

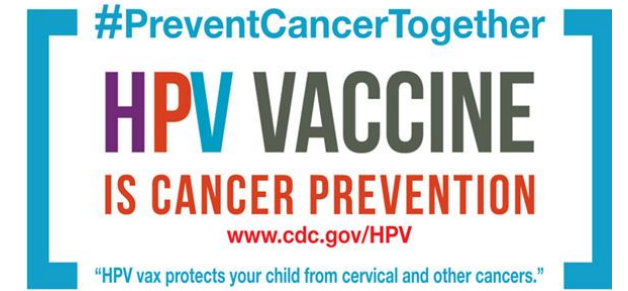


# WASHINGTON STATE HPV FREE TASK FORCE 2024 FALL QUARTER MEETING

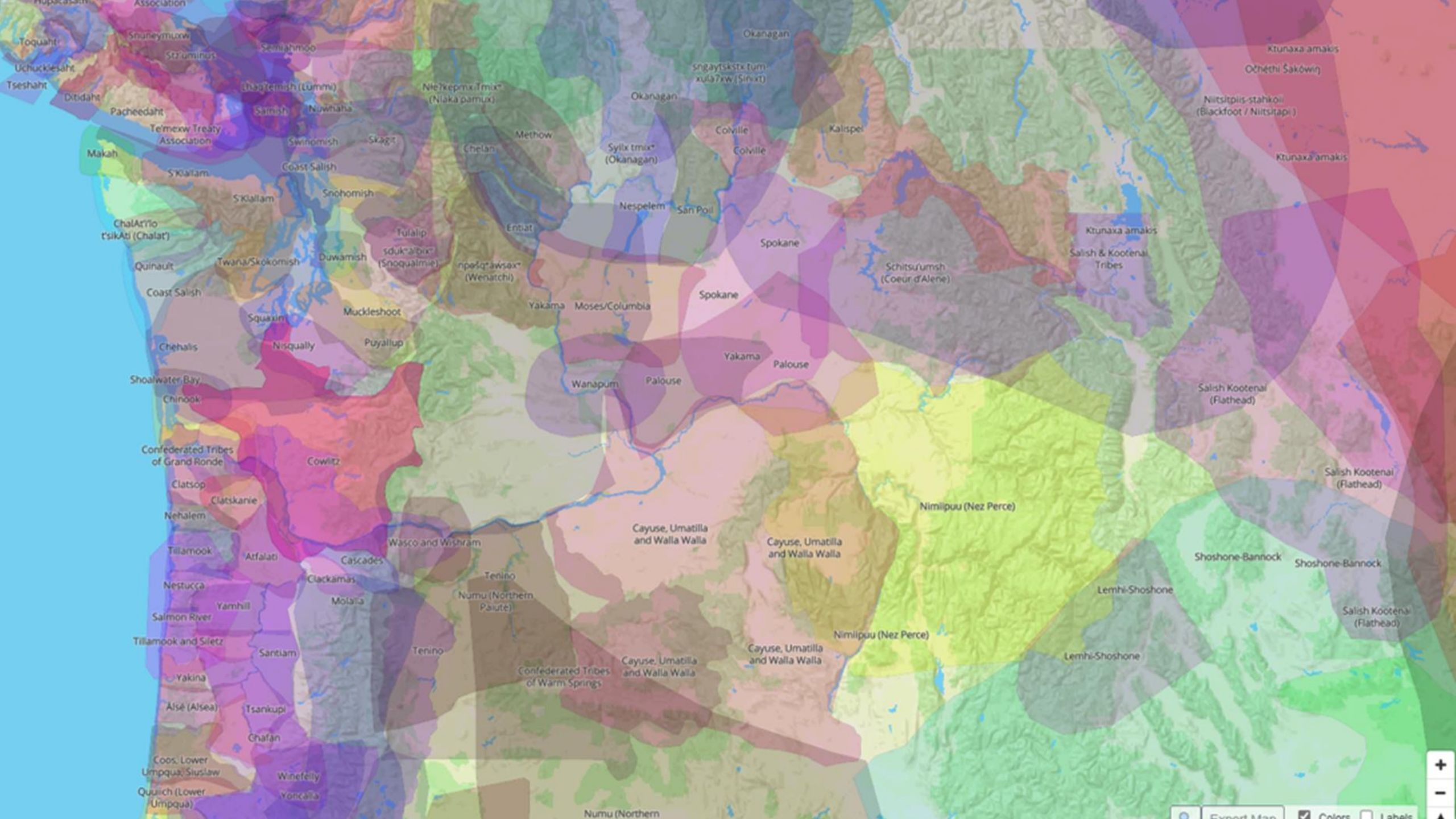
11<sup>th</sup> October 2024



# Agenda



- Land Acknowledgement
- Housekeeping, Accomplishments, and Updates
- Presentation 1: Chiricahua Community Health Center's Vaccination Initiative
- Presentation 2: Immunize Washington and Immunization Quality Improvement for Providers (IQIP)
- Presentation 3: Data and Resource Updates
  - Immunization Data Update & New Resources and HPV-Related Cancer Burden Data
- Poll: Project Ideas for 2025
- Presentation 4: Braiding Together Evidence, Equity & Advocacy for Cervical Cancer Prevention
- Wrap Up



# Housekeeping

- We will be recording this webinar so you can find it and all the resources referenced today on the WithinReach website. You will receive a follow up email with links to the material covered once it is available.
- While the focus is absolutely on HPV vaccination – we are also looking at adolescent immunizations collectively as they are all significantly impacted by pandemic, too narrow a focus on just HPV can create missed opportunities and the actions steps we are going to be discussing can increase rates and protection against many vaccine preventable disease.



# Code of Conduct

A friendly reminder that the HPV Taskforce invites all who attend today to help us create a safe, positive experience for everyone. Members and participants agree to support our mission and strengthen HPV prevention efforts in Washington State based on evidence-based guidance from the Advisory Committee on Immunization Practices (ACIP).

If you are subjected to an unacceptable behavior, notice that someone else is being subjected to unacceptable behavior, or have any other concerns, please notify any of the HPV Task Force planning team members as soon as possible. All reports will remain completely confidential.

See that chat message for more details.





Save the Date

## 2025 HPV Task Force Meeting Dates

- Spring Quarter Meeting (2-hour): February 7<sup>th</sup>, 2025
- Annual Roundtable (4-hour): May or June 2025 (Date TBD)
- Fall Quarter Meeting (2-hour): October 10<sup>th</sup>, 2025

Meetings will be virtual unless otherwise specified





# Task Force Accomplishments

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- May '24 – State Roundtable with over 65 attendees; 2 virtual task force meetings – Feb./Oct. '24
- Topics Covered:
  - Starting at 9 Resources including IQIP
  - New HPV @ 9 Awards
  - Using Media to Support HPV @ 9 Work
  - Cancer Data
  - Vaccine Data
  - Survivor Stories
  - Partnering with Pharmacy
  - CARE-A-Van
  - Engaging Dental/Oral Health Providers
  - Cervical Cancer



# Task Force Accomplishments

- Presentations and Learning Opportunities: School Based Health Alliance, City Match Conference, Era Conference, ACS National HPV State Engagement Meeting in Chicago IL
- Tabling Collaboration with WithinReach: Together We Can Stop Cervical Cancer
- Work Groups: Community Outreach & Clinical Interventions
  - Clinical Intervention – Back to School Provider Letter
- Second Published Article:
  - [Effect of immunization registry-based provider reminder to initiate HPV vaccination at age 9, Washington state - PMC \(nih.gov\)](#)
- Quality Improvement projects to increase HPV immunizations through WACHIP and WCAAP
- [DOH HPV @ 9 Awards](#)
- [AIM Awards Honorable Mention](#): The Washington State Department of Health's initiative WAIS Change: HPV at Nine increased HPV vaccinations among adolescents, helping to prevent cancers caused by HPV. The department of health educated and encouraged providers to routinely start HPV vaccination at age nine, and monitored vaccination coverage by age, with plans to publicly post HPV vaccination initiation and completion rates for children 9-10 annually starting in 2024.



# Task Force Accomplishments

- HPV @ 9 Resource Website: [Human Papillomavirus \(HPV\) Vaccine at Age Nine | Washington State Department of Health](#)
- Data Dashboard including @ 9 Data Available: [Immunization Measures by County Dashboard | Washington State Department of Health](#)
- [State ordering system for HPV Resources](#)
- Adolescent Immunization Poster now Available in 11 Languages:
  - Newest Additions: [Amharic](#), [Chuukese](#), [Tigrinya](#)
- HPV Awareness Videos:
  - [English](#) and [Spanish](#)
- DOH Communication Campaigns
- Coming Soon in 2025: American Cancer Society and HPV National Roundtable's Emerging Leaders Fellows Program: Nicole Rhodes

# 2025 National HPV Conference

- For more information: [National HPV Conference 2025 | Indianapolis, IN \(nhpvc.org\)](https://nhpvc.org)



# Free Printed HPV Resources

## Protect Your Preteen/Teen with Vaccines

Protect them from serious diseases including HPV cancers, meningitis, tetanus, whooping cough, flu, and COVID-19.



### AGES 9 - 10

- HPV dose 1 (human papillomavirus)
- HPV dose 2 (6 - 12 months after dose 1)

### AGES 11 - 12

- Meningitis dose 1 (MenACWY)
- Tdap (tetanus, diphtheria, pertussis)
- HPV (if 2 doses haven't been given)

### AGE 16

- Meningitis dose 2 (MenACWY)
- Meningitis B series (MenB)

### YEARLY

- Flu (seasonal influenza)

Preteens and teens should stay up-to-date with COVID-19 vaccine to help protect them from COVID-19.




This publication was supported in part by funding from the Centers for Disease Control and Prevention through Cooperative Agreement grant number 6 N4901P000682. The content of this publication does not necessarily represent the official views of, nor an endorsement by, the CDC/NIH or the U.S. Government.

- Offering free of charge – 8x11 lightly laminated posters
- Encouraged to put in any/each exam room, vaccination location – reinforcing beginning HPV vaccination at 9-10
- If interested, contact: Char Raunio, ACS,
- Email: [Char.Raunio@cancer.org](mailto:Char.Raunio@cancer.org)
- **Order needs to be place by Thursday, Nov. 21<sup>st</sup>**
- To place order, will need name, shipping address, and quantity requesting.



# Quality Improvement Project

## HPV @ 9 Cohort 4 Starting February 2025

- For Pediatric and Family Medicine Clinics that are interested in improving HPV vaccination rates for preteens, ages 9-12.
  - Contact: Sherri Zorn for questions or interest.
  - Email: [szorn@wcaap.org](mailto:szorn@wcaap.org)
- 

State of WA  
Cervical Cancer  
Awareness  
Month  
Proclamation  
Resubmitted

Last Year's →

The State of Washington



Proclamation

*WHEREAS*, cervical cancer is a disease in which cancer cells form in the cervix; and

*WHEREAS*, according to the U.S. Cancer Statistics Working Group, in 2020, 11,542 new cervical cancer cases were diagnosed and 4,272 lives were lost from it; and

*WHEREAS*, the National Cancer Institute reports that the five-year survival rate of all individuals diagnosed with cervical cancer is 67.2 percent, due to improved treatment, early diagnosis, and vaccinations; and

*WHEREAS*, cervical cancer incidence rates and death rates are still high among certain populations in the United States, largely due to limited access to cervical cancer screening and vaccinations; and

*WHEREAS*, studies have shown that the human papillomavirus (HPV) vaccine is highly effective at reducing infections associated with the types of viruses that can lead to cervical cancer; and

*WHEREAS*, the results from a simple Pap test and HPV co-test can be used to help prevent cervical cancer or detect cervical cancer in its earliest and most curable stages; and

*NOW, THEREFORE*, I, Jay Inslee, governor of the state of Washington, do hereby proclaim January 2024 as

*Cervical Cancer Awareness Month*

in Washington, and I urge all people in our state to join me in this special observance.

Signed this 13<sup>th</sup> day of November, 2023

Governor Jay Inslee





## Presentation 1

**Dennis Walto, MA**

Chief External Affairs Officer

**&**

**Emily Harris, MPH, LPN**

Director of Community Health

**Chiricahua Community Health Center, Arizona**



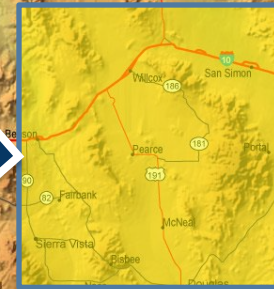
**CHIRICAHUA**  
COMMUNITY HEALTH CENTERS, INC.  
HEALTH FOR ALL

**Introducing....**

# **Chiricahua Community Health Centers, Inc**

**“Caring for Patients  
Building Healthy Communities”**

**Cochise  
County**



An aerial photograph showing a long, narrow river flowing through a vast, green landscape. The river is surrounded by dense vegetation, including many trees with bright yellow foliage. In the background, there are rolling hills and mountains under a clear sky. The text is overlaid on the left side of the image.

## ***Chiricahua's Catchment Area is...***

- ***Larger than Rhode Island and Connecticut combined***
- ***Larger than 80 Countries UN Recognizes***
- ***Runs 100 miles along the US / Mexico Border***





# *Chiricahua Demographics...*

- *More than 60% racial and/or ethnic minority*
- *80% live under 200% Federal Poverty thresholds*
- *More than 33K unique patients per year – 25% of entire catchment population*
- *140,000+ encounters per year*
- *15 fixed site medical, dental and behavioral health facilities*
- *Eight mobile medical and mobile dental clinics*



**CHIRICAHUA**

COMMUNITY HEALTH CENTERS, INC.

HEALTH FOR ALL

# Improving HPV Vaccine Administration via Integrated Vaccine Efforts

Emily Harris, MPH, LPN - Director of Community Health

19

25 million

children worldwide missed their immunizations  
due to the pandemic

- American Academy of Pediatrics

# 20

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

# 21

# DENTAL INTEGRATION



# 22

## 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%

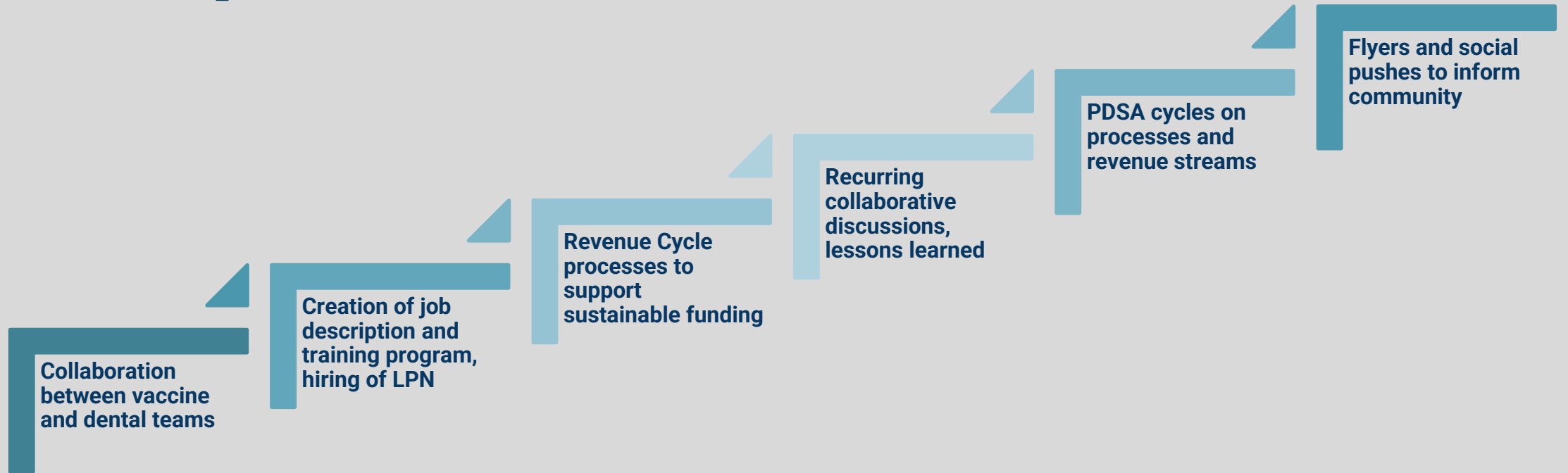


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# 23 Project Design & Implementation



# 24

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.



**CHIRICAHUA**

COMMUNITY HEALTH CENTERS, INC.

HEALTH FOR ALL

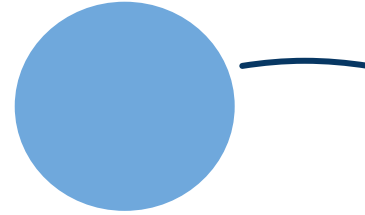
 **DELTA DENTAL®**



# 25

## VACCINE-DENTAL WORKFLOW

Immunization records  
reviewed day prior to  
appointment



**CHIRICAHUA**

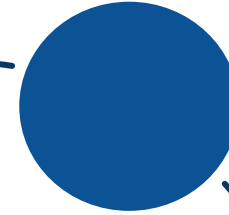
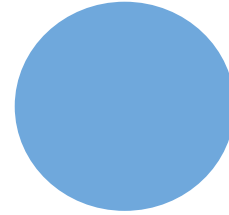
COMMUNITY HEALTH CENTERS, INC.

HEALTH FOR ALL

# 26

## VACCINE-DENTAL WORKFLOW

Immunization records  
reviewed day prior to  
appointment



Patient offered vaccine  
during check-in by Patient  
Service Representative



**CHIRICAHUA**

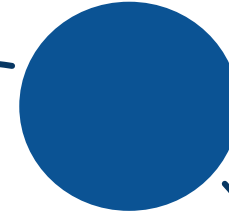
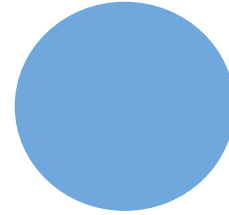
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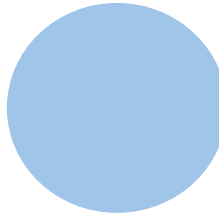
# 27

## 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



**CHIRICAHUA**

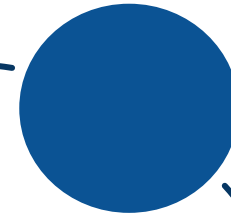
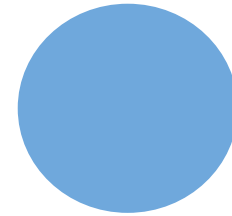
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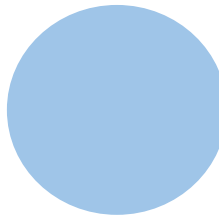
# 28

## VACCINE-DENTAL WORKFLOW

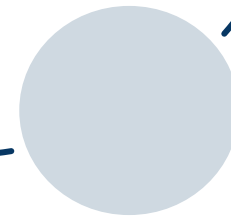
Immunization records  
reviewed day prior to  
appointment



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



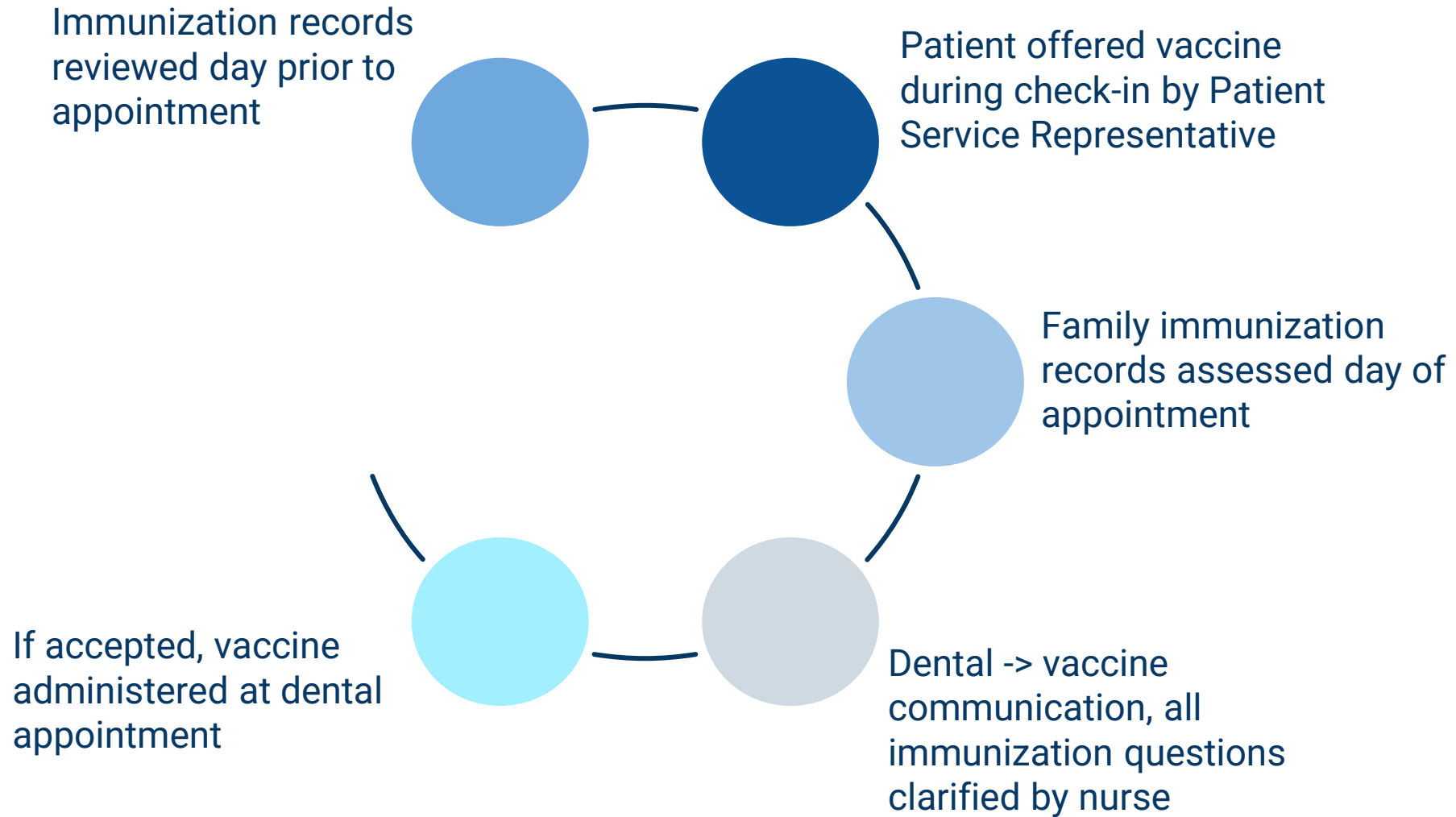
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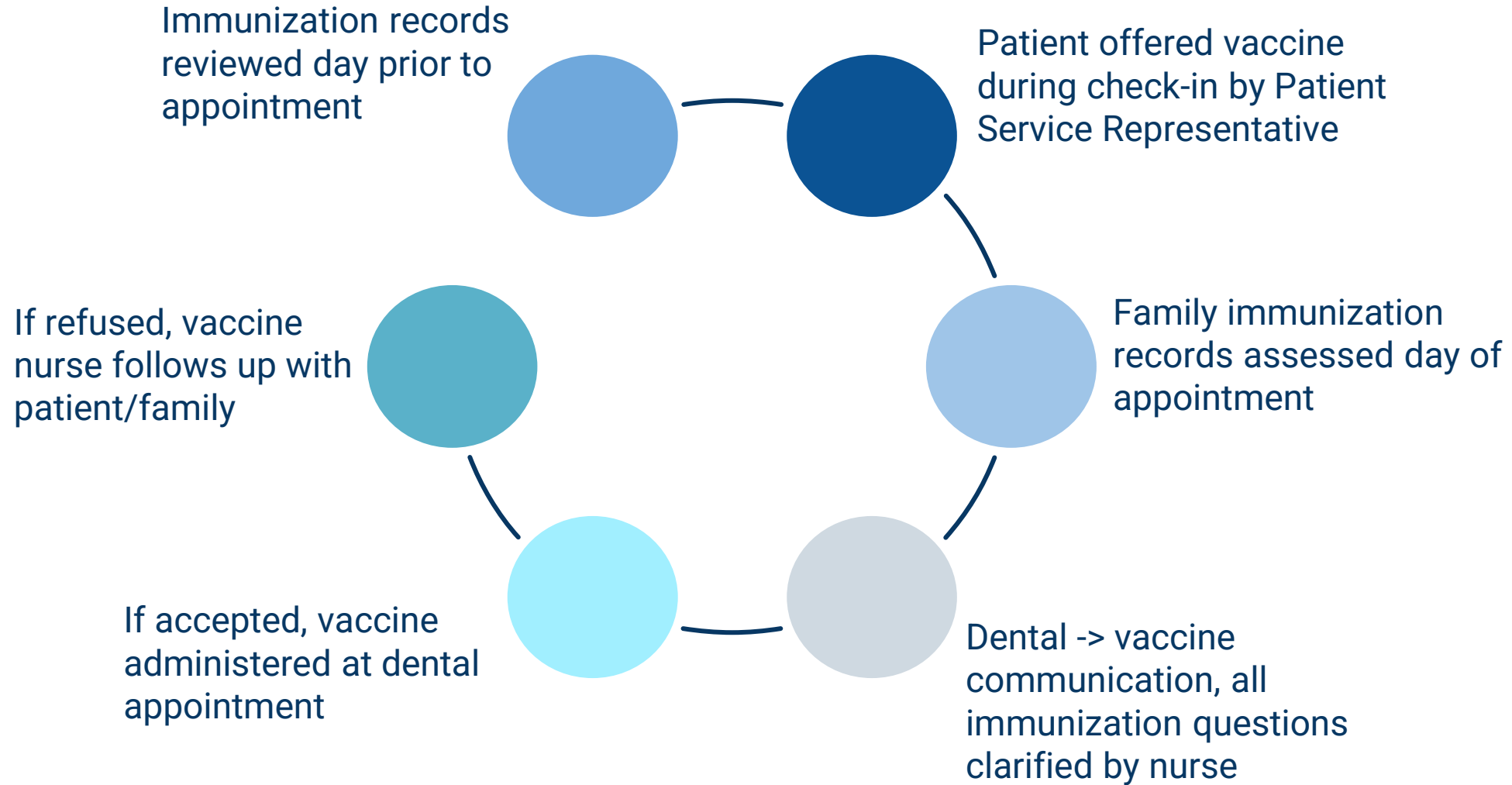
# 29

