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COMMUNITY HEALTH CENTERS, INC.

HEALTH FOR ALL



Improving HPV Vaccine Administration via Integrated Vaccine Efforts

Emily Harris, MPH, LPN - Director of Community Health

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25 million

children worldwide missed their immunizations
due to the pandemic

- American Academy of Pediatrics



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Goal: Implement creative & innovative approaches to address declining immunization rates



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DENTAL INTEGRATION



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PEDIATRIC & ADULT SURVEY RESULTS

From 6/28/22 to 12/31/22, CCHCI's Research & Dental teams led a survey study assessing dental patients' reported willingness to receive vaccines (or have their child receive vaccines) within the dental clinic during an appointment

642 adults surveyed, **628** pediatric patients

	Accepted	Refused	Unsure
Pediatric	50.2%	21.6%	28.2%
Adult	54.2%	28.5%	17.3%



6 Project Design & Implementation



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PROJECT DESIGN & IMPLEMENTATION



PÓNGASE AL DÍA CON SUS VACUNAS HOY MISMO

Puede conseguirlos en su próxima visita al dentista.

Pregunte hoy mismo a un miembro del equipo dental o llame al 520-364-1429.

 **DELTA DENTAL®**

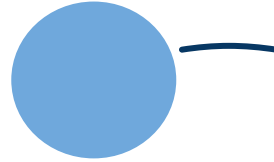


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VACCINE- DENTAL WORKFLOW

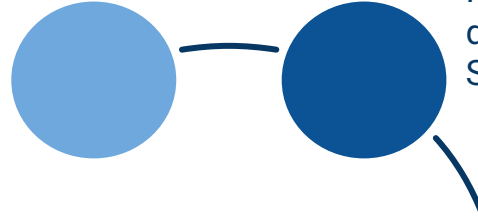
Immunization records
reviewed day prior to
appointment



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VACCINE- DENTAL WORKFLOW

Immunization records
reviewed day prior to
appointment



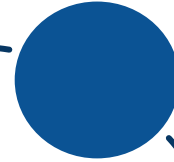
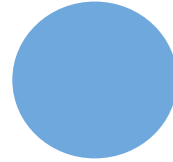
Patient offered vaccine
during check-in by Patient
Service Representative



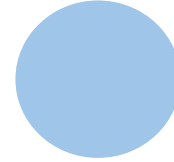
10

VACCINE- DENTAL WORKFLOW

Immunization records
reviewed day prior to
appointment



Patient offered vaccine
during check-in by Patient
Service Representative



Family immunization
records assessed day of
appointment



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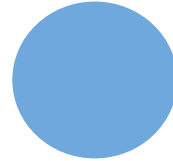
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VACCINE- DENTAL WORKFLOW

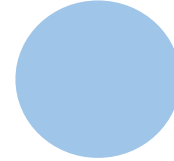
Immunization records
reviewed day prior to
appointment



Patient offered vaccine
during check-in by Patient
Service Representative



Family immunization
records assessed day of
appointment



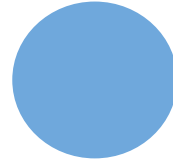
Dental -> vaccine
communication, all
immunization questions
clarified by nurse



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VACCINE- DENTAL WORKFLOW

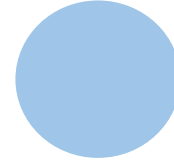
Immunization records
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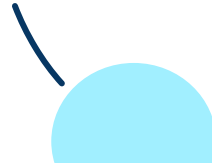
Patient offered vaccine
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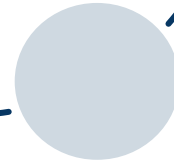
Family immunization
records assessed day of
appointment



