# Evaluating HPV Vaccination for Dental Patients

D. Lee, DDS[1]; M. Dara[3]; A. Pazmiño, DDS, MSD, MBA[1]; A. Neumann, DDS, MPH, PhD[2]; G. Bona, DDS, MS[1]
[1]Department of Pediatric Dentistry, [2]General Practice and Dental Public Health, [3]UTHealth Houston School of Dentistry

## ABSTRACT

- **Purpose:** To establish HPV vaccination rates among pediatric patients at the UTHealth School of Dentistry at Houston (UTSD).
- **Methods:** Patients in ages 8 to 19 and parents answered questions on HPV vaccine status as part of the medical history form during dental visits and structured responses were recorded on the electronic health records. We performed automated queries to establish the proportion of vaccinated patients and frequency distributions to categorize the reasons for not receiving the vaccine.
- **Results:** Responses from 318 patients were collected from 02/21/22 to 01/09/23. Nearly 46% received HPV vaccination, showing 9% lower vaccination rate when compared to the national rate of 55%. There was no statistically significant difference between in numbers of vaccinated and non-vaccinated patients [z=1.52, p=.05, 95% CI [0.40, 0.51]]. Among the patients who have not received the vaccine, 47.3% were interested in getting more information, and 21.3% were willing to receive the vaccine at UTSD. The main reason for vaccine hesitancy was due to preference at pediatrician's office (13.6%).
- **Conclusions:** There is a need and opportunity to educate patients on the importance of HPV as a cancer vaccine and increase the vaccination rates.

## BACKGROUND

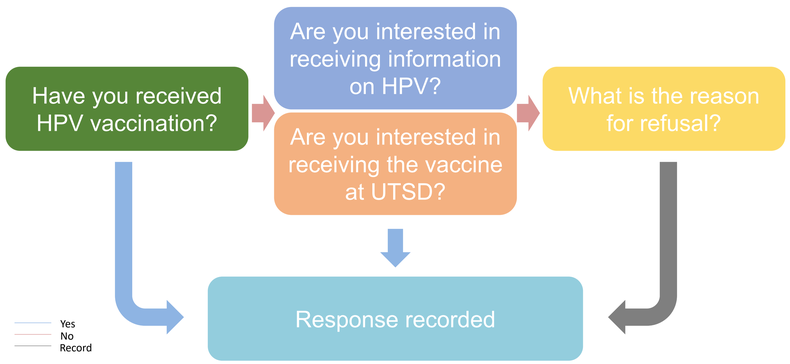
- Human papillomavirus (HPV) is responsible for oropharyngeal cancers.
- The number of oropharyngeal cancers is rising, and it is a public health concern.
- HPV vaccine is the main prevention method that is very effective when administered at appropriate age of 9-14.
- Pediatric dentists can play a critical role in raising awareness of importance of HPV vaccines, with regular encounters with target population[1].

| Reasons (select all that apply) | Response Rates |
|---|---|
| Would prefer to receive at my PCP or pediatrician's office | 13.6% |
| Undecided | 8.88% |
| Other | 7.69% |
| Religious reasons | 1.77% |
| Concerned about side effects and risk | 1.77% |
| Waiting to have more information about the vaccine | 1.77% |
| I do not believe vaccines work | 1.18% |
| Decided, but have not done yet (do not have time) | 1.18% |
| Do not trust vaccine and/or provider | 0.59% |

**Table 1- Reasons for vaccine hesitancy**
Parents/patients were asked to choose all the reasons for not receiving the vaccine.

## METHODS

- Prospective data collection and retrospective analysis of questionnaires on dental electronic health records (IRB approval: HSC-DB-22-0323).
- Patients/parents voluntarily responded to questionnaires on HPV vaccine status.




## RESULTS

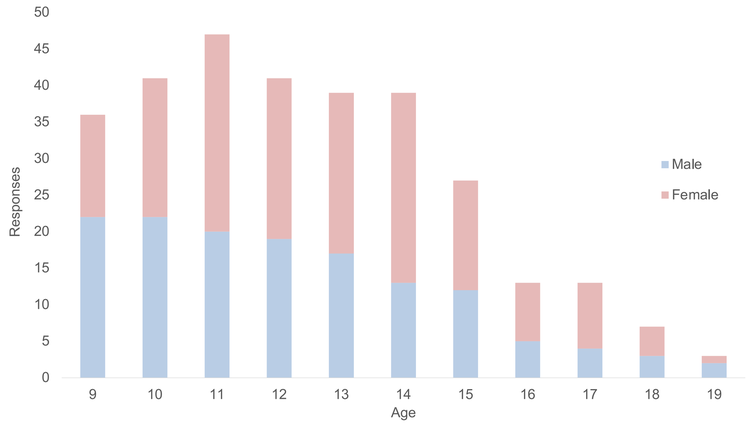



**Figure 1- Age and gender distribution**
Total of 318 responses were collected, with Male=41%; Female=59%; age 8 or younger: 6.5%; 9-12: 54%; 13-17: 37%; 18-19: 2.5%.


**Figure 2- Vaccine status and interest**
Patients were asked on their HPV vaccine status. Among unvaccinated patients, 80 patients were interested in getting more information and 36 patients were interested in getting the vaccine at school of dentistry.

- There was no statistically significant difference between in numbers of vaccinated and non-vaccinated patients [z=1.52, p=.05, 95% CI [0.40, 0.51]].

## DISCUSSION

- This study is the first to establish the rate of HPV vaccination status among pediatric patients at UTSD.
- Due to lack of experience and knowledge, dental providers did not provide adequate information on HPV vaccines to patients and parents[2].
- Parents felt that dentists were qualified to counsel about HPV and its vaccination[3].
- There is a need and opportunity to educate patients on the importance of HPV as a cancer vaccine and increase the vaccination rates.
- Dentists should consider *ADA Code of Ethics* to minimize ethical conflicts associated with vaccination while maximizing benefits[4].

**Limitations:**

- Low usability of the questionnaire form on electronic health records due to time constraints, providers' lack of training, and inadequate calibration of clinical staff.
- Parents' lack of awareness and interest in HPV counseling.
- Patients' vaccine records were not confirmed with primary care physicians.

## CONCLUSION

- Next step should focus on educating dental providers and increasing patient/parent acceptances, in hopes to promote and administer HPV vaccines in dental clinics.

## ACKNOWLEDGEMENTS

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