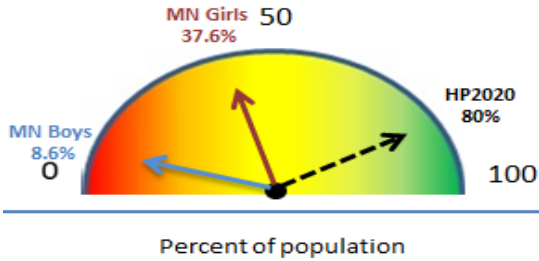
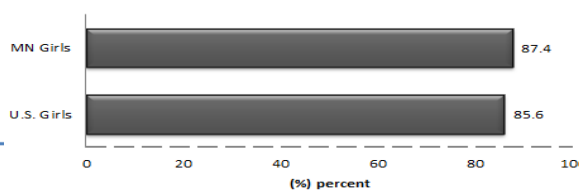


# Minnesota: Human Papillomavirus Cancer & Prevention Profile

## HPV Vaccination Rates & Missed Opportunities (13-17 yrs; NIS-Teen 2013)

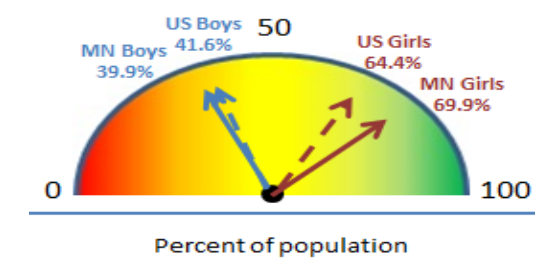


Percent of Unvaccinated Girls with Missed Opportunities

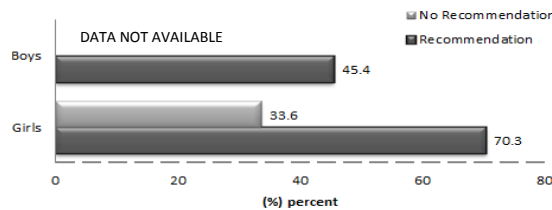


Healthy People 2020: Goal is 80% HPV vaccine (3 shots) coverage for boys and girls by age 13-15 years

## Prevalence of Provider Recommendations (13-17 yrs; NIS-Teen 2013)

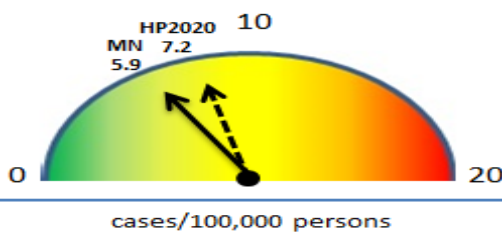


Vaccine Coverage by Receipt of Provider Recommendation

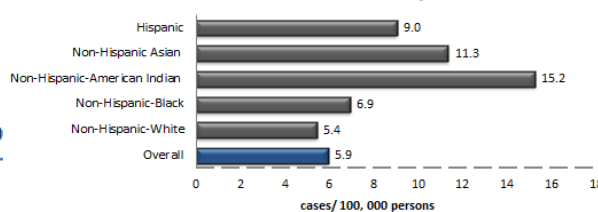


A strong provider recommendation is the most effective method for encouraging HPV vaccinations

## Cervical Cancer – New Cases per Year (USCS 2007- 2011)

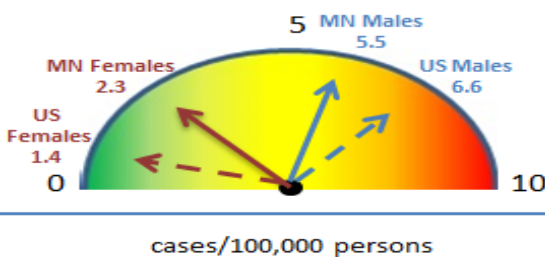


Cervical Cancer Incidence Rate by Race/ Ethnicity

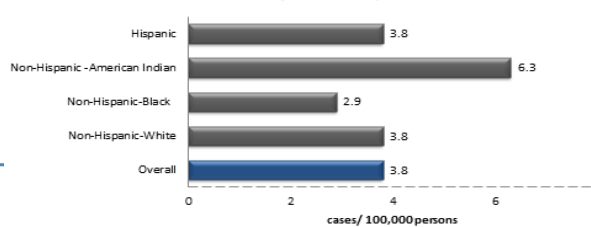


81% of new cases of cervical cancer could be prevented by HPV vaccination

## Oropharyngeal Cancer – New Cases per Year (USCS 2007- 2011)



Oropharyngeal Cancer Incidence Rate by Race/ Ethnicity



Racial/Ethnic minorities and low-income individuals suffer poorer HPV cancer outcomes

Contact your Area Health Education Center HPV Ambassador for information on professional education opportunities about HPV Vaccination.