If accepted, vaccine
administered at dental
appointment

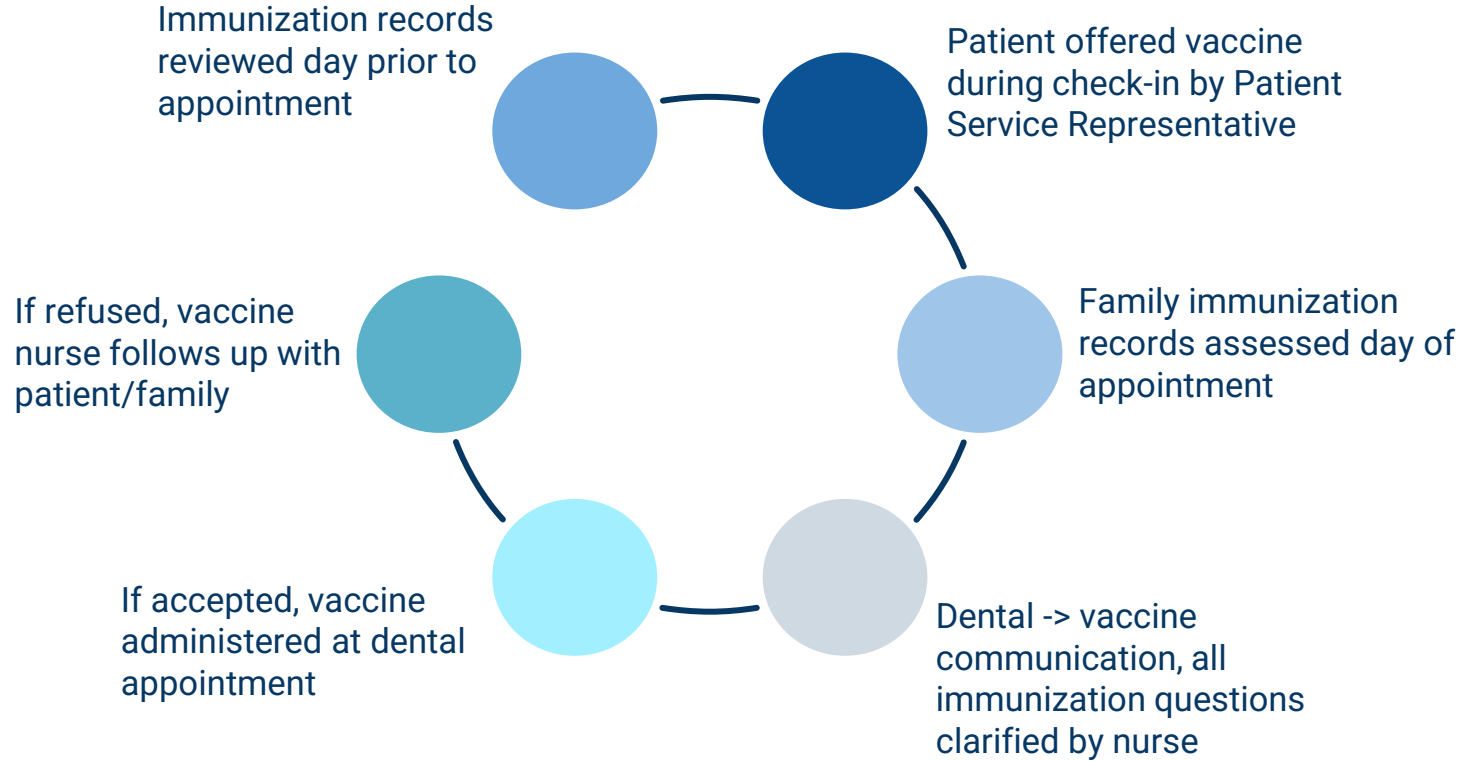


Dental -> vaccine
communication, all
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VACCINE- DENTAL WORKFLOW



