

HIV INCIDENCE ESTIMATES

NEW YORK STATE, 2013

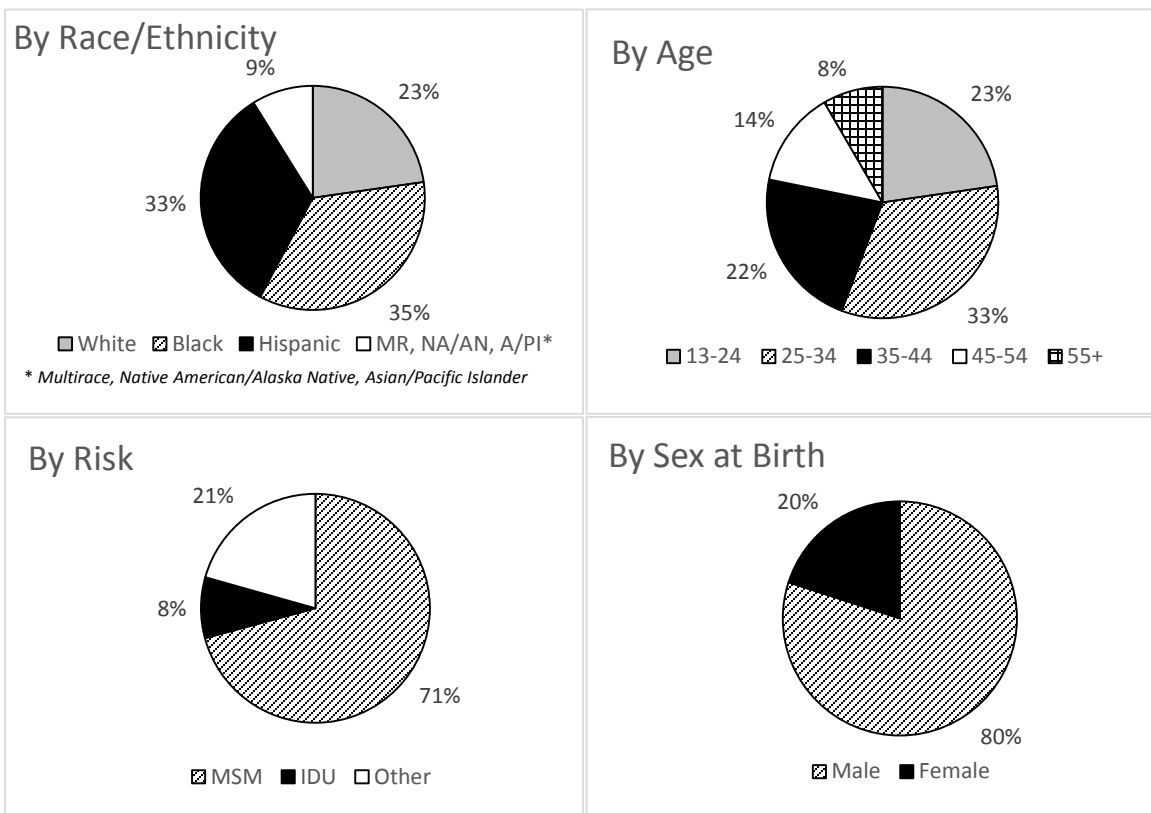
INTRODUCTION

HIV incidence data¹ estimate the number of persons who become newly infected in a given year. The overall benchmark for New York State's *Ending the Epidemic* initiative is a reduction in such cases to 750 by the end of 2020. This document reports NYS incidence estimates and population rates for 2006-2013.

