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After Vaccine's Debut, HPV Plummets in Young Women

The CDC analyzed data from before and after the introduction of the Gardasil vaccine for human papillomavirus.

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The approval of the Gardasil human papillomavirus (HPV) vaccine for girls and young women in 2006 has been followed by a dramatic decrease in the prevalence of the four strains of the virus that the vaccine prevents.

HPV causes genital warts and can can cause cervical cancer, anal cancer, oral cancer and other malignancies. The original Gardasil vaccine prevents infection with HPV types 6 and 11, which cause genital warts, and 16 and 18, which cause cancer. A newer version of the vaccine that protects against nine HPV types is now approved for both males and females up to age 45.

Centers for Disease Control and Prevention (CDC) researchers, led by Nancy McClung, PhD, of the CDC's National Center for Immunization and Respiratory Diseases, analyzed 2003 to 2006 and 2013 to 2016 data from the National Health and Nutrition Examination Survey. They looked in particular for the four HPV strains in question among 4,674 young women.

Among the 14- to 19-year-olds who participated in the survey between 2013 and 2016, 53.9% had received more than one dose of the vaccine, including 52.6% of whites, 58.1% of Blacks and 59.5% of Mexican Americans. As for 20- to 24-year-old women during this period, 51.5% received at least one vaccine dose, including a respective 58.5%, 45.0% and 33.8% of each racial group.

Evidence of any of the four strains of HPV declined from 11.5% among those in the younger age bracket during the earlier period to just 1.8% of those in the younger group during the later period.

After adjusting the data to account for differences in race, lifetime number of sex partners and poverty status, the CDC investigators found that prevalence of the four viral strains declined by 86% between the two periods. Prevalence rates among the teenage cohort declined by an unadjusted 86% among whites, 74% among Blacks and 87% among Mexican Americans between the two periods.

Among the young women in their early 20s, prevalence of the four HPV strains was 18.5% in the earlier period and 5.3% in the later period, which represented an adjusted decline of 71%.

Prevalence rates declined by an unadjusted 81% among whites, 83% among Blacks and 67% among Mexican Americans.

“These findings show how well the HPV vaccine is working to prevent HPV infections, and the potential of HPV vaccination to reduce cervical cancer disparities in the future,” McClung said in a CDC press release.

To read a press release about the study, click here.

To learn more about HPV vaccination for cancer prevention, click here.