## VACCINE-DENTAL WORKFLOW



# 30

## VACCINE-DENTAL WORKFLOW



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31



# Program Results

5/1/23-9/30/24



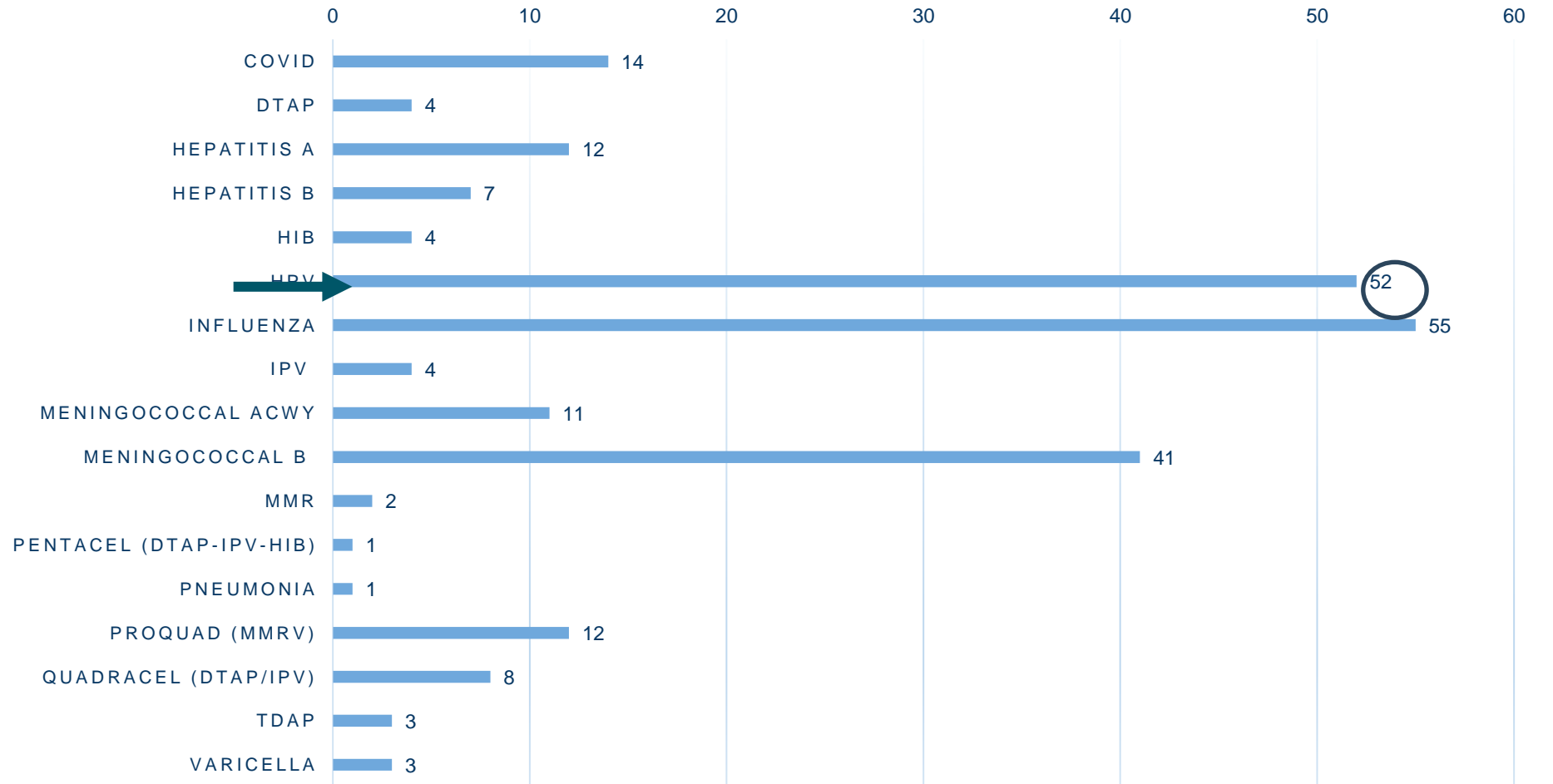
**CHIRICAHUA**

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# 32

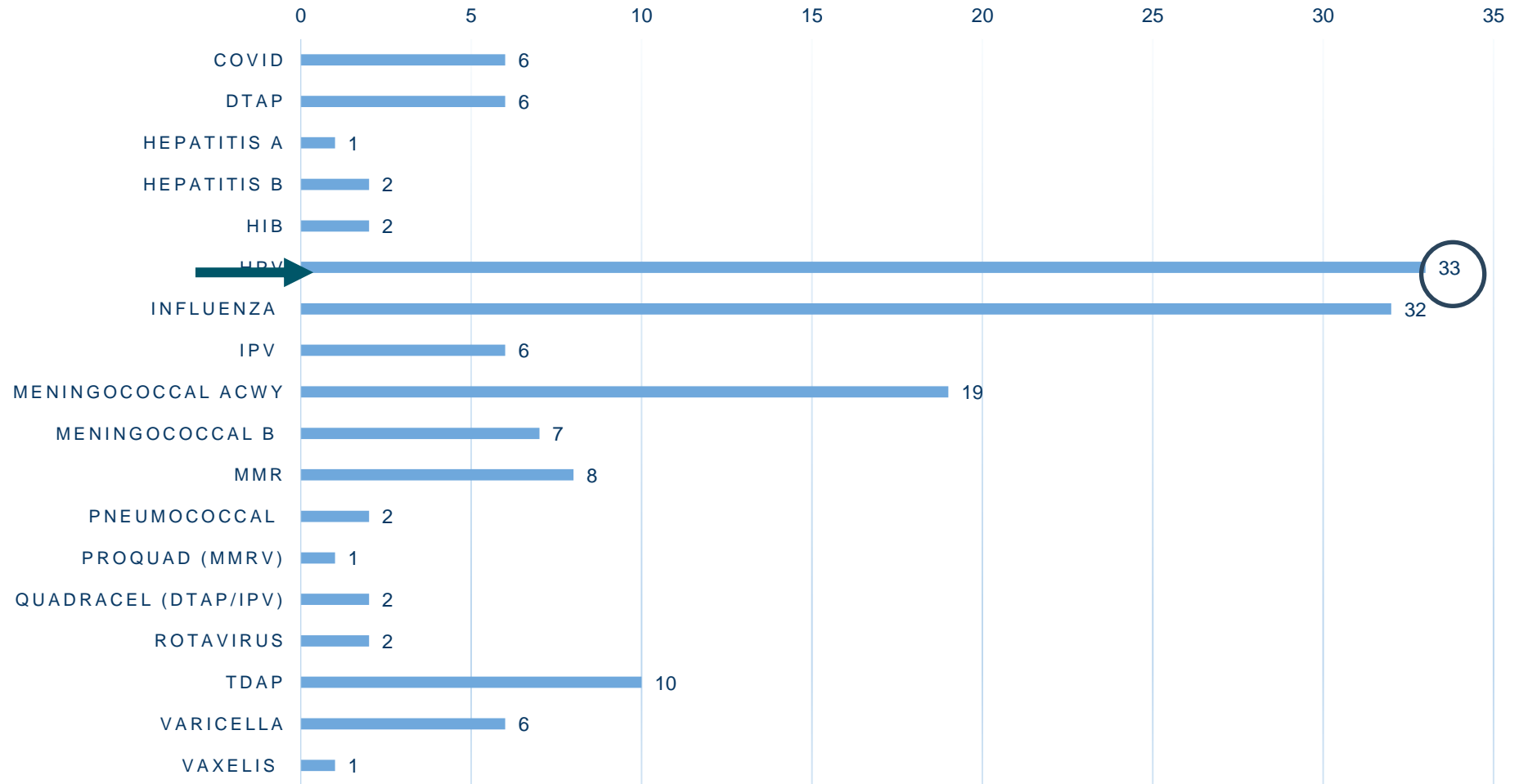
## Sierra Vista – Dose Breakdown May – Dec 2024, Pediatrics





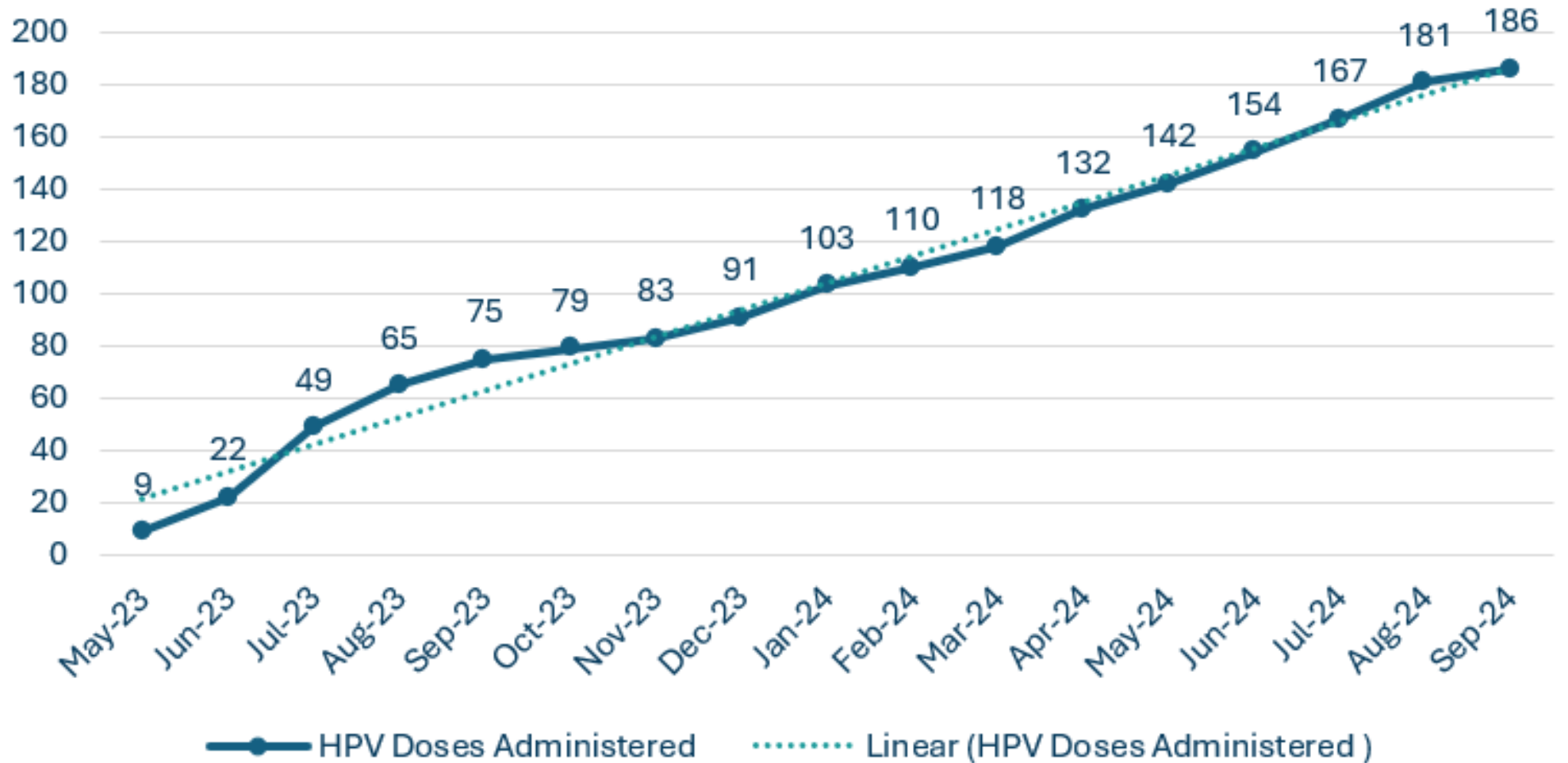
# 33 Douglas – Dose Breakdown

## May – Dec 2024, Pediatrics



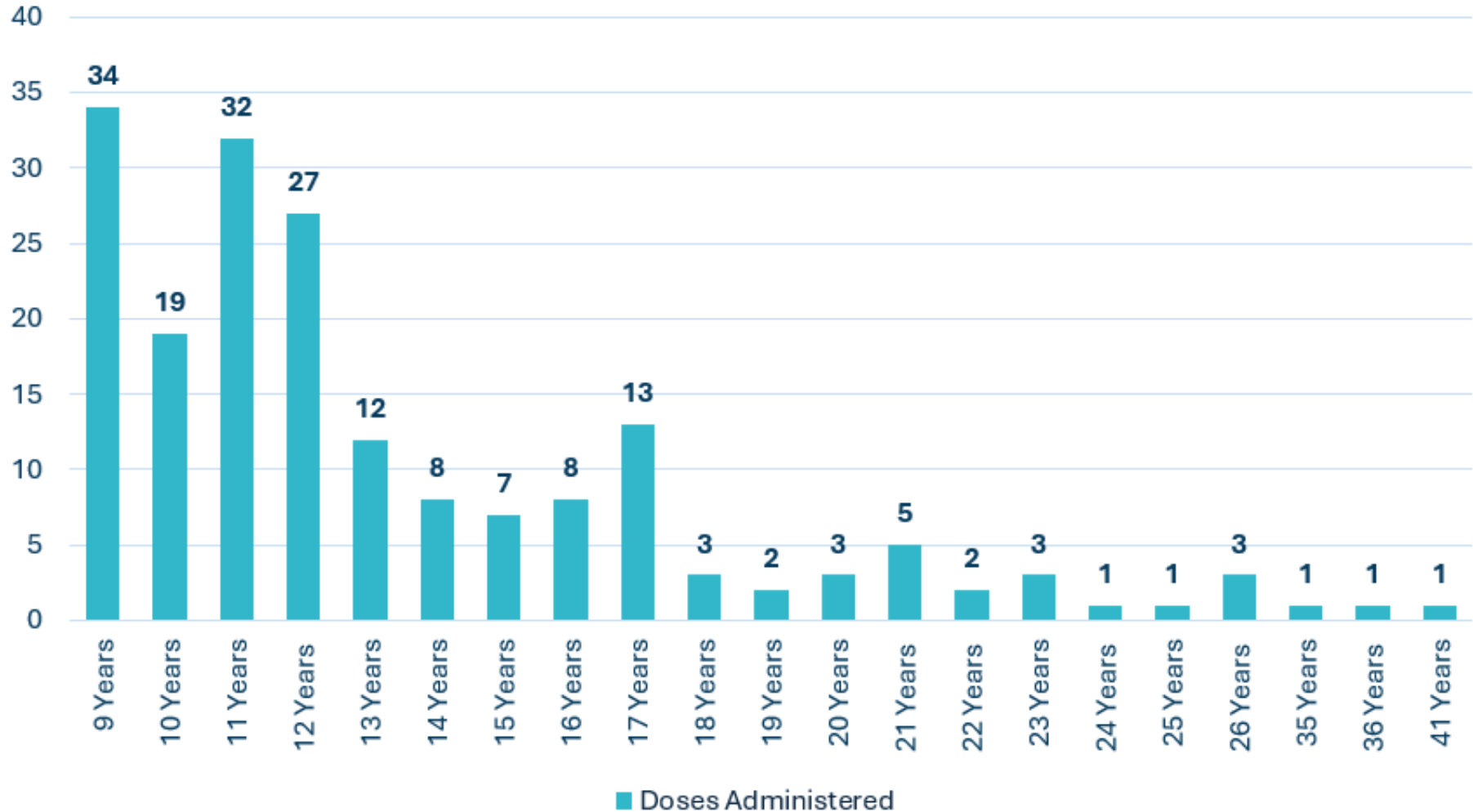
# 34

## HPV Vaccine Administration May 2023 – Sep 2024



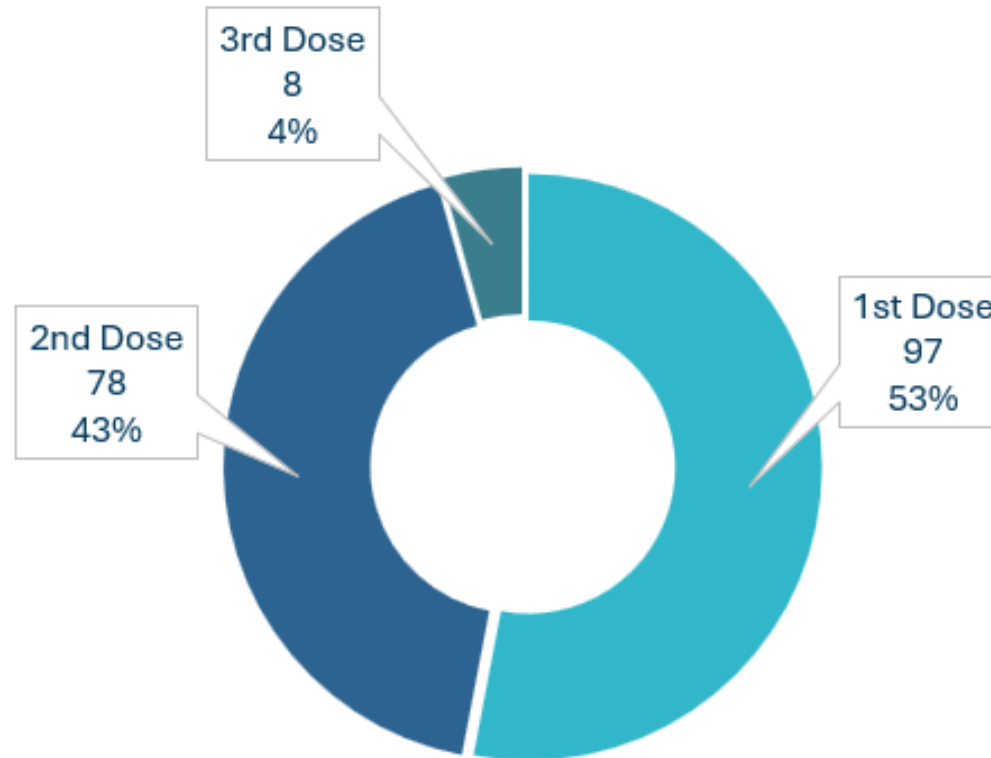
# 35

## HPV Vaccine Administration May 2023 – Sep 2024, By Age



# 36

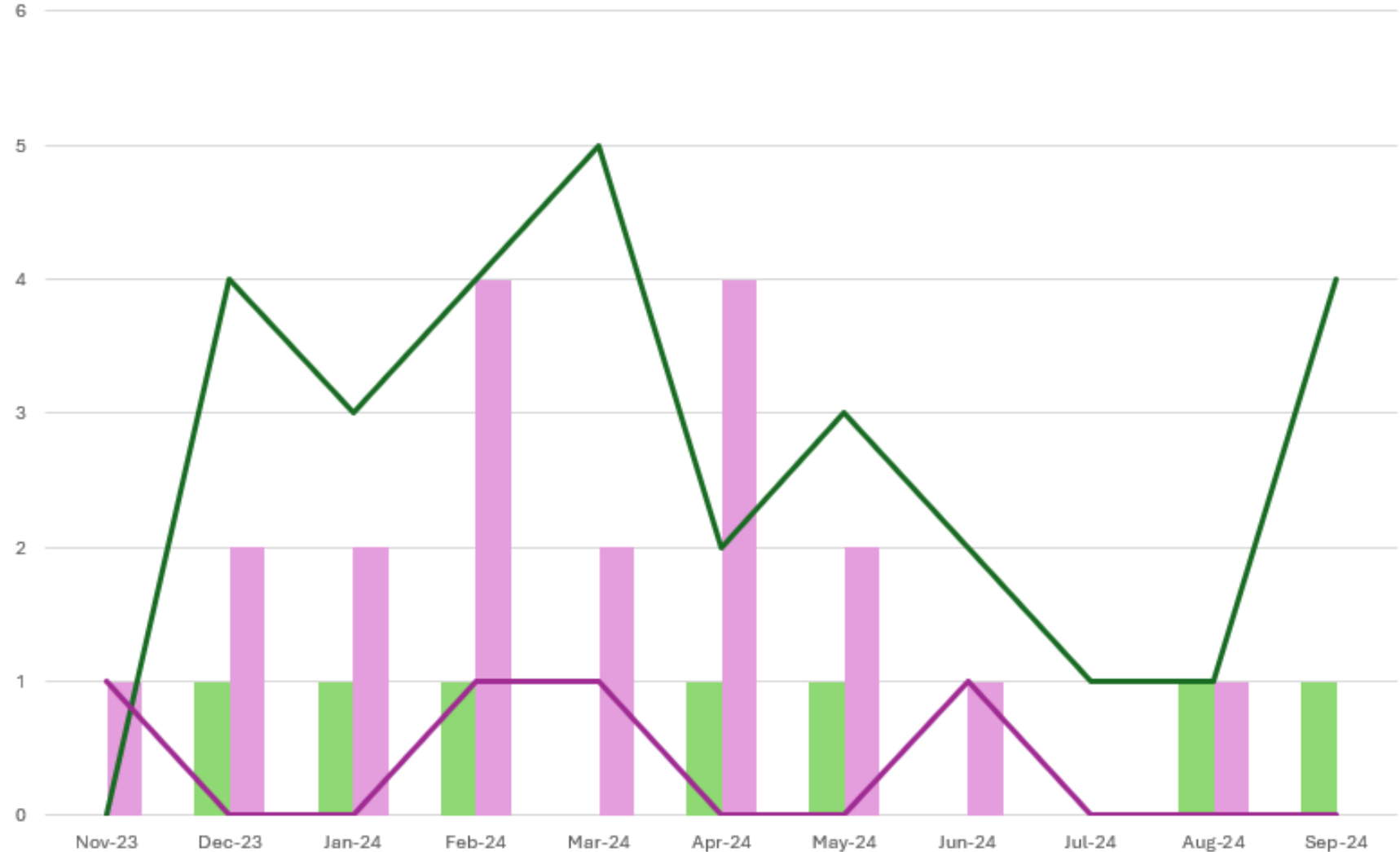
## HPV Vaccine Administration May 2023 – Sep 2024, By Dose



# 37

## Childhood Immunization Status Impact

0-24 Month Dental Vaccines

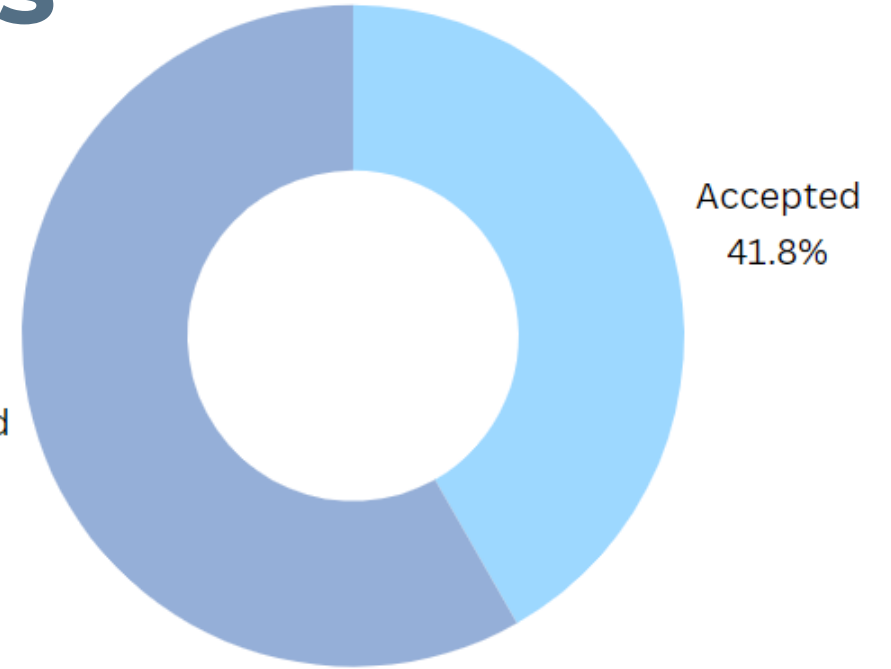


	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
SV Administered	0	1	1	1	0	1	1	0	0	1	1
GRC Administered	1	2	2	4	2	4	2	1	0	1	0
SV Refused	0	4	3	4	5	2	3	2	1	1	4
GRC Refused	1	0	0	1	1	0	0	1	0	0	0

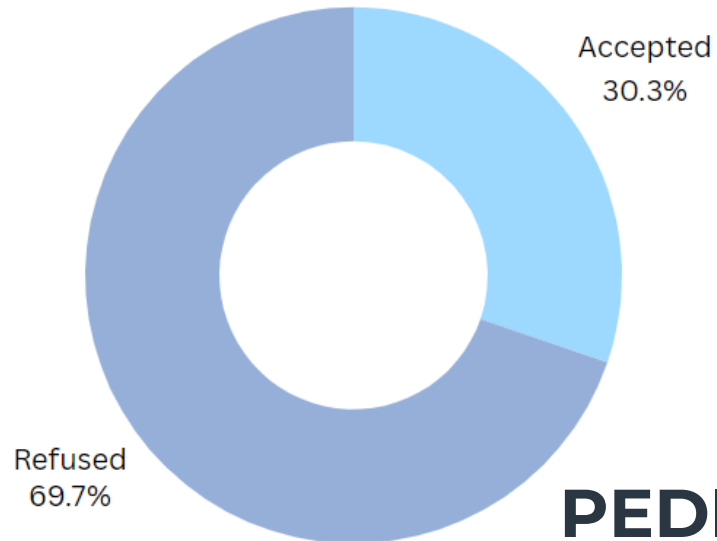
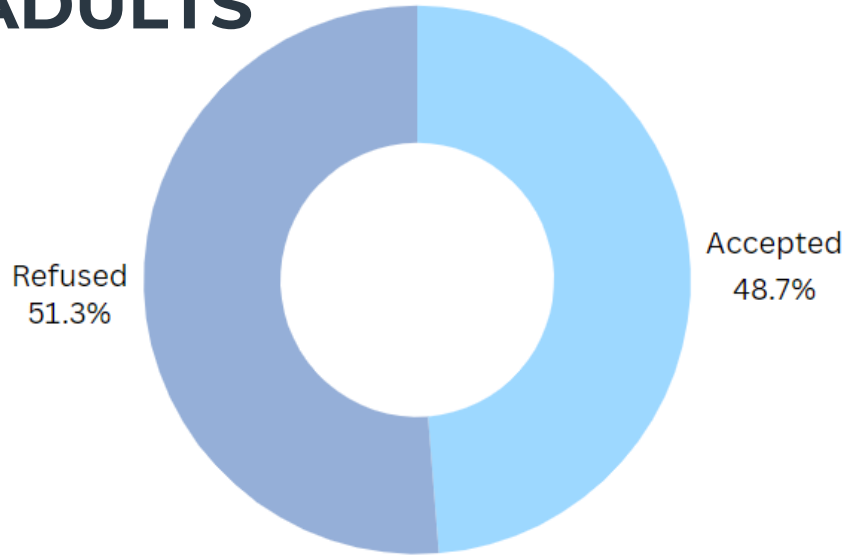
# 38

## Acceptance Rates May 2023 – Sep 2024

### ALL AGES



### ADULTS



### PEDIATRICS

# 39

## 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%



4

**2,528 vaccines**

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

0

**41.8% acceptance**

rate amongst eligible dental patients (adult and pediatric)



**Total Patients**



**Adult Patients**



**Pediatric Patients**





# 41

## 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

42

THANK  
YOU!



