

HPV, HPV Vaccination, and My Dental Office: What's the Connection?

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Campaign



Learning Objectives

- Cite the American Dental Association Resolution 65H-2019 as it relates to oropharyngeal cancer and HPV, the timeline of FDA approval of Gardasil 9 in prevention of oropharyngeal cancer for males and females, and the updated recommendations and stance on HPV vaccination from oral healthcare sources included the American Dental Association, the Academy of Pediatric Dentistry, and the Academy of General Dentistry
- Practice integration of HPV vaccination history into medical history interview
- Perform HPV talking tips and medical-dental integration referral pathways
- Identify anatomical structures associated with HPV-related oropharyngeal and oral cancers
- Complete a visual and manual oral cancer screening in the dental office

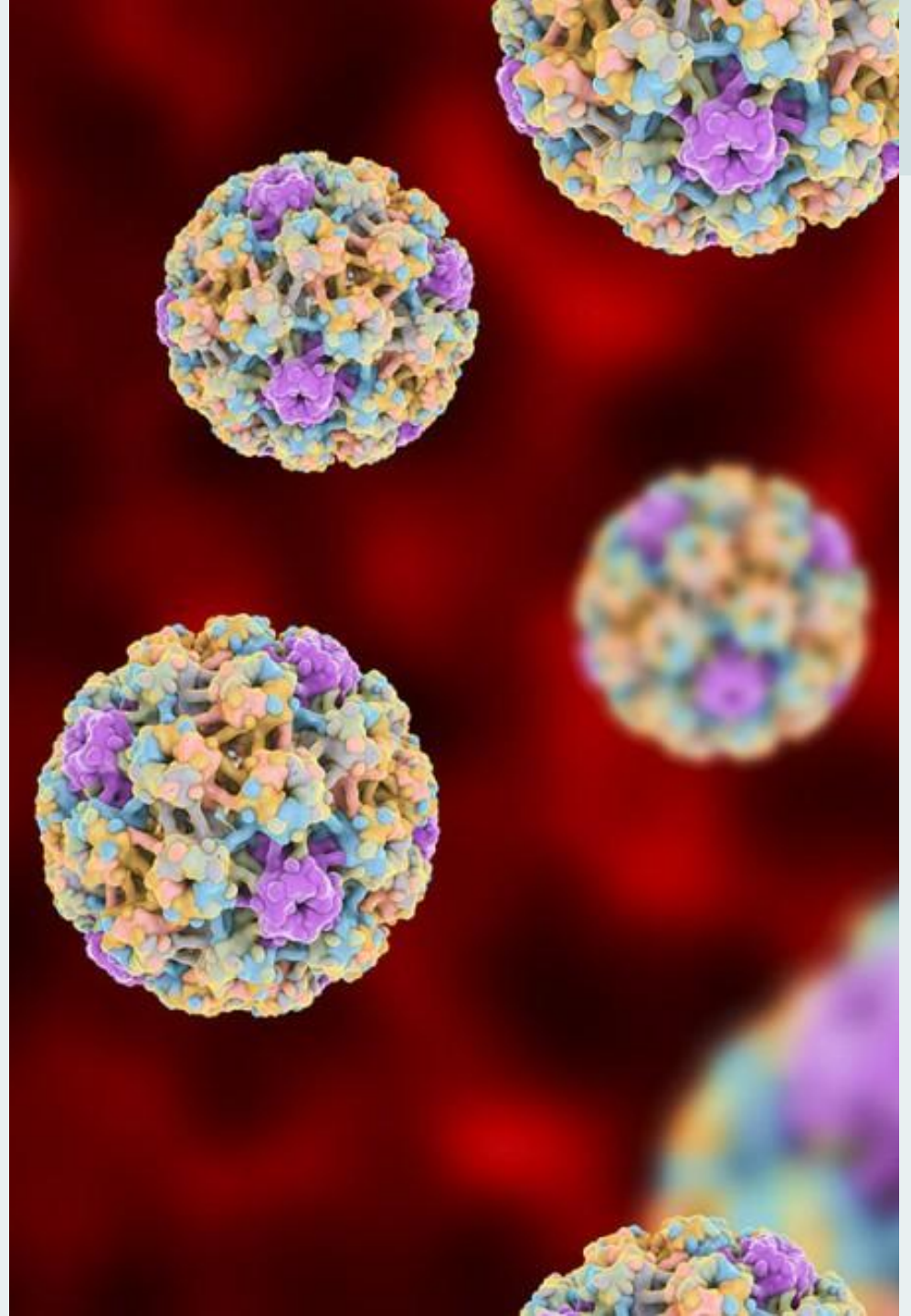
What is Human Papillomavirus (HPV)?

- An infectious virus that spreads through intimate contact, typically genital skin-to-skin contact
- Most common sexually transmitted infection globally



Why Is HPV a Concern?

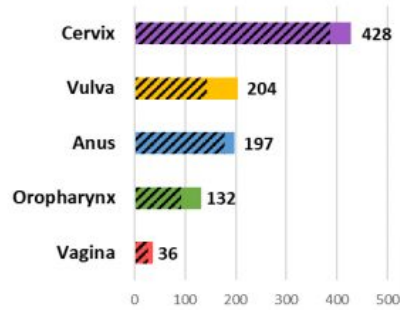
- HPV causes six types of cancer: cervical (90%), anal(90%), penile(60%), vaginal(70%), vulvar(70%), and **oropharyngeal(70%)**
- HPV infects ~14 million Americans annually
- WV has the highest incidence rate of HPV-associated cancers in the nation
- WV has one of the lowest HPV vaccination series completion rates in the nation



Why Is HPV a Concern?

