

***CDC - HIV Incidence, Prevalence and Undiagnosed Infections in Men Who Have Sex With Men - HIV incidence decreased among all transmission categories except MSM***

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**HIV INCIDENCE, PREVALENCE, AND UNDIAGNOSED INFECTIONS IN MEN WHO HAVE SEX WITH MEN**

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## **Conclusion**

- HIV incidence decreased among all transmission categories except MSM
- Disparities by race/ethnicity and age among MSM
  - Continued high incidence among black MSM and increasing incidence among Hispanic/Latino MSM and 25–34 year olds
  - High percentage of undiagnosed infections among black and Hispanic/Latino MSM
  - Among young MSM, decreasing incidence is encouraging but 52% with undiagnosed infections in 2014
- Tailored testing, prevention and treatment are needed for these groups to reduce HIV transmission



## HIV Incidence, Prevalence and Undiagnosed Infections in Men Who Have Sex With Men

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### Background

- Gay, bisexual, and other men who have sex with men (MSM) represent ~2% of the US population, yet 67% of persons with HIV diagnoses in 2015
- Differences in HIV diagnoses by race/ethnicity and age have been described but less data are available on incidence and prevalence
- New method using national HIV surveillance data and CD4 tests used to estimate incidence, prevalence and percent of undiagnosed infections
- Estimating HIV outcomes among MSM to better guide prevention efforts

## Methods

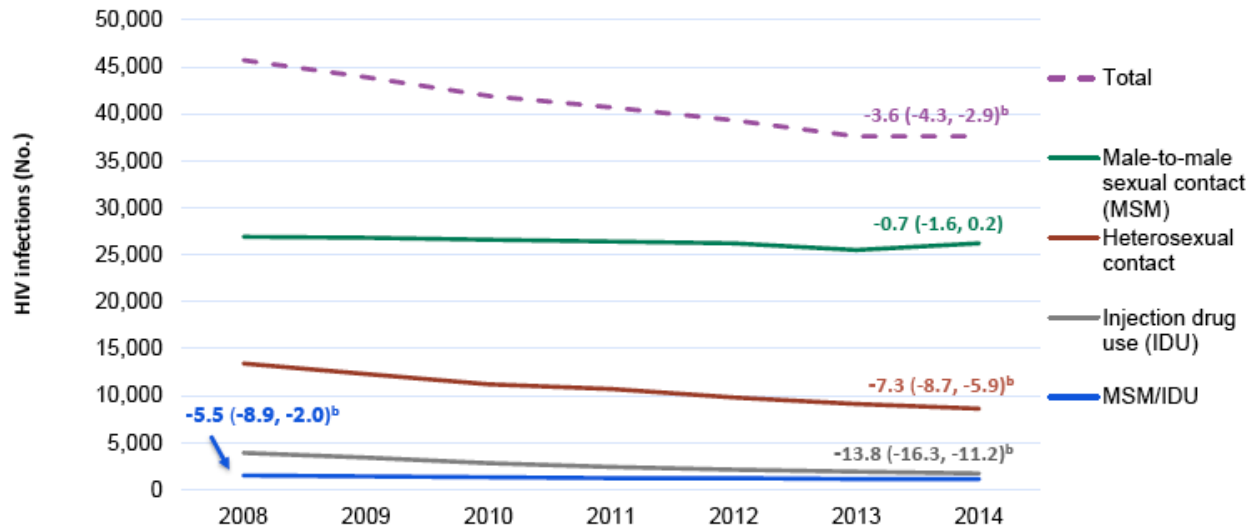
- Data from the National HIV Surveillance System
- The first CD4 value after HIV diagnosis was used to estimate the distribution of delay from infection to diagnosis based on a well-characterized CD4 depletion model
- The distribution of diagnosis delay was used to estimate HIV incidence
- HIV incidence data, combined with information on cumulative numbers of diagnoses and deaths, were used to estimate HIV prevalence
- Estimated HIV prevalence and the number of persons living with diagnosed HIV infection were used to estimate the number and percentage of undiagnosed infection

Song R, Hall IH, Green TA, et al. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immuno Defic Syndr* 2017 Jan 1;74(1):3-9.