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Program Results

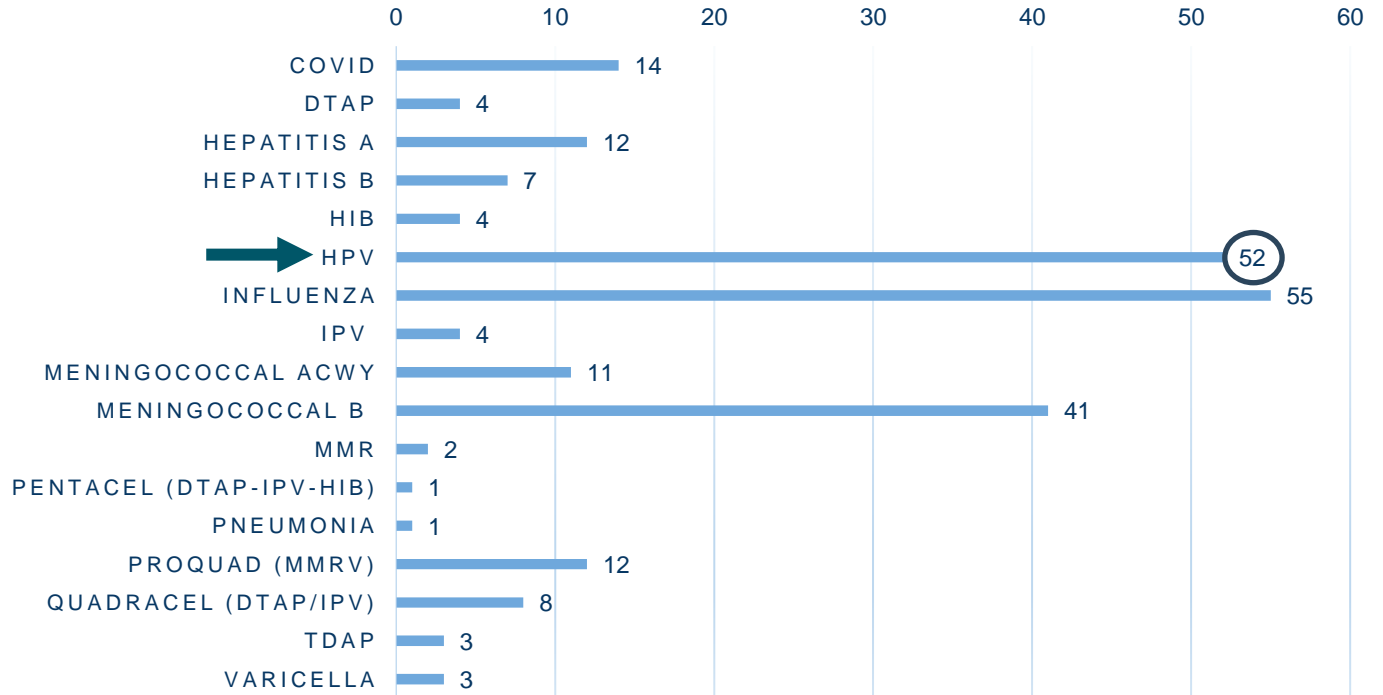
5/1/23-9/30/24



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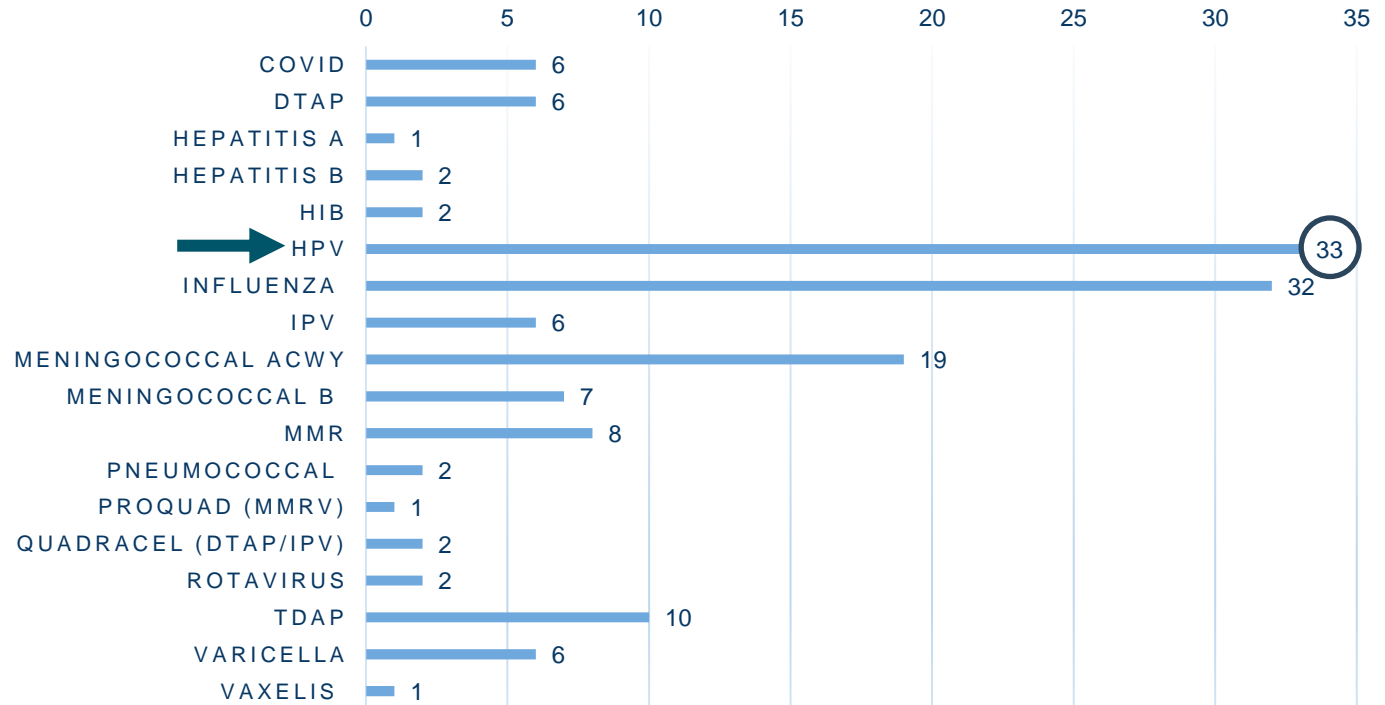
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Sierra Vista – Dose Breakdown May – Dec 2024, Pediatrics