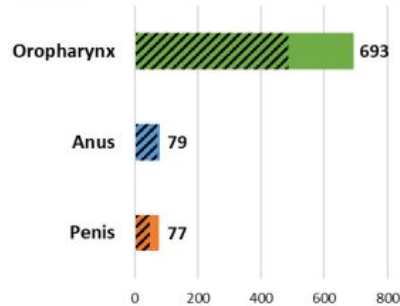
Figure 1: Case Counts for HPV-Associated Cancers and Estimated Proportion of Cancers Caused by HPV, West Virginia, 2015-2019^{1,4}

Females:



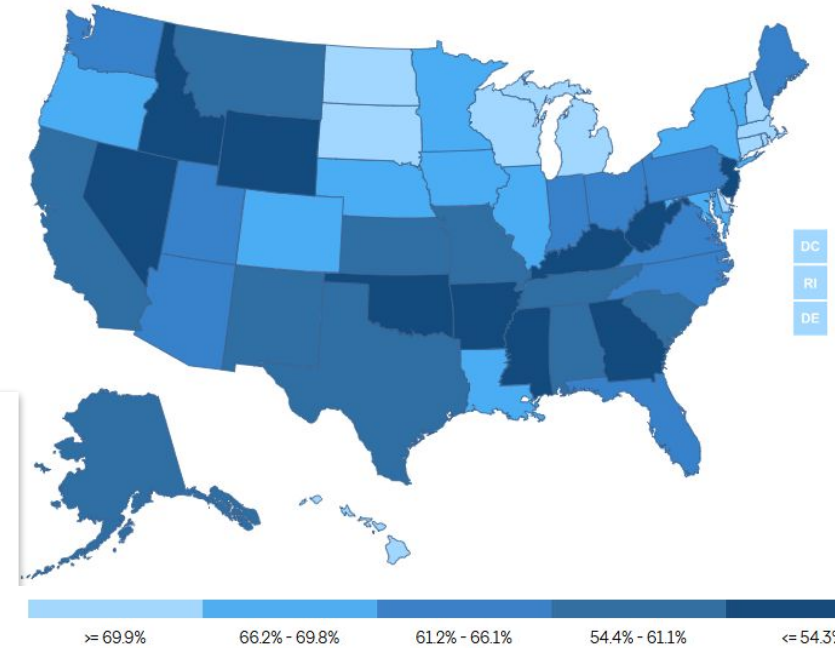
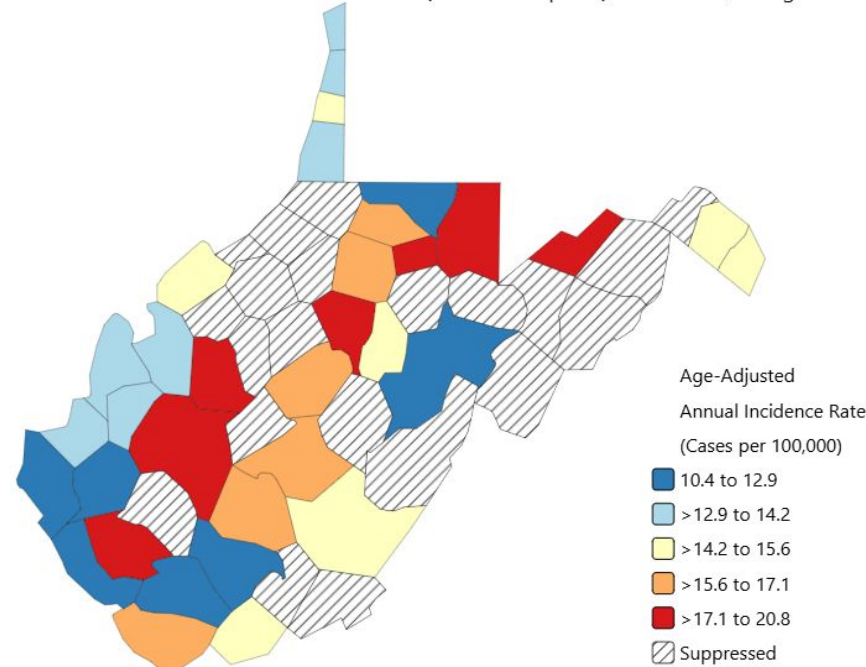
Estimated Proportion of Cancers Caused by HPV

Males:



Incidence Rates for West Virginia by County

Oral Cavity & Pharynx (All Stages[^]), 2017-2021
All Races (includes Hispanic), Both Sexes, All Ages



West Virginia Value:

