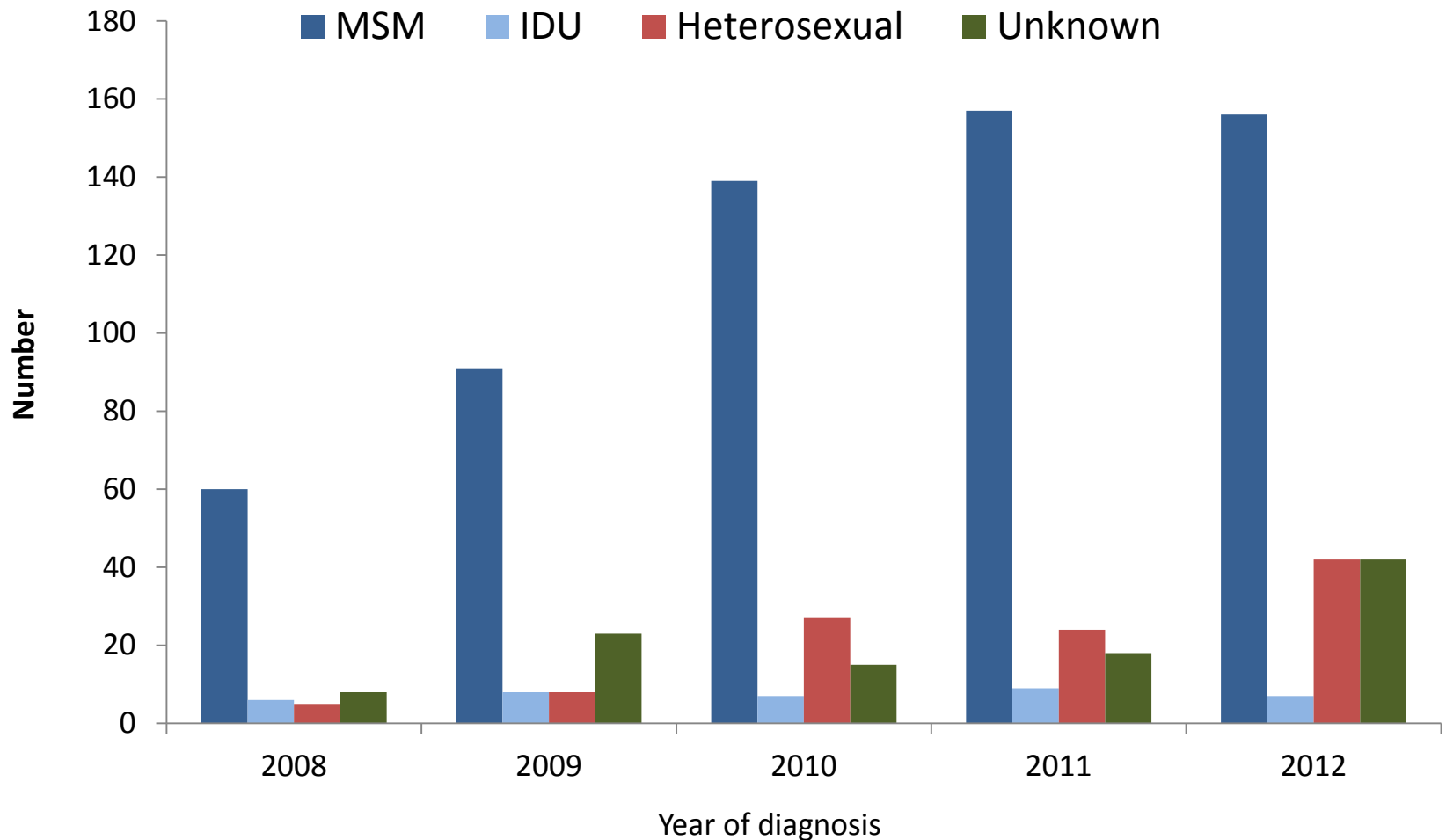
Estimated HIV Incidence Among MSM in NYC, 2008-2012