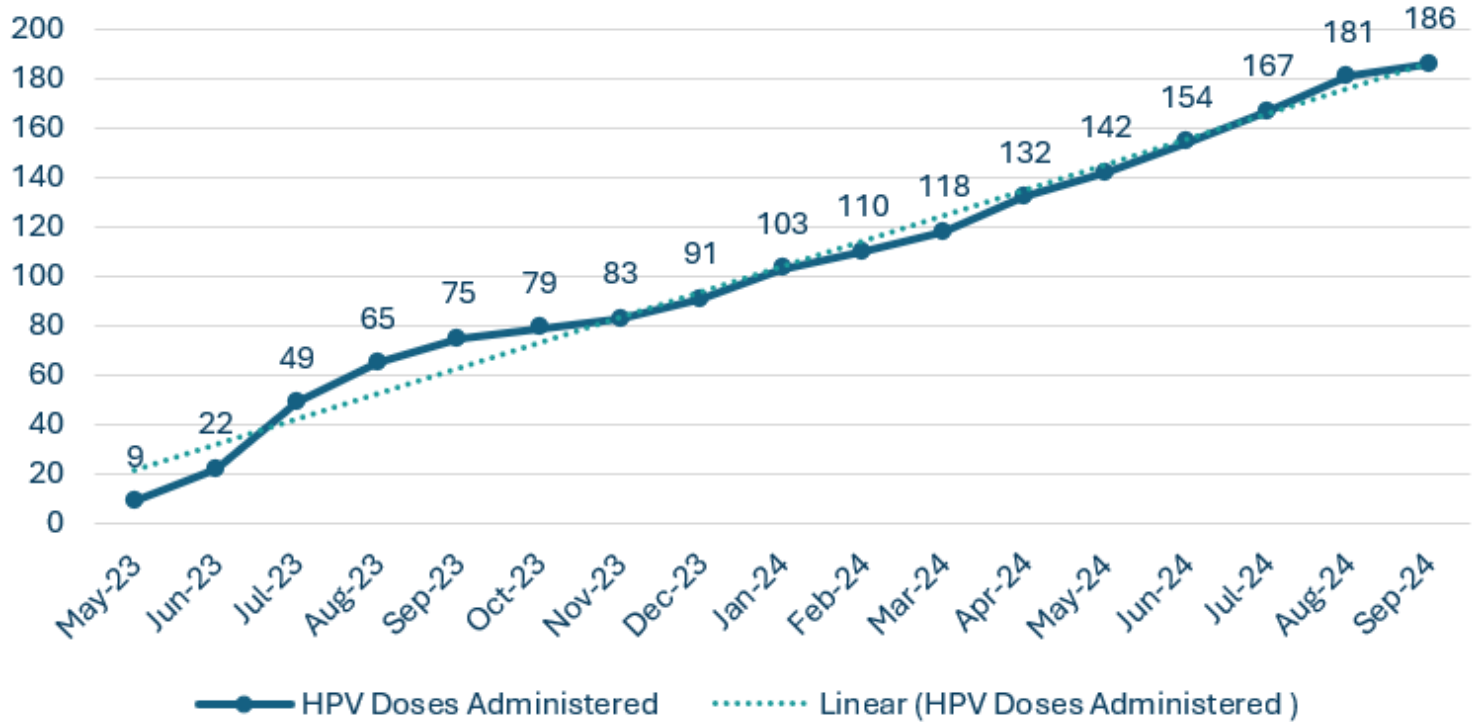
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Douglas – Dose Breakdown May – Dec 2024, Pediatrics



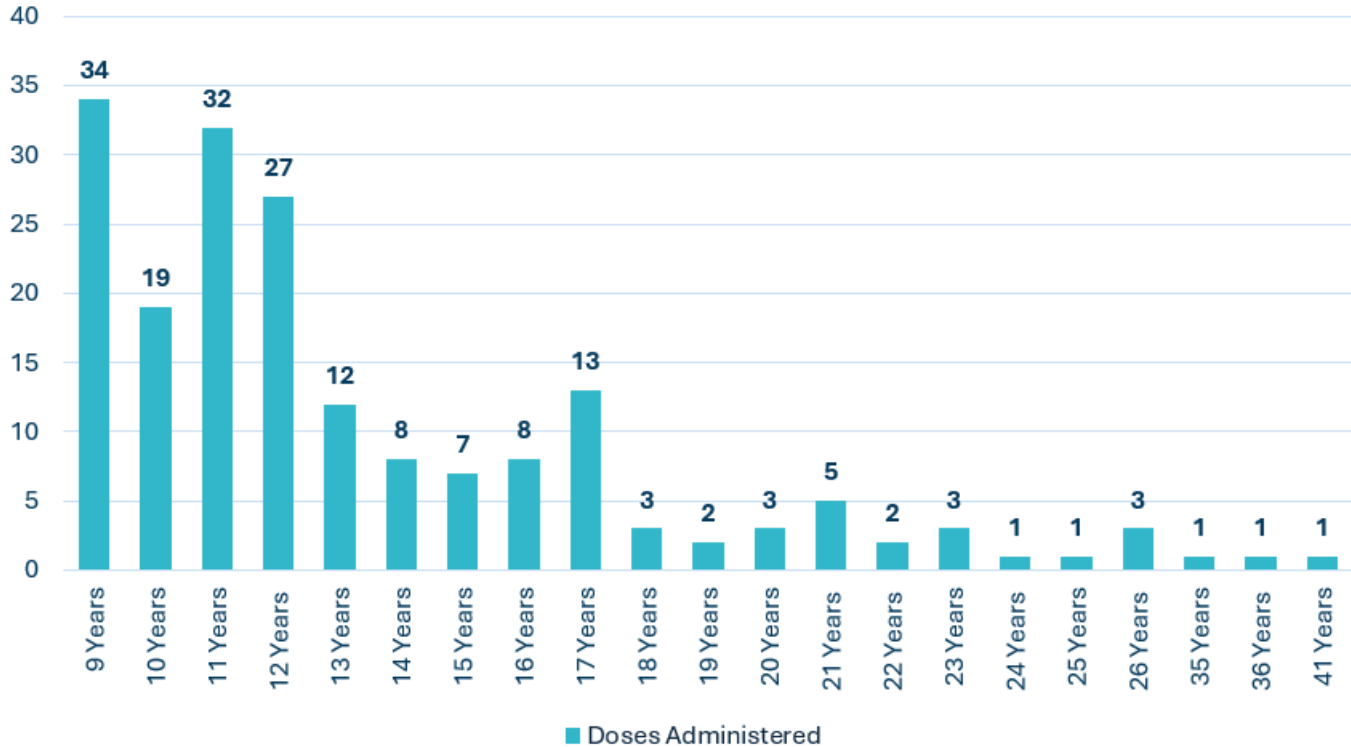
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HPV Vaccine Administration May 2023 – Sep 2024