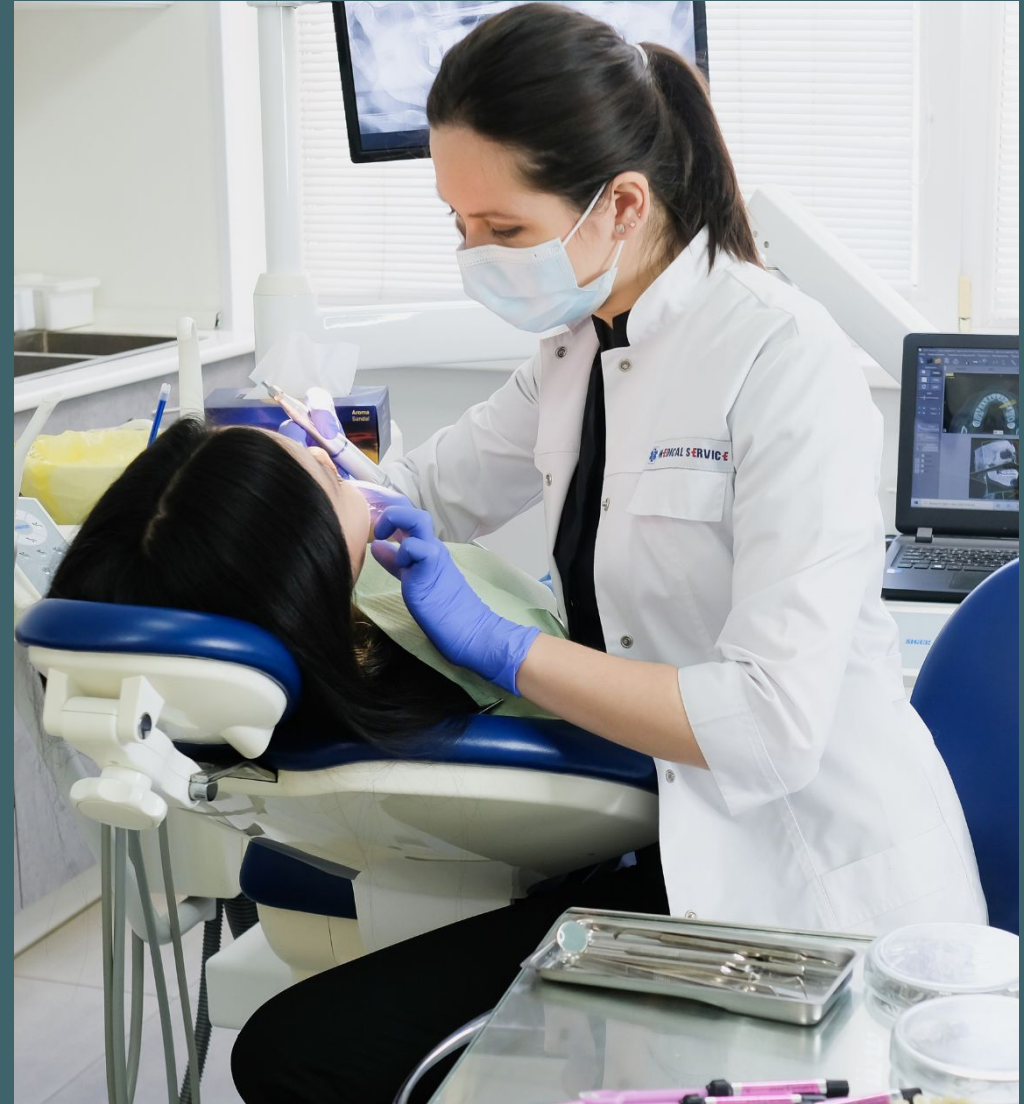
49.8%

Percentage of adolescents ages 13-17 who received all recommended doses of the human papillomavirus (HPV) vaccine

West Virginia Rank:

45

How are HPV and Oral Health Care Connected?



American Dental Association (ADA) Resolution 65H-2019

- Amended the ADA policy on early detection and prevention of oral cancer to **include oropharyngeal cancer and cover all patients**, not just those previously thought to be at an increased risk because of tobacco and alcohol use.
- Aligns statement with Centers for Disease Control and Prevention guidelines on visual and tactile examination and screening for oral and oropharyngeal cancers and highlights dentists' critical role in cancer screening and prevention.

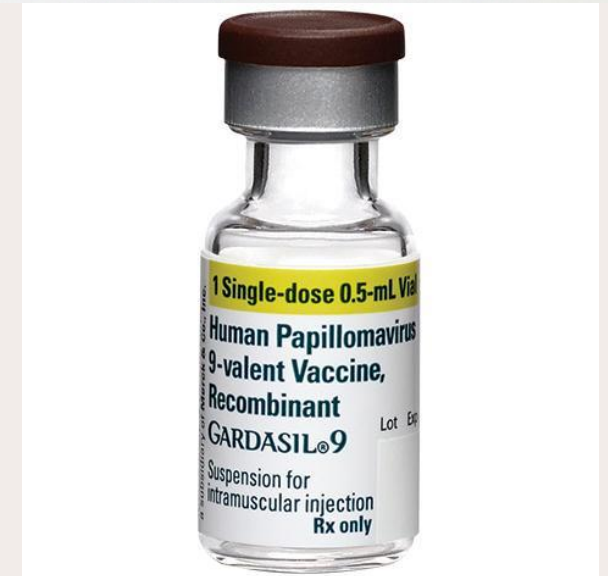
The American Academy of Oral Medicine (AAOM) Clinical Practice Statement

The AAOM recognizes that:

- More than 60% of oral and pharyngeal cancers are advanced stage (i.e. stage III & IV) at the time they are diagnosed.
- Overall, patients with oral cancer detected in the early stages have improved survival.
- Patients with *early-stage* cancers generally require less aggressive treatment and therefore experience fewer complications.
- There is a paucity of evidence to support or refute the practice of oral cancer screening.
- The curricula of training programs for oral healthcare providers mandate that dentists and dental hygienists be able to competently perform screening and risk assessment for oral cavity and oropharyngeal cancer.