HIGHLIGHTS FROM 2013 INCIDENCE ESTIMATES

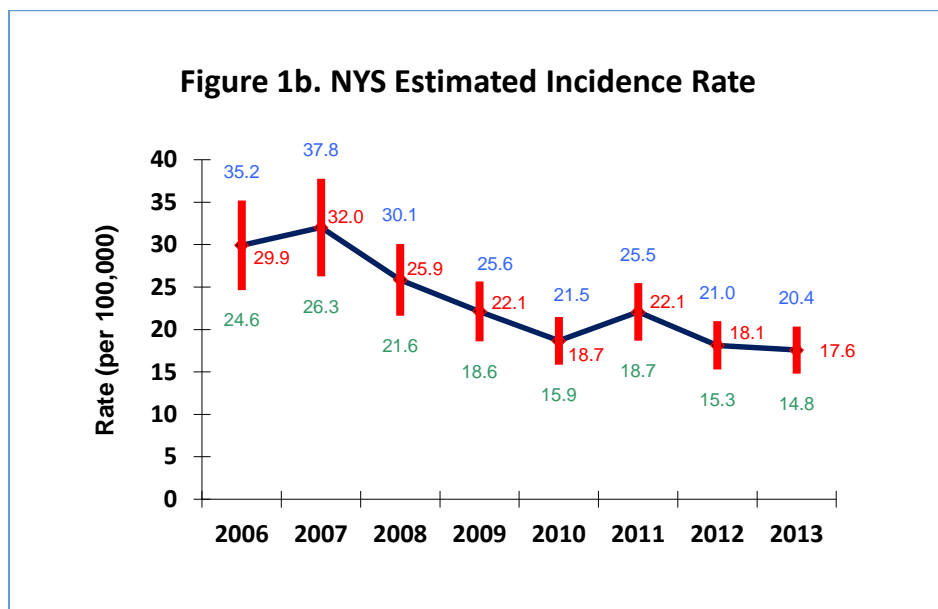
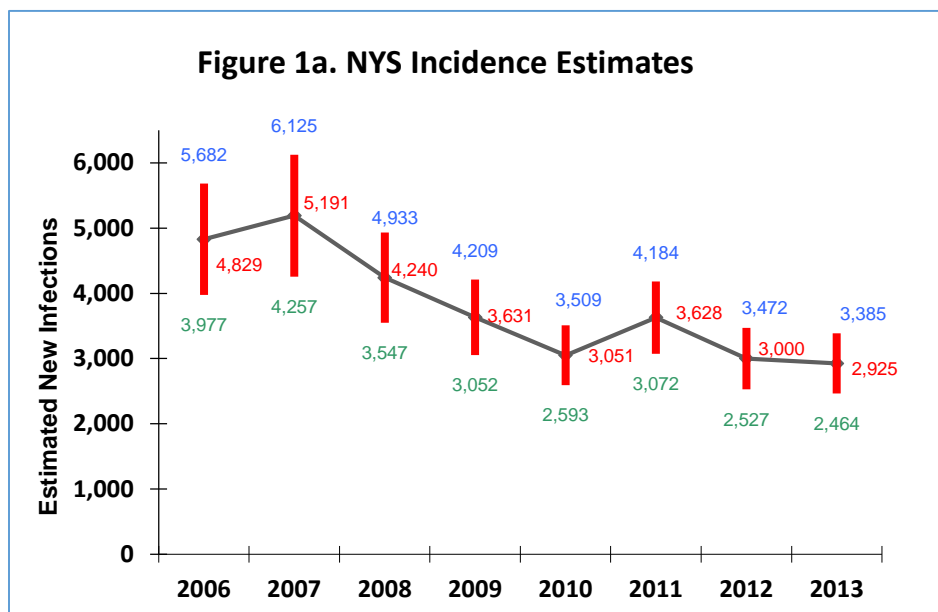
- NYS had an **estimated 2,925 new HIV infections** in 2013 or 17.6 infections per 100,000 population.
- Non-Hispanic blacks and Hispanics made up almost **70% of estimated new infections**, although their combined population proportion was just 32% in 2013. The estimated rate for non-Hispanic blacks (41.6 per 100,000) was six times that of non-Hispanic whites (6.8 per 100,000), and the rate for Hispanics was five times higher (34.0 per 100,000).
- People ages 25-34 had the **greatest estimated number of new infections of any age group** (966) and the highest rate (34.5 per 100,000). In 2013, **one in every three** estimated new infections was in persons aged 25-34 years, although only 16.9% of NYS residents were age 25-34 in 2013.
- Men who have sex with men (MSM) comprised **over two-thirds of estimated new infections** (71%).
- Estimated new infections among men (2,339) were **four times higher than those among women** (585).