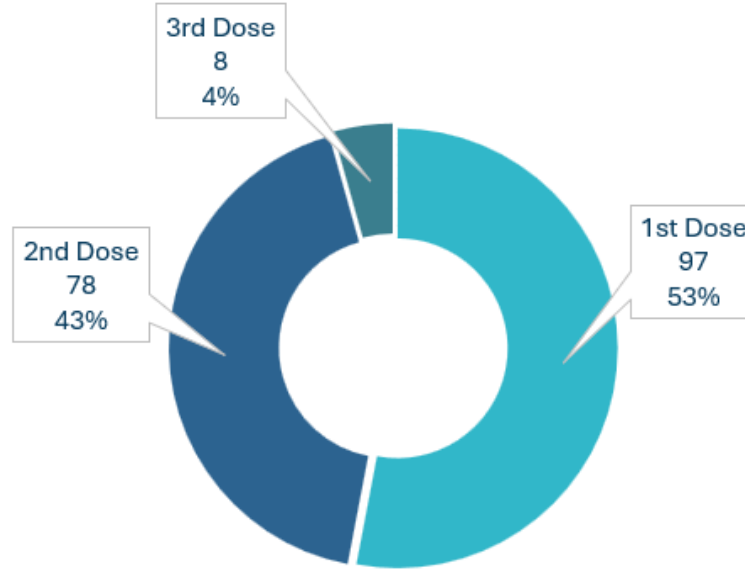
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HPV Vaccine Administration May 2023 – Sep 2024, By Age



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HPV Vaccine Administration May 2023 – Sep 2024, By Dose

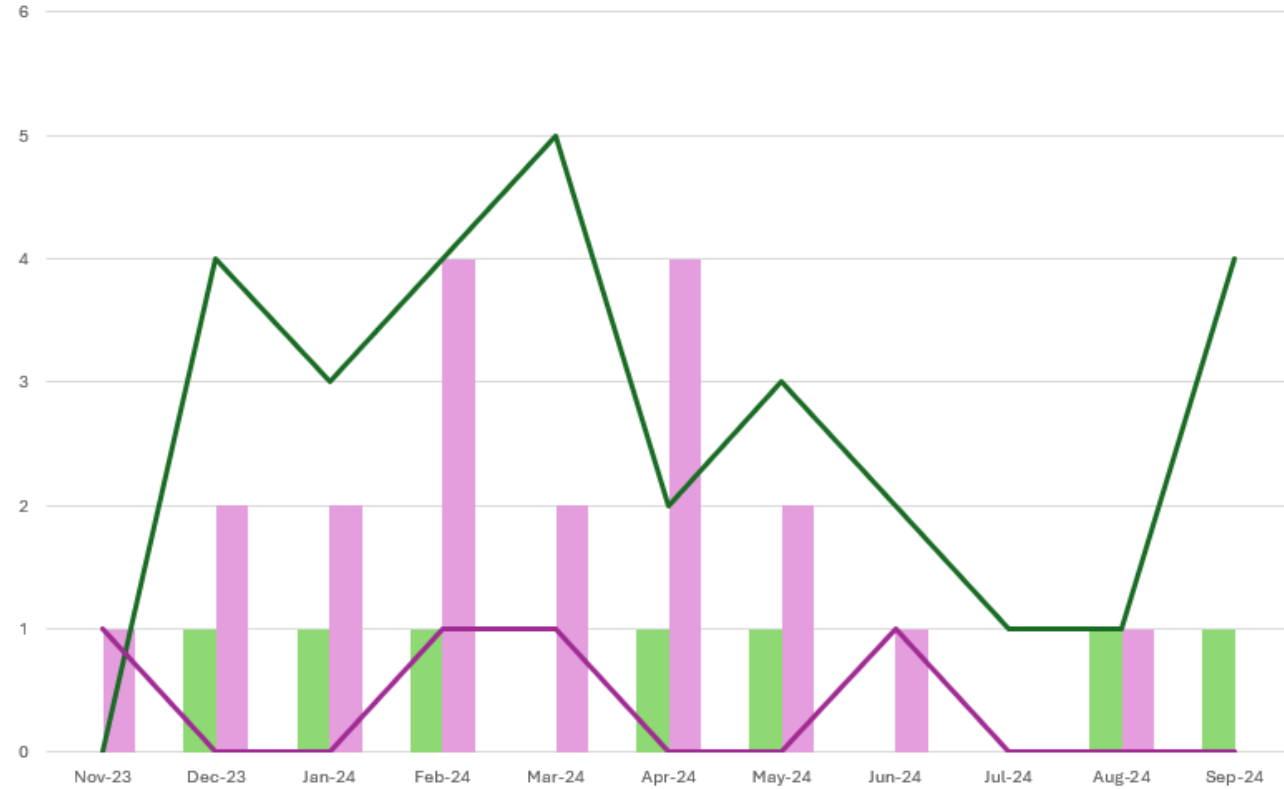


■ 1st Dose ■ 2nd Dose

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Childhood Immunization Status Impact