Gardasil: The HPV Vaccine

- 2006 - 2009
 - FDA approved quadrivalent Gardasil vaccine for females in 2006 for HPV prevention
 - FDA approved quadrivalent Gardasil vaccine for males in 2009 for HPV prevention
 - Quadrivalent: HPV types 6, 11, 16, 18
- 2014 - 2025
 - FDA approved 9-valent Gardasil vaccine for both females and males in 2014 for 9 strains of HPV
 - 9-valent: 6, 11, 16, 18, 31, 33, 45, 52, and 58
 - Quadrivalent vaccine discontinued in the US in 2017
 - FDA expanded age from 9-16 to 9-45 in 2018
 - FDA added prevention of oropharyngeal cancers caused by HPV types to Gardasil-9 indications in 2020



Gardasil: Dosing Schedule

Age	Regimen	Schedule	Vaccine Details
9 through 14 years	2-dose regimen 3-dose regimen	0, 6-12 months 0, 2, 6 months	Indicated for prevention of HPV-related (types 16, 18, 31, 33, 45, 52, and 58) cervical, vulvar, vaginal, anal, oropharyngeal and other head and neck cancers in females and anal, penile, oropharyngeal and other head and neck cancers in males.
15 through 45 years	3-dose regimen	0, 2, 6 months	Indicated for prevention of HPV-related (types 16, 18, 31, 33, 45, 52, and 58) cervical, vulvar, vaginal, anal, oropharyngeal and other head and neck cancers in females and anal, penile, oropharyngeal and other head and neck cancers in males.

HPV and Oral Health

HPV causes 70% of oropharyngeal cancers

HPV-associated cancers are preventable with vaccination

HPV can be **prevented** but **not cured**

Oropharyngeal cancer is the most common HPV-associated cancer in men

HPV has overtaken tobacco use as the most common cause of **oropharyngeal cancer** in the nation, including in areas like WV, where tobacco use is still high

What Can I Do?



Oral Cancer Screening by an Oral Healthcare Professional



- Routine oral cancer screenings by oral healthcare professionals yield opportunity to catch oral cancer in its early stages.
- Review History and Consider Risk Factors
- Higher risk examples:
 - Tobacco and nicotine use
 - Alcohol use
 - HPV
 - Familial history of cancer
 - Discuss importance of HPV vaccine for males/females with parents

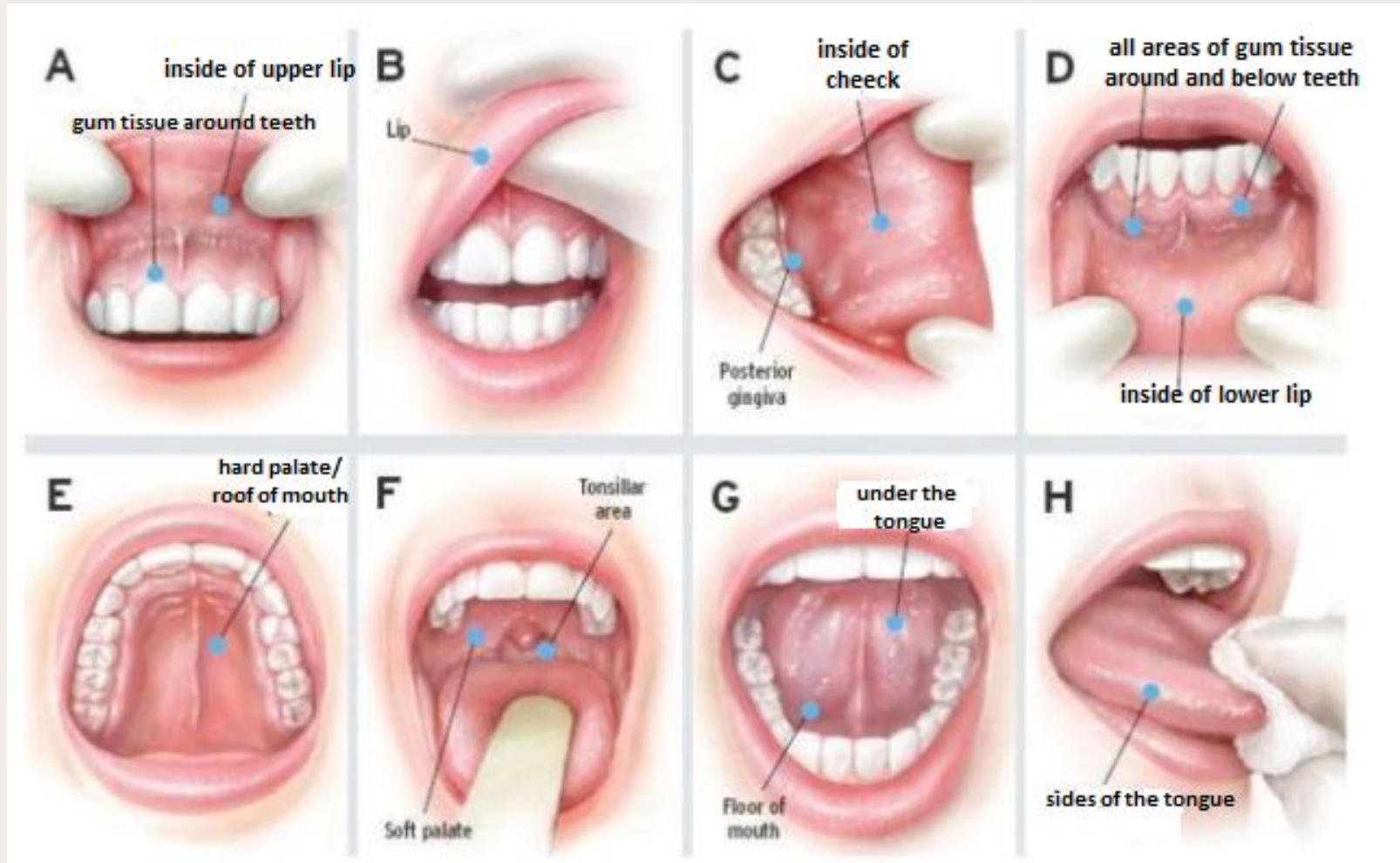
The American Academy of Oral Medicine (AAOM) Clinical Practice Statement

