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APHON Position Paper on Human Papillomavirus Immunization

Authors

Debra Eshelman-Kent, DNP MSN APRN RN

Brooke Cherven, MPH RN CPON®

Wendy Landier, PhD CPNP FAAN CPON®

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APHON's core purpose of supporting nurses and their practice with the goal of optimizing outcomes for children, adolescents, and young adults with cancer and blood disorders mandates substantial attention to human papillomavirus (HPV) immunization. Pediatric hematology/oncology nurses dedicate their practice to maximizing health throughout the cancer trajectory (ie, from initial cancer diagnosis through survivorship) for patients with oncologic diseases and the continuum of care for patients with blood disorders. Pediatric hematology/oncology patients may be at increased risk for not receiving crucial adolescent vaccines compared with the healthy population because their care often is delivered in subspecialty clinics, where the focus is on disease management, rather than in primary care, where the focus is on health promotion (Hofstetter, Lappetito, Stockwell, & Rosenthal, 2017). Cancer prevention strategies are an essential component of education provided by pediatric hematology/oncology nurses, and immunization against HPV is a necessary preventative measure.

HPV is an attributable cause of a significant number of cancers, including cervical, vaginal, vulvar, anal, penile, and oropharyngeal cancers and high-grade dysplasia (Forman et al., 2012; Torre et al., 2015). Globally, more than 600,000 cases of cancer are attributable to HPV each year (de Martel, Plummer, Vignat, & Franceschi, 2017). Infection with HPV leads to significant morbidity, mortality, and healthcare costs (Chesson et al., 2012; Crow, 2012; Reagan-Steiner et al., 2016). HPV vaccines have been developed to target the most common types of dysplasia and cancers attributable to HPV, have been proven safe and effective, and are recommended through vaccination policy for males and females during pre- and early adolescence—prior to sexual contact—to maximize effectiveness (Arbyn, Xu, Simoens, & Martin-Hirsch, 2018; Castle & Maza, 2015; Drolet et al., 2015; Zhai & Tumban, 2016).

Despite established efficacy and safety, uptake of the HPV vaccine lags behind that of other recommended adolescent vaccines (Reagan-Steiner et al., 2016), and vaccination rates are significantly less in cancer survivors than in the general population (Klosky et al., 2017). Underimmunization is a problem that has particular relevance for the pediatric, adolescent, and young adult (PAYA) oncology patient population because this population has the potential to be at increased risk for secondary cancers, including those associated with HPV (Inskip & Curtis, 2007; Nasioudis, Ramer, Sisti, & Fambrini, 2015; Ojha et al., 2013; Reulen et al., 2011; Temming et al., 2015). In many cases, the cause of second cancers may be apparent (eg, radiation), but for others, the etiology of a second cancer may not be specifically linked with prior cancer therapy or known genetic causes. Therefore, for cancer prevention, all potential risk factors, including HPV, should be considered, highlighting the need for preventative immunization against HPV.

Nursing Practice

- As suggested by the American Nurses Association (ANA) Code of Ethics, Provision 4, "the nurse takes actions consistent with the obligation to promote health and to provide optimal care" (American Nurses Association, 2015a). APHON endorses the ANA's position of immunizing individuals against vaccine-preventable diseases, since immunization aligns with "the nurse's obligation to use interventions to optimize health and well-being" (American Nurses Association, 2015a, 2015b).
- The pediatric hematology/oncology nurse is responsible for assessing the patient's and family's knowledge of the importance of HPV immunization to ensure they receive comprehensive education and recommendations for immunization.

- The pediatric hematology/oncology nurse is responsible for supporting and fostering the autonomy of the young adult hematology/oncology patient to make decisions about HPV immunization, when appropriate.
- The pediatric hematology/oncology nurse should educate the patient and family that receiving the HPV immunization series does not negate the need for cancer screening practices.