0-24 Month Dental Vaccines



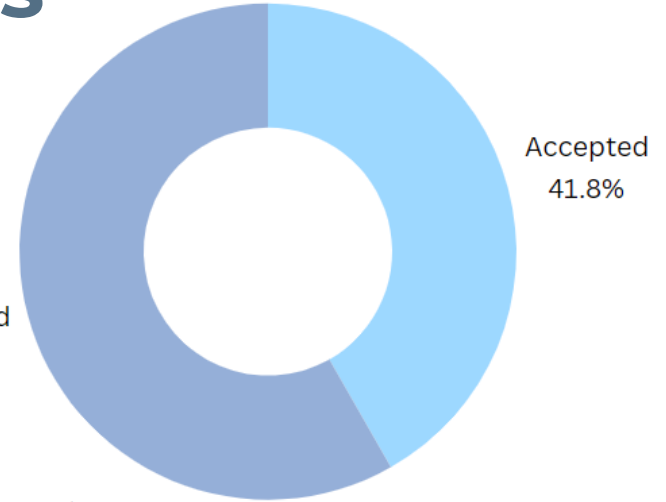
	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
SV Administered	0	1	1	1	0	1	1	0	0	1	1
GRC Administered	1	2	2	4	2	4	2	1	0	1	0
SV Refused	0	4	3	4	5	2	3	2	1	1	4
GRC Refused	1	0	0	1	1	0	0	1	0	0	0



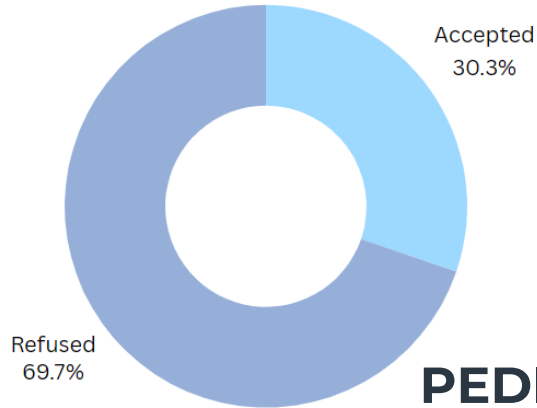
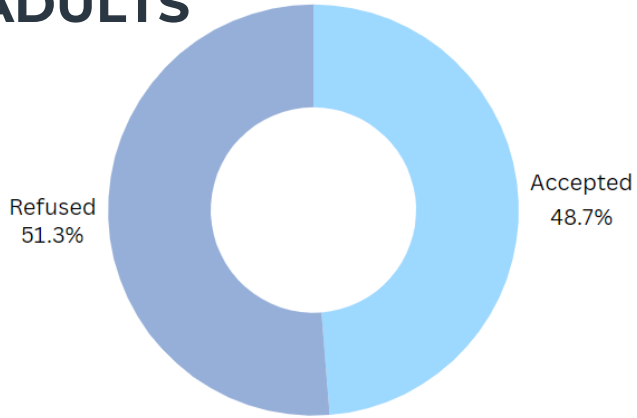
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Acceptance Rates May 2023 – Sep 2024

ALL AGES



ADULTS



PEDIATRICS

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PEDIATRIC & ADULT SURVEY RESULTS

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23

2,528 vaccines

administered to 1,807 patients during dental appointments (adult and pediatric)

41.8% acceptance

rate amongst eligible dental patients (adult and pediatric)



Total Patients



Adult Patients



Pediatric Patients



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Next Steps

- ▶ Continued expansion of immunizations in dental settings
- ▶ Additional integrative health services within dental settings
- ▶ Improve HPV administration practices in medical settings utilizing lessons learned from dental implementation
- ▶ Implementation of sustainable funding mechanisms

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**THANK
YOU!**



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Children's Health Fund

Adam Hodges DDS FAGD - October 2024



Family Health Services

The Children's Health Project

IN PARTNERSHIP WITH
The Children's Health FUND

sanofi aventis
Because health matters

SWEET
AS SUGAR
AND ONE
SMART



Famous for one day!



If you could
prevent a
cancer in
your child,
would you?

This is the question we asked our
patient parents.



Why would dentists care so much about HPV?

MDIP.com



Dentists are the first line of oral cancer screening

-Oral cancer represents the sixth most common malignancy worldwide, with an estimated 450,000 new cases diagnosed annually.

-Despite the overall advances in diagnostic and surgical techniques, the five-year survival rate remains only slightly greater than 50%.