## Methods

- Estimates for persons  $\geq 13$  years
- Data stratified by transmission category
  - MSM data stratified by race/ethnicity and age at HIV infection
  - Data adjusted for missing risk factor information
- Examined trends for 2008–2014 by the estimated annual percentage change (EAPC) and 95% confidence intervals (CIs)

## Estimated HIV incidence among persons aged ≥13 years, by transmission category<sup>a</sup>, United States, 2008–2014



Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.

<sup>a</sup>Adjusted for missing risk factor information. Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

<sup>b</sup>Estimated annual percentage change is different from zero at the 5% significance level.

## Estimated HIV prevalence among persons aged ≥13 years and percentages of persons living with undiagnosed HIV infection, by transmission category<sup>a</sup>, United States, 2014

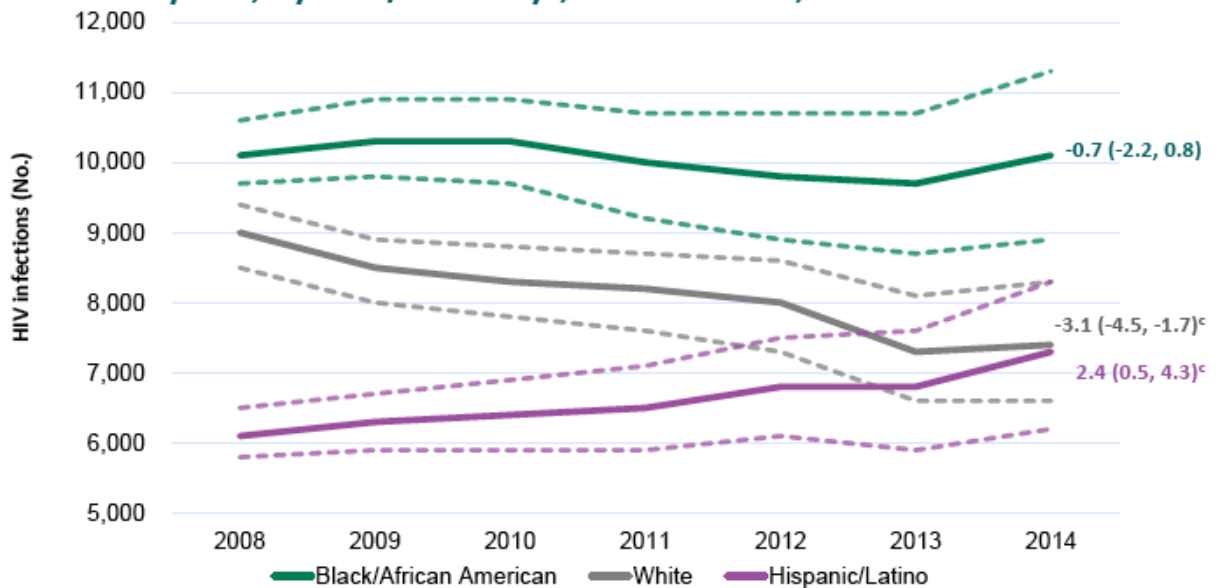
Transmission category	HIV prevalence		Persons living with undiagnosed HIV infection	
	No.	95% CI	%	95% CI
Total	1,107,700	(1,088,500, 1,127,000)	15.0	(14.3, 15.7)
Male-to-male sexual contact	615,400	(600,900, 629,900)	17.3	(16.3, 18.4)
Injection drug use	139,700	(133,300, 146,100)	6.4	(4.4, 8.4)
Male-to-male sexual contact and injection drug use	56,600	(52,900, 60,200)	7.4	(4.5, 10.3)
Heterosexual contact	296,100	(286,300, 306,000)	15.6	(14.2, 17.0)

Abbreviation: CI, confidence interval.

Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.

<sup>a</sup>Adjusted for missing risk factor information. Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

**Estimated HIV incidence among men who have sex with men<sup>a</sup>, aged ≥13 years, by race/ethnicity<sup>b</sup>, United States, 2008–2014**



Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.  
<sup>a</sup>Adjusted for missing risk factor information. <sup>b</sup>Hispanics/Latinos can be of any race.  
<sup>c</sup>Estimated annual percentage change is different from zero at the 5% significance level.