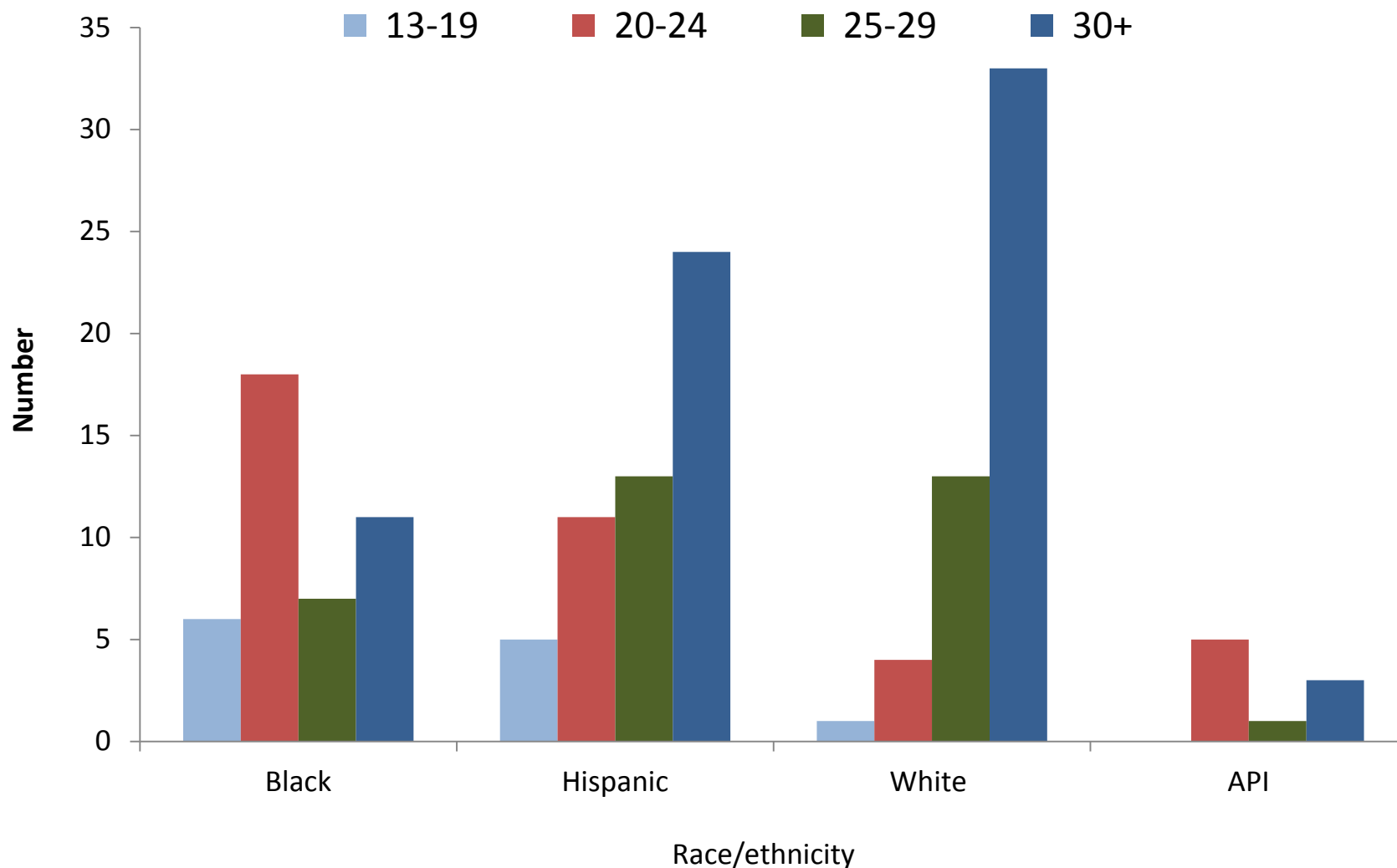
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¹Estimates generated September 2013, by the CDC Stratified Extrapolation Approach (SEA). SEA combines results from the Serologic Testing Algorithm for Recent Seroconversion (STARHS) with data on demographic characteristics, risk factor, initial diagnosis date, testing and treatment history from the HIV surveillance registry. Unknown risk factor was imputed using the Multiple Imputation procedure in SAS v9.2.