The AAOM thus encourages oral health care providers to:

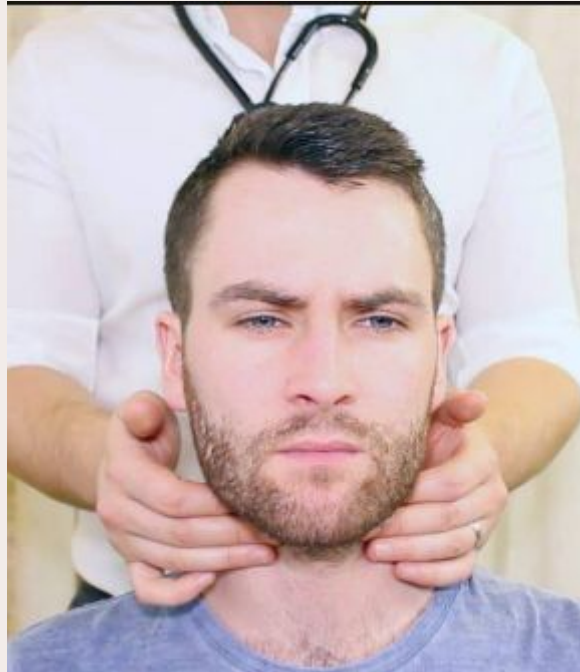
1. Perform a risk assessment for oral diseases for all patients, including an assessment for oral and oropharyngeal cancer.
2. Perform a non-invasive visual and tactile oral mucosal examination as part of the standard initial and recall examination for all patients.
3. Educate patients about the risk factors, provide counseling and offer treatment for avoidable risky behaviors, and promote a healthy lifestyle.



Oral Cancer Screening- Intra Oral Exam

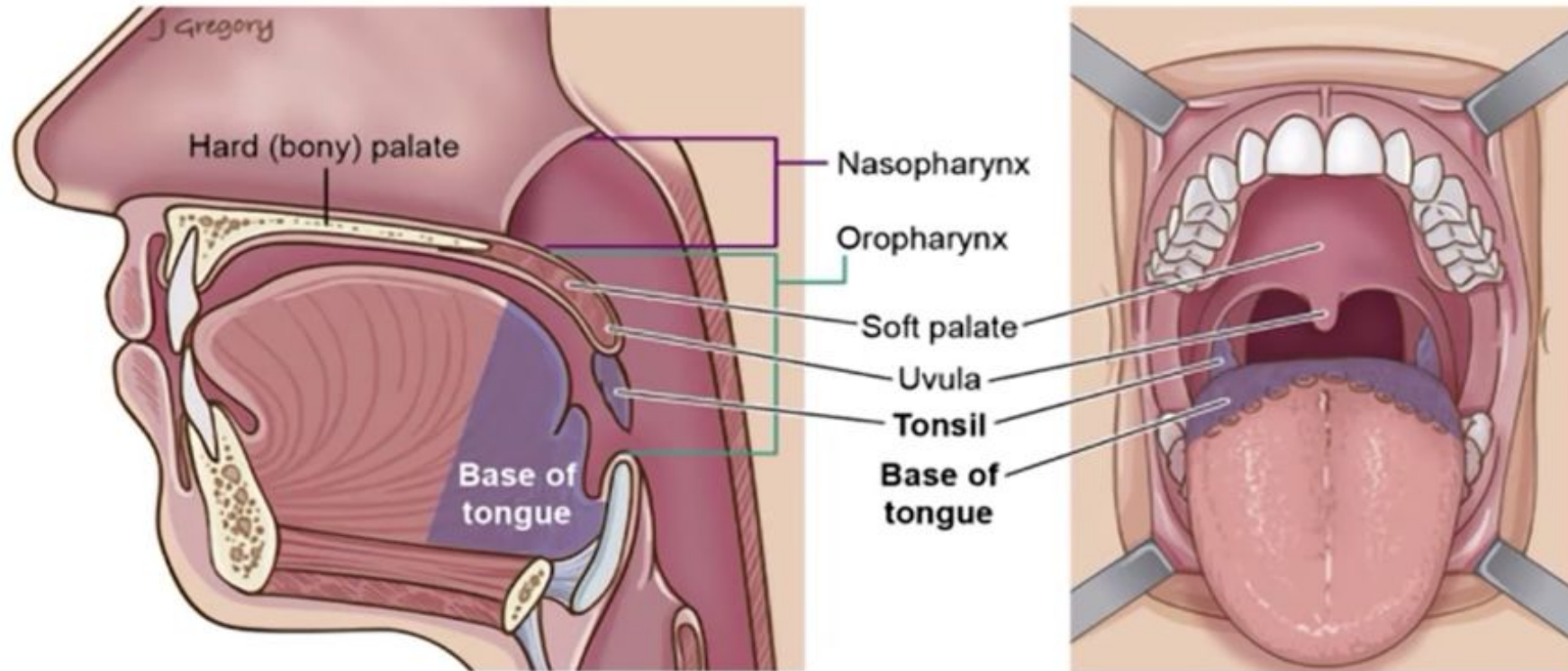


Oral Cancer Screening- Intra Oral Exam



www.dentalcare.com
www.researchgate.net
www.geekymedics.com

The Oropharynx



Oral Cancer Screening Patient Interview: Examples of Signs and Symptoms of HPV Oropharyngeal Cancers