NYS INCIDENCE ESTIMATES BY POPULATION GROUP, 2013



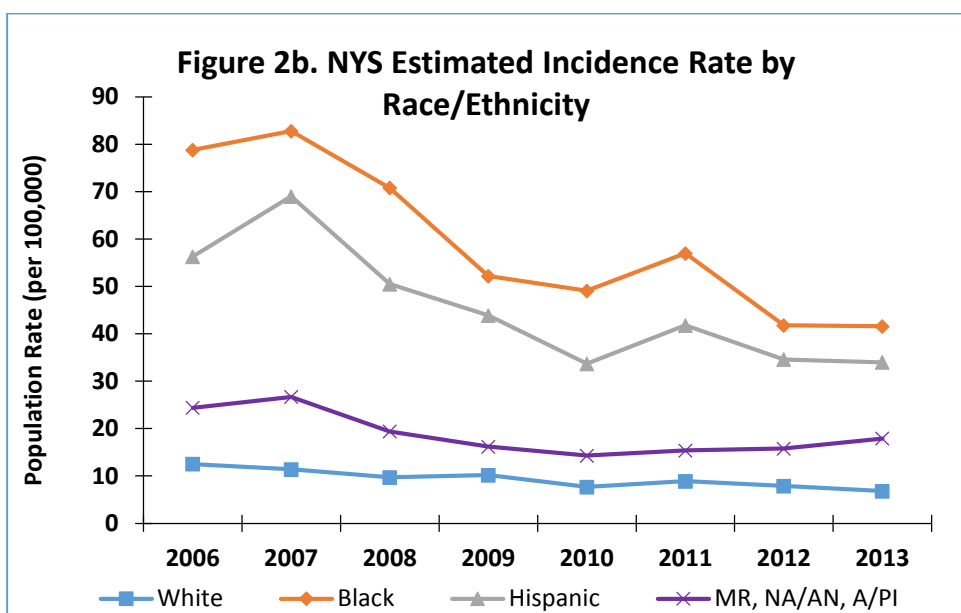
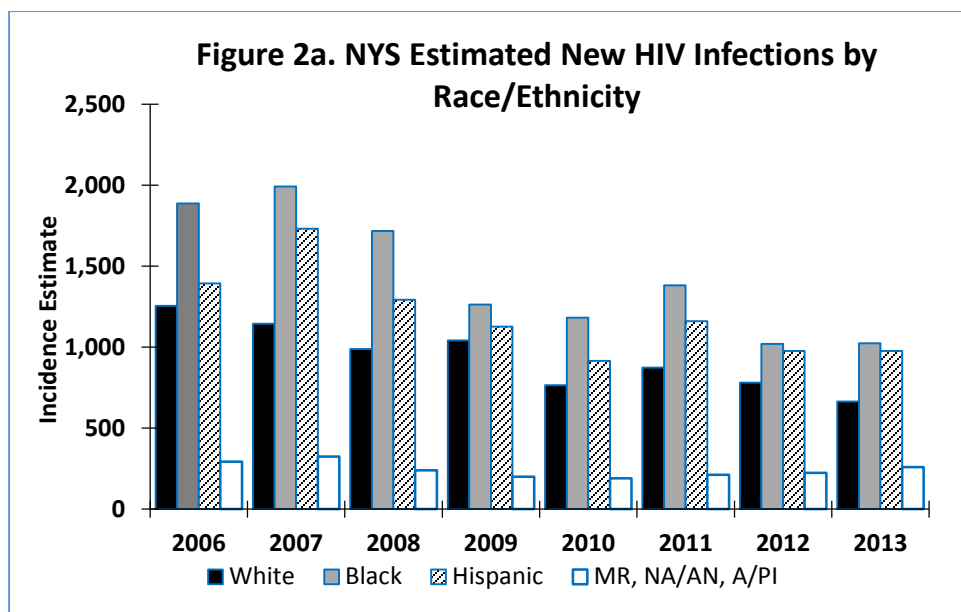
STATEWIDE INCIDENCE TREND 2006 – 2013

The new infection estimates for each year are shown in **Figure 1a** along with the 95% confidence interval. Between 2006 and 2013, estimated new HIV infections decreased 39%. The estimated incidence rates (i.e., the number of new infections per 100,000 population) and 95% confidence intervals are shown in **Figure 1b**. Between 2006 and 2013, the estimated incidence rate decreased by 41%, a statistically significant decrease.