Nursing Interventions

- APHON recognizes the need to decrease missed opportunities for administration of the HPV vaccine to age-eligible cancer survivors and patients with hematologic disorders.
    - The pediatric hematology/oncology nurse should assess the HPV vaccine status of age-eligible patients during healthcare encounters. For patients who have not initiated or completed the HPV vaccine series, the pediatric hematology/oncology nurse should provide a strong recommendation for the vaccine and facilitate vaccination at the soonest available opportunity (including at the current healthcare encounter, whenever possible). Pediatric hematology/oncology nurses should be aware that receiving a recommendation for the HPV vaccine from a healthcare provider is the strongest predictor for initiation of the HPV vaccine in both the general population (Gilkey et al., 2016) and among cancer survivors (Klosky et al., 2017).
    - The pediatric hematology/oncology nurse should use available technology, such as electronic medical record alert systems, to prompt time-sensitive reminders to help decrease the number of missed opportunities for vaccination.

    - The pediatric hematology/oncology nurse should use existing recall and reminder strategies (or develop new strategies, if none exist) to facilitate completion of the vaccine series.
- APHON recognizes the importance of collaborating with primary care providers to optimize the health care of hematology/oncology patients.
    - The pediatric hematology/oncology nurse should recognize that provision of the HPV vaccine may occur in the oncology or primary care setting, depending on institutional and practice characteristics as well as patient circumstances and preferences.
    - The pediatric hematology/oncology nurse should work in collaboration with primary care providers to ensure patients initiate and complete the HPV vaccine series.

Nursing Advocacy

The HPV vaccine is promoted as a cancer-prevention intervention by national organizations in the United States (American Academy of Pediatrics, 2012; Saslow et al., 2016) and Canada (SOGC, SCC, GOC, & CFPC, 2015) and internationally by the World Health Organization (World Health Organization, 2017). The Children's Oncology Group (Children's Oncology Group, 2013) and the American Society of Clinical Oncology (Bailey et al., 2016) specifically state that the HPV vaccine should be recommended to all eligible cancer survivors and other immunocompromised patients. Therefore, APHON stands with other national and international organizations in recommending the HPV vaccine for age-eligible cancer survivors and patients with hematologic disorders.

Despite these recommendations, less than 25% of AYA cancer survivors report initiating the HPV vaccine (Klosky et al., 2017). Cancer survivors are less likely than peers to report a healthcare provider recommendation for the HPV vaccine, yet provider recommendation is the strongest predictor for HPV vaccine initiation among cancer survivors (Klosky et al., 2017). Pediatric hematology/oncology nurses should address this gap by incorporating HPV vaccine recommendation into hematology/oncology nursing practice. Adolescent and young adult cancer survivors and patients with hematologic disorders have the right to receive education about cancer prevention, including the HPV vaccine, and pediatric hematology/oncology nurses have the responsibility to promote vaccination among cancer survivors and patients with hematologic disorders.

- APHON supports equity of access to HPV immunization.

Economic Considerations

HPV vaccination has been evaluated for cost effectiveness within the United States and internationally among the general population. The currently recommended nonavalent vaccine is considered cost effective, particularly when administered during early adolescence (Brisson et al., 2013; Chesson, Markowitz, Hariri, Ekwueme, & Saraiya, 2016; Simms et al., 2016; World Health Organization, 2017). In countries with universal health care or school-based immunization programs, there usually is no cost to the patient. In the United States, the cost of the HPV vaccine may be covered by private insurance policies, governmental programs, or pharmaceutical company patient assistance programs (Centers for Disease Control and Prevention, 2016).

- The pediatric hematology/oncology nurse should have an understanding of how children, adolescents, and young adults with hematologic and oncologic diseases can access the HPV vaccine.

Support of Future Research

APHON recognizes the need for continued research regarding the HPV vaccine to: 1) determine the immunogenicity of the vaccine in cancer survivors to ensure the vaccine affords these survivors adequate protection against HPV and 2) increase the low uptake of HPV vaccination in the population of children, adolescents, and young adults with hematologic and oncologic diseases.

Summary

PAYA with hematologic and oncologic disorders are missing opportunities to receive the HPV vaccine, and vaccination uptake in this population is low. Pediatric hematology/oncology nurses have the opportunity to promote HPV vaccination among PAYA hematology/oncology patients and have the responsibility to discuss cancer prevention strategies, including the HPV vaccine, with their patients. APHON supports the promotion of the HPV vaccine as a crucial part of clinical practice for pediatric hematology/oncology nurses.

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