



HIV Incidence Estimates for North Carolina, 2006-2009



• What is incidence?

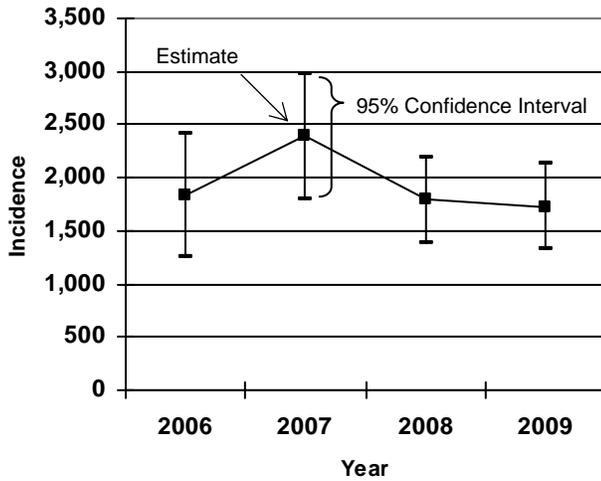
Incidence is the number of new infections of a disease among a group of susceptible people within a specified time period. The HIV incidence estimate is formed through complex statistical methods. Several pieces of information are used in the process, including an individual's previous testing history and a lab test that distinguishes between recent and long-term infections.

• How is an HIV incidence estimate different from new diagnoses of HIV Disease?

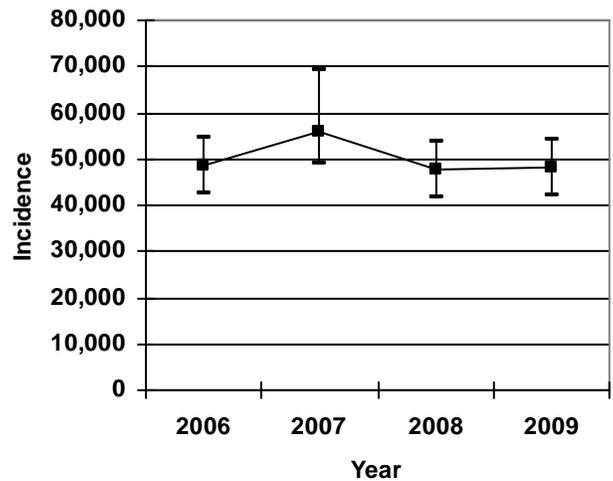
While we do our best to capture all new infections of HIV Disease occurring in North Carolina, the number of new diagnoses only includes people who have tested positive for HIV disease and whose diagnosis was reported to the N.C. division of public health. New diagnoses for any year may include both recent and long-term infections.

Overall Incidence Estimates

North Carolina Incidence Estimates



United States Incidence Estimates



In 2007, both North Carolina and the U.S. overall saw an increase in the incidence estimate. While it may partly reflect increased testing along with expanded HIV prevention efforts, no single factor could be identified as the reason. Excluding 2007, both North Carolina and the U.S. overall had relatively stable incidence estimates from 2006-2009. Though apparently stable, the number of new infections remains unacceptably high for both the U.S. and North Carolina.

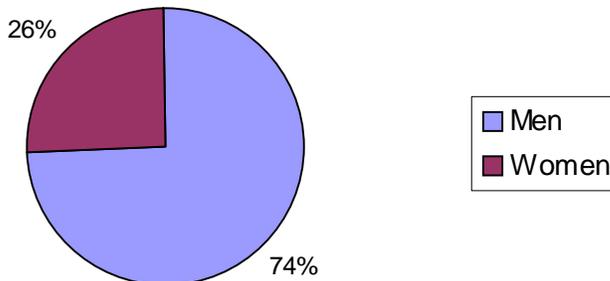
A word about estimates

These estimates are not simple measures— they apply what we know about something in order to attempt to fill in what we don't know, which is called multiple imputation. The end picture (the estimate) depends on the quality of the information supplied.

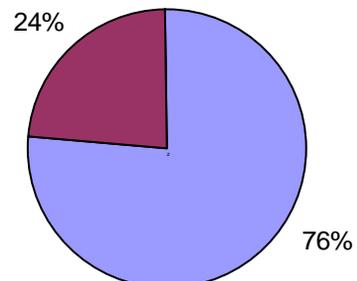
Because estimates are uncertain, they include confidence intervals. A **confidence interval** (CI) is an estimated range of values which is likely to include the measure you're estimating. For the 95 percent CIs presented in the figures above, we are 95 percent certain that the true incidence lies in the range presented. Reliable estimates have narrow CIs; unstable estimates have wide CIs.

