

US Cervical Cancer Rates Decrease Following Implementation of Human Papillomavirus Vaccination of Young Females

Since the introduction of human papillomavirus (HPV) vaccination for young females in 2006, cervical cancer incidence has decreased in the US.

Jennifer Logan, MD, MPH

August 27, 2018 – During 2011–2014, the annual incidence of invasive cervical cancer decreased 29% compared with 2003–2006 pre-HPV vaccine era levels among females aged 15 to 34 years in the United States.

Fangjian Guo, MD, PhD, with the Department of Obstetrics & Gynecology and the Center for Interdisciplinary Research in Women's Health at The University of Texas Medical Branch at Galveston, and colleagues reported their findings online May 30, 2018 in the *American Journal of Preventive Medicine*.

Since 2006, HPV vaccination has been recommended for US females ages 11 to 26 years to prevent cervical cancer. Although vaccine use has been shown to reduce infections with certain HPV strains and cervical lesions, no study had previously assessed population-level changes in invasive cervical cancer incidence among young females.

This cross-sectional study used data from the National Program for Cancer Registries and Surveillance, Epidemiology, and End Results Incidence- U.S. Cancer Statistics 2001–2014 database to compare invasive cervical cancer incidence among 15 to 34-year-old females before vaccine introduction (2003–2006) with the most recent 4-year period after vaccine introduction (2011–2014). Data were further analyzed to determine timepoints associated with changes in incidence trends.

Compared with 2003–2006, the 4-year average annual invasive cervical cancer incidence rate during 2011–2014 was 29% lower among females ages 15 to 24 years (rate ratio, 0.71; 95% confidence interval [CI], 0.64–0.80) and 13.0% lower among females ages 25 to 34 years (rate ratio, 0.87; 95% CI, 0.84–0.90). Rates for both squamous cell carcinoma and non-squamous cell carcinoma decreased for females ages 15 to 24 years and 25 to 34 years. Furthermore, 2009 was the point at which both squamous cell and non-squamous cell cancer incidence first changed from stable to decreasing. However, a change point in cervical cancer incidence was not observed for females ages 25 to 34 years.

“These findings serve as further evidence of the effectiveness of HPV vaccination in preventing cervical cancer,” concluded Dr Guo and colleagues.

The study authors report no relevant conflicts of interest.

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