Nemours Children's Health Initiative to Start HPV Vaccination at Age 9 Improved Completion Rates

WILMINGTON, Del. (December 11, 2024) — A quality improvement program designed to increase earlier uptake of the human papillomavirus (HPV) vaccine raised vaccination rates significantly, according to a study by Nemours Children's Health researchers.

In a new study published in *Academic Pediatrics*, Caitlin J. Miller, medical student at Sidney Kimmel Medical College of Thomas Jefferson University and Jonathan Miller, MD, Associate Chief of Primary Care, Nemours Children's Health, Delaware Valley discussed a Nemours quality improvement initiative aimed at getting 9-year-old patients to begin the vaccination series. The study builds upon their research presented at the Pediatric Academic Societies Meeting in May.

The HPV vaccine, first approved in 2006, can prevent up to 90% of cervical cancers and large proportions of vulvar, vaginal, anal, and head and neck cancers. As of 2022, 62.6% of U.S. adolescents ages 13-17 had received both recommended doses, with 76.0% having at least one dose. However, public health experts have voiced concern that not enough adolescents complete the series, and that vaccination rates are inconsistent across racial and ethnic groups.

Currently, the U.S. Centers for Disease Control and Prevention recommends that adolescents receive their first HPV vaccine at age 11. However, research has shown that initiating vaccination at age 9 is safe, effective, and increases the chances that adolescents will complete the series.

In this study, electronic health records in 20 Nemours Children's primary care sites were updated to inform health care professionals that patients should be offered the HPV vaccine at age 9. The clinicians received updated education on the vaccine and practice-level feedback on ongoing vaccination rates.

Conducted from 2019 to 2022, the study's primary measure was the Healthcare Effectiveness Data Information Set (HEDIS) rate, defined as the percentage of patients who have had two doses of the HPV vaccine by their 13th birthday. In 2019, the HPV vaccine HEDIS rate in the Nemours Primary Care network was 49.2%. In 2022, the rate had improved to 59.5%. The following year, although the study had ended, the researchers noted the rate had continued to rise to 63.9%.

The researchers also found that early HPV vaccine initiation (starting at age 9), improved from 13.2% in 2019 to 42.2% in 2022. Early initiation improved significantly in every racial and ethnic group, with an increase from 27.6% to 51.5% for Hispanic or Latino patients; from 19.0% to 45.7% for Black patients, from 4.8% to 44.8% for Asian patients, and from 6.1% to 36.5% for white patients.

The researchers said that providers felt many parents are more accepting of HPV vaccination at age 9, possibly due to reduced stigma related to sexual activity. They also suggested that the increased provider education in this quality improvement initiative helped providers strengthen their communication on cancer prevention, an effective message for many parents.

"Initiating HPV vaccination at age 9 allows us to make leaps in this important public health measure," said Dr. Jonathan Miller. "We were thrilled to discover that this project led to significant improvements in racial disparities in vaccination rates, even though we did not design the intervention specifically to do that."

"Our study showed that initiating vaccination at age 9 leads to more adolescents being fully protected against cervical cancer and several other cancer types, which adds to a growing body of evidence and broader national push to begin the series at that age," said Caitlin Miller.

About Nemours Children's Health

Nemours Children's Health is one of the nation's largest multistate pediatric health systems, which includes two freestanding children's hospitals and a network of more than 70 primary and specialty care practices. Nemours Children's seeks to transform the health of children by adopting a holistic health model that utilizes innovative, safe, and high-quality care, while also addressing children's needs well beyond medicine. In producing the highly acclaimed, award-winning pediatric medicine podcast Well Beyond Medicine, Nemours underscores that commitment by featuring the people, programs and partnerships addressing whole child health. Nemours Children's also powers the world's most-visited website for information on the health of children and teens, Nemours KidsHealth.org.

The Nemours Foundation, established through the legacy and philanthropy of Alfred I. duPont, provides pediatric clinical care, research, education, advocacy, and prevention programs to the children, families and communities it serves. For more information, visit Nemours.org.

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