One in Five At-Risk Teens Is not Vaccinated Against Cancer-Causing HPV

"Vaccine hesitancy and delayed decision-making, not lack of access, are the main barriers," to the cancer-preventing shots.

April 7, 2026 By Eva Lorenz

Slightly over one in five adolescents in a Pennsylvania health system were not completely vaccinated against human papillomavirus (HPV)—the virus that causes most cases of cervical cancer—before becoming sexually active, according to a research letter published in JAMA Pediatrics.

In a twist, researchers found unexpected disparities: 49% of unvaccinated young people were non-Hispanic white, and 59% were commercially insured.

"The pattern was backwards from typical health care disparities," lead study author Brian Jenssen, MD, MSHP, told MedPage Today. "This suggests vaccine hesitancy and delayed decision-making, not lack of access, are the main barriers," he added.

Although a majority (79%) of adolescents were vaccinated against HPV before their sexual debut (first sexual experience) those who weren't are missing out on an effective cancer prevention.

"This is urgent: There are more than 39,000 HPV-caused cancers annually in the U.S., [and] we have an intervention that prevents cancer," lead study author Brian Jenssen, MD, MSHP, told Healio. "The vaccine is most effective if given before exposure."

HPV is spread through skin-to-skin and sexual contact and can cause genital warts and various types of cancer (most commonly cervical cancer). There are more than 100 types of HPV, but only about a dozen types are high-risk or cancer-causing. A highly effective vaccine can prevent HPV infection. The American Academy of Pediatrics recommends starting the HPV vaccination series

between 9 and 12 years of age.

The HPV vaccine is 97% effective in preventing cervical cancer and cell changes that could lead to cancer and almost 100% effective in preventing external genital warts, according to the American College of Obstetricians & Gynecologists.

Cervical cancer used to be one of the most common causes of cancer death for American women. However, since scientific advancements in prevention and screening, cervical cancer rates decreased by more than half from the mid-1970s to the mid-2000s, according to the American Cancer Society (ACS). In 2026, ACS estimates about 13,490 new cases of invasive cervical cancer and 4,200 deaths related to cervical cancer.

To learn more about HPV and cervical cancer, read Cancer Health's Cervical Cancer Basics, which reads in part:

> "What is cervical cancer?
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> Cervical cancer develops when cells grow out of control in the uterine cervix. The cervix is the lower part of the uterus (womb), connecting the uterus to the vagina. The most common type of cervical cancer is squamous cell carcinoma. Almost all cases of cervical cancer are caused by human papillomavirus (HPV).
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> When detected early, treatment is generally effective, and many people can be cured, but more advanced disease is harder to treat.
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> Who gets cervical cancer?
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> Cervical cancer is one of the most common malignancies in women worldwide, and it is a leading cause of cancer-related death for women in developing countries. In the United States, however, cervical cancer is relatively uncommon thanks to routine screening with HPV tests and Pap smears, which can detect abnormal precancerous cells and allow for early treatment. Wider use of the HPV vaccine has also contributed to the decline.
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> Cervical cancer is typically diagnosed in middle-aged women, and it is seldom seen in women younger than age 20. About 20% of cases occur in women over 65. Women living with HIV and those with advanced immune suppression for other reasons are more likely to develop

invasive cervical cancer."

Researchers at the Children's Hospital of Philadelphia used confidential surveys from 9,491 sexually active patients ages 13 to 18 within a large pediatric care network. Vaccination records were linked to self-reported sexual debut, or first experience, to determine whether immunization occurred prior to HPV exposure risk.

Some 12% of adolescents were not vaccinated against HPV, and another 9% failed to complete the vaccine series before their first sexual experience. The researchers found that rates of vaccination varied by practice; indeed, there were fewer unvaccinated adolescents at practices that regularly administered HPV vaccines at age 9.

To read more about recent updates on HPV vaccination and cervical cancer screening, read:

- "Declines in Cervical Cancer Incidence in U.S. Varied Substantially by State, Aligning With HPV Vaccination Rates,"
- "HPV Vaccine: One and Done?"
- "Federal Health Department Endorsees At-Home Cervical Cancer Screening" and
- "Most Women Prefer In-Person Cervical Cancer Exams to At-Home HPV Tests."

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http://beta.docker.cancerhealth.com/article/one-five-atrisk-teens-vaccinated-cancercausing-hpv