

## **FACTS & FIGURES**

When sharing information about HPV with the news media, it is important that it be based in scientific evidence from reliable sources. For ease of reference, important data related to HPV vaccination and HPV-related cancers have been compiled here, with sources included.

### **What is HPV?**

- The human papillomavirus (HPV) is a group of more than 150 related viruses. Some HPV types cause warts or papillomas (non-cancerous tumors) and others cause cancers. ([CDC](#))
- HPV is the most commonly sexually transmitted infection in the world, and is transmitted through intimate skin-to-skin contact. ([CDC](#))
- HPV will infect 75-80% of people at some point in their lives. Nearly 80 million people are currently infected in the United States, and 14 million new infections occur every year. ([CDC](#))

### **HPV and Cancer**

- HPV is responsible for almost all cervical cancers, more than 90% of anal cancer, roughly 2/3 of oropharyngeal cancers and the majority of vulvar, vaginal and penile cancers. ([CDC](#))
- Each year in the United States, about 41,000 new HPV-related cancers are diagnosed. This includes roughly 17,300 men and 23,700 women. ([CDC](#))
- Worldwide, more than 600,000 new HPV-related cancers are diagnosed each year: ([Forman et al](#))
- Worldwide, more than 250,000 women die of cervical cancer each year. ([WHO](#)) In the United States ~13,250 new cases of invasive cervical cancer will be diagnosed in 2018 and ~4,100 women will die from this cancer. ([ACS](#))
- Oropharyngeal cancers are more common in men and are expected to surpass cervical cancers in annual incidence by the year 2020. ([Chaturvedi et al](#))
- There is no effective early screening test for oropharyngeal cancers. Most cancers are therefore diagnosed at later stages, when current treatments are less effective and result in significant adverse health effects. ([Schmeler and Sturgis](#))
- In the United States, the overall annual direct medical cost burden of preventing and treating HPV-related diseases is at least \$8 billion. ([Chesson et al](#))

## The HPV Vaccine

- Each HPV vaccine passed extensive safety testing before being approved by the FDA. The most common side effects are mild, including pain, redness, and swelling at the injection site. ([CDC](#))
- Since its introduction in 2006, more than 100 million doses of the HPV vaccine have been distributed nationally and more than 270 million doses globally. ([CDC](#), [WHO](#))
- The CDC recommends all children complete the vaccine series between ages 9-13. Children younger than 15 should receive two doses of the vaccine six months apart. Those above age 15 should complete a three-dose series. The vaccine is recommended for young men up to age 21 and young women up to age 26. ([CDC](#))
- The 3-dose HPV vaccine series is also recommended for the following people, if they did not get vaccinated when they were younger:
  - young men who have sex with men, including young men who identify as gay or bisexual or who intend to have sex with men through age 26
  - young adults who are transgender through age 26
  - young adults with certain immunocompromising conditions (including HIV) through age 26.
- The recommended ages are based on the most robust immune response. Further, the vaccine is protective, not curative, meaning that maximum effectiveness is achieved when administered before any exposure to HPV. ([ACIP](#))
- Nationally, 49.5% of girls and 37.5% of boys have completed the HPV vaccine series. Approximately 65% of girls and 56% of boys have received at least one dose. ([CDC](#))
- The Department of Health and Human Services, through the Healthy People 2020 initiative, has introduced a goal of reaching 80% vaccination rates by the year 2020. ([Healthy People 2020](#))
- The U.S. has already seen a 64% decline in the 4 HPV types that the vaccine protects against among girls aged 14-19. There was a 34% decrease among girls 20-24. ([Markowitz et al](#))
- Several countries have achieved the recommended high vaccination rates including Rwanda (99%), United Kingdom (86%), Belgium (82%), Portugal (87%), Denmark (82%) and Australia (~84%). ([Markowitz et al](#))
- Analyses of vaccine effectiveness data from multiple countries clearly shows that the higher the HPV vaccine coverage the greater the reduction in precancerous cervical lesions and HPV infection prevalence. (Drolet et al *Lancet Infectious Diseases* 2016)
- A study from Finland demonstrated for the first time that cervical cancer incidence was 0 among vaccinated women. ([Luostarinen et al](#))
- HPV vaccine uptake is highest in US states and territories that have school entry requirements; these include Rhode Island, Washington D.C., Virginia, and Puerto Rico (as of Fall 2018).

- Studies show that many pediatricians are not consistently recommending the HPV vaccine to parents. ([Gilkey et al](#))
- Vaccination rates may be improved by addressing physician's perceptions about parental acceptance of HPV vaccination. ([Allison et al](#))
- The HPV vaccine has been shown not to increase promiscuity. Vaccination in the recommended ages was not associated with increased sexual activity-related outcome rates. ([Bednarczyk et al](#))