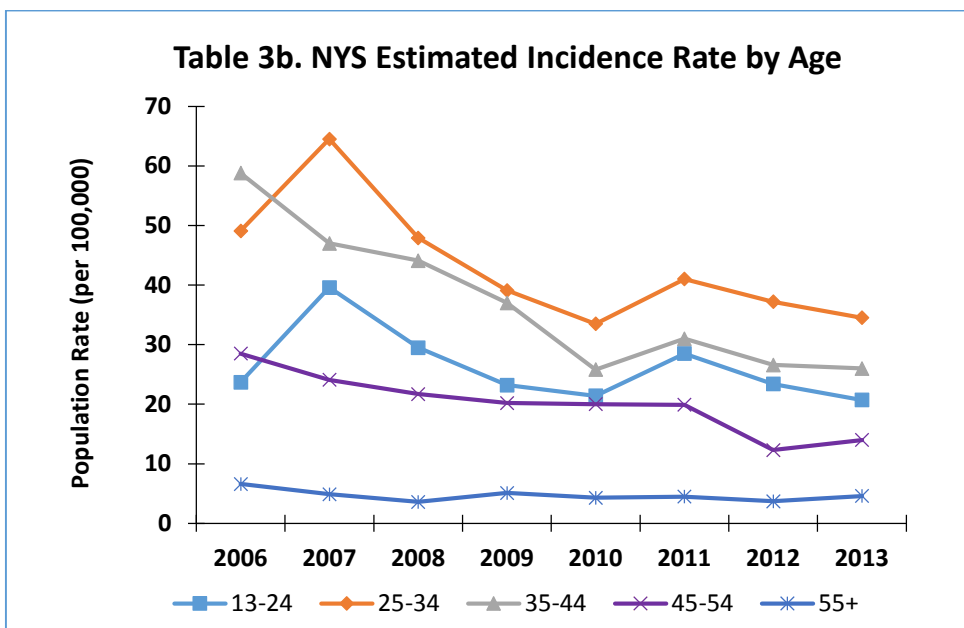
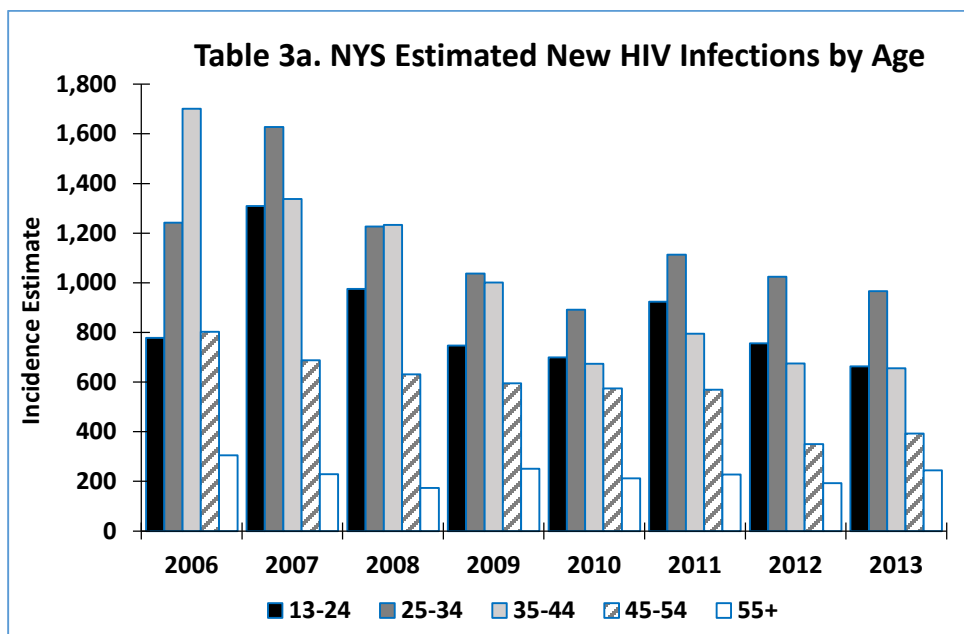
RACE/ETHNICITY INCIDENCE TREND 2006 – 2013

Incidence by race/ethnicity is shown in **Figures 2a** and **2b**. Between 2006 and 2013, estimated new HIV infections decreased by race/ethnicity as follows: non-Hispanic white – 47% decrease; non-Hispanic black – 46% decrease; Hispanic – 30% decrease; and for the combined non-Hispanic multi-race (MR), Native American/Alaska Native (NA/AN), and Asian/Pacific Islander (A/PI) category – 11% decrease. The NYSDOH is unable to assess incidence individually for numerically smaller race/ethnicity groups using CDC's incidence methodology.



