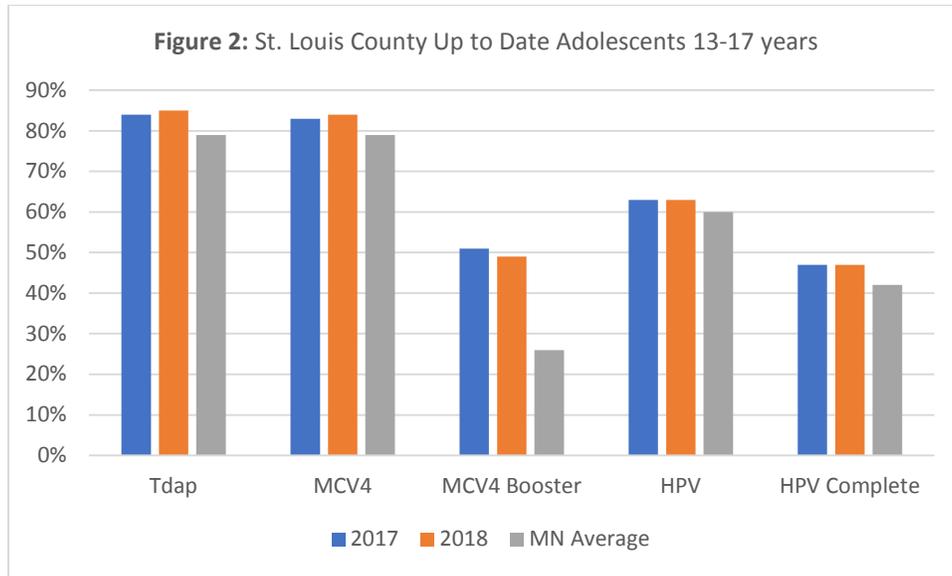
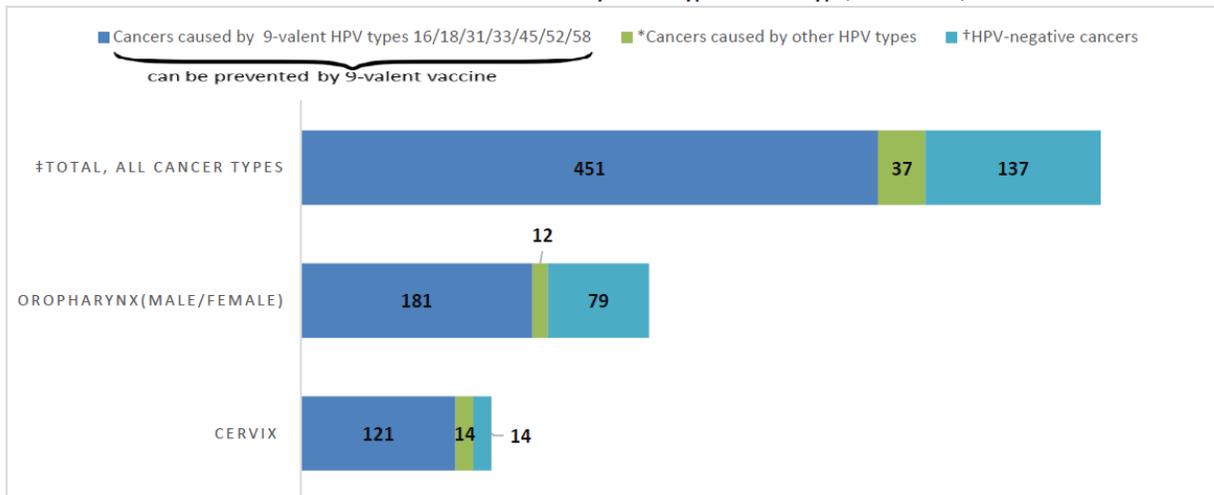


Adolescent Immunizations

Trends in St. Louis County, MN



Estimated number of HPV-associated cancers by cancer type and HPV type, Minnesota, 2010–2014



Source: Data are from population-based cancer registries participating in the CDC National Program of Cancer Registries and/or the NCI Surveillance, Epidemiology, and End Results Program, meeting criteria for high data quality for all years 2010 to 2014, (all registries except Nevada, covering about 99% of the U.S. population).

Cancers caused by other HPV types are cancers caused by HPV types not included in the 9-valent HPV vaccine.

†HPV-negative cancers* are those that occur at anatomic sites in which HPV-associated cancers are often found, but HPV DNA was not detected.

‡Total, all cancer types* includes HPV-associated cervical carcinomas as well as squamous cell carcinomas at other anatomic sites, including the vagina, vulva, penis, anus (including rectal squamous cell carcinomas), and oropharynx. However, due to small numbers, data points for the following sites are not displayed in the graph above: vagina, vulva, penis, anus, and rectum.



When considering vaccination for adolescents, there are two recommended ages for when they should be receiving them. At 11 – 12 years of age, adolescents should receive a dose of Tdap, Human Papillomavirus (HPV), and Meningococcal (MCV4). At age 16, adolescents should receive their booster dose of MCV4. This booster dose, as highlighted in Figure 2, is often missed or forgotten. Getting the booster dose protects adolescents in their early adult life while attending college and living in close proximity to others.

The recommended age for the first dose of The HPV vaccine is at 11 – 12 years of age. The vaccine is a two dose series if initiated before the age of 15 years. If the series is started on or after the fifteenth birthday, the adolescent needs three doses. The reason for the difference in number of doses is due to the body having a better immune response in younger adolescents.

HPV cancers are on the rise. While we do not have cancer statistics specific to St. Louis County because of reporting practices in Minnesota, Figure 3 shows an alarming rate of HPV associated cancers that can be prevented by the HPV vaccine. The HPV vaccine can prevent over 90% of cancers caused by HPV. As shown in the Figure 3, an estimated total of 642 HPV-associated cancers were reported each year during 2011 – 2015 in Minnesota. Of these, around 76% (491/642) were attributable to HPV, and around 93% (456/491) could have been prevented by the 9-valent HPV vaccine, including 187 oropharyngeal and 120 cervical cancers. Of note, the majority of these oropharyngeal cancers occurred among males.

Notes

Information for immunization rates were pulled from the Minnesota Immunization Information Connection (MIIC) registry, which is run by the Minnesota Department of Health. Data was gathered between June 18, 2019 and September 10, 2019. Studies referenced in the text are noted below. Any comments or questions can be sent to Katie Albert, albertk@stlouiscountymn.gov

Flannery, B., Reynolds, S. B., Blanton, L., Santibanez, T. A., O'Halloran, A., Lu, P.-J., ... Fry, A. M. (2017). Influenza Vaccine Effectiveness Against Pediatric Deaths: 2010–2014. *Pediatrics*, 139(5). doi: 10.1542/peds.2016-4244

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November 2019