## Presentation 2

**2024 IQIP Immunize WA Awards**

Chrystal Averette, MPH

**Washington State Department of Health**



# Washington State Immunization Quality Improvement for Providers



**IMMUNIZE WASHINGTON AND IMMUNIZATION QUALITY IMPROVEMENT FOR PROVIDERS (IQIP)**  
Office of Immunization Child Profile

---

## Immunize WA Trending Data 2015-2024



# Immunize WA Goals

## Increase

- Increase immunization rates at the clinic level by using best practice tools and the Washington State Immunization Information System (IIS).

## Support

- Support activities to provide on time vaccination to children and adolescents

## Encourage

- Encourage clinics to measure their immunization rates so they know where they are doing well and areas to improve.

## Engage in

- Engage in immunization quality improvement activities

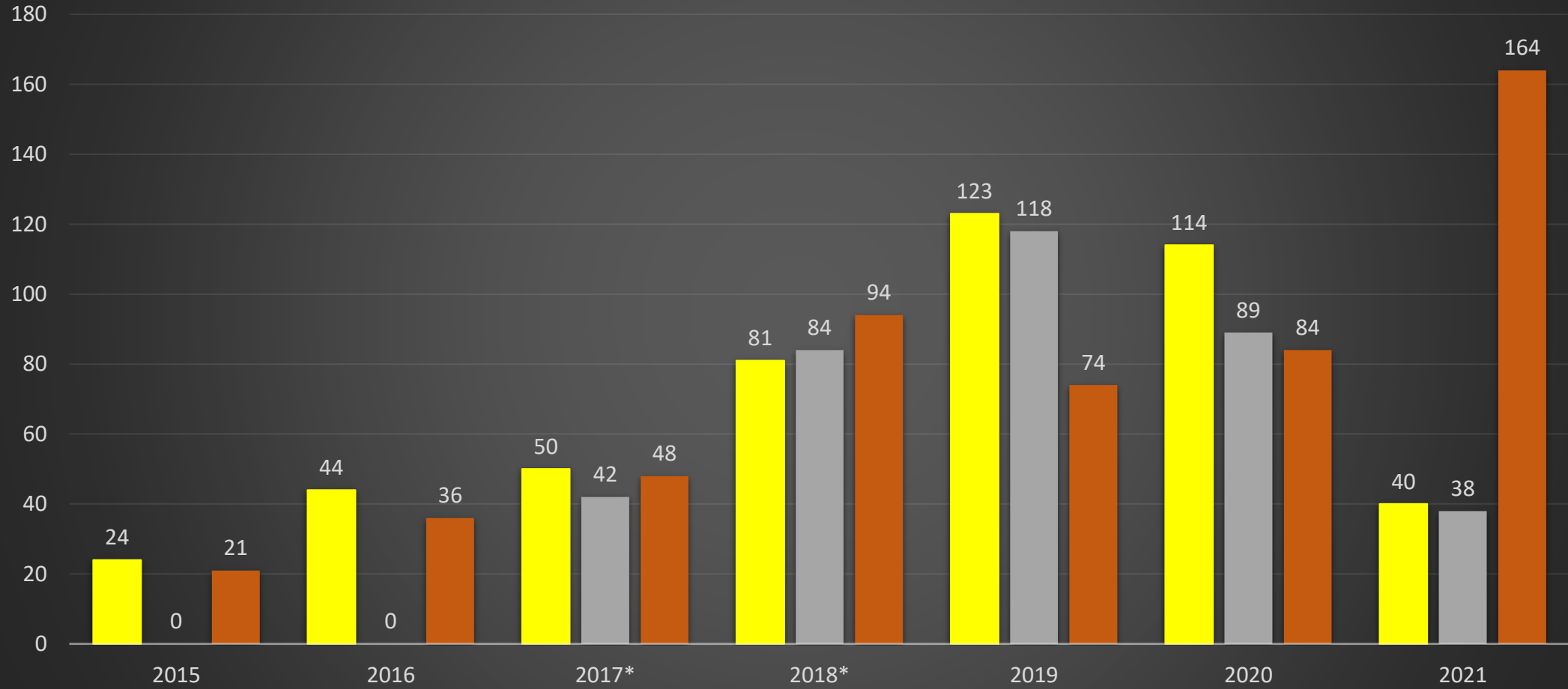
## Help

- Help Washington meet national goals for child and teen vaccines

Immunize WA  
Vaccine Series  
Gold 80% or higher,  
Silver 70-79%  
Bronze 70% and  
above on different  
immunization  
measure  
HPV Cancer  
Prevention 9-10  
years 25% or higher

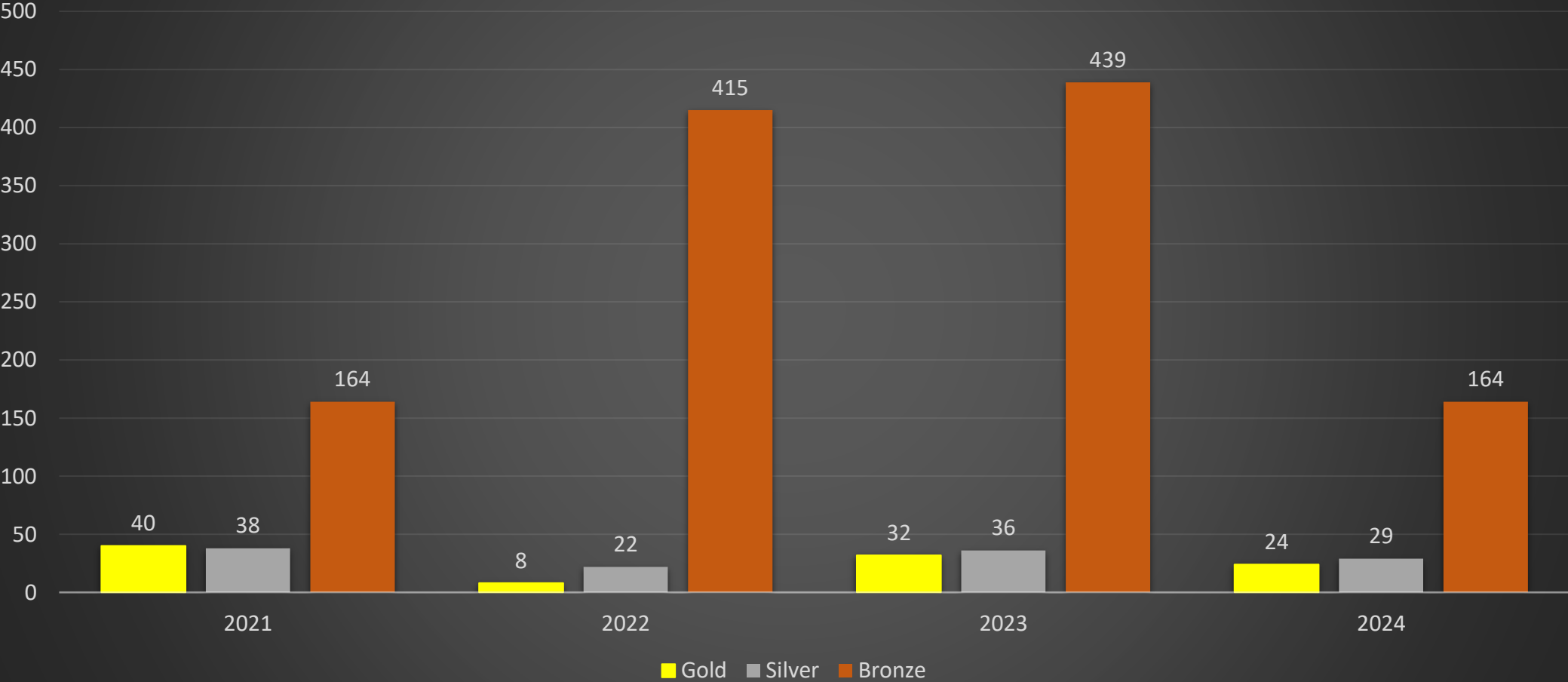
- 2015 Induction of annual award for the childhood award (4313314) and adolescent 13-17 years old (1:1:3)
- Providers nominated clinics for award Jan 1<sup>st</sup> through Feb 15<sup>th</sup>. Awards were announced in April during National Infant Immunization Week (NIIW). Self nominations were to encourage data clean-up, running coverage rate reports, and engaging in AFIX visits
- 2017 Bronze series introduced for adolescents 70% and above for (1:1:1) series for 13-17 years old to encourage completion of series. Dec 2016 ACIP approved two dose series for those receiving first dose of HPV before 15<sup>th</sup> birthday. Adolescent series (1:1:UTD)
- 2020 Adolescent measure moved to 13 years old to align with HEDIS Combo 2
- 2020 Awards moved to August during National Immunization Award due to Pandemic Response
- 2021 and 2022 DOH nominated all due to staffing shortages and turnover at clinics
- 2021 Childhood measure moved to HEDIS Combo 10
- 2022 Bronze Award added for childhood series (4313314) Healthy People 2020 measure
- 2024 10<sup>th</sup> Year anniversary, Logo was updated to modernize image. New award level for 9-10 years old for 1 dose of HPV of 25% or higher called HPV Cancer Prevention Award.

# Award Levels 2015-2021





# 2021-2024 Award Level Impacts of Pandemic



# Immunization Measures Childhood

---

**4313314 (Healthy People 2020 Goal of 80% for series rate) evaluate 24-35 months by age 2**

---

4 doses of DTaP and PCV

---

3 doses of Hep B, Polio, Hib

---

1 dose of MMR and Varicella

---

**HEDIS Combo 10 evaluate 24-35 months by age 2**

---

4 doses of DTaP and PCV

---

3 doses of Hep B, Polio, Hib

---

2 doses Flu and Rotavirus

---

1 dose of MMR, Varicella, Hep A

---

# Immunization Measure Adolescent

---

## **HEDIS Combo 2 (evaluate 13 to 13 years old by 13<sup>th</sup> birthday)**

---

1 dose of TDaP

---

1 dose of MCV4

---

2 doses of HPV (or completion of series)

---

---

## **1:1:1 (evaluate 13 to 13 years old by 13<sup>th</sup> birthday)**

---

1 dose of TDaP

---

1 dose of MCV4

---

1 dose of HPV

# HPV Cancer Prevention Award

---

**1 dose of HPV (evaluate 9 to 10 years old)**

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1 dose of HPV (25% and higher)

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Award sponsored by HPV Free Task Force

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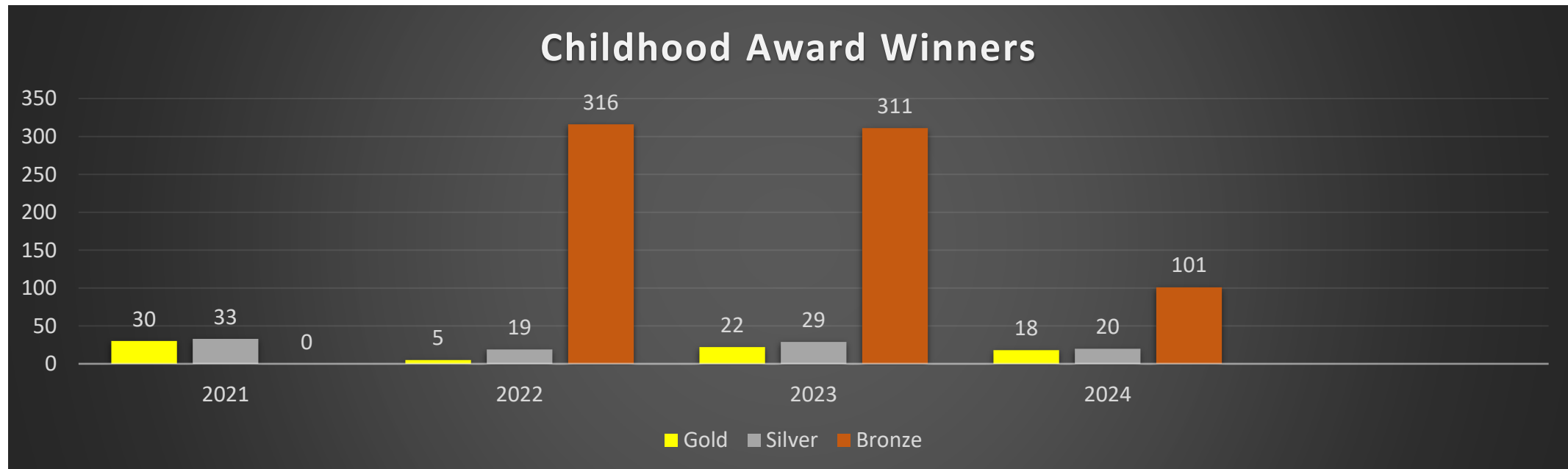
# Childhood Series

- 2021 awards moved from the 4313314 series to HEDIS Combo 10 measure



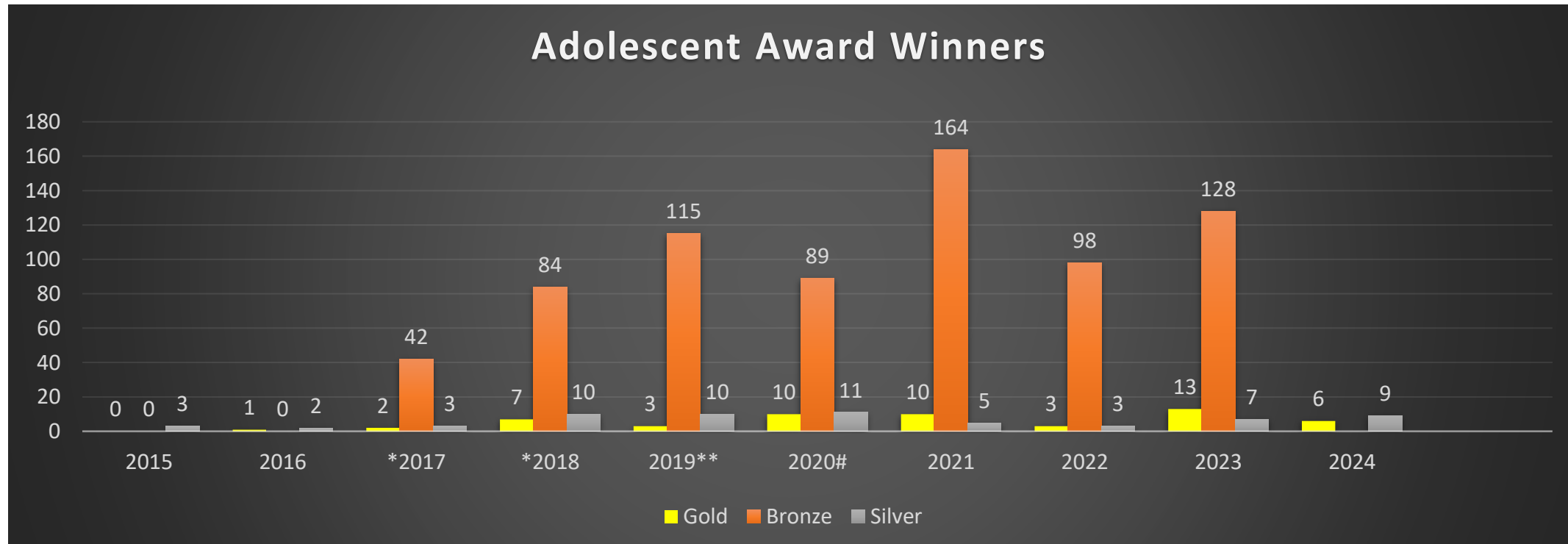
# Childhood Series 2021-2024

- 2021 awards moved from the 4313314 series to HEDIS Combo 10 measure
  - 2022 Bronze Award measure introduced

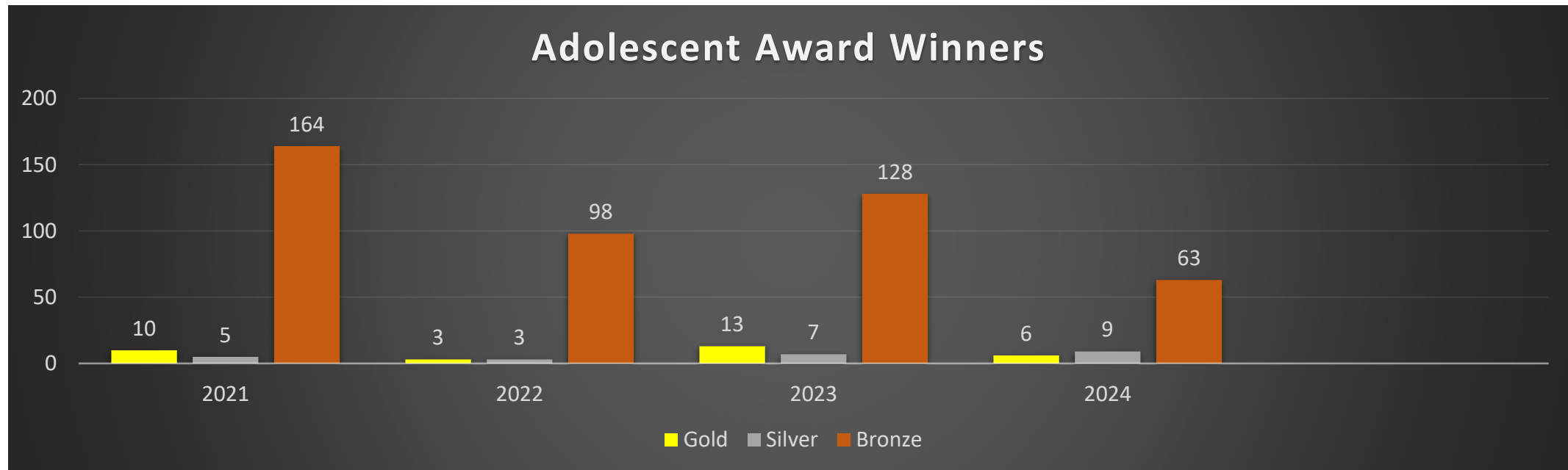


# Adolescent Series

- 2017 Bronze Award Level introduced to encourage providers to complete series

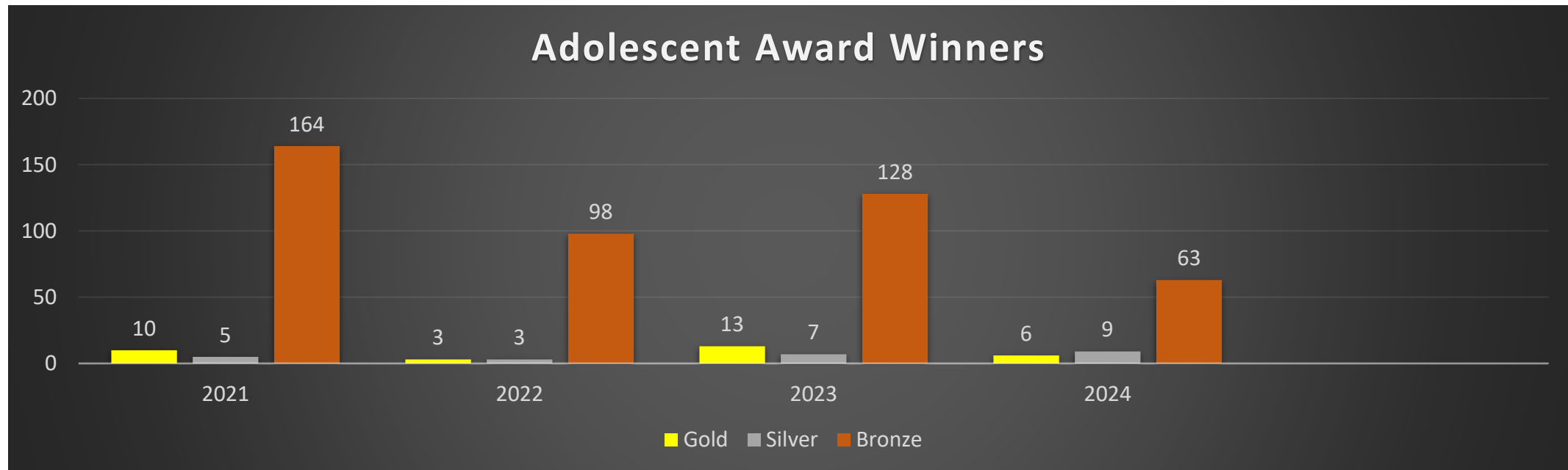


# Adolescent Series 2021-2024



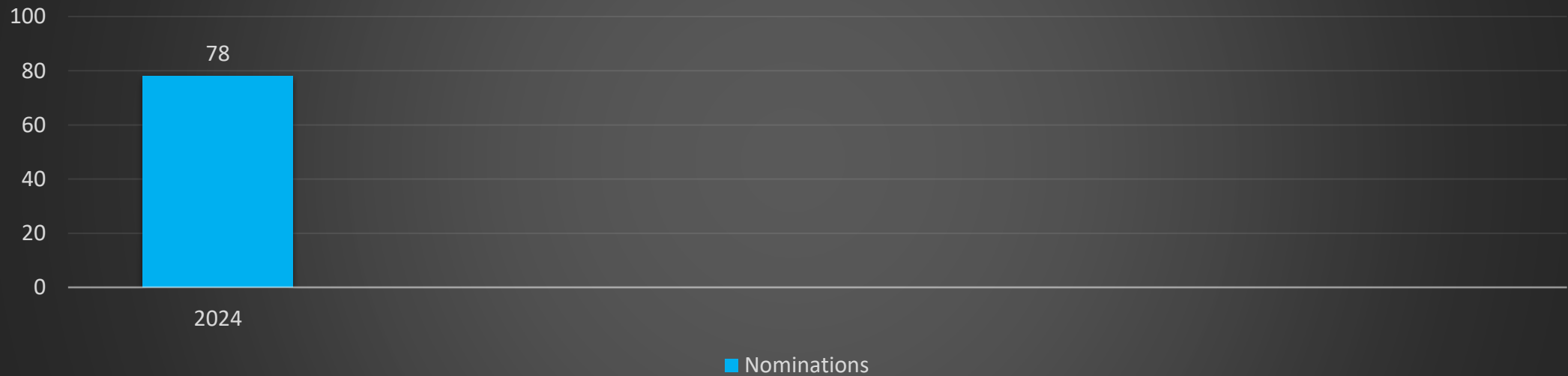


# Adolescent Series 2021-2024



# HPV Cancer Prevention 2024

## Adolescent Award Winners



## IQIP Purpose

*The purpose of IQIP is to **promote and support** the implementation of **provider-level strategies** designed to increase on-time vaccination among child and adolescent patients in adherence to the Advisory Committee on Immunization Practices' (ACIP) **routine immunization schedule***

- **Promote and support** – Collaborate with provider location to identify opportunities for workflow improvement, select QI strategies, and provide ongoing support and motivation
- **Provider-level strategies** – Update vaccination workflow changes at provider location to implement IQIP strategies
- **Routine immunization schedule** – Achieve on-time vaccination according to ACIP immunization schedule, reducing future need for catch-up

# Strategies and Action Items

---

## IQIP Core Strategies



Facilitate return to clinic for vaccination.



