Declines in Cervical Cancer Incidence in U.S. Varied Substantially by State, Aligning With HPV Vaccination Rates, New ACS Study Finds

The American Cancer Society study reported states with higher vaccination rates generally experienced a faster decline in cervical cancer risk

ATLANTA, February 23, 2026 — A new study by researchers at the American Cancer Society (ACS) shows cervical cancer incidence rates in women ages 20-31 declined by 27% in the United States between 2016-2021, when the human papillomavirus (HPV) vaccine was available, compared to 2000-2005, before the implementation of the vaccine. However, there were substantial differences in progress across individual states, ranging from more than a 50% decrease in cervical cancer incidence to no progress at all. The study is to be published today in the *Journal of the National Cancer Institute (JNCI).*

“Compared to the reduction at the national level, the large declines in cervical cancer incidence observed in several states were very encouraging, while little or no progress in other states shows the need for targeted intervention,” said Chenxi Jiang, MPH, associate scientist, surveillance, prevention, & health services research at the American Cancer Society and lead author of the study. “Notably, the significant correlation between higher vaccination rates and greater progress across states was consistent with what we anticipated based on the proven effectiveness of the HPV vaccine.”

For the study, researchers used cancer incidence data from the U.S. Cancer Statistics Database. Differences in cervical cancer incidence rates for women aged 20-31 between the pre-vaccination (2000-2005) and vaccination era (2016-2021) were estimated using rate ratios (RRs) across 47 states and the District of Columbia (D.C.). Associations between HPV vaccination rates from the National Immunization Survey-Teen and RRs were examined and adjusted for cervical cancer screening rates from the Behavioral Risk Factor Surveillance System.

The results showed that nationwide, cervical cancer incidence rates declined by 27% during the vaccination era, from 5.1 to 3.7 per 100,000. Reductions exceeded 50% in D.C., Rhode Island, Michigan, and Hawaii, with 28 additional states achieving statistically significant reductions of 15-50%. Ten states showed slower decreases (less than 15%). Notably, progress was lacking in Vermont, West Virginia, Idaho, Arkansas, and Alabama. Across states, higher vaccination rates were correlated with greater reduction in cervical cancer incidence rates (i.e., lower RRs). Every 10% increase in vaccination rates was associated with an 11.5% reduction in RRs, adjusted for screening rates.

“With comparable state-level measures, we now have an opportunity to identify areas with slower progress against cervical cancer, inform tailored policy response, and guide the allocation of public health resources to help,” added Dr. Hyuna Sung, senior principal scientist, cancer surveillance research at the American Cancer Society and senior author of the report. “Our study provides further evidence that the benefits of one of the most effective and highly affordable cancer prevention measures remain unevenly distributed across states. Persistently lower HPV vaccination coverage in some states is likely to contribute to widening regional disparities, particularly as cohorts of young women with inadequate protection age into higher-risk age groups. Improving HPV vaccination uptake in states with currently low coverage is essential to reducing these disparities and represents a key step toward achieving cervical cancer elimination at the national level.”

“This study underscores the importance of supporting strong vaccination uptake and policies nationwide to reduce the burden of cancer,” said Lisa Lacasse, president of the American Cancer Society Cancer Action Network (ACS CAN), ACS’s advocacy affiliate. “ACS CAN believes that everyone should have access to safe and effective vaccines, including the HPV vaccine, regardless of where they live, and should not encounter health insurance and other barriers to access those vaccinations. We therefore advocate for policies at the federal, state, and local levels that support science-based immunization recommendations and policies that protect all communities.”

Other ACS researchers contributing to this study include Jessica Star, MA, MPH, Dr. Priti Bandi, and Dr. Ahmedin Jemal.

Additional ACS Resources:

- Annual Statistics Report 2026
- American Cancer Society Updates Cervical Cancer Screening Guideline
- Cancer Prevention and Early Detection Report: Cervical Cancer Prevention is Lagging

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About the American Cancer Society
The American Cancer Society is a leading cancer-fighting organization with a vision to end cancer as we know it, for everyone. For more than 110 years, we have been improving the lives of people with cancer and their families as the only organization combating cancer through advocacy, research, and patient support. We are committed to ensuring everyone has an opportunity to prevent, detect, treat, and survive cancer. To learn more, visit cancer.org or call our 24/7 helpline at 1-800-227-2345. Connect with us on Facebook, X, and Instagram.

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