-When describing “oral cancer,” it is most appropriate to subdivide cases as either anterior oral cavity or oropharyngeal. The vast majority of cases of HPV-associated cancer are oropharyngeal in origin, meaning they involve sites such as the base of the tongue and the tonsils.

-Alcohol and tobacco use, the historical risk factors of conventional oral squamous cell carcinoma, remain the most common causes of anterior oral cavity squamous cell carcinoma. The lateral tongue and the floor of mouth also still are the sites where oral cancer is most likely to develop.

Oral cancer in general

“People who use both alcohol and tobacco have a 5-fold increased risk of developing cancers of the oral cavity, oropharynx, larynx and oesophagus compared to people who use either alcohol or tobacco alone. For heavy users, the risk is up to 30 times higher.”

World Health Organization

- <https://www.who.int/europe/news/item/03-02-2021-world-cancer-day-know-the-facts-tobacco-and-alcohol-both-cause-cancer#:~:text=People who use both alcohol,up to 30 times higher.>

Oropharyngeal cancer and HPV

The CDC defines

HPV can infect the mouth and throat and cause cancers of the oropharynx (back of the throat, including the base of the tongue and tonsils). This is called oropharyngeal cancer. HPV is thought to cause 60% to 70% of oropharyngeal cancers in the United States.

<https://www.cdc.gov/cancer/hpv/oropharyngeal-cancer.html#:~:text=HPV can infect the mouth,cancers in the United States.>

HPV

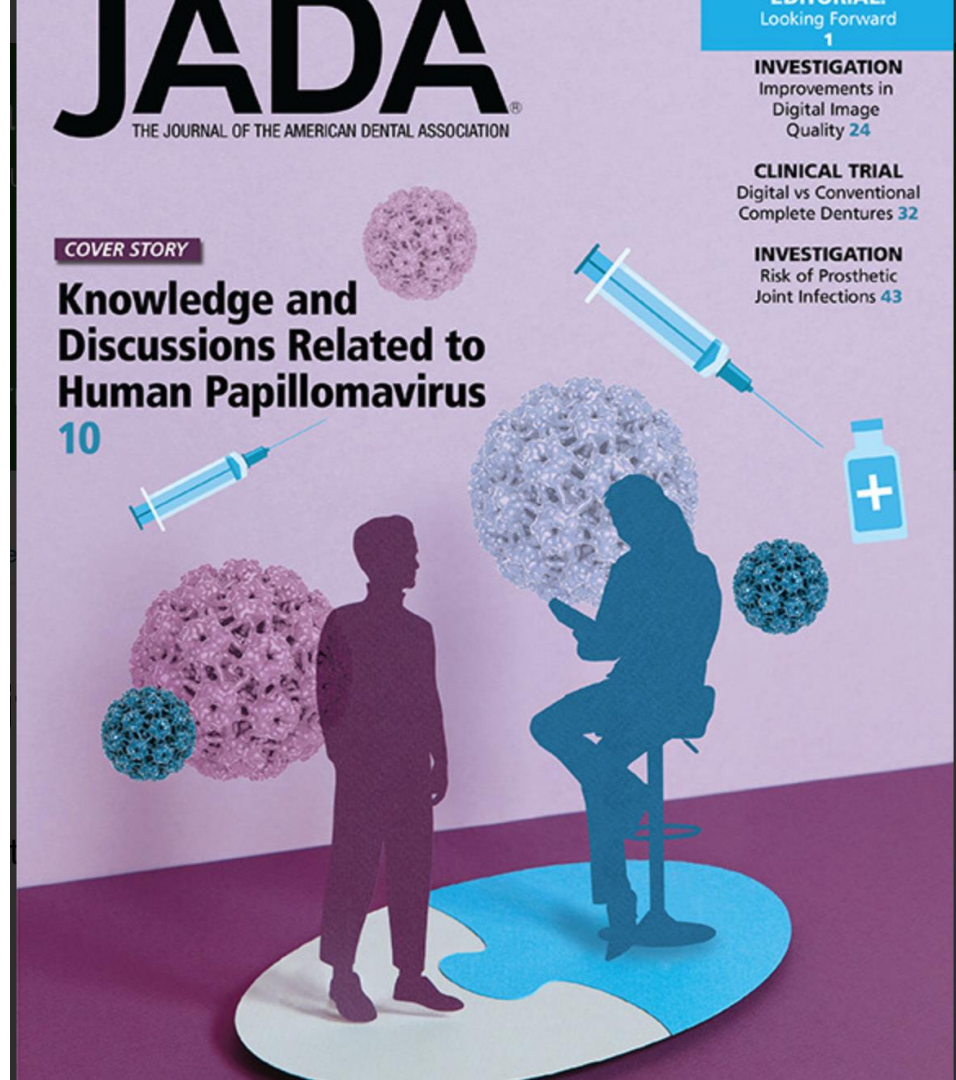
According to the ADA

“Human papillomavirus (HPV) has also been linked with throat cancers that form at the back of the mouth. HPV is the most common sexually transmitted disease in the U.S., with about 10% of adult males and 3.6% of females carrying the virus. Though most infections go away within two years, some infections stay.”

These are hard to detect and find.