Leverage IIS functionality to improve immunization practice.



Give a strong vaccine recommendation (include HPV vaccine if the provider has adolescent patients).



Strengthen vaccination communications.



Recommend HPV vaccination series starting at age 9.

## Strategy Selection



Facilitate Ret. 36.5%



Leverage IIS 75.8%



Strong Rec. 22.5%



Vax Comms 39.3%



Custom QI 60.1%

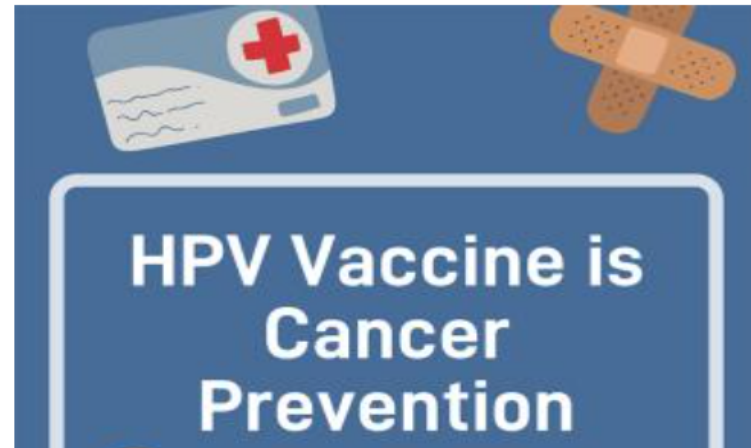


## State Specific Strategy

# Human Papillomavirus (HPV) Vaccine at Age Nine

## HPV Vaccine is Most Effective Between Ages 9 and 12 Years

- The HPV vaccine provides long-lasting protection against the most common cancers caused by HPV.
- Doctors and nurses recommend the HPV vaccine for children starting at age nine years.
- The HPV vaccine is most effective at this age, it produces the most infection-fighting cells, or antibodies. This also ensures immunity is already in place before any exposure to the virus.
- If your teen hasn't received the vaccine, it is not too late! Talk to their doctor or nurse about getting them



# Alternate QI Credit



Immunizations  
Learning  
Collaborative

# Immunizations Learning Collaborative

---

Increase Immunization Coverage







## Presentation 3

### Data Updates

**Nicole Rhodes, CHES**

Immunization Health Educator

**Washington State Department of Health**

**Katie Treend, MPH**

Comprehensive Cancer Control Program

Coordinator

**Washington State Department of Health**



# DOH UPDATES

Washington State Department of Health



**Nicole Rhodes (she/her)**

*Immunization Health Educator*

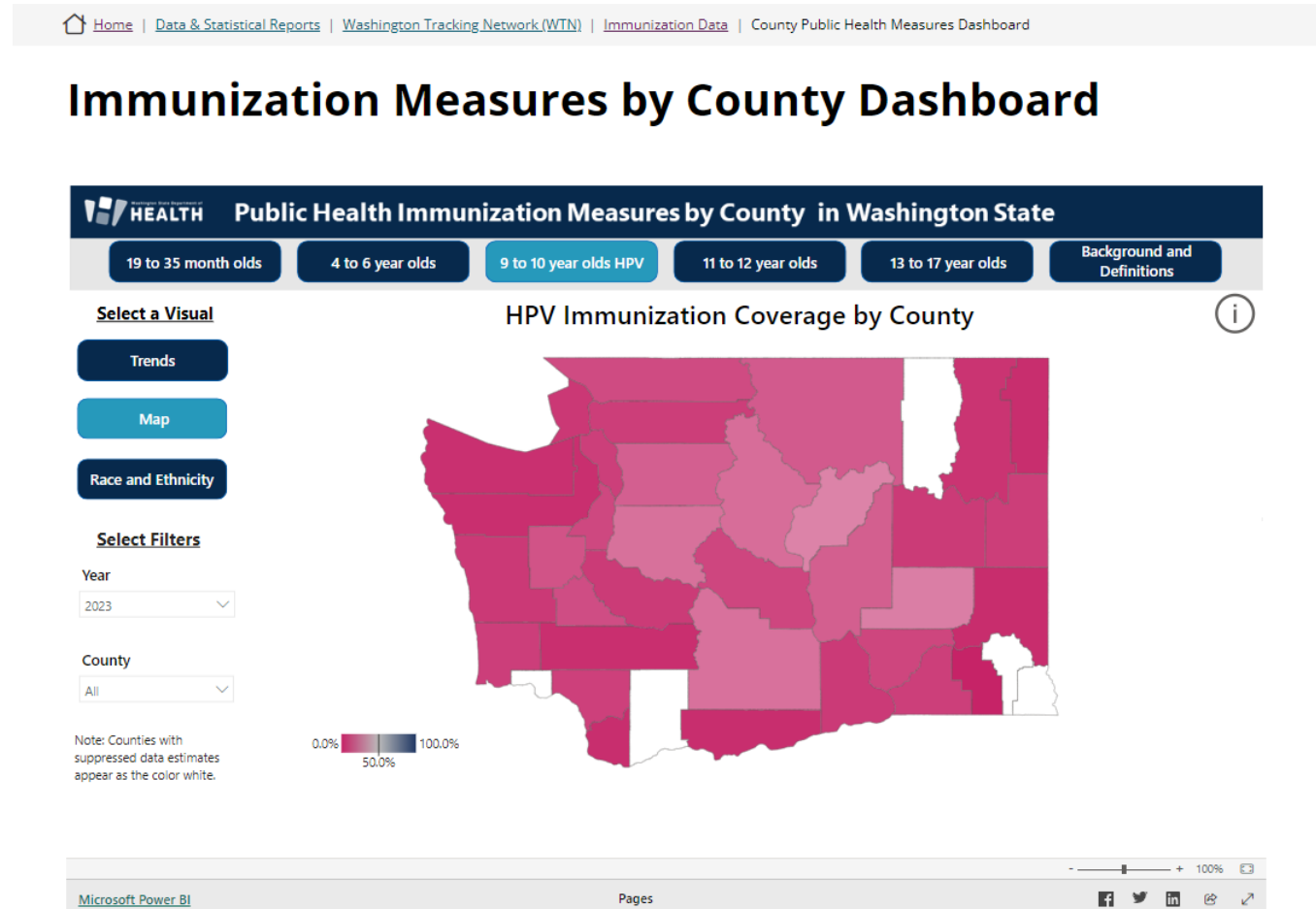
nicole.rhodes@doh.wa.gov

Health Promotion and Education (HPE)  
Office of Public Affairs and Equity (OPAE)  
Washington State Department of Health

Data

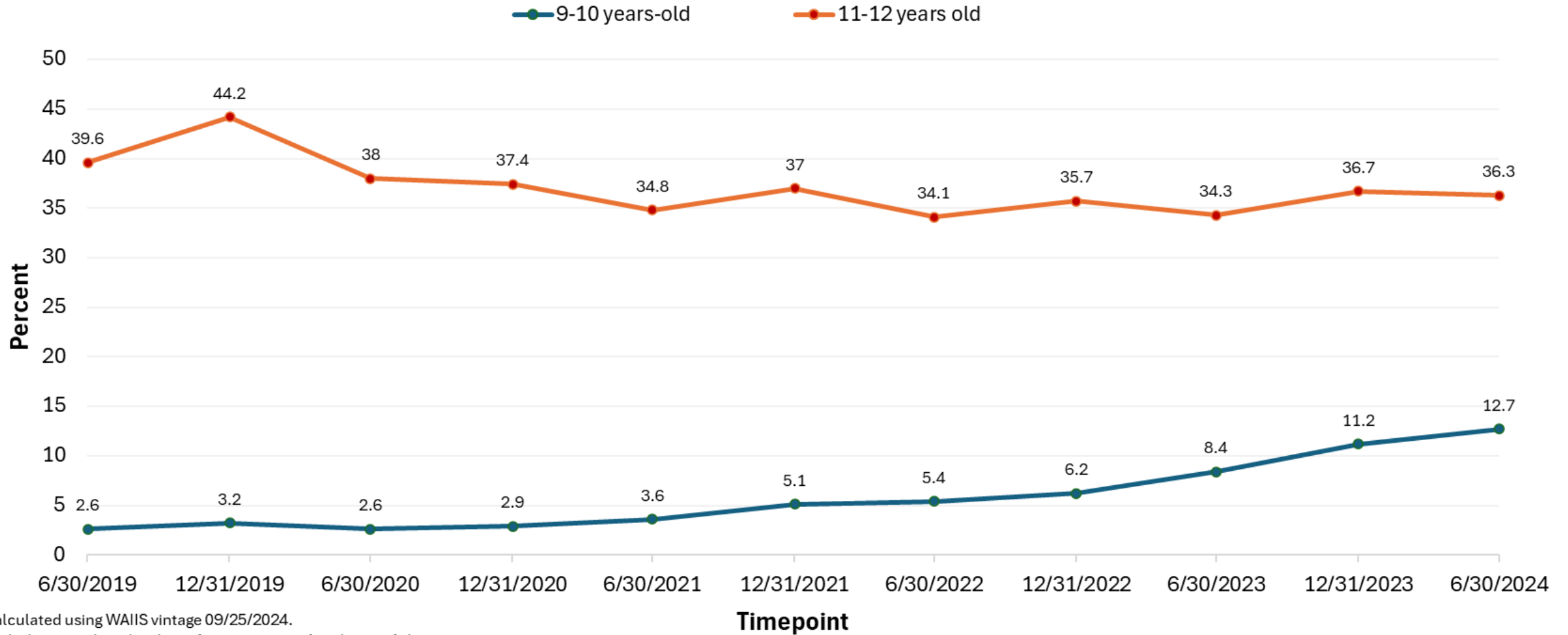
---

# New DOH HPV Immunization Data Dashboard!



Source: Immunization Measures by County Dashboard | Washington State Department of Health

## Percent of HPV-initiated (1+ dose) adolescents by age group, June 2019 - June 2024

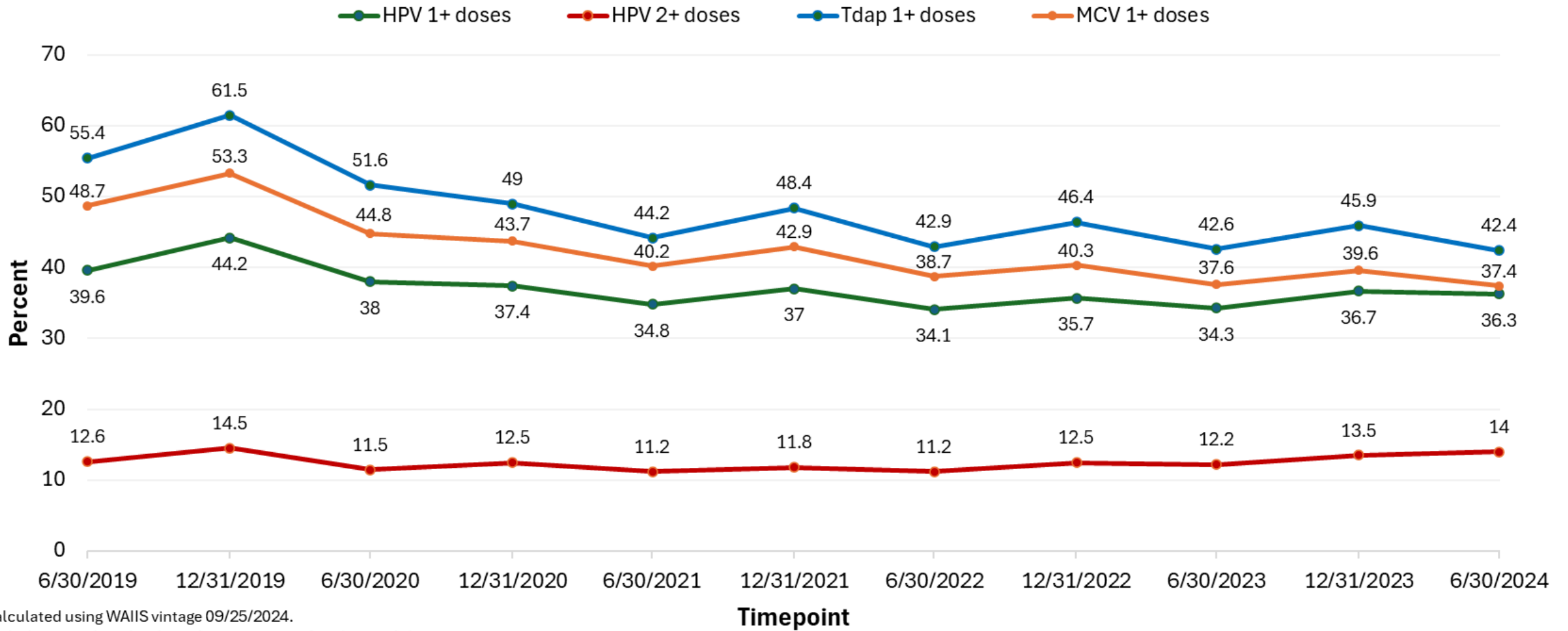


Calculated using WAIS vintage 09/25/2024.

Excludes records with a date of registry entry after the as-of-date.

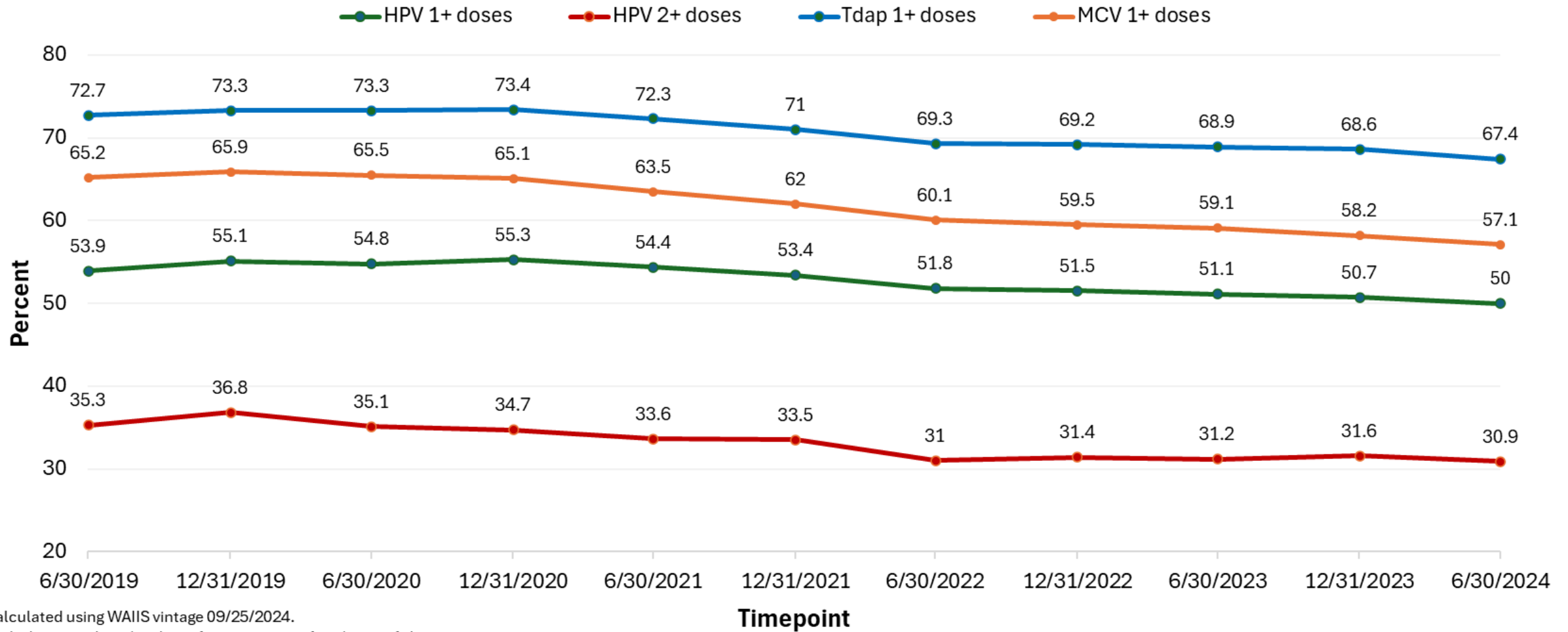
May not be comparable to prior estimates.

## Percent of 11-12 year olds with 1+ doses HPV, 2+ doses HPV, 1+ doses Tdap, and 1+ doses MCV, June 2019 to June 2024



Calculated using WAIS vintage 09/25/2024.  
Excludes records with a date of registry entry after the as-of-date.  
May not be comparable to prior estimates.

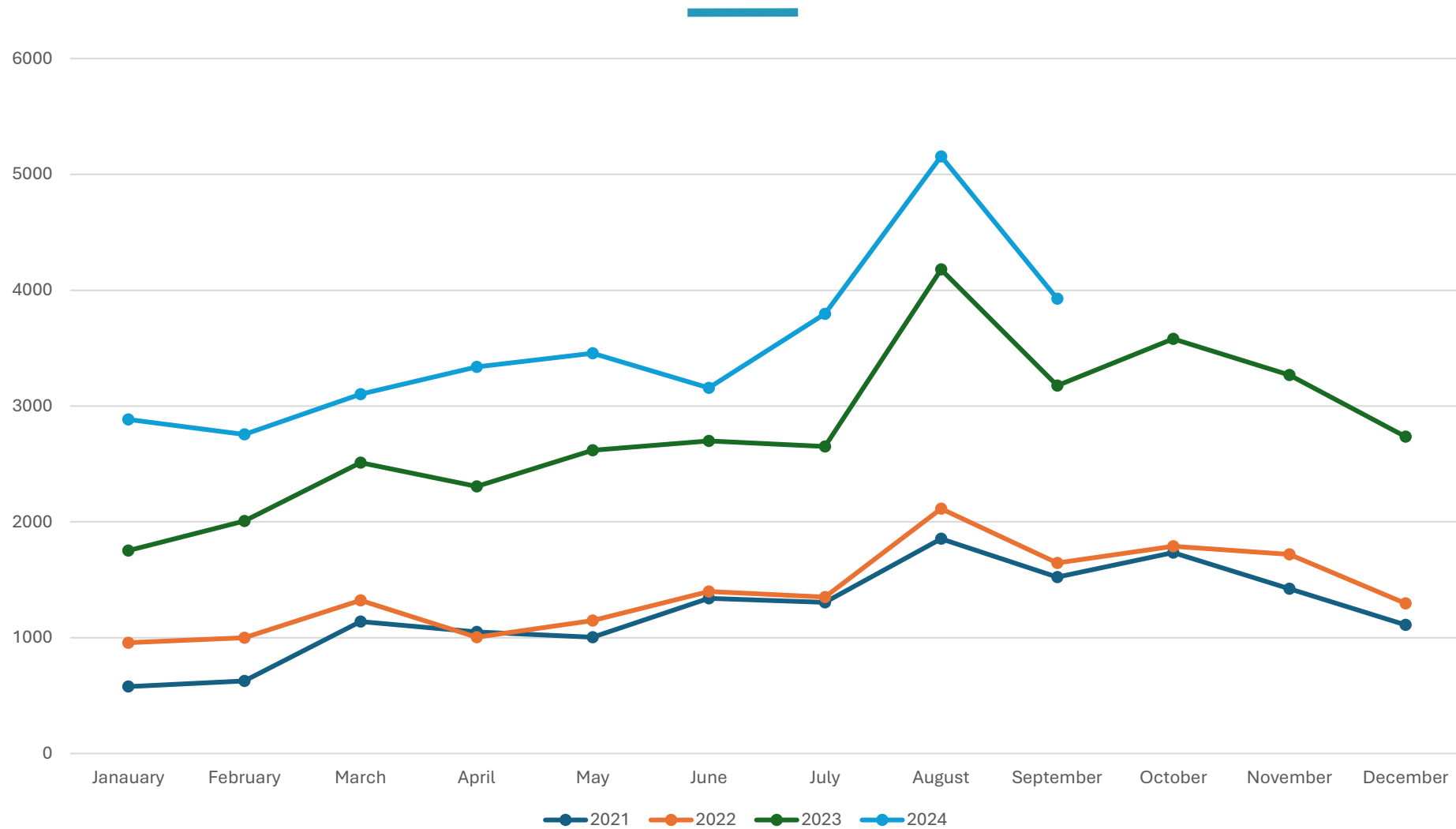
## Percent of 13 year olds with 1+ doses HPV, 2+ doses HPV, 1+ doses Tdap, and 1+ doses MCV, June 2019 to June 2024



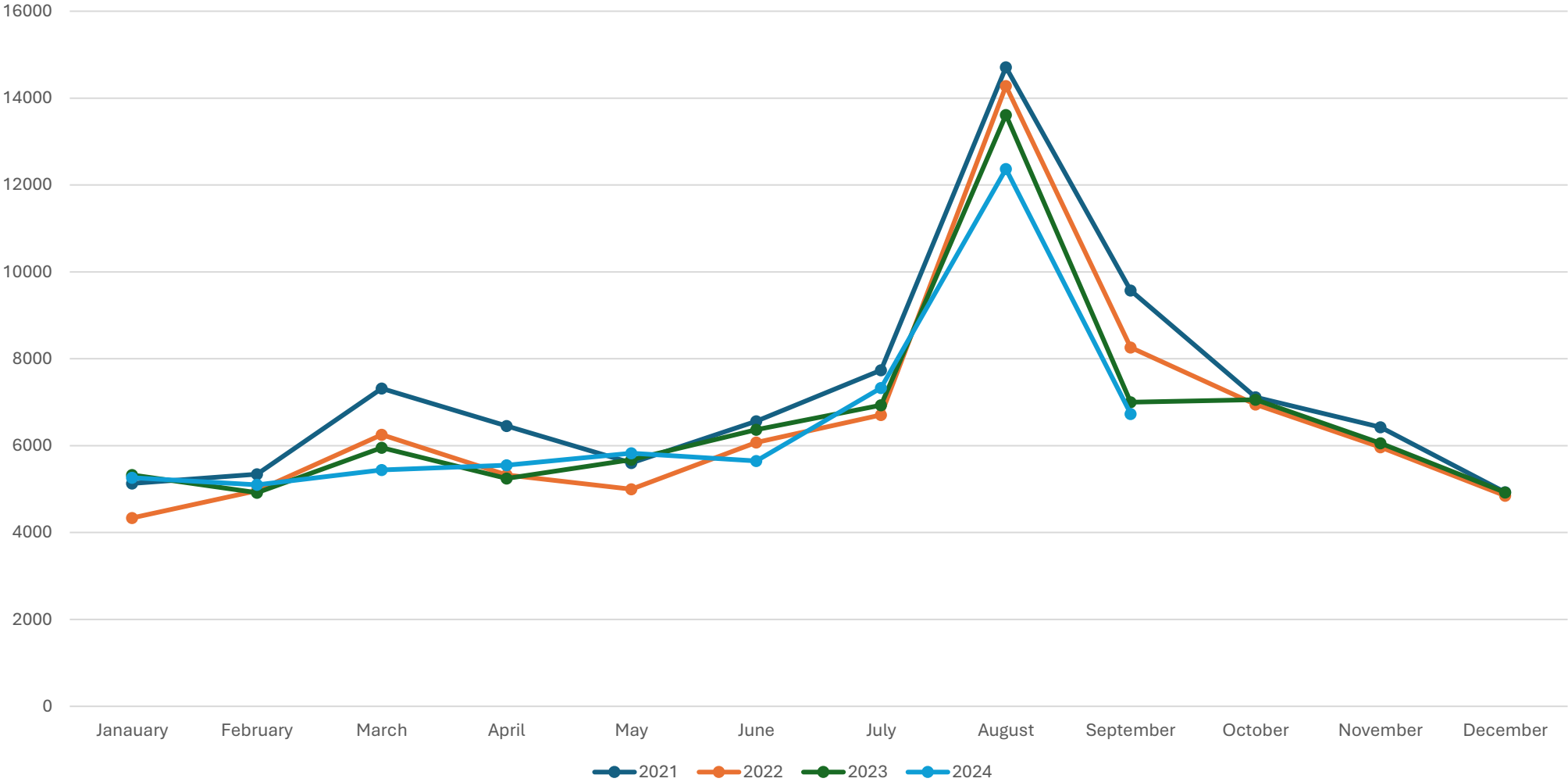
Calculated using WAIS vintages 09/25/2024.  
 Excludes records with a date of registry entry after the as-of-date.  
 May not be comparable to prior estimates.