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*Human Papillomavirus Vaccination is Cancer Prevention.*

# HOW TO READ THIS DOCUMENT



## HPV Vaccination Rates & Missed Opportunities

- Human papillomavirus (HPV) vaccination rates presented on the dashboard are state data for adolescents aged 13-17 years who have received all three doses in the HPV series according to the National Immunization Survey-Teen (NIS-Teen) from 2013.
- The bar chart data indicate the percent of unvaccinated state and national girls who had a missed opportunity. According to the CDC, a missed opportunity includes a health care encounter on or after 11th birthday, and on or after the publication of the ACIP recommendation for HPV vaccine (March 23, 2007 for girls; December 23, 2011 for boys) during which  $\geq 1$  vaccine was administered but not the 1st dose of the HPV vaccine series.
- Healthy People 2020 includes objectives for both male and females which read: "Increase the vaccination coverage level of 3 doses of human papillomavirus (HPV) vaccine for [females/males] by age 13 to 15 years." For US girls, the 2008 baseline was 16.6% and for US boys the 2012 baseline was 6.9%. The target for both boys and girls is 80% and data are from the NIS-Teen.

## Prevalence of Provider Recommendations

- Data on the dashboard represent the percent of state (solid line) and US (dashed line) boys (in blue) and girls (in red) who received a provider recommendation. According to the CDC, a provider recommendation is when a parent/guardian reported receiving recommendation for HPV vaccine from their teen's clinician according to the NIS-Teen from 2013.
- The bar chart shows vaccine coverage by receipt of provider recommendation for boys and girls 13-17 years old, when data was available from the NIS-Teen, 2013. For those who did not have a provider recommendation, light gray bars show the percent of boys and girls who received  $\geq 1$  dose of the HPV vaccine. For those who did receive a provider recommendation, dark gray bars show the percent of boys and girls who received  $\geq 1$  dose of the HPV vaccine. In most states, the bar graph shows that provider recommendation results in a greater percent of boys and girls vaccinated than when a provider does not recommend the vaccine.
- A strong provider recommendation is the most effective method for encouraging HPV vaccination – See references 4-6 below.

## Cervical Cancer – New Cases per Year

- Data on the dashboard represents the state cervical cancer incidence rate (solid line), or number of new cases per year per 100,000 persons according to the 2007-2011 data in the US Cancer Statistics (USCS) database. For comparison, the Healthy People 2020 goal of 7.2 cases/100,000 females is also shown (dashed line). The baseline for the U.S. from 2007 was 8.0/100,000 (USCS).
- The bar chart comes from the same source but breaks the cervical cancer incidence down by race and ethnicity. Subgroups shown vary by state based on the data available. Hispanic ethnicity includes all races.
- 81% of new cases of cervical cancer could be prevented by HPV vaccination. This statement is based on very recent research on the new 9-valent HPV vaccine (Gardasil©9) – See Saraiva et al. reference below for more information.

## Oropharyngeal Cancer – New Cases per Year

- Data on the dashboard represents the state (solid line) and national (dashed line) oropharyngeal cancer incidence rates, or number of new cases per year per 100,000 persons according to the 2007-2011 data in the USCS database. When available, data for both men (blue) and women (red) are shown.
- The bar chart comes from the same source but breaks the oropharyngeal cancer incidence down by race and ethnicity. Subgroups shown vary by state based on the data available. All bars include male and female data. Hispanic ethnicity includes all races.
- Racial/ethnic minorities and low-income individuals suffer poorer HPV cancer outcomes. There are a number of factors that impact this statistic, but the data are clear that racial/ethnic minority women and women living below the poverty line are more likely to become infected with HPV and get cervical cancer compared to Whites and higher income individuals. – See Hariri et al. reference and USCS below for more information.

## References

1. National Immunization Survey-Teen [http://www.cdc.gov/nchs/nis/data\\_files\\_teen.htm](http://www.cdc.gov/nchs/nis/data_files_teen.htm)
2. United States Cancer Statistics <http://wonder.cdc.gov/cancer-v2011.html>
3. Healthy People 2020. <http://www.healthypeople.gov>
4. Lau M, Lin H, Flores G. Factors associated with human papillomavirus vaccine-series initiation and healthcare provider recommendation in US adolescent females: 2007 National Survey of Children's Health. *Vaccine*. 2012 Apr 26;30(20):3112-8.
5. Vadaparampil S, Malo T, Kahn J, et al. Physicians' Human Papillomavirus Vaccine Recommendations, 2009 and 2011. *American Journal of Preventive Medicine*. 2014;46(1):90-84.
6. Saraiva M, Unger E, Thompson T, Lynch C et al. US Assessment of HPV Types in Cancers: Implications for Current and 9-Valent HPV Vaccines. *Journal of National Cancer Institute*. 2015; 107(6):1-12.
7. Hariri S, Unger E, Sternberg M, Dunne E, Swan D, Patel S, et al. Prevalence of genital human papillomavirus among females in the United States, the National Health And Nutrition Examination Survey, 2003-2006. *J Infect Dis* 2011; 204:566-73

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