Incidence Estimates for Selected Demographics (Proportions)

N.C. Estimated Incidence by Gender, 2009

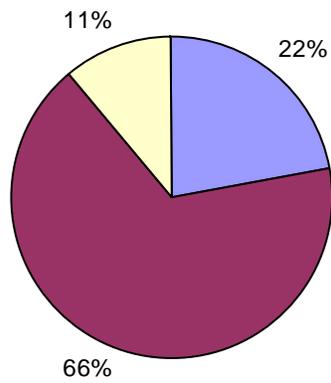


U.S. Estimated Incidence by Gender, 2009

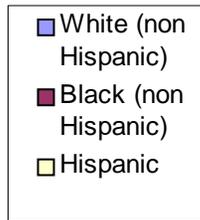
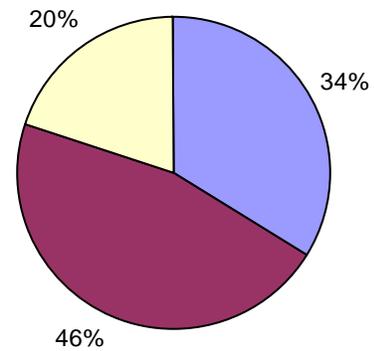


For both North Carolina and the United States overall, new infections are estimated to occur approximately three times more often among men than among women.

N.C. Estimated Incidence by Race, 2009

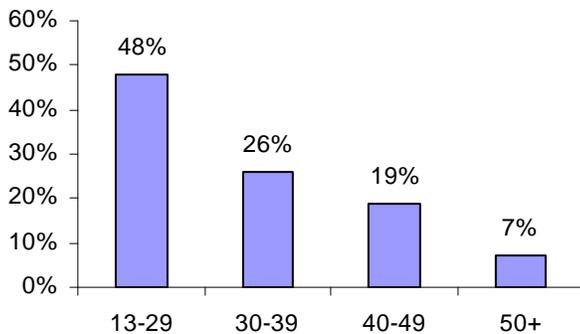


U.S. Estimated Incidence by Race, 2009

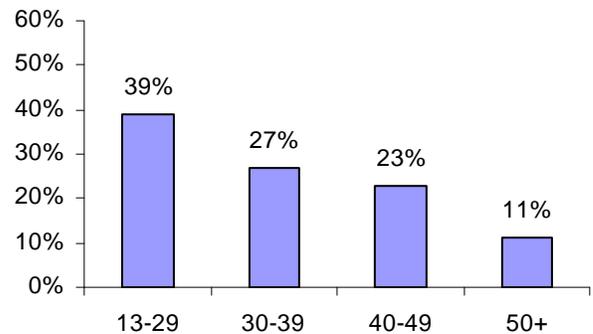


In North Carolina, blacks accounted for 20 percent more of the estimated incidence proportion than blacks in the U.S. overall. In contrast, for North Carolina, whites represented 12 percent less of the estimated incidence proportion and Hispanics represented 9 percent less of the estimated incidence proportion than the U.S. overall.

N.C. Estimated Incidence by Age, 2009

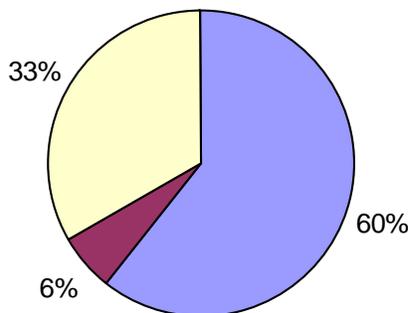


U.S. Estimated Incidence by Age, 2009

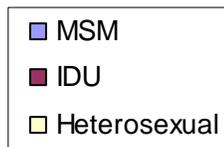
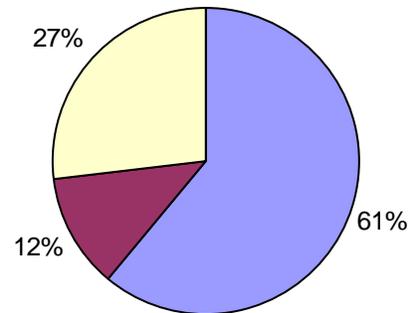


The greatest proportion of new infections was estimated to occur in the youngest age group, with the estimated incidence decreasing with age both for North Carolina and nationally. In North Carolina, the 13-29 age group accounted for 9 percent more of the estimated incidence proportion versus 13-29 year olds in the U.S. overall.

N.C. Estimated Incidence by Risk, 2009



U.S. Estimated Incidence by Risk, 2009**



**MSM/IDU risk was combined with IDU risk to make the national data comparable to the N.C. statistics.

Men who have sex with men (MSM) were estimated to experience the greatest proportion of the estimated incidence both in North Carolina and in the U.S. A greater proportion of N.C. infections were estimated to occur among homosexuals and a smaller proportion of infections were estimated to occur among injecting drug users versus the U.S. overall.

Summary

- From 2006-2009, both the N.C. and the U.S. incidence estimates appeared stable (excluding 2007)
- In 2009, N.C. blacks experienced a larger proportion of the estimated incidence than blacks nationwide (66% vs. 46%)
- In 2009, 13-29 year olds in North Carolina experienced a greater proportion of the estimated incidence than 13-29 year olds nationally (48% vs. 39%)
- In 2009, heterosexuals accounted for a larger proportion of the N.C. estimated incidence than the for overall U.S. (33% vs. 27%); however, MSM continued to be the group most heavily impacted by HIV both in North Carolina and nationally (60% and 61%)