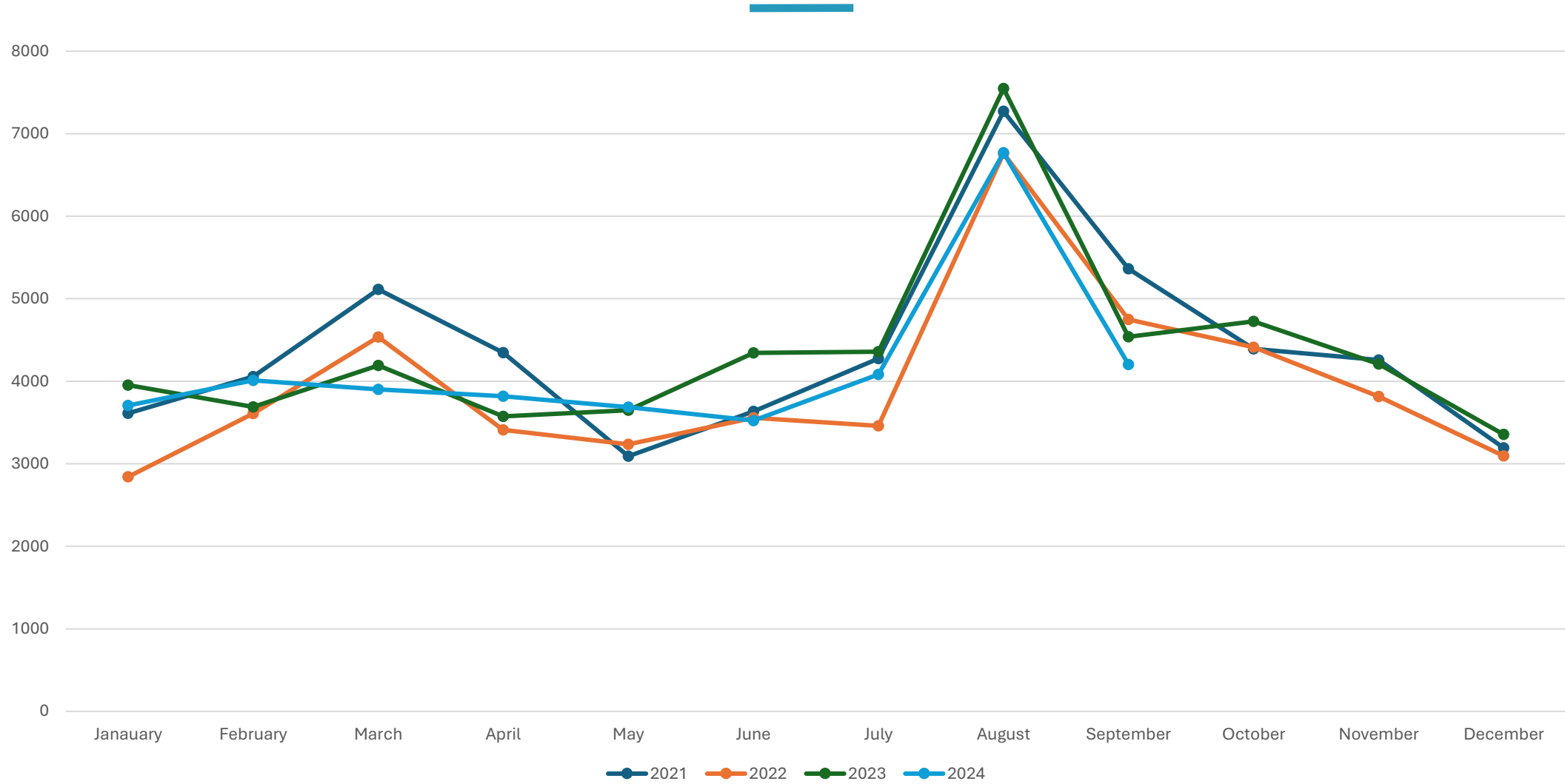
# HPV Administrations among 9-10 year olds by calendar year, Washington state



# HPV Administrations among 11-12 year olds by calendar year, Washington state



# HPV Administrations among 13-17 year olds by calendar year, Washington state



# Resources



# DOH HPV Vaccine At Age Nine Page


doh.wa.gov/hpv-at-nine

Home | You & Your Family | Immunization | Diseases And Vaccines | Human Papillomavirus (HPV) | Human Papillomavirus (HPV) Vaccine At Age Nine

## Human Papillomavirus (HPV) Vaccine at Age Nine

### HPV Vaccine is Most Effective Between Ages 9 and 12 Years

- The HPV vaccine provides long-lasting protection against the most common cancers caused by HPV.
- Doctors and nurses recommend the HPV vaccine for children starting at age nine years.
- The HPV vaccine is most effective at this age, it produces the most infection-fighting cells, or antibodies. This also ensures immunity is already in place before any exposure to the virus.
- If your teen hasn't received the vaccine, it is not too late! Talk to their doctor or nurse about getting them immunized as soon as possible. This is a recommended vaccine up through age 26.
- [If you are an adult age 27 through age 45](#), talk with your health care provider to see if you should get the HPV vaccine.



### Efforts to Increase HPV Vaccination Coverage Rates

Since 2017, the Washington State Department of Health (DOH) has worked with providers and advocates around the state to improve HPV vaccination coverage rates. In 2022, the Washington State Vaccine Advisory Committee passed a motion to routinely start HPV vaccination at age nine and to track and publish state and county data on HPV vaccination coverage rates for children ages 9-10 years.

# HPV Video



All Categories

HEALTH (DOH)



Search Product



(0)

(0)

All Categories

Fulfillment (By Agency)

Health (DOH)

Immunizations

MYPRINT MESSENGER

WINDOWS (64BIT)

MAC

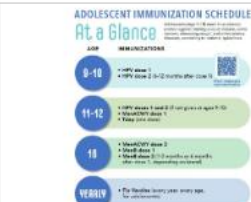
IMMUNIZATIONS

# immunizations



You may also find publications on Immunizations at the Department of Health's website. [http://www.doh.wa.gov/a-z\\_topics/a.htm](http://www.doh.wa.gov/a-z_topics/a.htm)

IN THIS CATEGORY:



Qty **BEGIN**

Qty **BEGIN**

Qty **BEGIN**

Qty **BEGIN**

ADOLESCENT IMM SCHEDULE POSTER - LG  
Adolescent Imm Schedule Poster - Large  
Size: 18" x 24"

ADOLESCENT IMM SCHEDULE POSTER - SM  
Adolescent Imm Schedule Poster - Small  
Size: 8.5" x 11"

ADOLESCENT IS DUE FOR A CHECKUP- PC  
Your Adolescent Is Due For A Checkup Postcard

ADOLESCENT IS DUE FOR A CHECKUP- PC-SP  
Your Adolescent Is Due For A Checkup Postcard - Spanish



Qty **BEGIN**

Qty **BEGIN**

Qty **BEGIN**

Qty **BEGIN**



v/hpv-

ering

To Learn More & Find Resources

---

[doh.wa.gov/hpv-at-nine](https://doh.wa.gov/hpv-at-nine)





# Questions?

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For additional questions or comments:

[nicole.rhodes@doh.wa.gov](mailto:nicole.rhodes@doh.wa.gov)



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# WASHINGTON HPV-RELATED CANCER UPDATE

Katie Treend, MPH  
Comprehensive Cancer Control Program Coordinator

## Contact

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EMAIL: [KATIE.TREEND@DOH.WA.GOV](mailto:KATIE.TREEND@DOH.WA.GOV)

HPV Free Task Force



**WASHINGTON DATA**

# Data Sources

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## **WA State Data:**

- Incidence Data: WA Dept. of Health Washington State Cancer Registry, released in April 2024.
  - Combined years: 2017-2021
- Mortality Data: WA Dept. of Health Washington State Cancer Registry, released in April 2024.
  - Combined years: 2017-2021
- Rates by Race and Ethnicity and County of Residence
  - Population Data: Washington State Population Interim Estimates (PIE), released in December 2022.
- Screening Data: Behavioral Risk Factor Surveillance System (BRFSS) 2022

## Data Sources

---

### **National Data:**

- National Program of Cancer Registries and Surveillance, Epidemiology and End Results Program SEER\*Stat Database: NPCR and SEER Incidence - U.S. Cancer Statistics Public Use Research Database, 2023 Submission (2001-2021). United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. Released June 2024. Accessed at [www.cdc.gov/cancer/uscs/public-use](https://www.cdc.gov/cancer/uscs/public-use)
- Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard; Confidence intervals are 95% for rates.

# Cancer Registry Background

- Washington State Cancer Registry (WSCR) has been collecting data on cancer since 1992.
- Cancer case information is received through various types of reporting:
  - Hospitals
  - Physician offices
  - Ambulatory surgery centers
  - Free standing treatment centers
  - Pathology laboratories



# Cancer Registry Background

- Legally required data for all newly diagnosed cancer case reporting include:
  - Patient demographics ( gender, age at diagnosis, race and ethnicity)
  - Medical information (type of cancer, date of diagnosis, stage at diagnosis and initial treatment)

# HPV Related Cancer Sites

- Squamous cell carcinoma of the oropharynx
- Squamous cell carcinoma of the anus
- Squamous cell carcinoma of the vulva
- Squamous cell carcinoma of the vagina
- Carcinoma of the cervix
- Squamous cell carcinoma of the penis

## References:

1 Watson M, Saraiya M, Ahmed F, Cardinez CJ, Reichman ME, Weir HK, Richards TB. Using population-based cancer registry data to assess the burden of human papillomavirus-associated cancers in the United States: overview of methods. *Cancer* 2008;113(10 Suppl):2841–2854. Available at [www.ncbi.nlm.nih.gov/pubmed/18980203](http://www.ncbi.nlm.nih.gov/pubmed/18980203).

2. Saraiya M, Unger ER, Thompson TD, Lynch CF, Hernandez BY, Lyu CW, Steinau M, Watson M, Wilkinson EJ, Hopenhayn C, Copeland G, Cozen W, Peters ES, Huang Y, Saber MS, Altekruse S, Goodman MT; HPV Typing of Cancers Workgroup. US assessment of HPV types in cancers: implications for current and 9-valent HPV vaccines. *Journal of the National Cancer Institute* 2015;107(6):djv086. Available at [www.ncbi.nlm.nih.gov/pubmed/25925419](http://www.ncbi.nlm.nih.gov/pubmed/25925419).

3 International Agency for Research on Cancer. IARC monographs on the evaluation of carcinogenic risks to humans. Volume 90: Human Papillomaviruses. Lyon, France: International Agency for Research on Cancer; 2007. Available at <http://monographs.iarc.fr/ENG/Monographs/vol90/>.

4 Viens LJ, Henley SJ, Watson M, Markowitz LE, Thomas CC, Thompson TD, Razzaghi H, Saraiya M, Centers for Disease Control and Prevention (CDC). Human papillomavirus-associated cancers—United States, 2008–2012. *MMWR* 2016;65(26):661–666. Available at [www.cdc.gov/mmwr/volumes/65/wr/mm6526a1.htm](http://www.cdc.gov/mmwr/volumes/65/wr/mm6526a1.htm).

5 Centers for Disease Control and Prevention. How Many Cancers Are Linked with HPV Each Year? Atlanta, GA: U.S. Department of Health and Human Services. Available at [www.cdc.gov/cancer/hpv/statistics/cases.htm](http://www.cdc.gov/cancer/hpv/statistics/cases.htm).

Table 1. Age-adjusted incidence rates for invasive cancer sites associated with HPV in Washington from 2017 to 2021

## Incidence data for the HPV related cancer sites

<b>Washington State HPV-Related Cancer Rates (per 100,000) by Cancer Site and Gender (2017-2021)</b>					
Cancer Site	Gender	Total # of New Cases	Total Population Count	Age Adjusted Rate*	95% Confidence Interval
All HPV-Related Cancers (Combined)	Male and Female (Combined)	5,249	37,889,275	11.7	11.4-12.1
	Male	2,452	18,980,483	10.7	10.3-11.2
	Female	2,795	18,908,792	12.9	12.4-13.4
Squamous cell carcinoma of the oropharynx	Male and Female (Combined)	2,447	37,889,275	5.1	4.9-5.3
	Male	2,066	18,980,483	8.9	8.5-9.3
	Female	380	18,908,792	1.6	1.4-1.7
Squamous cell carcinoma of the anus	Male and Female (Combined)	907	37,889,275	2	1.8-2.1
	Male	272	18,980,483	1.2	1.1-1.4
	Female	634	18,908,792	2.6	2.4-2.9

Table 1. Age-adjusted incidence rates for invasive cancer sites associated with HPV in Washington from 2017 to 2021

## Incidence data for the HPV related cancer sites

<b>Washington State HPV-Related Cancer Rates (per 100,000) by Cancer Site and Gender (2017-2021)</b>					
Cancer Site	Gender	Total # of New Cases	Total Population Count	Age Adjusted Rate*	95% Confidence Interval
Squamous cell carcinoma of the vulva	Female	467	18,908,792	2	1.8-2.2
Squamous cell carcinoma of the vagina	Female	90	18,908,792	0.4	0.3-0.5
Carcinoma of the cervix	Female	1,224	18,908,792	6.3	5.9-6.7
Squamous cell carcinoma of the penis	Male	114	18,980,483	0.6	0.5-0.7

## Trends in Incidence Rates of HPV Related Cancer Sites

---

- Tested for changes over time.
- Calculated the annual percent change (APC).
- Used Joinpoint software, version 4.9.1.0 (National Cancer Institute Software)

# Interpreting Joinpoint Analyses

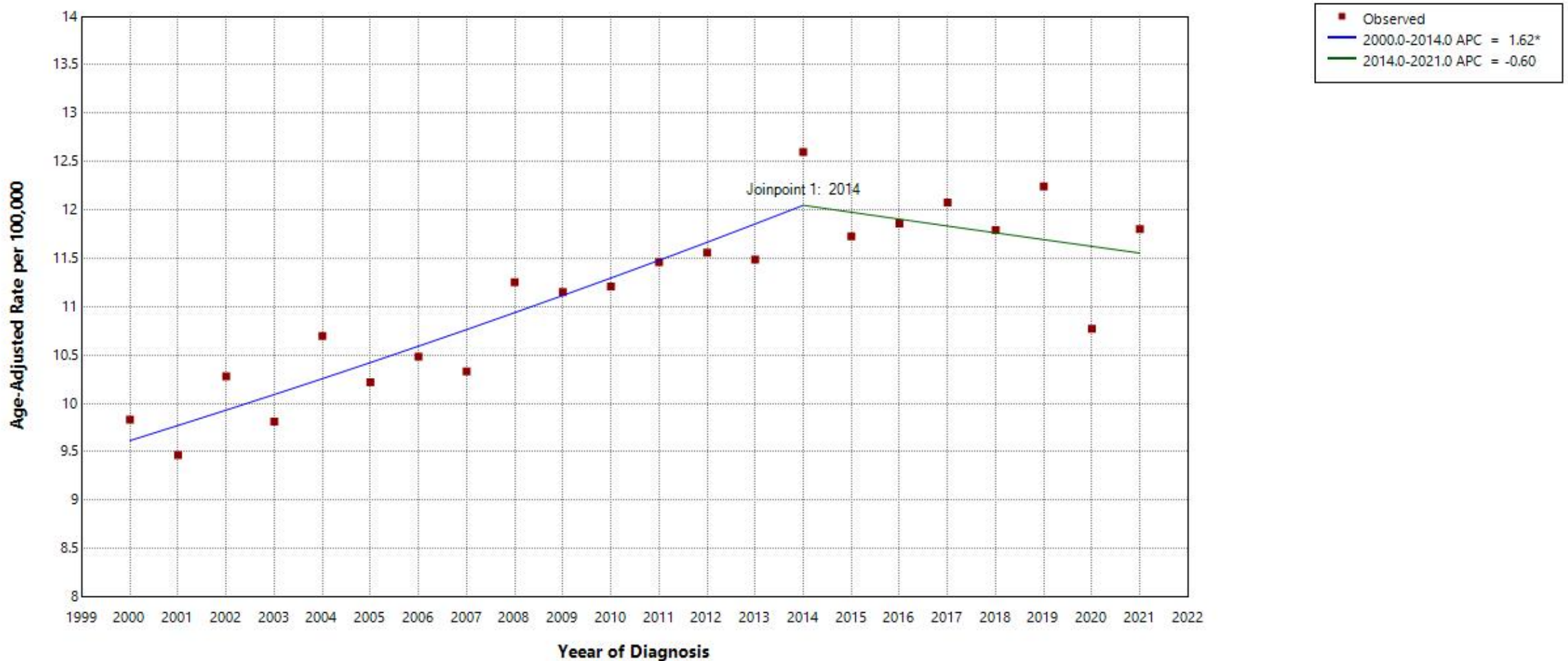
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- Rates are level over time when the APC **is not** statistically significantly different from zero ( $p \geq 0.05$ ).
- Rates are increasing or decreasing when the APC **is** statistically significantly different from zero ( $p < 0.05$ ).
- Increasing and Decreasing trends are described as:
  - Slight = APC is less than 1 percent
  - Steady = APC is between 1-3.9 percent
  - Sharp = APC is greater than or equal to 4 percent

Reference: Ries LAG, Wingo PA, Miller BF, Miller DS, Howe HI et al. The annual report to the nation on the status of cancer, 1973-1997, with a special section on colorectal cancer. Cancer, 2000, 88:2398-2424.

# Trend Analysis – All HPV-Related Cancers

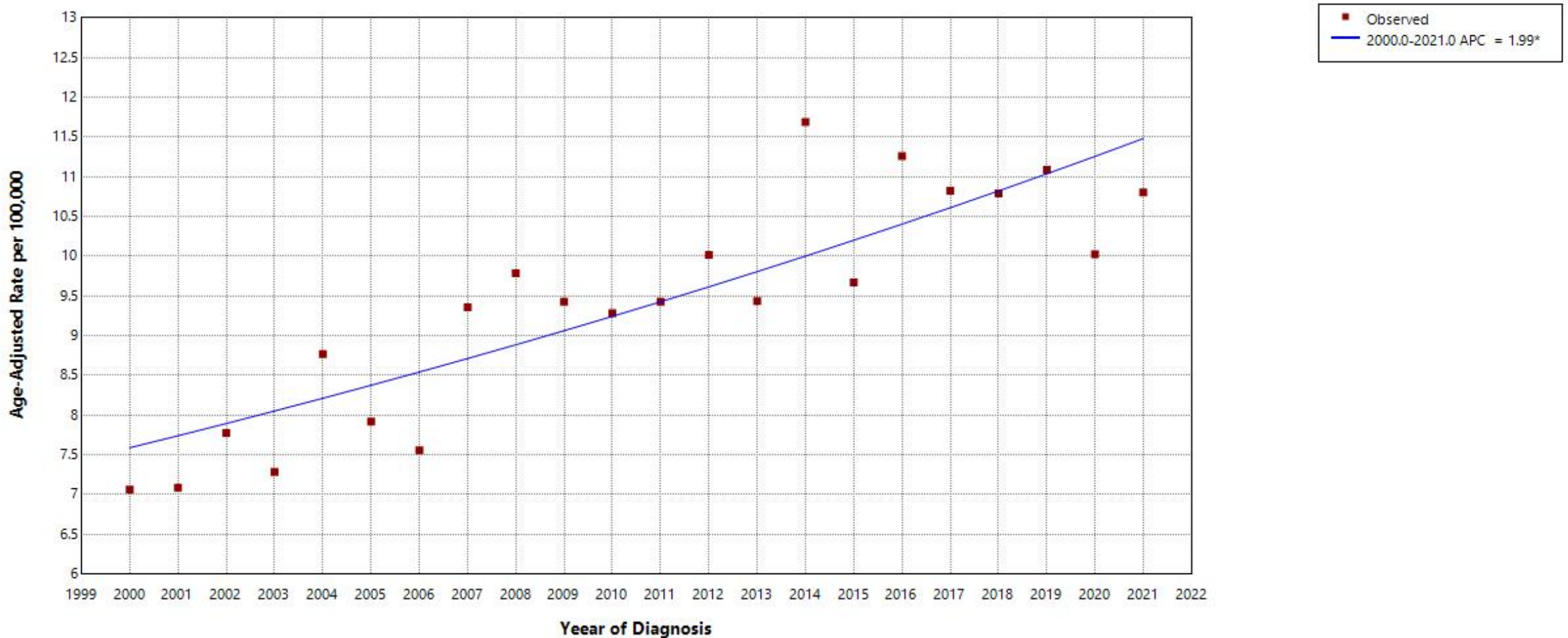
Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: Total / Malignant / All HPV related cances (total): 1 Joinpoint



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 1 Joinpoint.

# Trend Analysis – Male All HPV-Related Cancers

Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: " Male" / Malignant / All HPV related cances (total): 0 Joinpoints

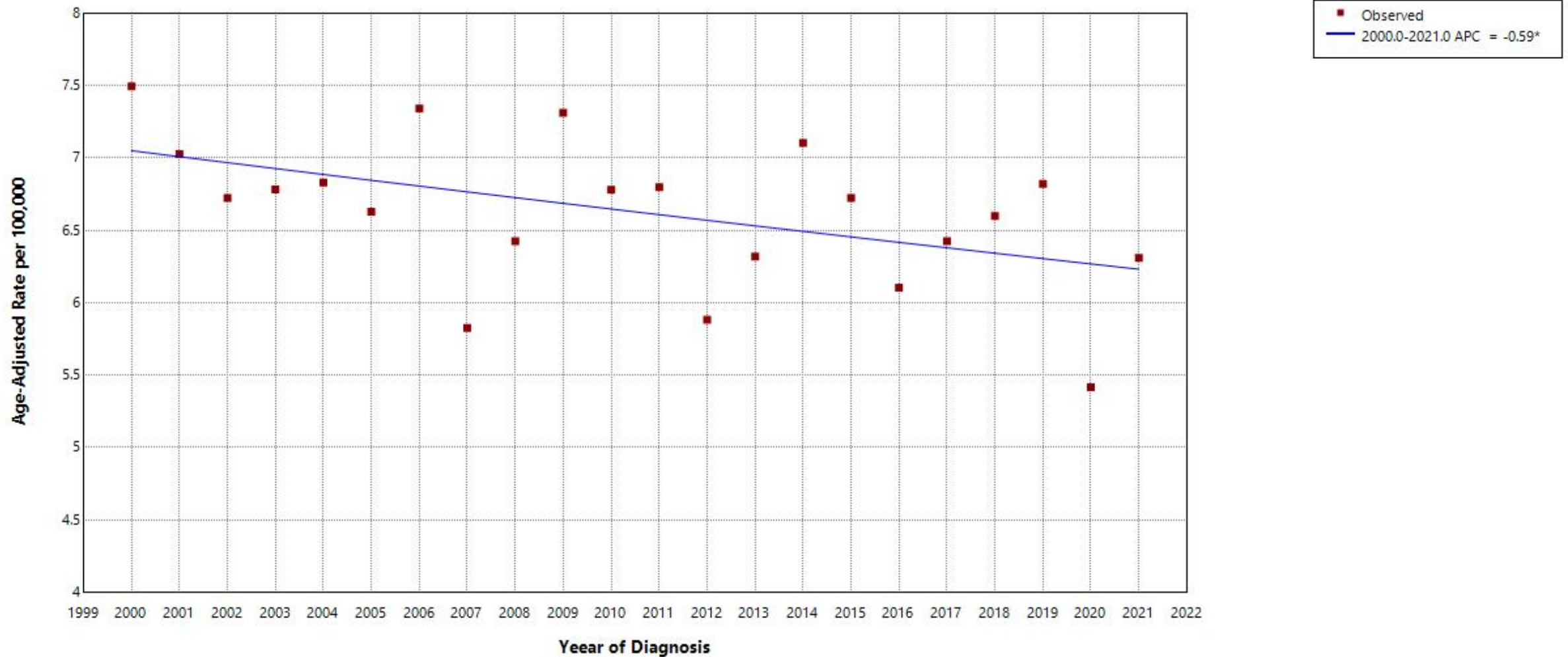


\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 0 Joinpoints.