- A persistent sore throat or hoarseness
- Unilateral swelling of the tonsils
- Trouble swallowing (dysphagia)
- Painful swallowing (odynophagia)
- Difficulty speaking or a change in voice (dysphonia)
- Tooth pain: could be relayed pain
- The feeling of a lump in the throat
- Difficulty moving tongue or jaw
- Neck mass
- Enlarged lymph nodes
- Otalgia/ear pain
- Changes in occlusion
- Unexplained weight loss

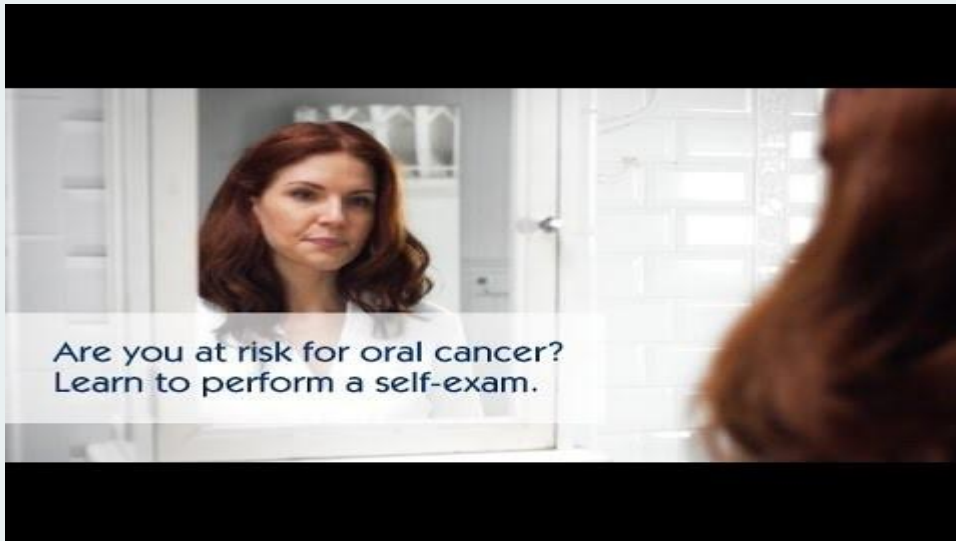
Next Steps

- Determine Nicotine Usage and History
- Recommend cessation
- Referral for biopsy and further testing to determine diagnosis
 - ENT
 - Oral Surgery
 - Diagnostic Sciences, Oral Medicine
 - Telehealth



Critical Patient Education: Video Resource

- 2 Minute Self Oral Exam created by American Association of Oral and Maxillofacial Surgeons
- Video “Are you at risk for oral cancer? Learn to perform a self-exam.”



<https://www.youtube.com/watch?v=JSY6MlcQd-Y>

ADA and AAPD Recommendations

The logo for the American Dental Association (ADA), featuring the letters "ADA" in a bold, green, sans-serif font with a registered trademark symbol.

AMERICA'S PEDIATRIC DENTISTS
THE BIG AUTHORITY on little teeth®



- ADA: dental professionals “should strongly and clearly recommend HPV vaccination to all age-eligible patients”
- AAPD: “advocate for HPV vaccination as cancer prevention”

Our Responsibilities

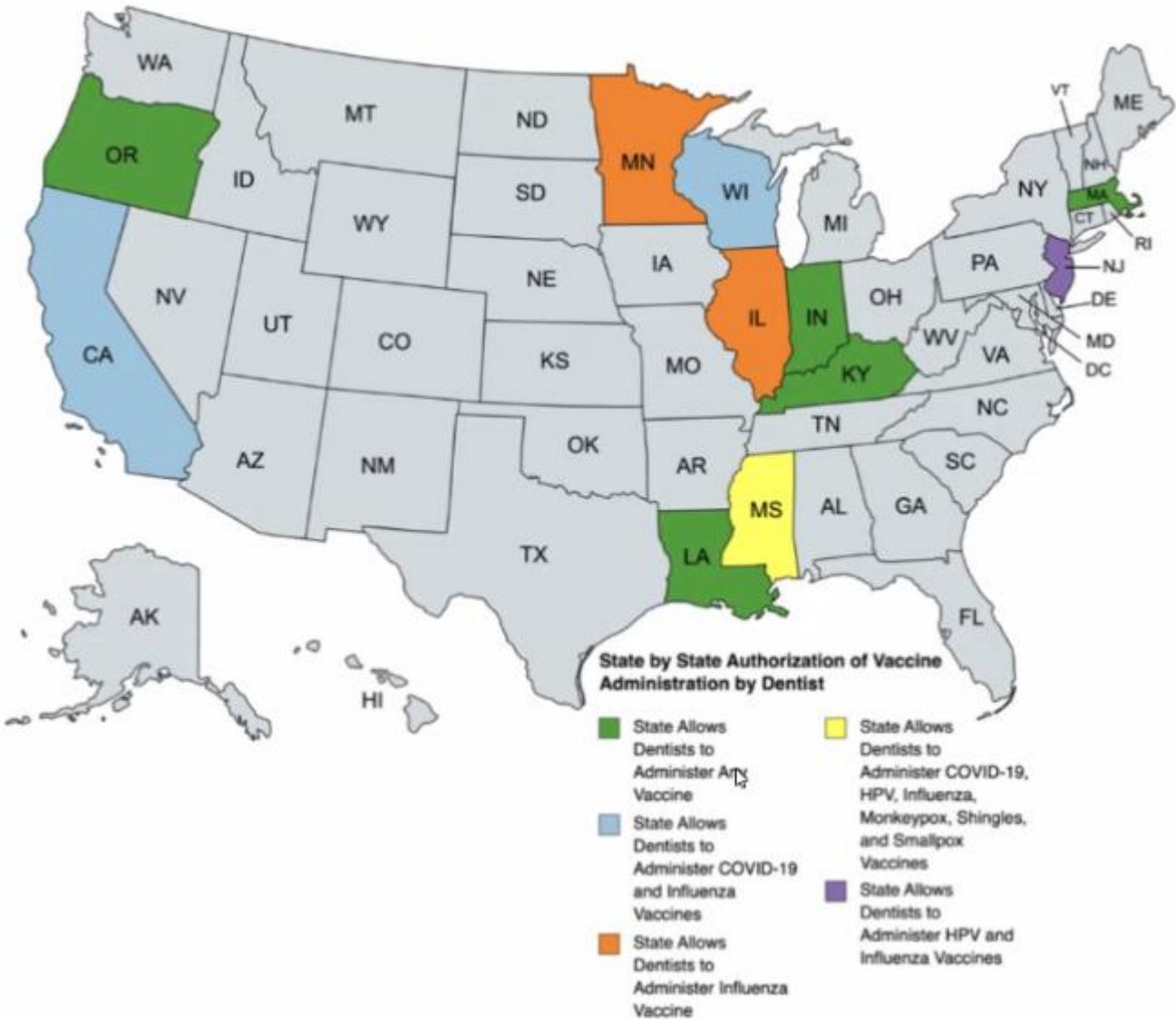
- To educate ourselves on the appearance of HPV-related signs and symptoms in order to perform more thorough examinations and oral cancer screenings
- To educate patients on HPV and HPV-related cancers, including prevention, vaccination, self-screening instructions, and treatment
- To encourage and refer patients to obtain HPV vaccination, particularly for boys and girls starting at age 9