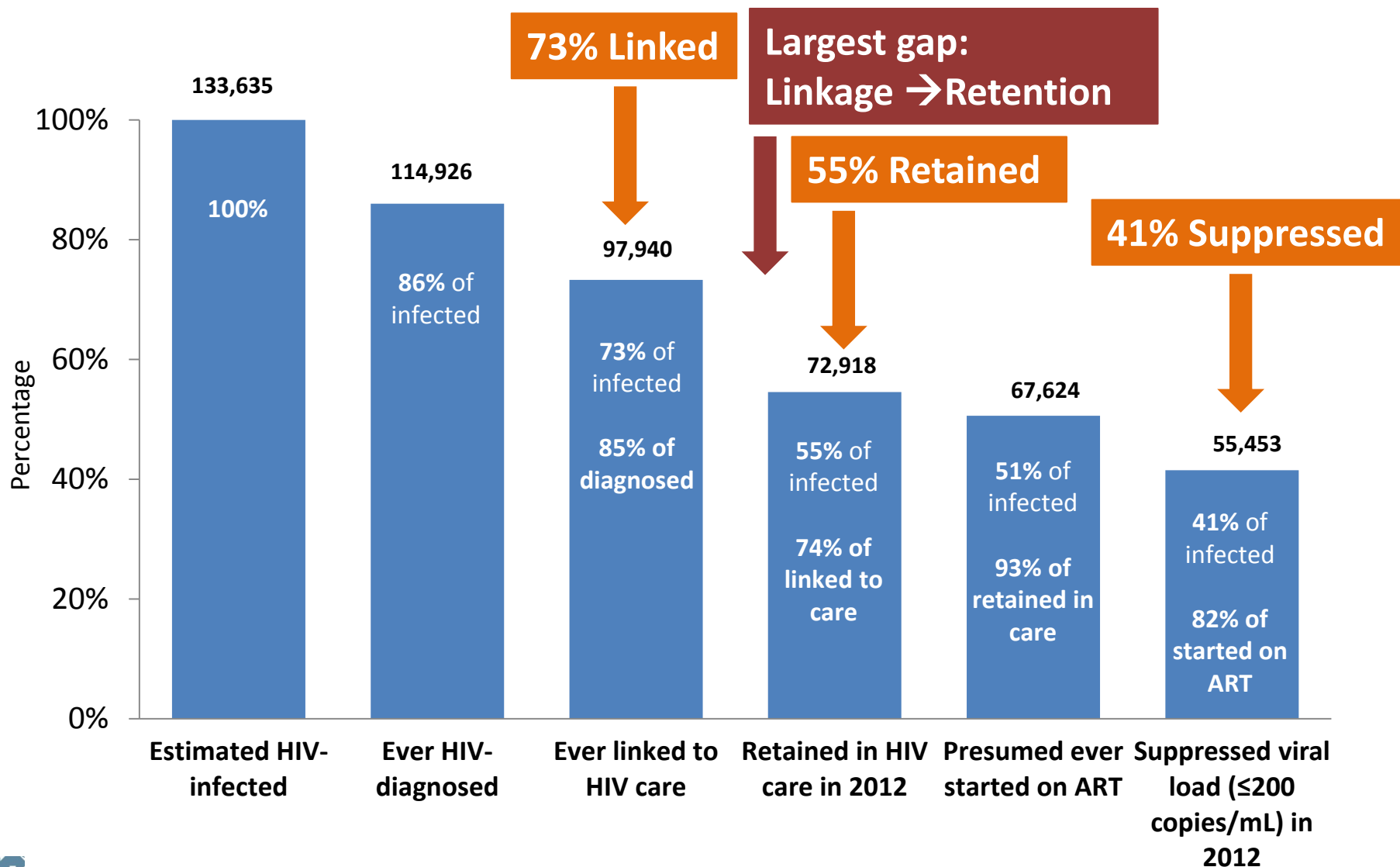
Acute HIV Infection by HIV Transmission Risk in NYC, 2008-2012