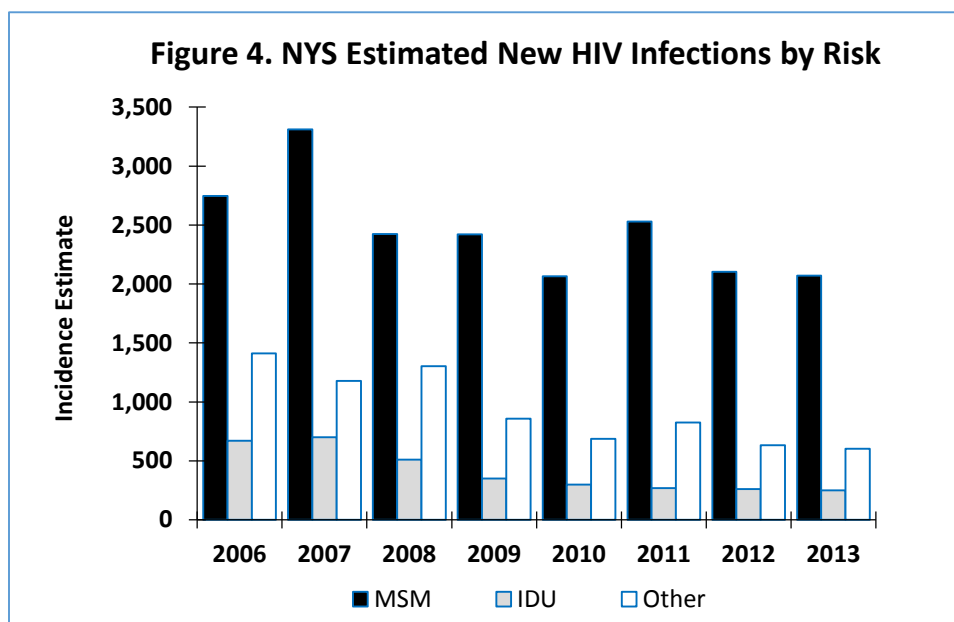
AGE INCIDENCE TREND 2006 – 2013

A decrease of 61% in estimated new HIV infections is seen for the age group 35-44 between 2006 and 2013. Although a slight decrease is also seen in age group 25-34, in 2013 one out of every three new HIV infections was found to occur in this age group.



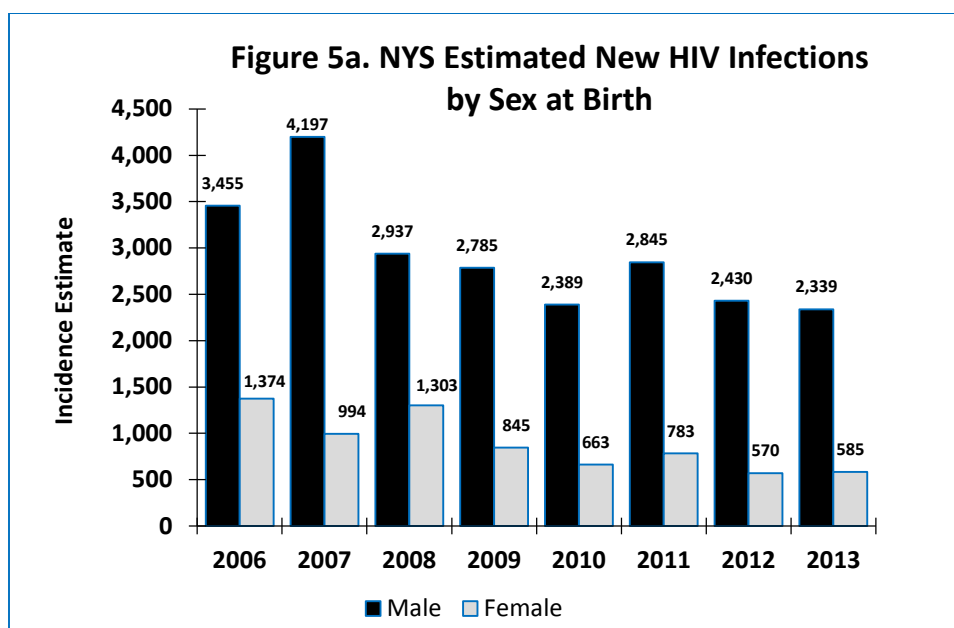
RISK INCIDENCE TREND 2006 – 2013

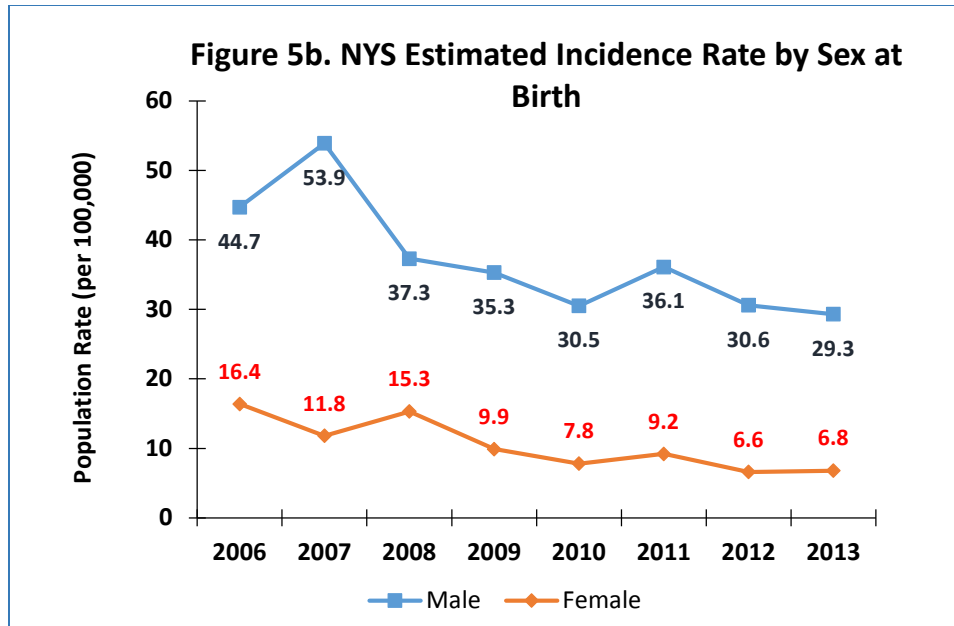
Estimates by transmission risk category are shown in **Figure 4**. From 2006-2013, there was a 25% decrease in new HIV infections among MSM, compared to a 63% decrease among IDU and a 57% decrease among “other risk.” Other risk includes heterosexual risk cases and cases that lack a CDC risk category designation. In this estimation procedure, estimated infections among persons with both MSM and IDU risk are grouped with IDU risk.



