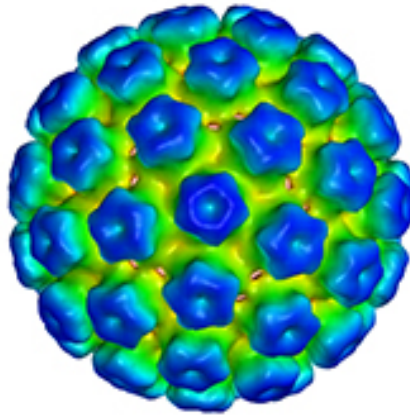


HPV-IMPACT Project



Human Papilloma Virus Type 16 VLP (virus-like particle) [National Institutes of Health](#)

Background/Overview

Human papillomavirus (HPV) is the primary cause of cervical cancer. It is also responsible for several other cancers including other genital, anal, and head and neck cancers. In 2006, a highly effective quadrivalent vaccine against HPV was approved by the FDA for use in girls and women ages 11-26 years. The vaccine included HPV types 16 and 18, which are responsible for approximately 70% of cervical cancers, and HPV types 6 and 11, which are the main cause of genital warts. In 2015, a nine-valent vaccine was approved and is now the only HPV vaccine used in the U.S. The nine-valent vaccine protects against five additional cancer-causing HPV types (31, 33, 45, 52, and 58) that are associated with another 20% of cervical cancers. The vaccine is currently recommended for both boys and girls, and young adults (<https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hpv.html>).

To monitor trends in high-grade cervical lesions, identify changes in HPV subtypes causing disease, and assess the impact of the HPV vaccine, the Centers for Disease Control and Prevention (CDC) chose Tennessee as one of five states nationally to initiate a novel surveillance project. The HPV Vaccine Impact Monitoring Project (HPV-IMPACT) is a collaboration between the Tennessee Department of Health (TDH), Tennessee Emerging Infections Program (EIP) and the Tennessee Cancer Registry (TCR). This surveillance effort is ongoing in Davidson County, Tennessee.

In 2008, the histologic diagnoses of cervical intraepithelial neoplasia grades 2, 2/3, 3, and adenocarcinoma in situ were added to the list of reportable conditions to the TCR. Case identification is achieved through reporting by hospital and commercial pathology laboratories directly to the TCR and in Davidson County, to HPV-IMPACT. A subset of histologic specimens are sent to the CDC for HPV subtyping.

Beyond examining disease trends and HPV types, this multi-faceted effort monitors vaccine coverage and cervical screening patterns to facilitate monitoring the impact of the HPV vaccine among the women of Tennessee. Although it will take decades to measure the impact of the vaccine on cervical cancer incidence, shorter term changes can be assessed through population-based surveillance of cervical dysplasia, which occurs with greater frequency and is detectable much earlier than cancer.

Purpose

To monitor the impact of HPV vaccine on cervical cancer precursors and HPV types associated with those precursors.

Goals and Objectives

- Monitor HPV vaccine impact on cervical intraepithelial neoplasia (CIN) grades 2 and 3 and adenocarcinoma in situ (AIS), combined as CIN2+ lesions
- Monitor HPV vaccine impact on HPV types associated with CIN2+ lesions
- Monitor HPV vaccine impact on other HPV-associated diseases, such as genital warts
- Estimate and monitor cervical cancer screening rates in Davidson county

Activities

- Monitoring of CIN2, CIN3 and AIS diagnoses from pathology laboratories in Davidson County
- Population-based active surveillance for CIN2, CIN3 and AIS in Davidson county
- Enhanced data collection through medical record reviews to determine HPV vaccination status
- Specimen collection to determine HPV types associated with CIN2, CIN3 and AIS diagnoses
- Laboratory and physician surveys
- Estimation of cervical cancer screening rates in Davidson County

More details regarding the Project

Hariri S, Unger ER, Powell SE, Bauer HM, Bennett NM, Bloch KC, Niccolai LM, Schafer S, Markowitz LE; HPV-IMPACT Working Group. The HPV vaccine impact monitoring project (HPV-IMPACT): assessing early evidence of vaccination impact on HPV-associated cervical cancer precursor lesions. *Cancer Causes and Control* 2012; Feb 23(2):281-288. [PMID: 22108842](https://pubmed.ncbi.nlm.nih.gov/22108842/)

Links

Other published studies: <https://www.ncbi.nlm.nih.gov/pubmed/?term=hpv-impact>

Information about HPV: <https://www.cdc.gov/hpv/>

Current vaccine recommendations: <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hpv.html>

Project Contact

HPV IMPACT Program Coordinator
Vanderbilt University Medical Center,
Department of Health Policy
(615)-322-6767