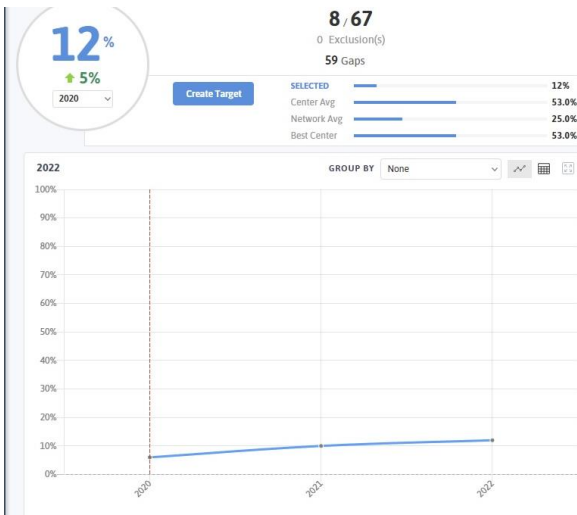
- Because of the location most oral exams cannot see them.
- Often the first symptom is a bulge on the side of the neck, trouble swallowing, and trouble with voice.

What did we do at our Health Center



What did we do?

- Prior to patients coming for appointments we IRIS was checked for HPV series completion, in process, or not started.
- Those who were identified as having not started were given information in the dental setting about the vaccine and the reason for our discussion with them.
- Printed material and an appointment was offered for the child to make current the HVP as well as any other vaccines that have lapsed.
- How did we do?



I have to talk a little
about cavities.

Acids(H⁺)

- All dental decay is the result of acids attacking tooth structure.
- Acids come from bacteria secretions, stomach regurgitation, or from the diet.

Hydroxide (OH⁻)

- Enamel is composed of $\text{Ca}_2(\text{PO}_4)_6\text{OH}_2$
- Acids (H⁺) Bind with the Hydroxide (OH⁻) groups making water.

Water (H₂O)

- With the missing negative charge of the OH⁻ the Ca⁺ and P⁺ become unstable and leave the tooth.
- The tooth now begins to become weaker leading to cavitations.

Understanding Cavities

Decrease sucrose in the diet

The body has a natural way of protecting against cavities. The tooth can and will secrete, in an outward flow, an acid neutralizing fluid. This is through an endocrine function of the parotid gland, which receives stimulus from hypothalamus portion of the brain. In high sucrose diets that portion of the hypothalamus stops secreting the precursor, within minutes of sugar consumption. The parotid gland, missing this precursor, is unable to secrete the hormone to stimulate tooth pulpal tissue secretions. In fact the research on this shows that it causes the tooth to have a reversal of the outward secretion and begins to pull fluid into the tooth, thus increasing the demineralization of the tooth.

The research also shows that this high sucrose diet has a profound impact on tooth development. The high sucrose leads to a lack of these stimulating hormones and thus a lack in development of the tooth.

(The systemic theory of dental caries, General Dentistry September/October [2011 367-373](#))

White Spot Lesions

Saliva provides the calcium and phosphate that joins fluoride to build the new crystal during the remineralization process. Topical sources of calcium and phosphate could help when the saliva flow is reduced.

(Dental caries: a dynamic diesis process. Featherstone, Australian Dental Journal/Vol 53, Issue 3)

MI Paste has been shown to remineralize teeth better than standard fluoride toothpaste as it contains Ca and P ions.

(Effectiveness of MI Plu and Remin Pro on remineralization and color improvement of postorthodontic white spot lesions, Heravi et al. Dent Res J. 2018 Mar-Apr; 15(2): 95-103)

Arginine

Eat more foods with arginine in it. Studies show that oral microflora is able to rebound to a normal pH when they are fed foods that are rich in arginine. These foods include seeds, nuts, meats, chickpeas, and seaweed.

(J Dent Res. 2017 Jul;96(8):924-930), (Mol Oral Microbiol. 2014 Feb;29(1):45-54)

Baking Soda

People with hyposalivation can benefit from bicarbonate solutions after meals and other times. This can help to bring pH levels back to an alkaline range. This has had benefits for extended period of time. It was suggested in this study that people with hyposalivation would benefit from baking soda toothpaste after sugar consumption.

In addition there were statistically significant reductions in the numbers of mutans streptococci in saliva after use with baking soda products.

Timing of the use of the products is important and should be used close to the time that the patient consumes sugars.

(Evidence for biofilm acid neutralization by baking soda. Zero. JADA 148(11 suppl) Nov 2017)

Fluoride

ADA Evidence strongly supports fluoride varnish at least every 3 to 6 months for all patients' ages 0-18. It is also the ADA expert opinion that patients older than 18 receive varnish every 3 to 6 months. For patients with low risk for developing caries OTC toothpaste and fluoridated water are adequate.

(JADA Topical fluoride for caries prevention, 144(11) November 2013;144[11]:1279-1291)

Brushing

Dentists should remind patients older than 8 years of age with active carious lesions to avoid rinsing their teeth with water after brushing this will keep residual fluoride on their teeth to promote remineralization. (General Dentistry March/April 2018 pg. 8)