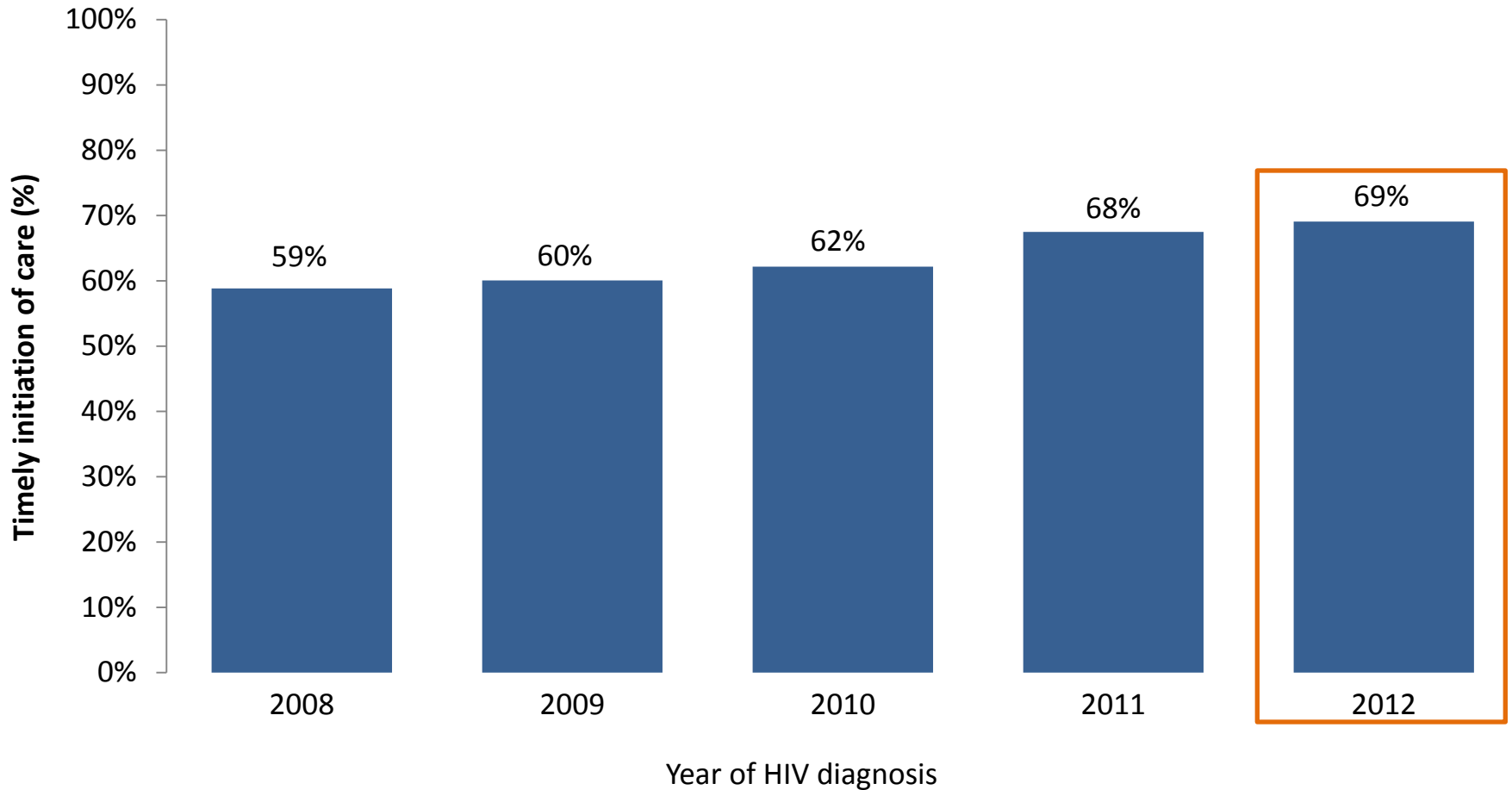
Acute HIV Infection Among MSM by Age and Race/ethnicity in NYC, 2012