SEX AT BIRTH INCIDENCE TREND 2006 – 2013

Estimates by sex at birth are shown in **Figures 5a and b**. A 35% decrease was seen among males and a 59% decrease among females from 2006-2013. Of the total estimated infections for 2013, 80% were in males.





SPECIAL FOCUS: DEMOGRAPHIC TRENDS AMONG MSM 2006-2013

To further examine MSM subpopulations, incidence estimates were created for 12 subgroups² characterized by age (13-29, 30+ years), transmission risk (MSM, non-MSM/persons with all other risks including those with unknown risk), and race/ethnicity (non-Hispanic black, Hispanic, and Other). The 'other' race/ethnicity designation includes non-Hispanic white, multi-race, Native American/Alaska Native, and Asian/Pacific Islander. **Figure 6a** shows decreases over time in incidence estimates for both MSM and non-MSM. However, non-MSM have experienced a percent decline more than twice that of MSM (59% decline among non-MSM vs. 25% among MSM). In 2013 an estimated 71% of new infections were in MSM with 29% in non-MSM.

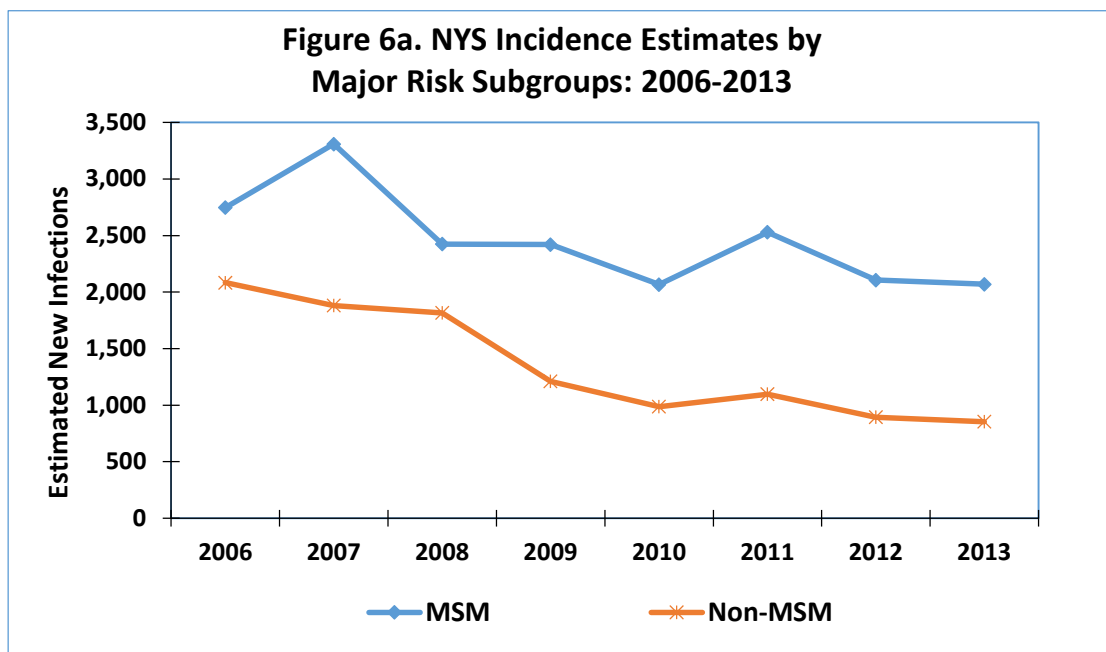
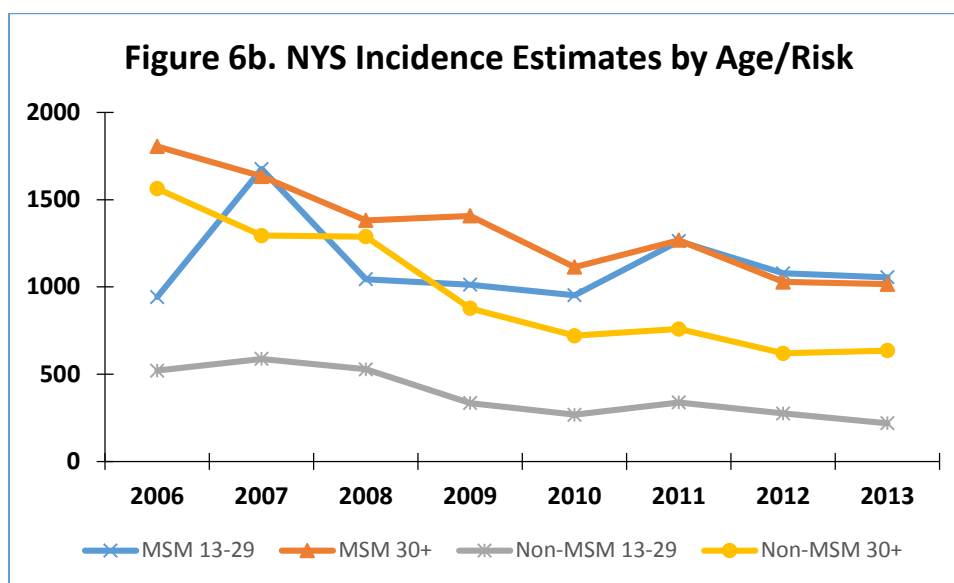