Wagner R, Villa A. Oral Human Papilloma Virus Infections and the Role of the Dental Professional. J Mass Dent Soc. 2017 Winter;65(4):12-15. PMID: 29813203.

Oral health care practitioners as vaccine administrators: The scenario in the United States

Alessandro Villa DDS, PhD, MPH  , Melodie Saremi BS, Jeffrey D. Klausner MD, MPH, Mary Ellen Murphy MLIS

The Journal of the American Dental Association
Volume 155, Issue 7, July 2024, Pages 556-558.e1



> *Pediatrics*. 2025 Apr 1;155(4):e2024066639. doi: 10.1542/peds.2024-066639.

Improving Human Papillomavirus Vaccine Administration Using Medical–Dental Integration

Jessica L Jack ^{1 2}, Amy B Stein ³, Laura J Podewils ^{3 4}, Kristin Breslin ³, Scott Hamilton ¹, Joshua T B Williams ^{1 2 3}

Affiliations + expand
PMID: 40037516 DOI: 10.1542/peds.2024-066639

CONCLUSIONS

MDI was an effective intervention to increase HPV vaccination rates at a safety-net health care system.

ORIGINAL CONTRIBUTIONS COVER STORY | [VOLUME 151, ISSUE 8, P560-567, AUGUST 01, 2020](#)

Parent perceptions of dental care providers' role in human papillomavirus prevention and vaccine advocacy

[Cynthia Stull, MDH](#)   • [Rebecca Freese, MS](#) • [Elise Sarvas, DDS, MSD, MPH](#)

DOI: <https://doi.org/10.1016/j.adaj.2020.05.004> •  Check for updates

“Parents are comfortable having discussions about HPV and the vaccine in the dental setting, especially with dentists.”

Tips for Talking about HPV at the Dentist

Although dentists and hygienists know the importance of oral cancer screenings and the role HPV vaccination plays in cancer prevention, it can be difficult to know how to talk about it.

HOW DO I START THE CONVERSATION?

"Did you know that your pediatrician recommends a vaccine that can prevent HPV, and that HPV can cause cancer? Your child is the right age to be vaccinated. It's time to ask your pediatrician about it."

PARENTS MAY ASK...

What is HPV?



YOUR ANSWER...

HPV (human papillomavirus) is the most common sexually transmitted infection in the USA. It can cause genital warts and many types of cancer, including oropharyngeal and cervical.

PARENTS MAY ASK...

How common is HPV and HPV-related cancer?



YOUR ANSWER...

Nearly everyone will have HPV in their lifetime, usually with no symptoms or treatment needed. But HPV does cause 31,000 cancer cases each year in the USA, about 11,000 of which are oropharyngeal cancers.

PARENTS MAY ASK...

Why is it important now?



YOUR ANSWER...

If administered before age 15, the immune response is so strong that boys and girls only need a 2 shot series. After age 15, they need 3 shots to have the same response and protection.

PARENTS MAY ASK...

Is the vaccine safe?



YOUR ANSWER...

Over 170 million doses of the HPV vaccine have been given and no serious safety concerns identified. The most common side effect is soreness at the injection site.

PARENTS MAY ASK...

Is the vaccine effective?



YOUR ANSWER...

The vaccine protects against the types of HPV that cause oral cancers. Studies show that the majority of cervical and anal cancers and up to 90% of genital warts can be prevented with the vaccine.

PARENTS MAY ASK...

Who needs the vaccine and how much does it cost?



YOUR ANSWER...

All boys and girls ages 11-12 should be vaccinated. Like other vaccines for children in Massachusetts, it is universally covered regardless of insurance.



For more information about HPV-related cancers and cancer prevention, contact Team Maureen.

TeamMaureen.org
info@TeamMaureen.org
PO Box 422, N. Falmouth, MA 02556



PREVENTING CANCER At the Dentist!