# Trend Analysis – Female Cervical Carcinoma

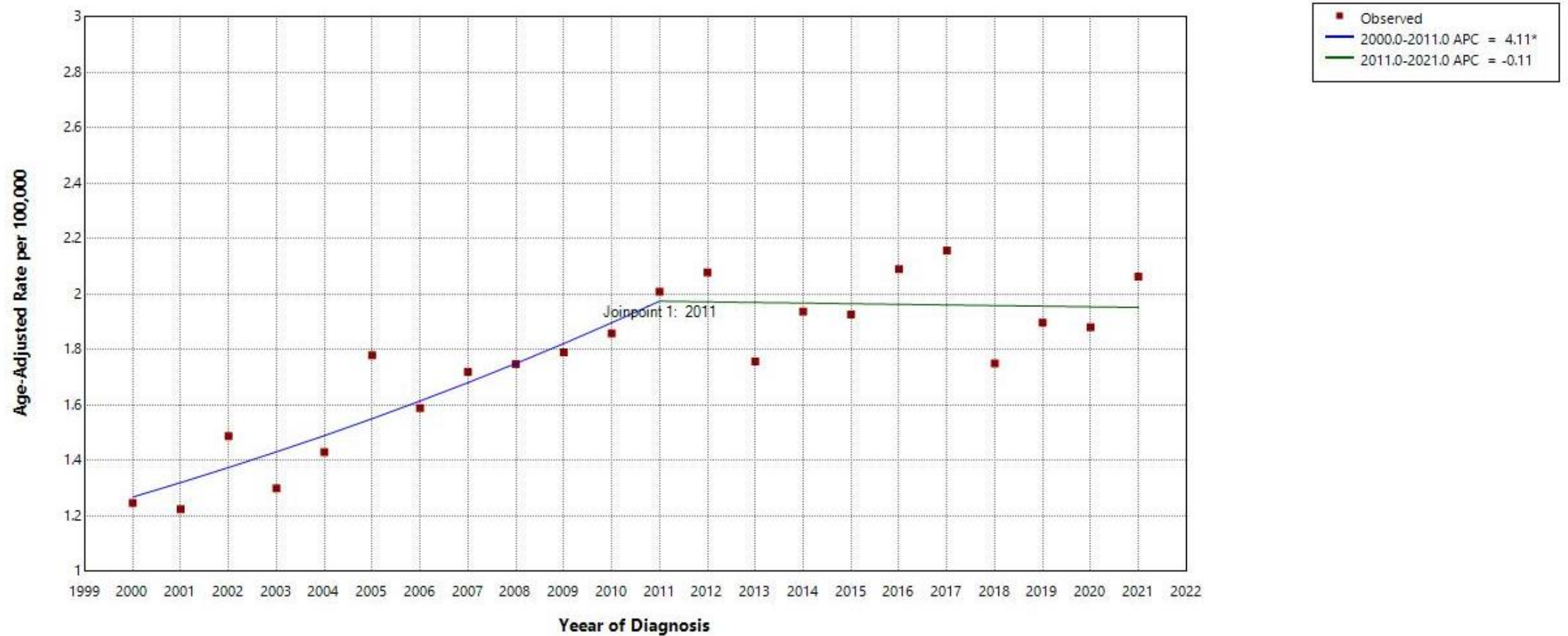
Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: " Female" / Malignant / Cervical carcinoma: 0 Joinpoints



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 0 Joinpoints

# Trend Analysis – Total Anal and Rectal Carcinoma

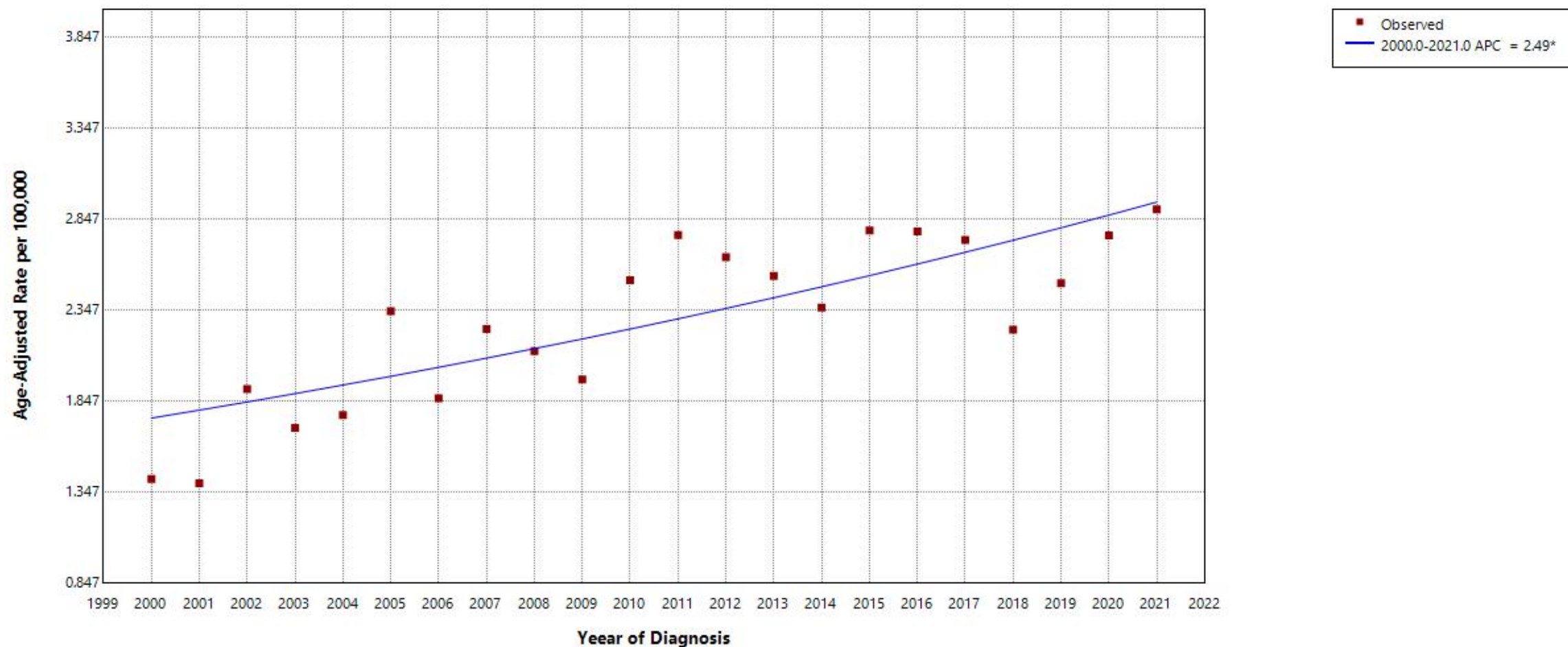
Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: Total / Malignant / Anal and rectal squamous cell carcinoma: 1 Joinpoint



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 1 Joinpoint.

# Trend Analysis – Female Anal and Rectal Carcinoma

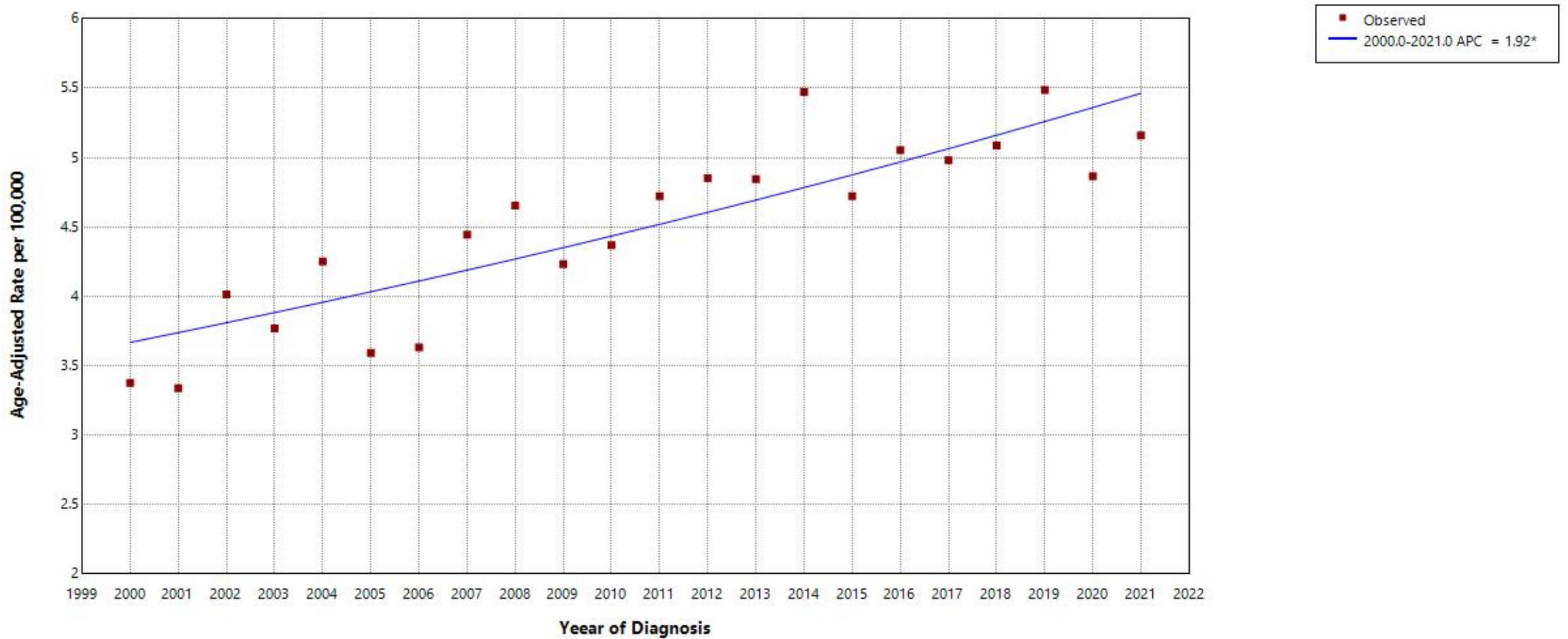
Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: " Female" / Malignant / Anal and rectal squamous cell carcinoma: 0 Joinpoints



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 0 Joinpoints.

# Trend Analysis – Total Oropharyngeal Carcinoma

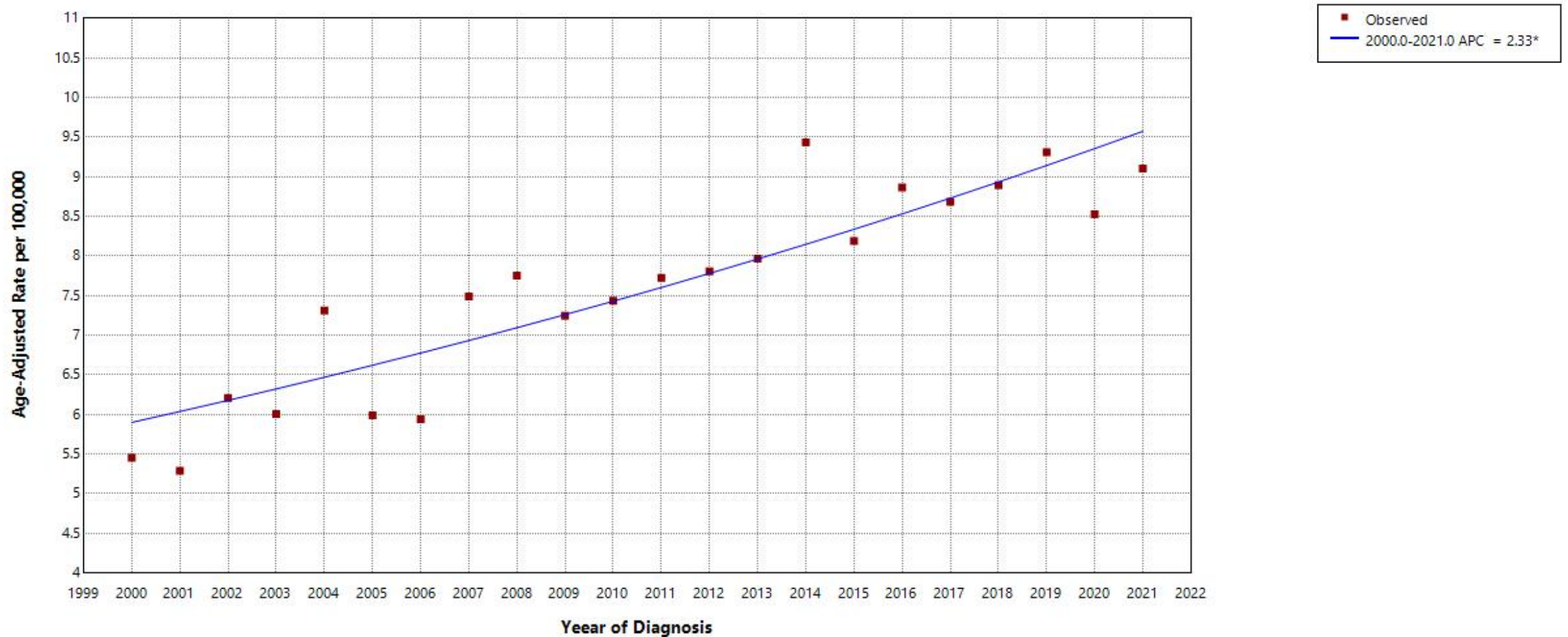
Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: Total / Malignant / Oropharyngeal squamous cell carcinoma: 0 Joinpoints



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 0 Joinpoints.

# Trend Analysis – Male Oropharyngeal Carcinoma

Age adjusted incidence rate trends for invasive cancer sites associated with HPV in Washington State from 2000 to 2021: " Male" / Malignant / Oropharyngeal squamous cell carcinoma:  
0 Joinpoints



\* Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level.  
Final Selected Model: 0 Joinpoints.

Age-adjusted incidence rate for invasive cancer sites associated with HPV in Washington State by race/ethnicity in Washington from 2017-2021.

## Incidence data for the HPV related cancer sites

All HPV-Related Cancers Combined by Race and Ethnicity and Gender (2017-2021)					
Race/Ethnicity	Gender	Total # of New Cases	Age Adjusted Rate	95% Confidence Interval	Total Population Count
White	Male and Female (Combined)	4,459	12.8	12.4-13.2	24,655,244
	Male	2,188	11.9	11.4-12.4	12,355,590
	Female	2,271	13.9	13.3-14.5	12,299,654
Black	Male and Female (Combined)	125	9.7	7.9-11.8	1,443,746
	Male	63	10	7.4-13.8	786,640
	Female	61	9.8	7.4-12.8	657,105
American Indian/ Alaska Native	Male and Female (Combined)	56	11.8	8.8-16.1	455,937
	Male	25	9.9	6.3-18.6	227,018
	Female	31	13.4	9-20	228,919

## Incidence data for the HPV related cancer sites

All HPV-Related Cancers Combined by Race and Ethnicity and Gender (2017-2021)					
Race/Ethnicity	Gender	Total # of New Cases	Age Adjusted Rate	95% Confidence Interval	Total Population Count
Asian	Male and Female (Combined)	193	5.6	4.8-6.5	3,437,872
	Male	49	3.5	2.5-4.8	1,602,084
	Female	144	7.3	6.2-8.7	1,835,789
Native Hawaiian/ Pacific Islander	Male and Female (Combined)	36	15.4	10.4-27.9	301,198
	Male	^	^	^	150,958
	Female	28	22.3	14.6-43.5	150,240
Hispanic	Male and Female (Combined)	260	9.3	8.1-10.7	5,247,959
	Male	75	6.3	4.8-8.1	2,698,910
	Female	184	12.4	10.5-14.6	2,549,049

## Incidence Rate for all HPV-Related Cancers Combined (per 100,000) by County of Residence 2017-2021

<b>County of Residence</b>	<b>Total # of New Cases</b>	<b>Age Adjusted Rate</b>	<b>95% Confidence Interval</b>	<b>Total Population Count</b>
Washington State Average	5,249	11.7	11.4-12.1	37,889,275
Adams County	^	^	^	101,782
Asotin County	16	10.8	5.8-19.5	111,214
Benton County	155	13.2	11.1-15.6	1,012,421
Chelan County	50	9.2	6.7-12.6	391,336
Clallam County	89	12.8	9.9-16.6	381,352
Clark County	270	9.2	8.1-10.4	2,466,183
Columbia County	^	^	^	19,751
Cowlitz County	91	13.5	10.7-16.9	545,280
Douglas County	41	16.1	11.4-22.4	211,089
Ferry County	^	^	^	36,029
Franklin County	53	13.3	9.8-17.7	472,724
Garfield County	^	^	^	11,337
Grant County	46	8.5	6.2-11.5	489,767
Grays Harbor County	79	14.9	11.5-19.1	374,758
Island County	85	12.9	10-16.8	428,629
Jefferson County	60	17.9	12.8-26.1	162,812



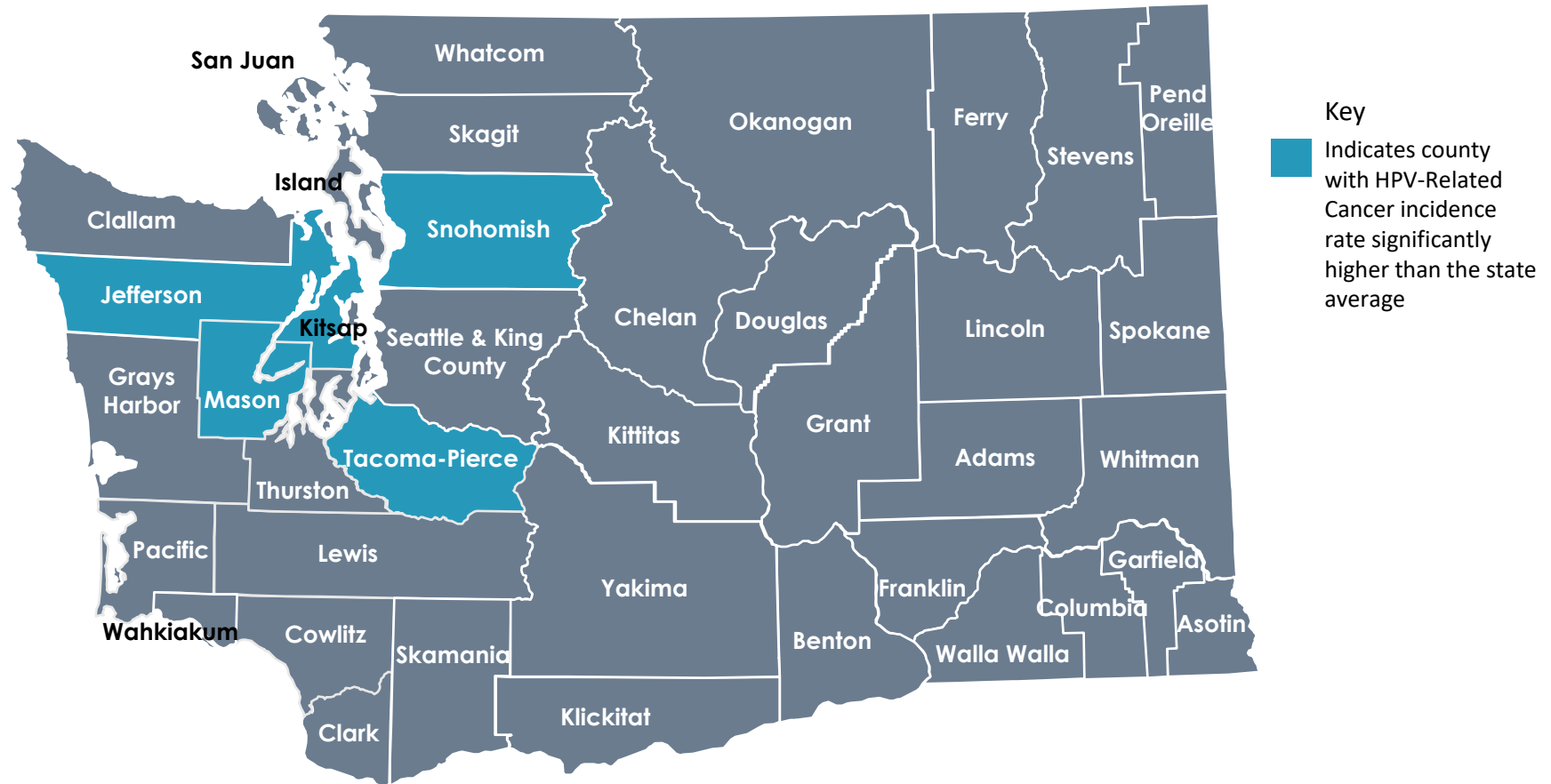
## Incidence Rate for all HPV-Related Cancers Combined (per 100,000) by County of Residence 2017-2021

County of Residence	Total # of New Cases	Age Adjusted Rate	95% Confidence Interval	Total Population Count
Washington State Average	5,249	11.7	11.4-12.1	37,889,275
King County	1,293	10.6	10-11.2	11,149,994
Kitsap County	254	14.2	12.4-16.2	1,363,223
Kittitas County	26	9.4	6-14.7	224,687
Klickitat County	23	12.7	7.6-21.1	111,842
Lewis County	63	12.3	9.3-16.3	404,801
Lincoln County	^	^	^	53,864
Mason County	78	15.8	12.2-20.6	323,879
Okanogan County	28	9.2	5.9-14.3	209,480
Pacific County	22	12.3	6.9-21.8	114,726
Pend Oreille County	15	15.3	7.6-29.9	66,433
Pierce County	674	13.3	12.3-14.4	4,516,528
San Juan County	15	11.4	5.8-25.2	87,236
Skagit County	113	12.9	10.5-15.8	637,391
Skamania County	12	15.3	7.4-32.1	57,559

## Incidence Rate for all HPV-Related Cancers Combined (per 100,000) by County of Residence 2017-2021

<b>County of Residence</b>	<b>Total # of New Cases</b>	<b>Age Adjusted Rate</b>	<b>95% Confidence Interval</b>	<b>Total Population Count</b>
Washington State Average	5,249	11.7	11.4-12.1	37,889,275
Snohomish County	657	13.8	12.7-14.9	4,074,698
Spokane County	287	9.4	8.3-10.6	2,645,048
Stevens County	33	12.1	7.9-18.1	229,506
Thurston County	233	13.2	11.5-15.2	1,446,584
Wahkiakum County	^	^	^	21,716
Walla Walla County	43	10.9	7.7-15.4	310,129
Whatcom County	159	11.6	9.8-13.7	1,112,767
Whitman County	14	7.1	3.8-12.9	234,311
Yakima County	155	11.7	9.9-13.8	1,276,408

# Washington State Local Health Jurisdictions



# Takeaways

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- All HPV-related cancers (combined) have increased (2000-2014)
- Significant Decreases in:
  - Female Cervical Cancer (2000-2021)
- Significant Increases in:
  - Male All HPV-related cancers combined (2000-2021)
  - Total Anal/Rectal Cancer (2000-2011)
  - Female Anal/Rectal Cancer (2000-2021)
  - Total Oropharyngeal Cancer (2000-2021)
  - Male Oropharyngeal Cancer (2000-2021)

# Takeaways

- County Disparities for All-HPV-Related Cancers Combined
  - Jefferson
  - Kitsap
  - Mason
  - Pierce
  - Snohomish

Questions?

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**Poll : Topics and Plans for 2025**





# Quick Poll

1. What are some topics you would like us to cover in 2025?
2. Are you interested in attending an in-person HPV Task Force meeting in 2025?
  1. Yes
  2. Not
  3. Maybe (need more information)
3. What topics or activities would make you more interested in attending an in-person meeting (select all that apply)?
  1. Data updates
  2. Research presentations
  3. Networking opportunities
  4. Training sessions
  5. Workshops
  6. Other (please specify)

A stylized sun graphic consisting of a solid yellow circle with several short, curved yellow dashes radiating from its top-left edge, set against an orange background.