Figure 6b shows 2006–2013 incidence trends among MSM and Non-MSM ages 13-29 and 30+. Between 2006 and 2013, large decreases in new infections were seen for all groups except the MSM 13-29 group, which experienced an increase of 12% in the same period.



Figures 7a-d examine more closely trends among the 12 subgroups. Here we see all risk/age/race subgroups experiencing declining incidence since 2006, and a few subgroups experiencing small increases in 2013 over earlier years.

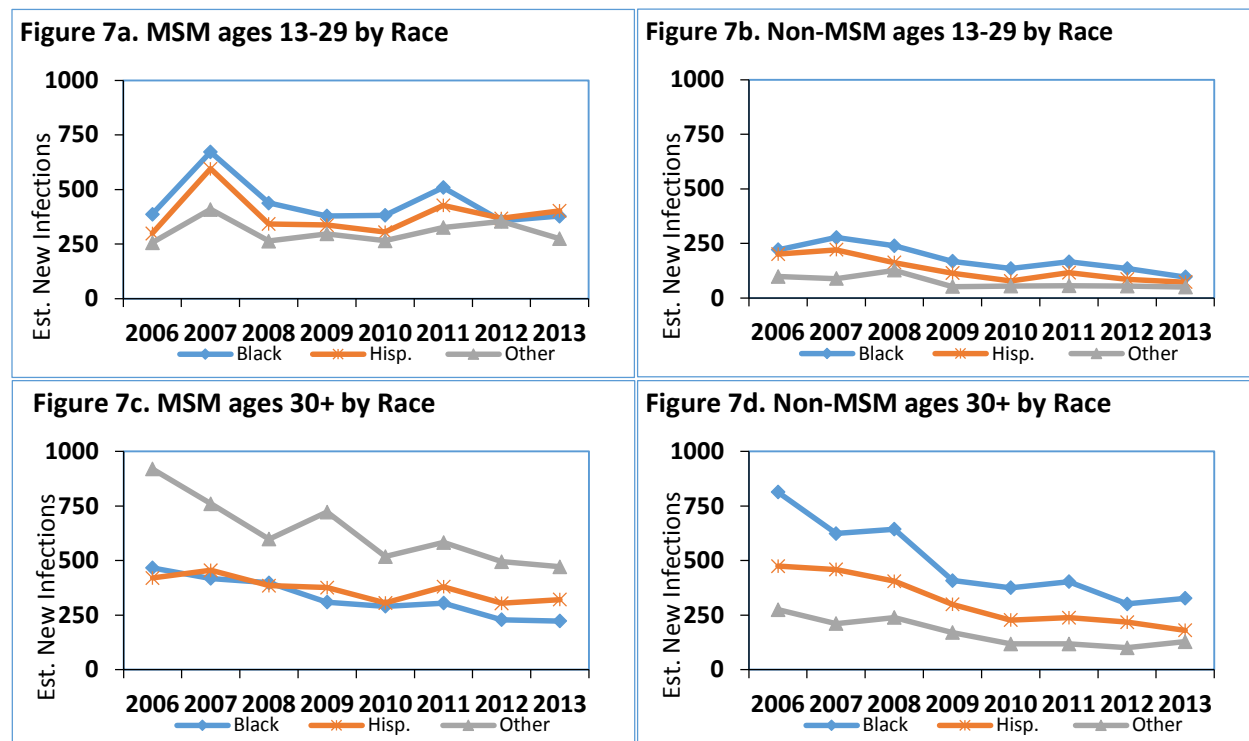
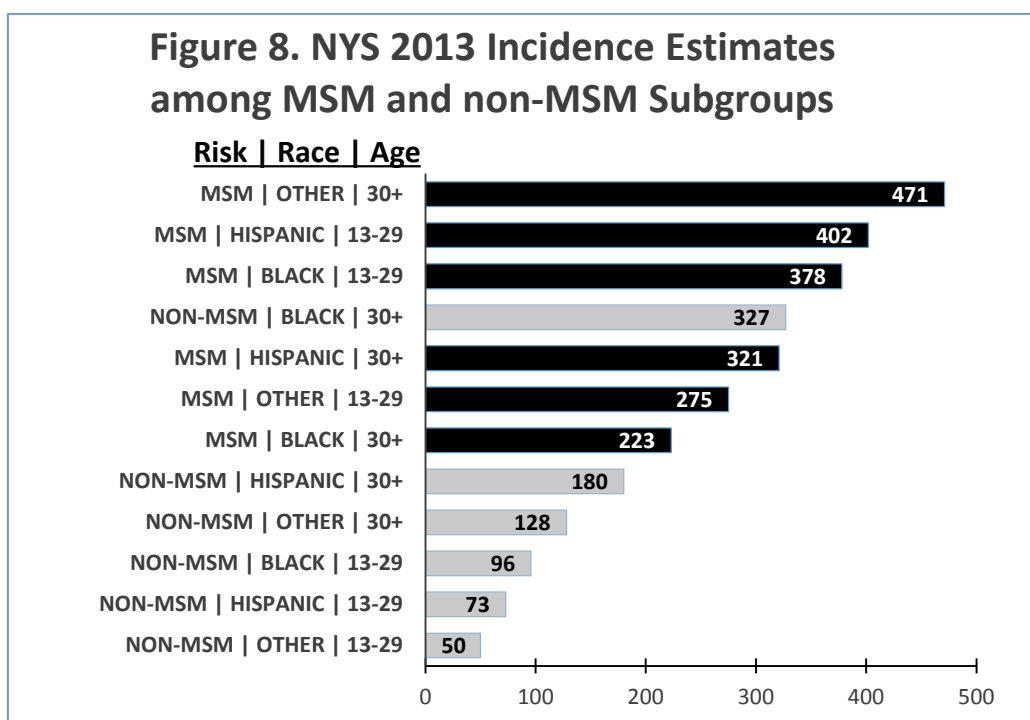


Figure 8 shows the estimated number of new infections occurring in each subgroup in 2013. It underscores the need to ensure all populations benefit from the enhanced *Ending the Epidemic* efforts to reduce new HIV infections to 750 by the end of 2020. The black-shaded bars represent MSM groups; the gray-shaded bars represent non-MSM groups.



CONCLUSION

New York State has made decisive progress in driving down new infections from 2006 levels. In order to reach the goal of 750 new infections by the end of 2020 it will be important to capitalize on this progress, ensuring that *Ending the Epidemic* activities effectively serve those groups where new infections continue to occur.

Questions about this report may be sent to the Bureau of HIV/AIDS Epidemiology at bhae@health.ny.gov or (518) 474-4284.

END NOTES

¹ Incidence data, derived by using a CDC-developed method called the stratified extrapolation approach (SEA) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2919237/>), combine a range of data sources and analytical methods to produce an estimate of the number of new HIV infections in a given year. Whereas counts of newly diagnosed cases may include HIV infections that occurred many years ago, incidence estimates are limited to only those infections that happened within a specified time frame.

² The subgroups were chosen to facilitate evaluation of HIV incidence among race/ethnicity and age subgroups of MSM. To meet the minimum size requirements of the SEA procedures, disparate groups of individuals were combined in the “non-MSM” category (males and females with IDU, heterosexual, and unknown risk) and in the “other” race/ethnicity category (whites, Asian/Pacific Islanders, Native Americans/Alaska Natives, multiracial). The aggregate estimate for these combined categories provides some information about the relative magnitude of incidence in these groups, but the trajectory of the epidemic in any one group may not be accurately represented by the aggregate number.