Human papillomavirus (HPV) is a common virus, infecting approximately 14 million new people each year (Centers for Disease Control and Prevention [CDC], 2019a; National Vaccine Advisory Committee, 2016). Overall, HPV affects 80 million Americans, with approximately all men and women contracting at least one type of HPV during their lifetime (National Vaccine Advisory Committee, 2016). Typically self-limiting, certain strains of HPV can cause ano-genital cancers, genital warts, and oral cancers.

Approximately 38,000 people each year are diagnosed with cancer possibly linked to HPV, with 90% of those preventable by the HPV vaccine (Viens et al., 2016). Gardasil 9®, a safe, effective, and long-lasting vaccine that protects against nine types of HPV known to cause cancer and genital warts, is recommended for males and females ages 9 through 26. Persons ages 27 through 45 may see some benefit from the vaccine and need to discuss with their provider whether they are a good candidate for the vaccine. Ideally, the HPV vaccine is administered between ages 9 and 14, prior to exposure through sexual activity (CDC, 2019a).

Although safety of the vaccine has been proven through rigorous clinical trials, HPV vaccine uptake needs improvement (CDC, 2019b; Meites et al., 2016; Walling et al., 2016). Mental health care providers, including nurses and advanced practice nurses, can play a vital role in comprehensive vaccine education and promotion by being knowledgeable about current recommendations and providing them to their clients.

FACTORS AFFECTING HPV VACCINE UPTAKE

Vaccine uptake rate is the proportion of eligible individuals who receive a vaccine during a specified time period. Nationally, only 69% of girls and 66% of boys ages 13 to 17 begin the HPV vaccination series, defined as receiving one dose (injection) of the recommended series (Walker et al., 2019). Of those receiving one dose of the series, only 53.7% of girls and 48.7% of boys complete the series (defined as receiving two doses if younger than 15 and three doses of the series if age ≥15) (Walker et al., 2019). In addition, adolescents living in rural communities are less likely to receive the first dose of the HPV vaccine compared to those living in urban settings (CDC, 2018).

Three overarching barriers to HPV vaccine uptake include: (a) lack of provider recommendation; (b) lack of parental demand due to concerns about safety and morality; and (c) the decreased number of visits for well-child checkups for the aging child (National Vaccine Advisory Committee, 2016). Regarding lack of providing recommendations, physicians most often cite financial concerns for clients, parental attitudes, and concerns from parents about the vaccine promoting sexual activity. Some physicians indicate that discomfort with discussing sexually transmitted infections and vaccine safety concerns are also barriers to providing recommendations for HPV vaccination (Kahn et al., 2009). Parental reasoning behind refusal of the HPV vaccination for their children includes lack of knowledge about HPV and the vaccine, feelings that the vaccine is unnecessary, concerns about the safety of the vaccine, lack of recommendations from health care providers, and belief that their child is not sexually active (Stokley et al., 2014).

The literature shows that as children age, the number of well-child checkups tends to decrease for all adolescents. In the latest data from 2014, 21% of adolescents ages 10 to 17 did not receive a well-child check-up in the past 12 months, and 2% of those individuals did not have a usual place for preventive care services (Black et al., 2016). In addition, Hispanic adolescents from families living below the poverty line and those who are uninsured were more likely to miss well-child checkups (Black et al., 2016). This finding reveals groups...
of older children who are likely not receiving HPV vaccine recommendations from primary care providers.

**IMPLICATIONS AND RECOMMENDATIONS**

It is imperative that unified and comprehensive vaccine recommendations come from all health care providers having interactions with older children for any reason. In some instances, a specialist may be the only health care provider a child may see, especially if they are missing well-child checkups. Positive education and information from all staff within a practice can also have important effects on the willingness of parents to vaccinate their children against HPV (CDC, 2019c). Parents’ confidence is increased when they are able to receive the same recommendations and information from all people. Differing messages can cause mistrust and confusion among parents.

Current recommendations (Table 1) indicate that all 11- to 12-year-old children should receive the HPV vaccine, as this is the optimal time when discussing other preteen vaccines and is typically prior to initiation of sexual activity. A two-dose schedule, with vaccinations occurring at least 6 months apart, is recommended for children ages 9 to 14. A three-dose schedule is recommended for individuals ages 15 to 26. In the three-dose series, the second dose is given 1 to 2 months following the first dose, and the third dose is given 6 months after the first dose (CDC, 2019c). The goal of timing of the vaccine is to protect the individual before they are ever exposed to HPV.

**CONCLUSION**

HPV causes many cases of cancer in America and affects millions of people each year. These cancers are preventable by a safe and effective vaccine recommended for persons ages 9 to 26, optimally received with other preteen vaccines at ages 11 to 12.

Although safety and efficacy have been proven, HPV vaccine uptake still needs improvement, especially in rural areas of America. Provider recommendations, parental refusal due to lack of knowledge and concerns about promoting sexual activity, and older children not receiving well-child checkups are reasons for low vaccine uptake. It is important that all providers, including those providing mental health care to children, deliver a congruent and positive message and recommendations to children and their parents about HPV vaccination. Nurses remain the most trusted professionals, as they have been for many years (Brenan, 2018); thus, psychiatric–mental health nurses and nurse practitioners are ideally positioned to help address this public health concern. HPV vaccine recommendations provided by psychiatric–mental health care providers can aid in increased uptake and reduction in the number of related cancers diagnosed in America each year.

**REFERENCES**


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