**Estimated HIV prevalence among men who have sex with men<sup>a</sup> aged ≥13 years, by race/ethnicity, United States, 2014**

Race/ethnicity	No.	95% CI
Black/African American	198,100	(189,400, 206,700)
Hispanic/Latino <sup>b</sup>	138,800	(131,800, 145,900)
White	243,000	(234,600, 251,400)

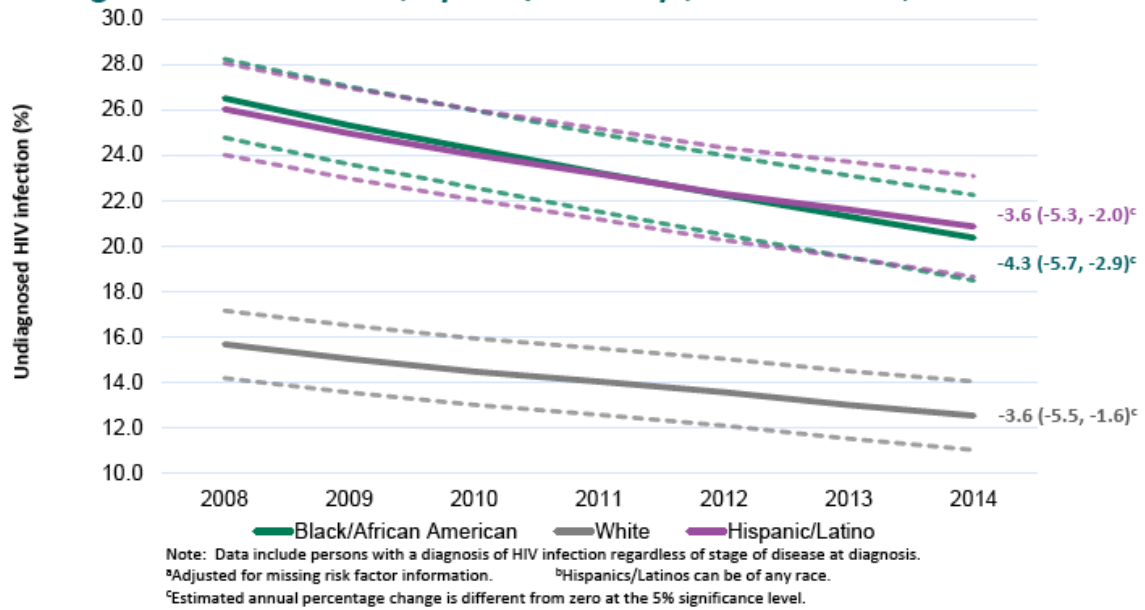
Abbreviation: CI, confidence interval.

Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.

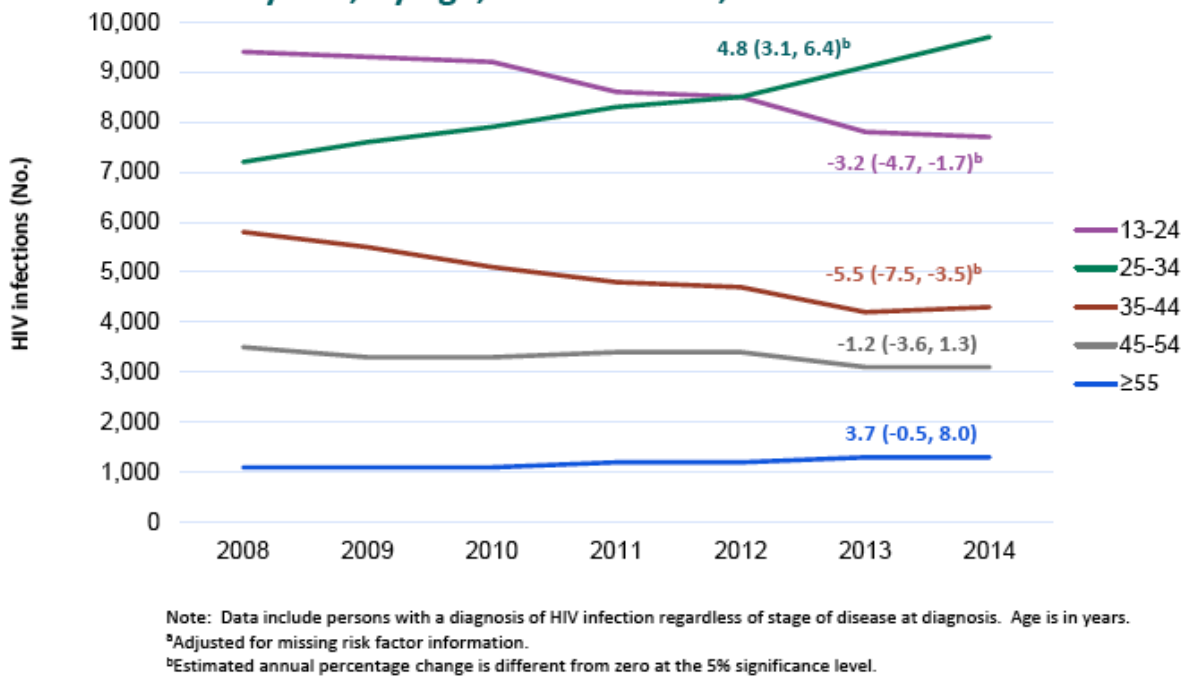
<sup>a</sup>Adjusted for missing risk factor information.