Presentation 4

**Cervical Cancer Prevention & HPV Vaccine**

**Dr. Linda Eckert**

Professor, Departments of Obstetrics & Gynecology

**University of Washington**

# Braiding Together Evidence, Equity & Advocacy for Cervical Cancer Prevention

Linda O Eckert, MD  
Professor, Obstetrics & Gynecology  
Adjunct Professor, Global Health  
University of Washington  
eckert@uw.edu  
drlindaeckert.com  
@drlindaeckert



# DISCLOSURES

No funding from industry; no speaker bureau's

Other funding related to topics discussed today:

- Prior long term paid consultant to World Health Organization on HPV vaccine and Cervical Cancer Screening Policy
- NCI funding “Cascade Trial” for improving pre-cancer treatment in women with HIV. NIH/NCI UG1CA275402
- Book recently published by Cambridge University Press: “Enough: Because We Can Stop Cervical Cancer”
  - may receive some royalties

# Perspectives

Liberia

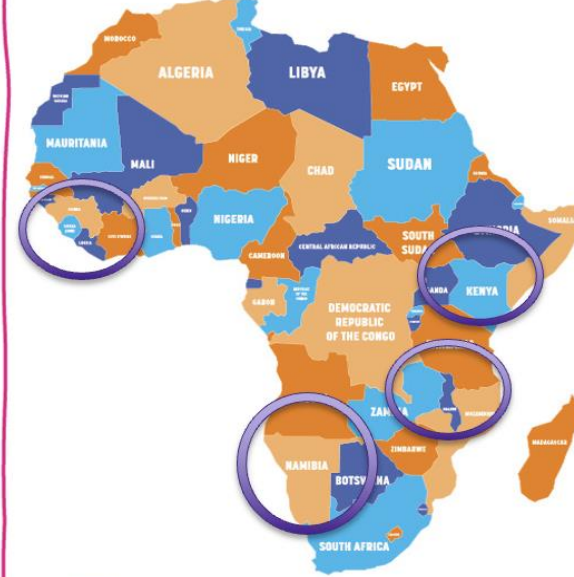
Nicaragua



Brownsville,  
Texas



Map of Africa



Kenya  
Malawi  
Namibia



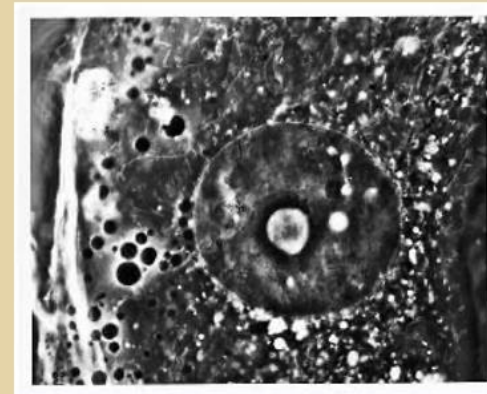
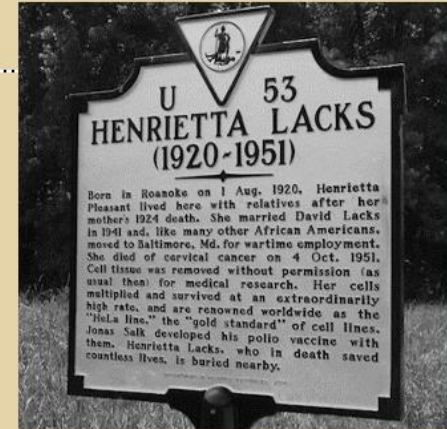
Seattle

# W

# Acknowledgment



<https://hela100.org/herstory>



# LANGUAGE

- Majority of persons born with a cervix identify as women
- Some persons who have cervixes do not; trans men and/or non-binary individuals may have been born with a cervix and not identify as a woman
- I will use both “woman” and “person with a cervix”
- a cervix is a cervix, and we want for *every* cervix to receive care
  
- I hope we can offer each other grace in this linguistic regard

# CERVICAL CANCER: INTERGENERATIONAL IMPACT

nature medicine



Article

<https://doi.org/10.1038/s41591-022-02109-2>

## Global and regional estimates of orphans attributed to maternal cancer mortality in 2020

Received: 3 October 2022

Accepted: 25 October 2022

Published online: 20 November 2022

Florence Guida<sup>1,11</sup>✉, Rachel Kidman<sup>2</sup>, Jacques Ferlay<sup>1</sup>, Joachim Schüz<sup>1</sup>, Isabelle Soerjomataram<sup>1</sup>, Benda Kithaka<sup>3</sup>, Ophira Ginsburg<sup>4</sup>, Raymond B. Mailhot Vega<sup>5</sup>, Moses Galukande<sup>6</sup>, Groesbeck Parham<sup>7</sup>, Salvatore Vaccarella<sup>1</sup>, Karen Canfell<sup>8</sup>, Andre M. Ilbawi<sup>9</sup>, Benjamin O. Anderson<sup>9</sup>, Freddie Bray<sup>1</sup>, Isabel dos-Santos-Silva<sup>10</sup> & Valerie McCormack<sup>1,12</sup>✉

- Used cancer mortality data, and fertility data to estimate number of orphans from cancer
- In 2020: 1,047,000 orphans from maternal cancer
  - 20% (n=210,000) from cervical cancer
  - 25% (n=258,000) from breast cancer
- 27 yo – now parenting 6 --colleague's story

Without the mother: 1-3

- Increased anxiety & depression
- Marry younger
- Less likely to complete education
- Get less health care
- Generational poverty



# COST OF CERVICAL CANCER IN US



**\$2.3 BILLION**

total annual medical cost  
of cervical cancer care in 2020<sup>4</sup>

Per-patient annual costs:

- year of death: \$97,000
- year of diagnosis: \$58,700
- continuing care phase: \$4,000

National Cancer Institute. Financial burden of cancer care.  
Cancer Trends Progress Report. Updated April 2022. Accessed  
November 4, 2022

<https://www.cdc.gov/chronicdisease/programs-impact/pop/cervical-cancer.htm#:~:text=%242.3%20BILLION&text=Cervical%20cancer%20treatment%20costs%20accounted,of%20all%20cancer%20treatment%20costs>. Accessed 9 Jan, 2024

# GLOBAL COST EFFECTIVENESS

## ➤ OXFAM estimates:

- women's contributions to families, communities, and countries measure well above 10.8 trillion USD,
- more than three times the size of the global tech industry.<sup>1</sup>

## ➤ WHO health economy team<sup>2</sup>:

- For lower income countries:
- Each dollar spent on screening through 2050: ~~\$3.20~~ to the economy based on work force earnings
- Add in unpaid labor: \$26 dollars returned to economy for each dollar spent.

## 26:1 return!!!

<sup>1</sup><https://www.oxfam.org/en/not-all-gaps-are-created-equal-true-value-care-work#:~:text=They%20carry%20out%2012.5%20billion,of%20the%20global%20tech%20industry>. Accessed 10 Dec, 2023

<sup>2</sup>WHO: Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem. WHO, 17 Nov 2020. Global Strategy.

# OBJECTIVES

- Evidence on Prevention
  - Single dose HPV vaccine
  - Screening: HPV testing transition
  - Self Testing transition
- Equity and Stigma
  - National Disparities
  - Market Economy and Shortages
- Advocacy
  - Power of Story
  - Partnerships wanted

# CERVICAL CANCER: PREVENTABLE

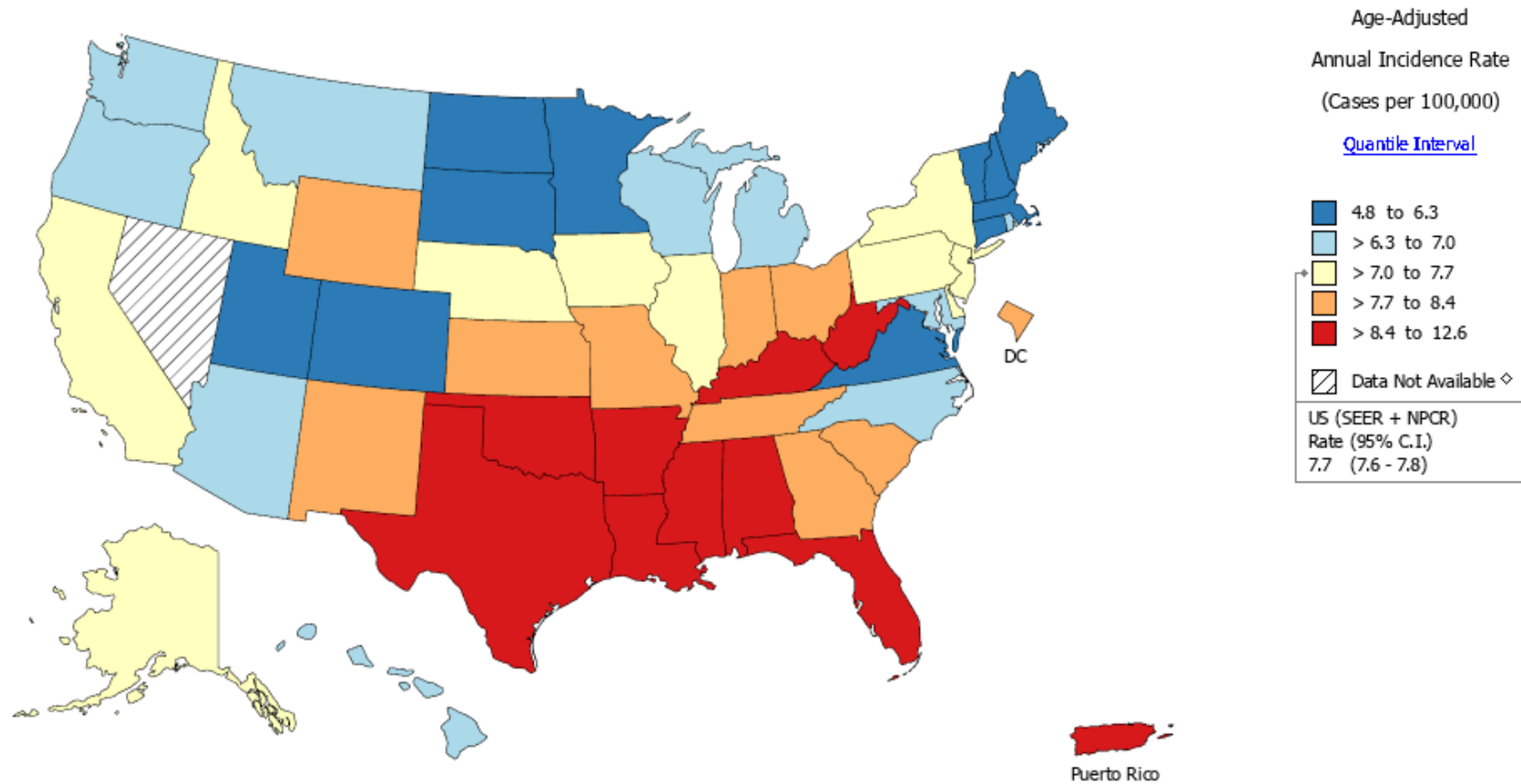
- We already have the “Moonshot” for this cancer
- It’s preventable:
  - We know what causes it,
  - how to find it,
  - how to treat it
  - even have a vaccine
- **YET DEADLY**
  - Globally – kills a woman every 90 seconds
  - In US kills a woman every two hours.
  - 662,000 global cases in 2022<sup>1</sup>
  - projected to reach 855,000 cases by 2040<sup>2</sup>

<sup>1</sup><https://gco.iarc.who.int/media/globocan/factsheets/cancers/23-cervix-uteri-fact-sheet.pdf>. Accessed 26 Feb, 2024

<sup>2</sup>[https://gco.iarc.fr/tomorrow/en/dataviz/bubbles?sexes=1\\_2&cancers=23](https://gco.iarc.fr/tomorrow/en/dataviz/bubbles?sexes=1_2&cancers=23). Accessed 28 December, 2023.

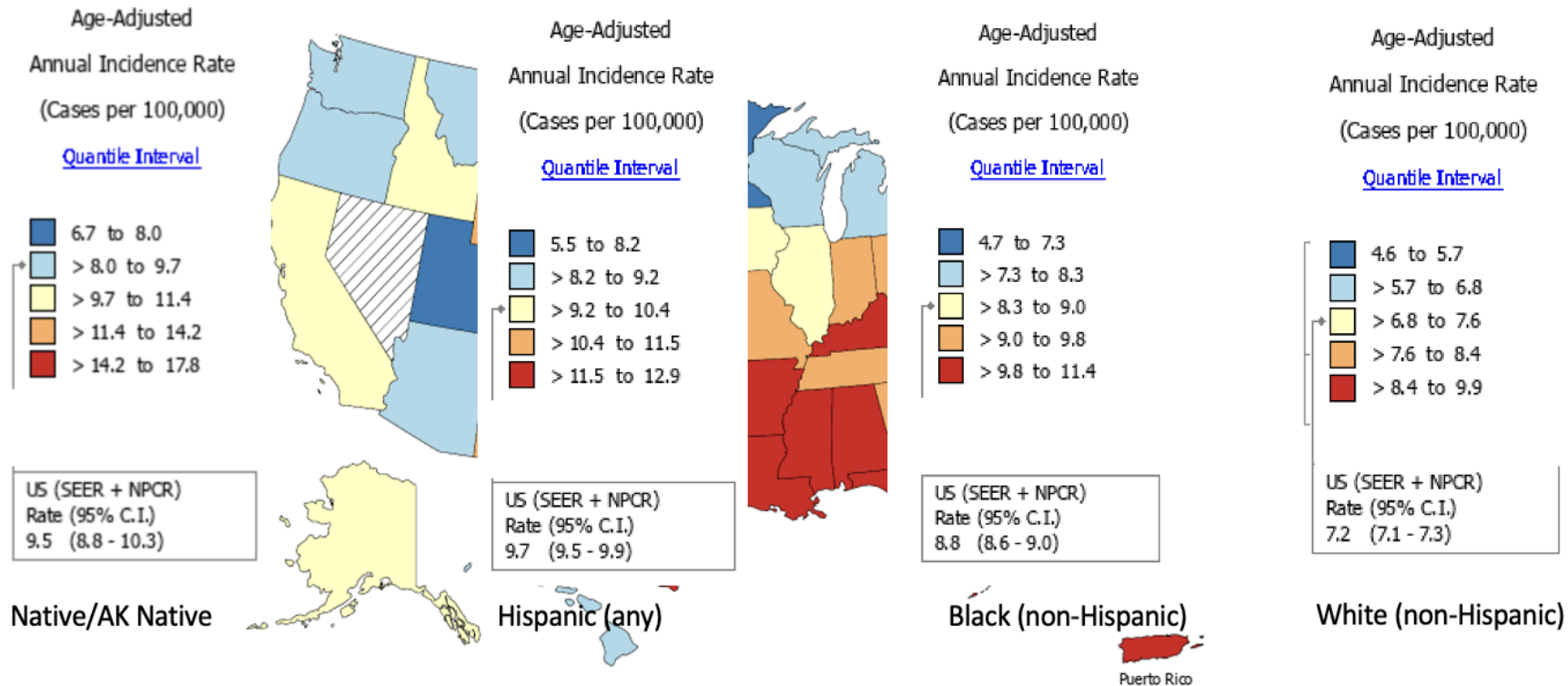
# CERVICAL CANCER: US INCIDENCE

Incidence Rates<sup>†</sup> for United States by State  
Cervix, 2015 - 2019  
All Races (includes Hispanic), Female, All Ages



# HIDDEN IN US RATES

**Incidence Rates<sup>†</sup> for United States by State  
Cervix, 2015 - 2019  
All Races (includes Hispanic), Female, All Ages**



<https://statecancerprofiles.cancer.gov/>

# PRIMARY PREVENTION: HPV VACCINE

- Long-term protection evidence
- Recommended dosing schedule US
  - Age to administer reflects HPV vaccine primarily works to prevent HPV acquisition
  - Increased antibody response when 9-14 years

Age	Doses	Schedule
9–14 years	2 doses	<i>Dose 2: 6 to 12 months after dose 1</i>
15–45 years	3 doses	<i>Dose 2: 1 to 2 months after dose 1 Dose 3: 6 months after dose 1</i>

- Cost *“The list price for each indicated dose of GARDASIL 9 is \$286.78. Most people will not pay the list price, although it may have an impact on your out-of-pocket costs.”*

*-<https://www.gardasil9.com/adults/cost/>Accessed Jan 7, 2024*

# NEW DATA ON HPV VACCINE !



## No cervical cancer cases detected in vaccinated women following HPV immunisation

First published on 22 January 2024

JOURNAL ARTICLE CORRECTED PROOF

### **Invasive cervical cancer incidence following bivalent human papillomavirus vaccination: a population-based observational study of age at immunization, dose, and deprivation** [Get access >](#)

Tim J Palmer, FRCPath ✉, Kimberley Kavanagh, PhD, Kate Cuschieri, PhD, Ross Cameron, MPH, Catriona Graham, MSc, Allan Wilson, FIBMS, [Kirsty Roy, PhD](#)

*JNCI: Journal of the National Cancer Institute*, djad263,

<https://doi.org/10.1093/jnci/djad263>

**Published:** 22 January 2024 **Article history** ▼



# SINGLE DOSE HPV VACCINE: STUDIES

## Trials with data on 1-dose HPV vaccination

Trial/country	Evidence	Vaccine	Age (yrs) at vaccination	Description
<b>CVT</b> Costa Rica	Efficacy/ Immunogenicity	2vHPV	18–25	<u>Post-hoc analyses</u> : participants randomized to 3 doses or control, but analyzed as 1-, 2-, 3-dose groups
<b>India IARC</b> India	Efficacy/ Immunogenicity	4vHPV	10–18	<u>Post-hoc analyses</u> : participants randomized to 2 or 3 doses but analyzed as 1-, 2-, 3-dose groups
<b>KEN SHE</b> Kenya	Efficacy	2vHPV 9vHPV	15–20	<u>Randomized trial</u> : 1 dose of 2vHPV, 9vHPV, meningococcal vaccine
<b>DoRIS</b> Tanzania	Immunogenicity	2vHPV 9vHPV	9–14	<u>Randomized trial</u> : 1-, 2-, 3-dose groups
<b>Thailand Impact</b> Thailand	Impact/ effectiveness	2vHPV	grade 8	Students in one province received 1 dose; in another 2 doses

CVT, Costa Rica Vaccine Trial; IARC, International Agency for Research on Cancer. All studies conducted among girls/women

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# SINGLE DOSE HPV: COSTA RICA

## Costa Rica Vaccine Trial (CVT): protection after 1, 2 or 3 doses of 2vHPV through 11 years

- Post hoc analysis of RCT: women vaccinated at age 18–25 years
- Randomized to receive 3 doses of 2vHPV or control, but not all completed series

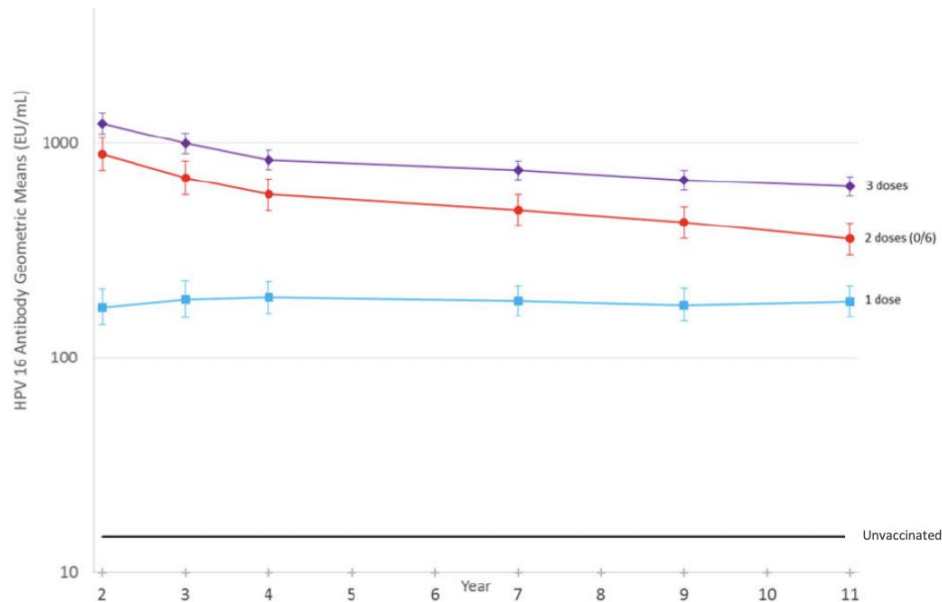
Doses	Number	Prevalent 16/18 HPV % (95% CI)	Vaccine efficacy % (95% CI)
3 doses	1365	2.0 (1.3–2.8)	80.0% (70.7–87.0)
2 doses	62	1.6 (0.1–7.7)	83.8% (19.5–99.2)
1 dose	112	1.8 (0.3–5.8)	82.1% (40.2–97.0)
Control	1783	10.0 (8.7–11.4)	Reference

Kreimer AR, et al. J Natl Cancer Inst 2020

14

# SINGLE DOSE HPV: COSTA RICA

## Costa Rica Vaccine Trial (CVT): HPV 16 antibody after 1, 2 or 3 doses of 2vHPV through 11 years



- Stable HPV 16 antibody levels through 11 years post vaccination in all dose groups
- Levels at least 10-fold above those in unvaccinated

Antibody by VLP-based ELISA at the NCI HPV Immunology Laboratory  
Kreimer AR, et al. J Natl Cancer Inst 2020

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# KEN SHE SINGLE DOSE– RCT KENYA

## KEN SHE, RCT of 1 dose of 9vHPV, 2vHPV or MCV



- 2250 Kenyan women aged 15–20 years
- 1458 evaluated for efficacy at month 18 in mITT HPV 16/18 cohort

Vaccine	Number	Incident persistent HPV 16/18	Incidence/ 100 PY	Vaccine efficacy % (95% CI)
9vHPV	496	1	0.17	97.5% (81.7–99.7)
2vHPV	489	1	0.17	97.5% (81.6–99.7)
MCV	473	36	6.83	Reference

Enrollment criteria: 1-5 lifetime partners; HIV negative; enrollment between December 2018 and June 2021

MCV, meningococcal vaccine

mITT, modified intention to treat: HPV 16/18 HPV DNA negative (external genital and cervical swabs) at enrollment and month 3

(self-collected vaginal swab) and HPV antibody negative at enrollment

PY, person years

Barnabas R, et al. DOI [10.21203/rs.3.rs-1090565/v1](https://doi.org/10.21203/rs.3.rs-1090565/v1); NEJM Evidence 2022

**3 yr Vaccine Efficacy Data:**

9v HPV 98.8%

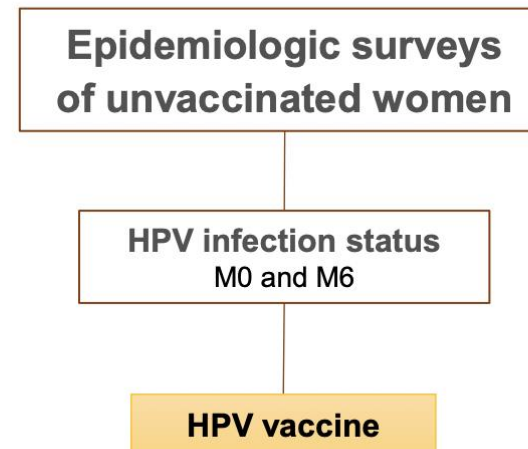
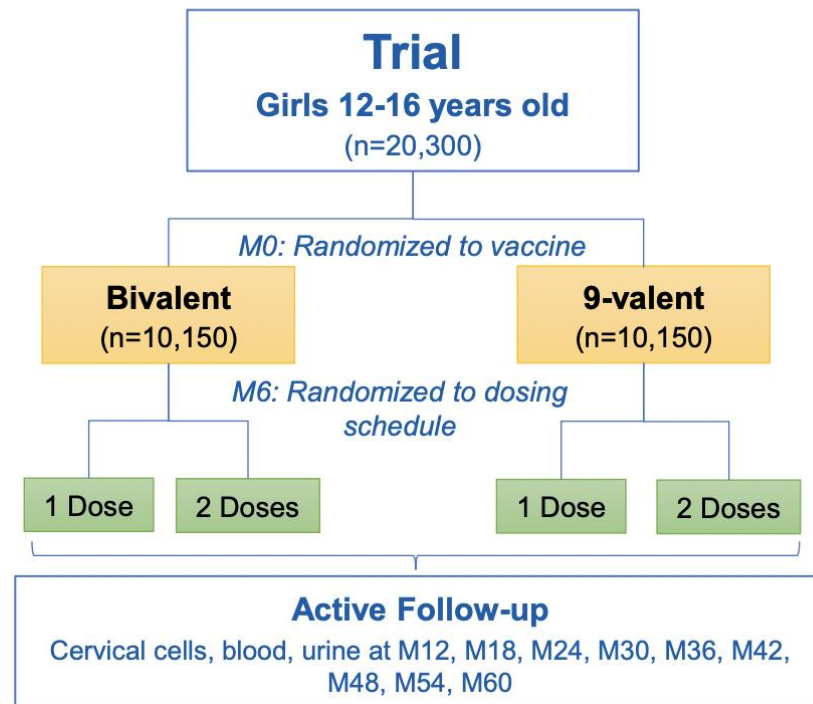
2vHPV 97.5%

Barnabas et al, *Nature Medicine*,  
vol 29 Dec 2023, p 3224-3232

# MORE EFFICACY DATA IS COMING

## ESCUDDO

- Randomized trial in Costa Rica to evaluate efficacy (U.S. National Cancer Institute)
- Objectives: 1) to evaluate non-inferiority of 1 versus 2 doses of bivalent and 9-valent vaccines for prevention of new cervical HPV16/18 infections that persist 6+ months, and 2) to evaluate 1 dose compared to unvaccinated



First results expected 2024



Porras, et al. Vaccine 2022

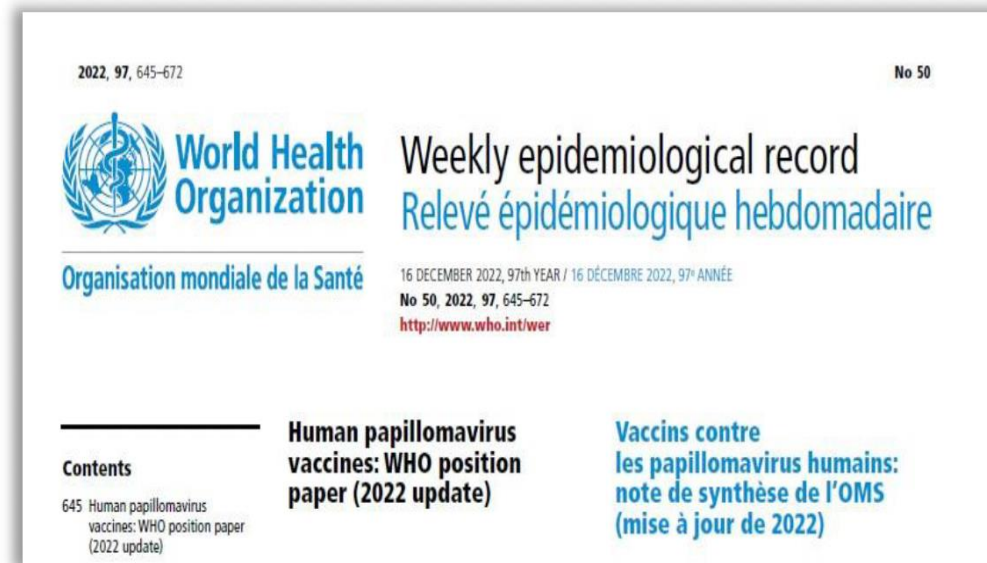
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# WHO RECOMMENDATIONS FOR HPV VACCINE

December 2022:

Evidence supports a 2-dose schedule from age 9 years and for all older age groups for which HPV vaccines are licensed.