What is HPV?

Human Papilloma Virus (HPV) is a very common virus that spreads from skin-to-skin contact. **Almost everyone will have HPV at some point in their life.**

HPV usually has no symptoms, so most people with HPV don't know they have it. Most cases of HPV go away on their own, but other cases can go on to cause cancer.

HPV & Cancer

HPV causes 6 types of cancer. The most common are oropharyngeal and cervical cancer. The oropharynx is the area in the back of the tongue and throat.



80% of oropharyngeal cancer cases are found in men. Cervical cancer is found in women and people with a cervix.



The vaccine is given in 2-3 doses over several months. If you are 14 or younger, you need 2 shots. After age 15, you will need an extra catch-up shot to be fully protected.



The vaccine is for everyone ages 9 to 26.

The HPV vaccine protects you or your child from the most cancer-causing strains of HPV and 90% of genital warts.

The best time to get the HPV vaccine is between ages 9 and 12. This is because children have a stronger immune response.

How much do YOU know about HPV?



Scan the QR Code with your phone to take our HPV quiz!



Adapted with permission from the Massachusetts HPV Coalition and Team Maureen. Visit mahpvcoalition.org for more information.

You do everything
to get them
smiling now...

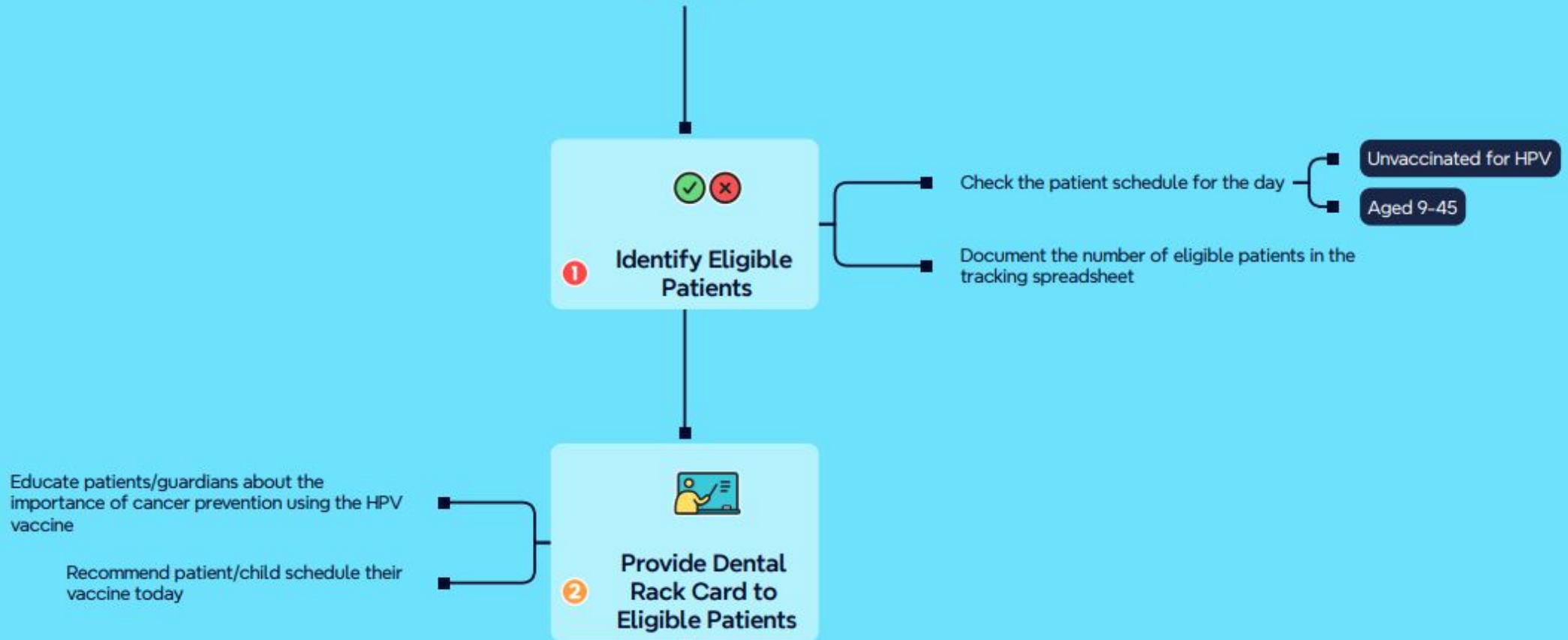


Keep their smiles
healthy and **bright**
for life.

Educate and Recommend

- Repetition and reinforcement of consistent messaging is important for behavior change
- Oral healthcare providers have the opportunity to educate patients about how to prevent oropharyngeal cancer as a trusted provider
- Recommend HPV vaccination as a cancer prevention measure

HPV Dental Integration Workflow



Implement Medically Integrative Workflow

References

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- <https://www.cdc.gov/cancer/headneck/>
- <https://www.gardasil9.com/>
- <https://www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer/about.html> Dr. Terry Day, MD, FACS
"Protecting Your Patients from HPV Associated Cancers"
- WV Cancer Burden Report, <https://oeps.wv.gov/cancer/documents/data/burdenreport2022.pdf>
- <https://www.teammaureen.org/>
- <https://paoralhealth.org/>
- [https://www.americashealthrankings.org/explore/measures/Immunize HPV/WV](https://www.americashealthrankings.org/explore/measures/Immunize_HPV/WV)
- <https://www.statecancerprofiles.cancer.gov/incidencerates/>



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**Thank
you!**



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