<sup>b</sup>Hispanics/Latinos can be of any race.

**Estimated percentages of men who have sex with men<sup>a</sup>, aged ≥13 years, living with undiagnosed HIV infection, by race/ethnicity<sup>b</sup>, United States, 2008–2014**



**Estimated HIV incidence among men who have sex with men<sup>a</sup>, aged ≥13 years, by age, United States, 2008–2014**



## Estimated HIV prevalence among men who have sex with men<sup>a</sup> aged ≥13 years, by age, United States, 2014

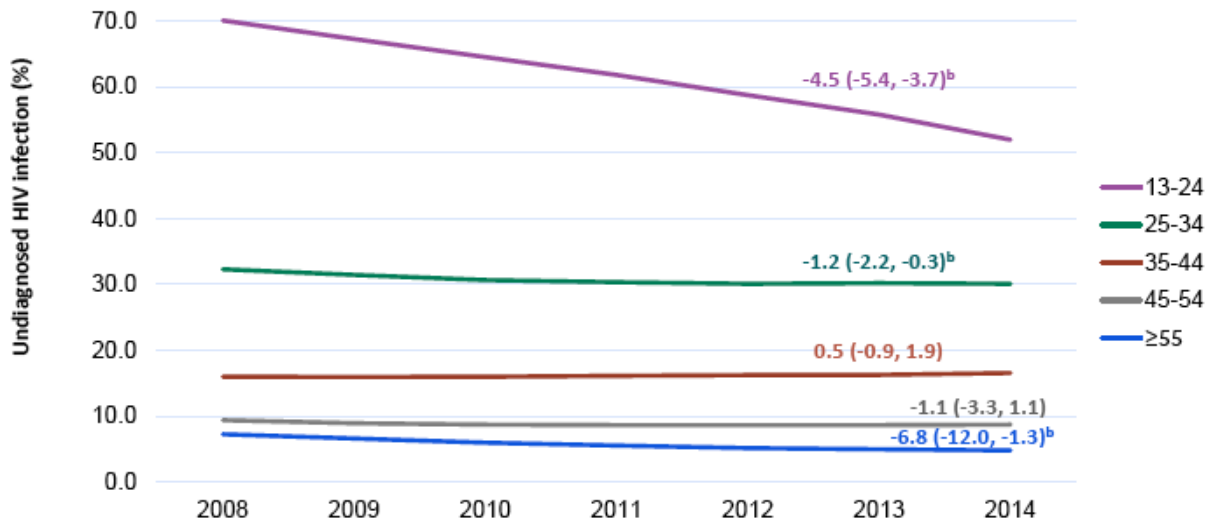
Age in years	No.	95% CI
13-24	48,200	(46,400, 49,900)
25-34	128,500	(126,300, 130,800)
35-44	125,800	(124,100, 127,500)
45-54	185,800	(184,000, 187,600)
≥55	127,100	(125,300, 128,800)

Abbreviation: CI, confidence interval.

Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis.

<sup>a</sup>Adjusted for missing risk factor information.

## Estimated percentages of men who have sex with men<sup>a</sup>, aged ≥13 years, living with undiagnosed HIV infection, by age, United States, 2008–2014



Note: Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. Age is in years.

<sup>a</sup>Adjusted for missing risk factor information.

<sup>b</sup>Estimated annual percentage change is different from zero at the 5% significance level.

**Questions?**  
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We thank the state and local health departments and the HIV surveillance programs that provided surveillance data to CDC

For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.