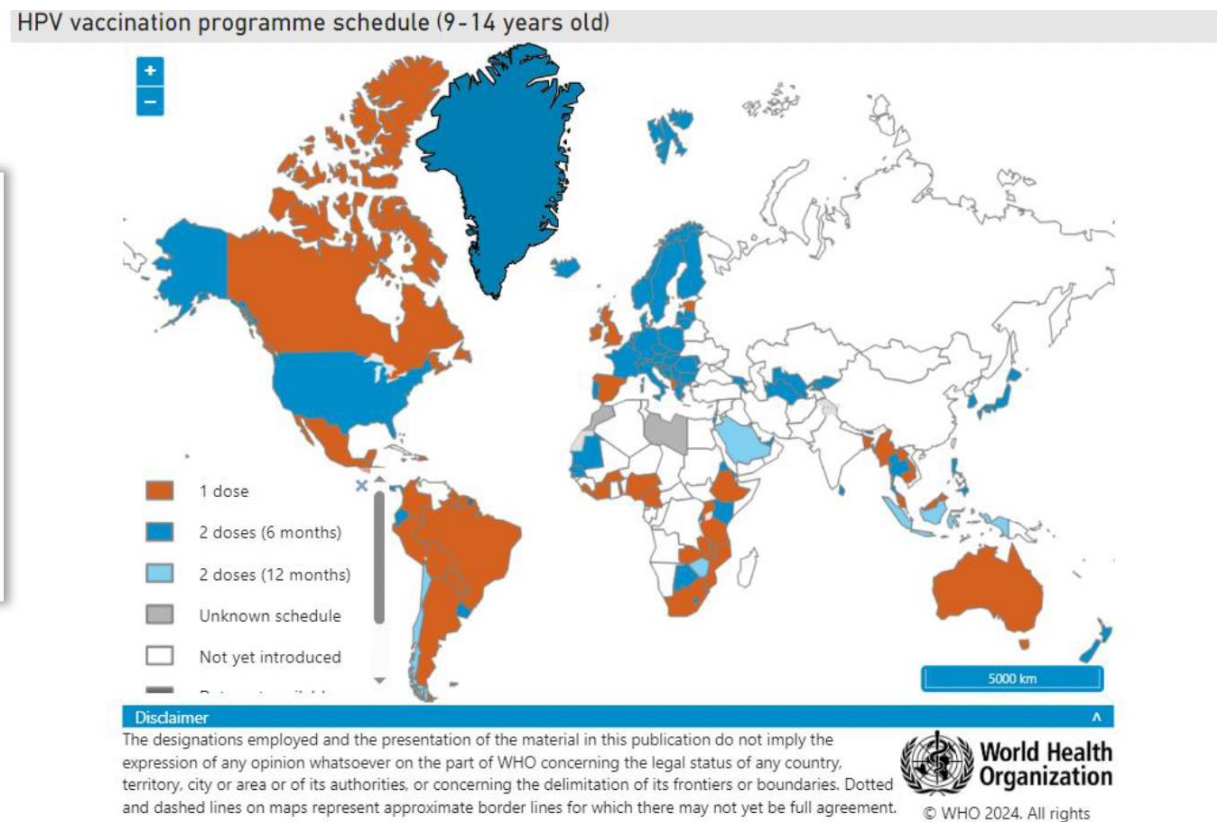
“As an off-label option, a single-dose schedule can be used in girls and boys aged 9–20 years.”



# HPV VACCINE SCHEDULES: 9-14 YEAR OLDS

## by number of doses

Interval_doses	No. of countries
1 dose	56
2 doses (12 months)	5
2 doses (6 months)	77
Not yet introduced	50
Unknown schedule	6



Date: July 25, 2024



## COMING ... SOUTHEAST ASIA?





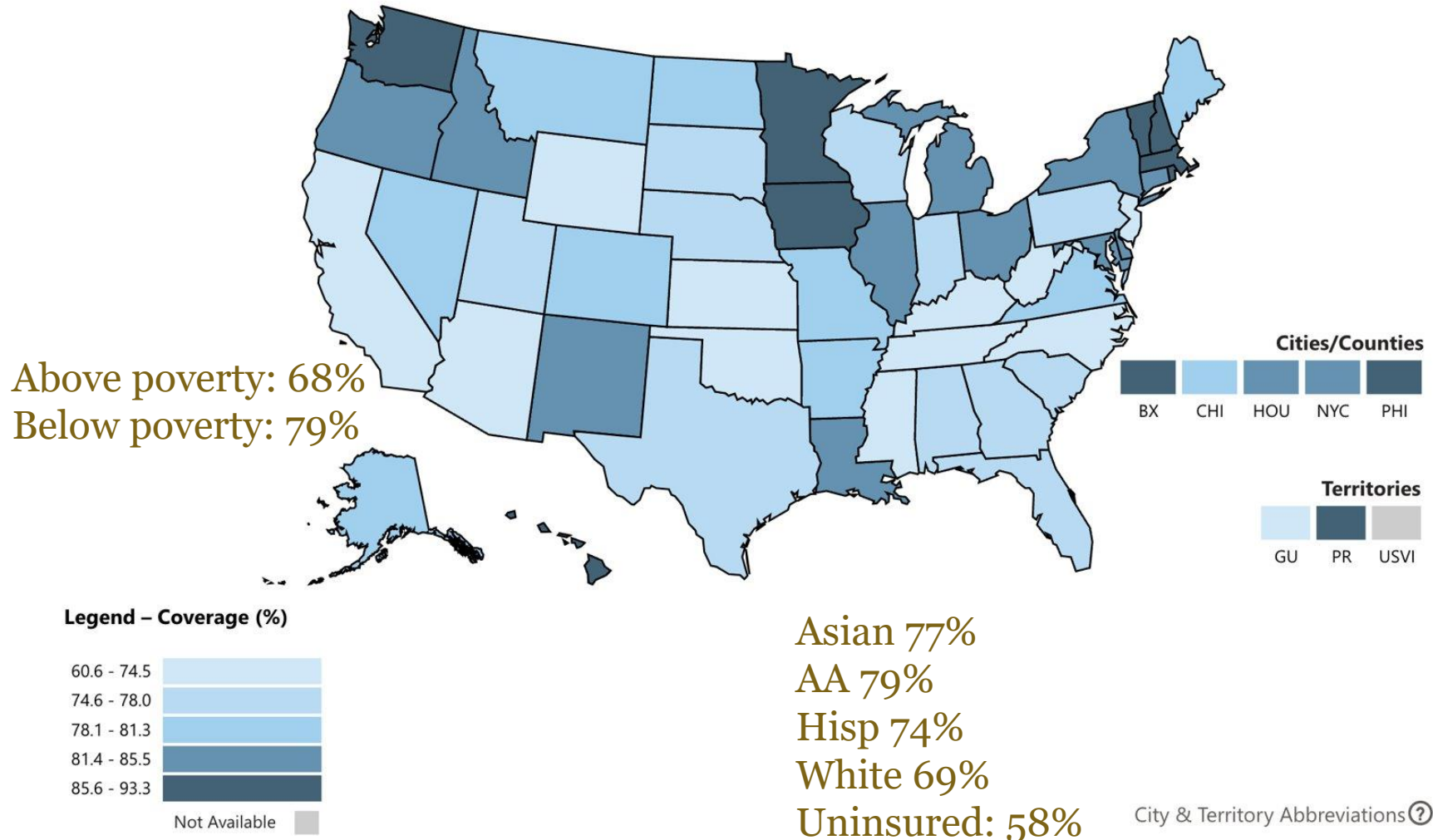
# GLOBALLY: HPV VACCINE

- In 2022/2023: HPV Vaccine coverage increased globally<sup>1</sup>
  - 20% of girls globally have had one dose
  - up from 15% pre pandemic, to low of 13% in pandemic
- Gavi has renewed efforts, and offered some funding to recent “Gavi graduates”
- Hardest is the “caught in the middle countries” (too rich for Gavi, too poor for their health budgets to pay for it)

<sup>1</sup><https://www.who.int/news/item/17-11-2023-global-partners-cheer-progress-towards-eliminating-cervical-cancer-and-underline-challenges#:~:text=The%20global%20HPV%20vaccination%20coverage,levels%20for%20the%20first%20time.>  
Accessed 28 Dec 2023

# US: HPV VACCINATION COVERAGE

≥1 Dose HPV Vaccination Coverage among Females Age 13-17 Years, 2022, National Immunization Survey-Teen



# CULTURALLY RELEVANT VACCINATION MESSAGING: NO “ONE SIZE FITS ALL”

## Arizona’s Navajo Nation-

- Combined HPV vaccination with a traditional coming-of-age ceremony: Kinaalda-celebrates onset of menses.
- 82.7% vaccine coverage
- Received award from CDC for one of the top HPV vaccine coverage rates of 10 pediatric practices honored across country

# SECONDARY PREVENTION: US SCREENING

Table 1. USPSTF Recommendations for Routine Cervical Cancer Screening

Population*	Recommendation	USPSTF Recommendation Grade†
Aged less than 21 years	No screening	D
Aged 21–29 years	Cytology alone every 3 years‡	A
Aged 30–65 years	Any one of the following: <ul style="list-style-type: none"> <li>• Cytology alone every 3 years</li> <li>• FDA-approved primary hrHPV testing alone every 5 years</li> <li>• Cotesting (hrHPV testing and cytology) every 5 years</li> </ul>	A
Aged greater than 65 years	No screening after adequate negative prior screening results§	D
Hysterectomy with removal of the cervix	No screening in individuals who do not have a history of high-grade cervical precancerous lesions or cervical cancer	D

Abbreviations: FDA, U.S. Food and Drug Administration; hrHPV, high-risk human papillomavirus testing.

## ACS

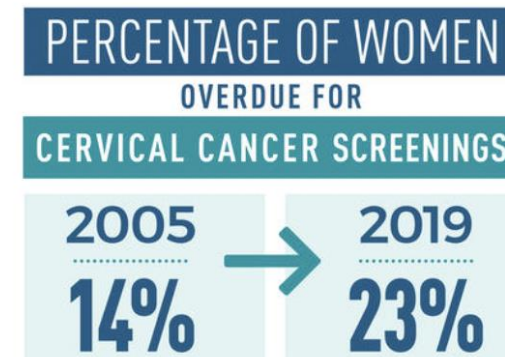
- starting screening at age 25
- with an HPV test
- HPV testing Q 5yrs years
- through age 65.

“However, testing with an HPV/Pap cotest every 5 years or with a Pap test every 3 years is still acceptable”

**Power of a negative HPV TEST!!!**

# CONTROVERSY POINTS

- Ages 21-24: US cx ca cases dropped from 151 in 1999 to 69 in 2017 – do we need to screen? Triage by HPV vaccine status?
- Pap vs HPV in 25-29
- Stopping screening age 65: Caveats!!!
  - 10 years normal screens
  - No CIN 2+ for 25 years
- **EVERYONE AGREES:**  
most important thing  
is getting screened!



Source: Suk R, et al. doi:10.1001/jamanetworkopen.2021.43582

Why Are Many Women  
Overdue for Cervical  
Cancer Screening?

Lack of knowledge about screening  
recommendations most common  
reason.

# CHALLENGES TO SCREENING

- Access challenges
  - Urban/ rural divide
  - Low-cost screening: Medicaid Expansion
    - Planned Parenthoods
    - Community Health Centers
- Evaluation of abnormal screening
  - Number of visits
  - Cost
  - Transportation
  - Providers

# FDA APPROVAL OF HPV SELF-SAMPLING

## American Cancer Society Statement: FDA Approval of HPV Self-Collection for Cervical Cancer Screening

May 15, 2024



- Approved in health care settings only
- With specific HPV tests
  - Roche Self Collection
  - BD Onclarity HPV Assay
- **Great addition – but not “easy”**

# A CERVIX IS A CERVIX

[Am J Mens Health](#). 2020 May-Jun; 14(3): 1557988320925691.

PMCID: PMC7271678

Published online 2020 Jun 3. doi: [10.1177/1557988320925691](https://doi.org/10.1177/1557988320925691)

PMID: [32489142](https://pubmed.ncbi.nlm.nih.gov/32489142/)

## Bridging Barriers to Cervical Cancer Screening in Transgender Men: A Scoping Review

- higher likelihood of not receiving CCS in their lifetime (37% TM vs. 10% cisgender women; [Rahman et al., 2019](#)),
- and lower likelihood of receiving regular CCS (56% TM vs. 72% cisgender women,  $p = .001$ ; [Kiran et al., 2019](#)).
- Up to 90% TG Males surveyed preferred HPV swab (either self or provider obtained, to Pap test) [McDowell et al., 2017](#);
- Self swabs shown to correlate with provider collected [Reisner et al., 2018](#).

2019 Canadian study found TG men in Toronto 60% less likely than cis-gender residents to have CCS [Dhillon et al, 2020](#)

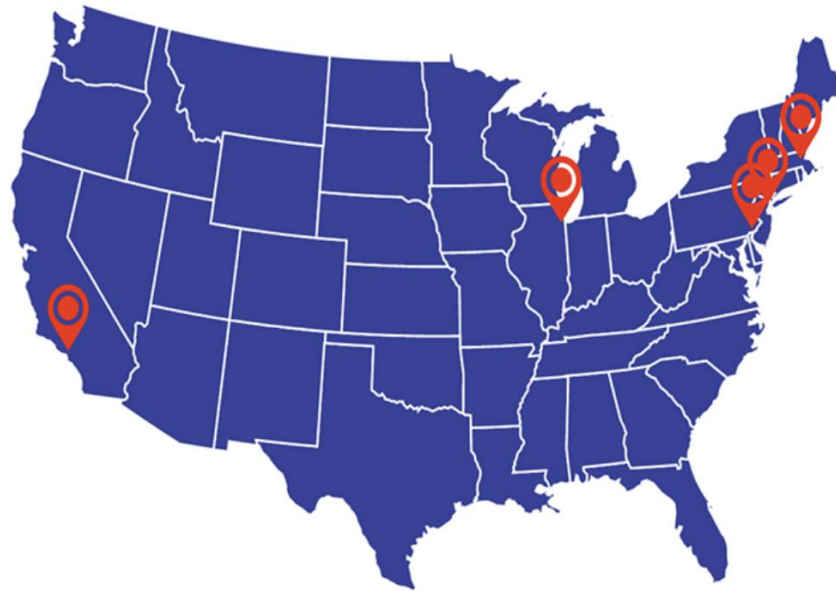


# IMPACT OF REDLINING ON SCREENING

## Redlining Associated with Lower Cancer Screening Rates

Pawlik et al., *J Am Coll Surg*, September 2023.

**JACS** / JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS



**Most Redlined Metropolitan Areas**  
(by Population)

1. New York-Newark-Jersey City, NY-NJ
2. Los Angeles-Long Beach, CA
3. Chicago-Naperville-Elgin, IL-IN-WI
4. Philadelphia-Camden-Wilmington, PA
5. Boston-Cambridge-Newton, MA-NH

### Odds of Meeting National Cancer Screening Targets for Three Common Cancers\*

People living in historically redlined areas are:

**79%** less likely to meet cervical cancer screening targets

**64%** less likely to meet colon cancer screening targets

**24%** less likely to meet breast cancer screening targets

\*Comparisons are between historically redlined areas vs. those not associated with redlining practices

# AND...THE RESULT

➤ [Int J Gynecol Cancer](#). 2022 Aug 18;ijgc-2022-003728. doi: 10.1136/ijgc-2022-003728.

Online ahead of print.

## **The increasing incidence of stage IV cervical cancer in the USA: what factors are related?**

[Alex Andrea Francoeur](#)<sup>1</sup>, [Cheng-I Liao](#)<sup>2</sup>, [Michelle Ann Caesar](#)<sup>3</sup>, [Ava Chan](#)<sup>4</sup>, [Daniel S Kapp](#)<sup>5</sup>,  
[Joshua G Cohen](#)<sup>6</sup>, [Ritu Salani](#)<sup>6</sup>, [John K Chan](#)<sup>7</sup>

Women of color still have higher cervical cancer overall –  
but increase in stage IV is highest in white women in the south ages 40-44:

- 4.5% annual increase in Stage 4 cervical cancer

Compared with black women:

- white women 2x rate missed or non guideline appropriate screening (26.6% v 13.8%)
- White teens (13-17 yo) lowest HPV rate: 66.1% v 75.3% for black teens

# WHERE TO GO: ROAD TO ADVOCACY

Advocacy via Community can lead to policy change

- USA: Act Up, HIV/AIDs advocacy in 1980's
  - FDA changed clinical trial policy
  - trial HIV drug pricing changed
- Breast Cancer Advocacy
  - Stigma gone
  - Screening/Treatment paid for
  - NFL wears pink
- Ireland: Story of Savita Halappanavar's death in 2012
  - Led to step wise changes in policy
  - Constitutional Amendment for change in Reproductive Health Policy in 2018

<https://www.history.com/news/act-up-aids-patient-rights>

<https://www.usnews.com/news/best-countries/articles/2022-06-27/the-story-behind-irelands-abortion-ban-and-its-reversal>

# ADVOCACY – IS THE US MOVING TOWARD ELIMINATION GOALS?



## Cancer Moonshot CERVICAL CANCER FORUM

Thursday, January 25th  
at 10am ET



# ADVOCACY: THE POWER OF STORY

Start with a story.

It's the standard advice for any doctor who sets out to write, speak or advocate on behalf of her patients. Stories change minds. They change how people think about issues that can otherwise feel impersonal.

Stories matter.

# STORIES CAN CHANGE US

I don't think any  
amount of data will  
ever change hearts  
and minds.

It's the stories.

**Alison McCrary**

tribal citizen of the Ani-Yun-Wiya  
United Cherokee Nation  
and social justice movement lawyer

# INTANGIBLE OBSTACLES: PERSPECTIVES AND STORIES FROM THOSE IMPACTED BY CERVICAL CANCER

- Curated stories of cervical cancer survivors or family members from 6 continents – over 150 hours of interviews
- Interviewed experts working in all resource settings
- Combined with 30 years of clinical experience and guideline development work in many settings
- Added evidence based information about cervical cancer prevention written for the general reader
- And offer hope-filled examples for a way beyond the obstacles

# INTANGIBLE OBSTACLES TO CERVICAL CANCER ELIMINATION

- Stigma: “a mark of disgrace associated with a particular circumstance, quality, or person”<sup>1</sup>
- Patriarchy: “a system of society or government in which men hold the power and women are largely excluded from it”<sup>1</sup>
- Burden of unpaid labor
- Child Marriage: “formal marriage or informal union between a child under the age of 18 and an adult or another child”
  - 20-30% involve girls younger than 15

**GUIDELINES**

**VACCINES**

**VALUE OF WOMEN**

<sup>1</sup>Oxford dictionary <sup>2</sup><https://www.unfpa.org/data/dashboard/adolescent-youth>. Accessed 14 March 2024



# STIGMA IN CERVICAL CANCER: HPV QUOTES

## STIGMA- 100% of women I talked with-all socioeconomic strata

- “having cervical cancer is like wearing a sticker that says ‘I’m promiscuous.’ I had friends say ‘I thought you only got cervical cancer if you had too many partners’”
- “the moment I got asked if I had been tested for HIV because I had cervical cancer, that is the moment I decided not to tell anyone I had cervical cancer”

# STIGMA IN CERVICAL CANCER: HPV QUOTES

- “I am at fault for HPV, but my partner, well he is rarely subject to the same social consequences”.
- “my doctor told me I must have started having sex at 14 because otherwise I would not have gotten this cancer”
- “my mother-in-law said she never got screened, so I do not need to be screened unless I am cheating on her son”

# INTANGIBLE OBSTACLES TO CERVICAL CANCER ELIMINATION

➤ Stigma: “a mark of disgrace associated with a particular circumstance, quality, or person”<sup>1</sup>


➤ Patriarchy: “a system of society or government in which men hold the power and women are largely excluded from it”<sup>1</sup>

# PATRIARCHY: QUOTES

- “Some of the men in our village will not let their wives go for screening”
- Barbara – whose physician husband worked with her male gynecologist to determine her treatment- just surgery, no radiation or chemotherapy
  - and after 3 years and 5 surgeries she asked for a hysterectomy – they declined
  - finally, her 14<sup>th</sup> surgery was a hysterectomy – with partial bladder removal
  - Her husband divorced her when she was in the hospital

Patriarchy can be a sledge hammer--- or a paper cutter

# PARTNER WITH ADVOCATES

- In my career- I'm now seeking opportunity for advocacy partnerships
- Why?
  - Implementation assistance-no "science silo's"
  - Can teach us to use power of story
  - Together: overcome Stigma
- Combining Data with Stories and Advocacy  IMPACT
- All of us have a story, and all of us can be advocates

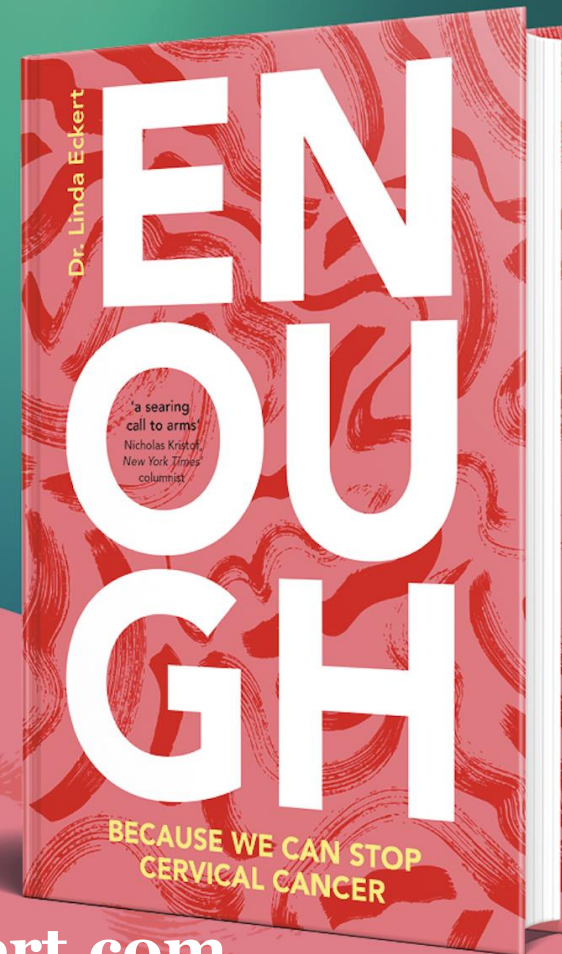
# Let's Go!!!! We have ENOUGH



**WE CAN END  
CERVICAL  
CANCER**



Get Informed. Get Screened. Get Vaccinated.



UW M

@drlindaeckert

drlindaeckert.com



Wrap Up



Save the Date

## 2025 HPV Task Force Meeting Dates

- Spring Quarter Meeting (2-hour): February 7<sup>th</sup>, 2025
- Annual Roundtable (4-hour): May or June 2025 (Date TBD)
- Fall Quarter Meeting (2-hour): October 10<sup>th</sup>, 2025

Meetings will be virtual unless otherwise specified





# Cancer Action Plan of Washington

- State-Wide Cancer Coalition
- 5-Year Cancer Plan
  - Includes HPV vaccine and HPV-related Cancer priorities
- Current Phase: Review of the final cancer plan
- **Next Meeting : October 30<sup>th</sup>, 2024**
  - Time: 9:30 am- 3:30pm
  - Venue: Highline College, 2400 S 240th St, Des Moines, WA 98198
  - Registration link: <https://bit.ly/CAPOWOct2024>
- Contact: [Katie.Treend@doh.wa.gov](mailto:Katie.Treend@doh.wa.gov)

Thank you for doing your part to prevent  
HPV Cancers!

