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# The Role of Dental Hygienist in HPV Prevention and Education in Parents of Adolescents

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#### **Abstract**

Objectives/Aims: Today the Human Papillomavirus (HPV) infects nearly 14 million people each year in the United States alone. HPV is responsible for several cancers, including oropharyngeal, which is currently on the rise. Each year an estimated 53,000 cases of oropharyngeal cancers are diagnosed, with 70% of the cases related to HPV. The significance of educating dental providers and patients of the correlations between HPV and oropharyngeal cancers involves increased prevention strategies in dental practices. The aim is to begin offering multi-level education to adolescents' parent's in routine dental care visits, in order to provide an innovative approach to reduce HPV-related cancers.

Methods: A sequence of MeSH terms were used to search the literature which included "HPV prevention strategies", "Dental hygienist" and "HPV-related oropharyngeal cancer." Additional terms were searched in the literature consisting of, the HPV vaccine, vaccination rates in The United States, professional roles, perceived barriers, questionnaire, risk factors, pediatricians, adolescent, sexual activity, oral cancer screening and systemic oral health. Results were refined to studies published within the last five years, excluding other countries outside the United States, and was centered to primary research sources.

Results: The Human papillomavirus (HPV) has been shown to increase the rates of several cancers outside the cervical region, including cancers of the oropharynx. Evidence based research has discovered HPV vaccines that protect against strains of cervical cancer are likely to have the same effect in preventing HPV infections in the oropharynx.

Conclusion: Compiling appropriate training along with refining dental providers self-efficacy to communicate HPV prevention strategies through continuing education. Along with expertise guided training in dental hygiene curricula could facilitate the process of reducing HPV-related cancers in the oral cavity.

#### Introduction

Research has shown that the incidence rate of oropharyngeal cancer has steadily increased from the years 1972-2018, whereas other head and neck cancers have slowly decreased (1). Of the 14 million cases of HPV reported annually in The United States, over 50,000 cases are related to cancer located in the oropharynx (2). While the use of primary risk factors associated with oropharyngeal cancer such as smoking and alcohol use has decreased over the years, the total incidence rate has increased primarily due to HPV.

It is understood that HPV has been identified as a contributing agent for oropharyngeal cancers and signifies the importance of increased prevention in dental practices. In order to effectively lower the rate of HPV-related cancers in the future, dental professionals are advised to start implementing prevention strategies with their patients(3). Dental professionals are encouraged to become proactive in providing HPV education to patients, parents, and guardians of adolescents.

#### **Discussion**

- The Human Papillomavirus has been shown to increase the rates of several cancers outside the cervical region, including cancers of the oropharynx.
- Evidence based research has discovered HPV vaccines that protect against strains of cervical cancer are likely to have the same effect in preventing HPV infections in the oropharynx.
- Current studies from The American Dental Education Association suggest that dental providers often feel uncomfortable providing HPV prevention with patients due to barriers: age, sexual orientation, and patient reactions.
- Increased education prevention strategies in dental practices will aid the decrease of HPV related infections. Dental hygienists need to actively participate in providing patients, parents and guardians with HPV prevention and education to decrease the risk of oropharyngeal cancer.

#### Research

 A study conducted at Virginia Commonwealth University Pediatric Dental Clinic, among adolescents parents and guardians showed that 89% of caregivers were more likely to vaccinate their children against HPV after learning more about it from their pediatric dental provider (Table 1).

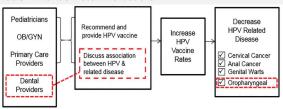
Table 1: Attitudes Towards Vaccinating Against HPV after Intervention

Which of the following best describes your attitude towards the HPV vaccine?	n, %
I am more likely to vaccinate my child(ren) against HPV since learning more about it	47, 89%
There is the same likelihood I will vaccinate my child(ren) against HPV	5,9%
I am less likely to vaccinate my child(ren) against HPV since learning more about it.	1, 2%

#### Conclusion

- The significance of educating dental providers and patients of the correlations between HPV and oropharyngeal cancers involves increased prevention strategies in dental practices.
- The aim is to begin offering multi-level education to adolescents' parent's in routine dental care visits, in order to provide an innovative approach to reduce HPV-related cancers.

#### **Table 2: Provider Recommendations**



#### **Future Research**

- Future research should consist of creating and implementing evidence-based, multi-system approaches to facilitate communication-building and address the barriers and concerns for HPV prevention.
- The studies conducted in the future should focus on innervation strategies among different health care providers to deliver the appropriate education to parents and guardians.

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