HIV Care Continuum for NYC, 2012

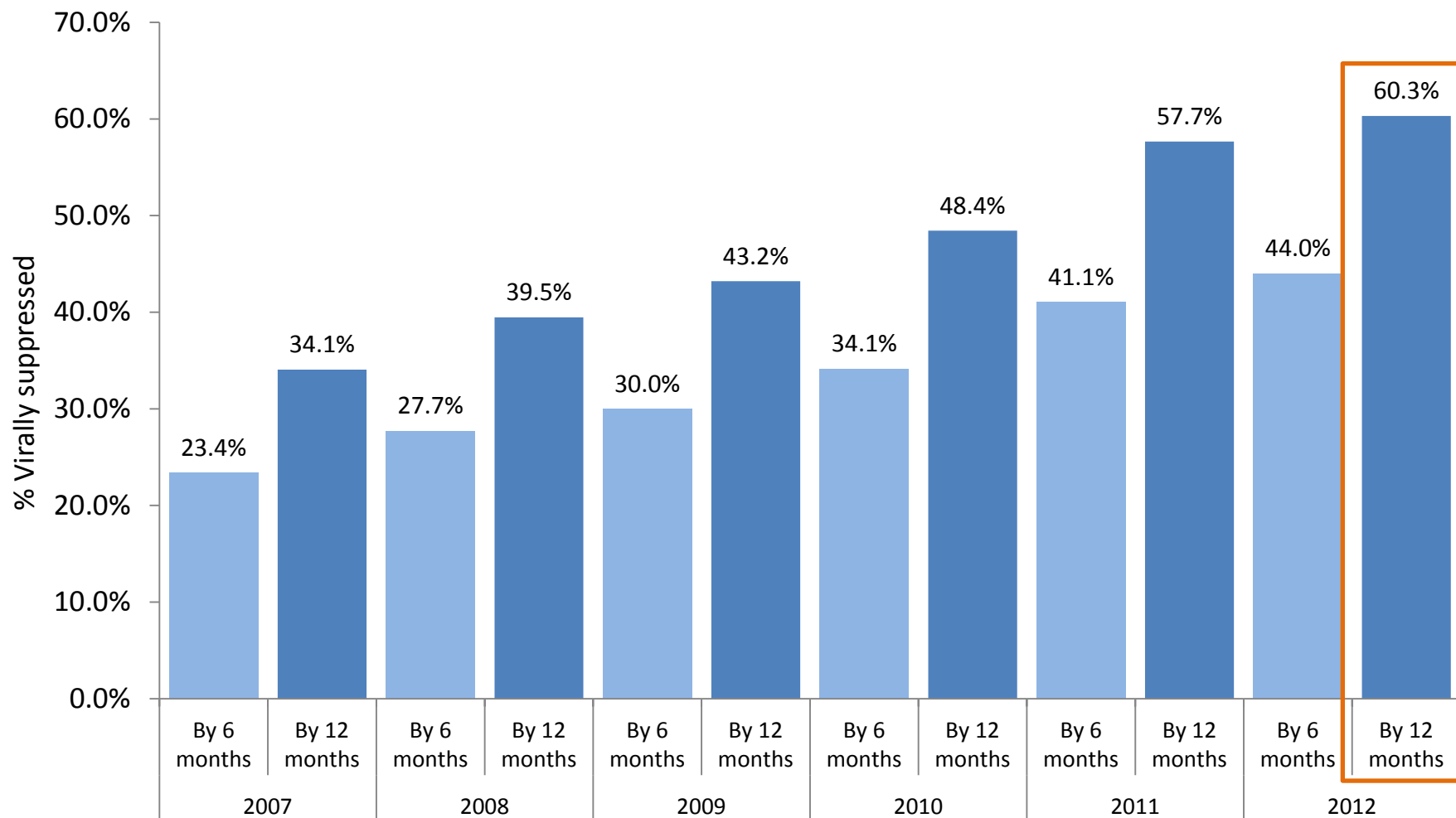


Initiation of Care Within 3 Months of HIV Diagnosis in NYC, 2008–2012



Timely initiation of care is defined as first CD4 or VL drawn within 3 months (91 days) of HIV diagnosis, following a 7-day lag. Data reported to NYC DOHMH by June 30, 2013.

Viral Suppression at 6 and 12 Months After HIV Diagnosis in NYC, 2007-2012



As reported to NYC DOHMH by December 31, 2013.

Thank you

HIV Epidemiology and Field Services Program, NYC DOHMH
<http://www.nyc.gov/html/doh/html/data/hivepi.shtml>