



# Strategies for Improving HPV Vaccination Rates

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National HPV Vaccination Roundtable



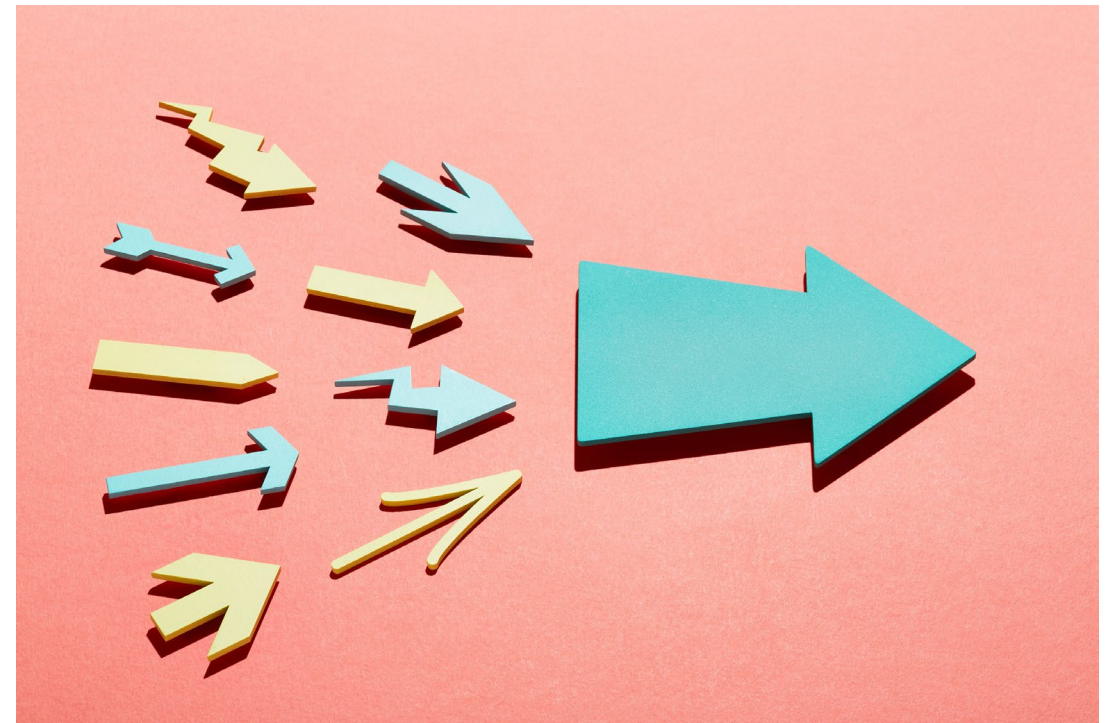
# WE HAVE GREAT TOOLS TO INCREASE HPV VACCINATION → TIME TO PUT THEM INTO PRACTICE

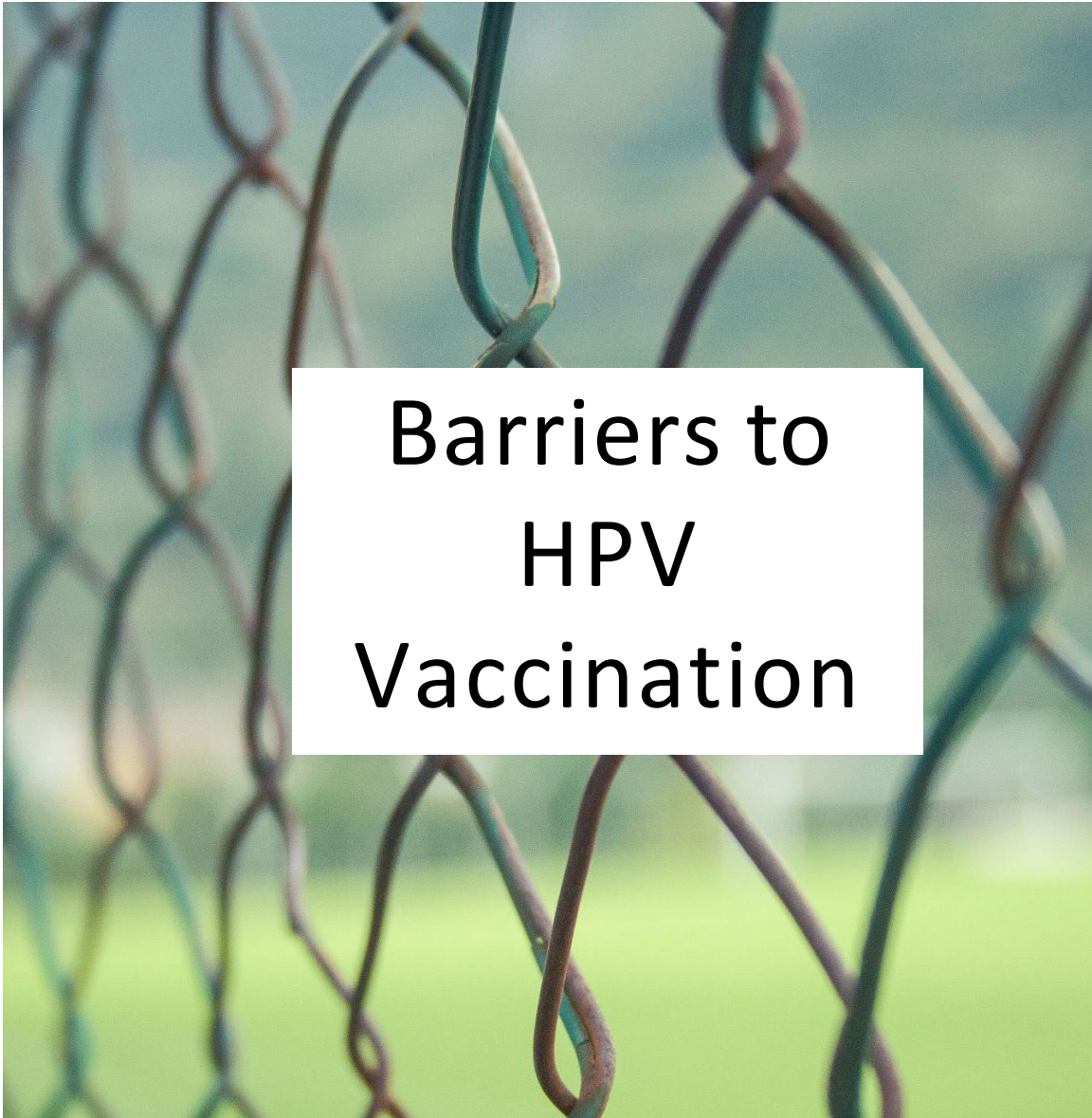
## Use a multi-level approach

- Start HPV vaccination at age 9
- Effective Communication – strong provider recommendation
- Clinic level strategies

## Two main goals

- Protect your patients from HPV cancers through HPV vaccination
- Make it easier for providers and staff to do this life-saving work





## Barriers to HPV Vaccination

Lack of awareness

Lack of access

Lack of a provider recommendation

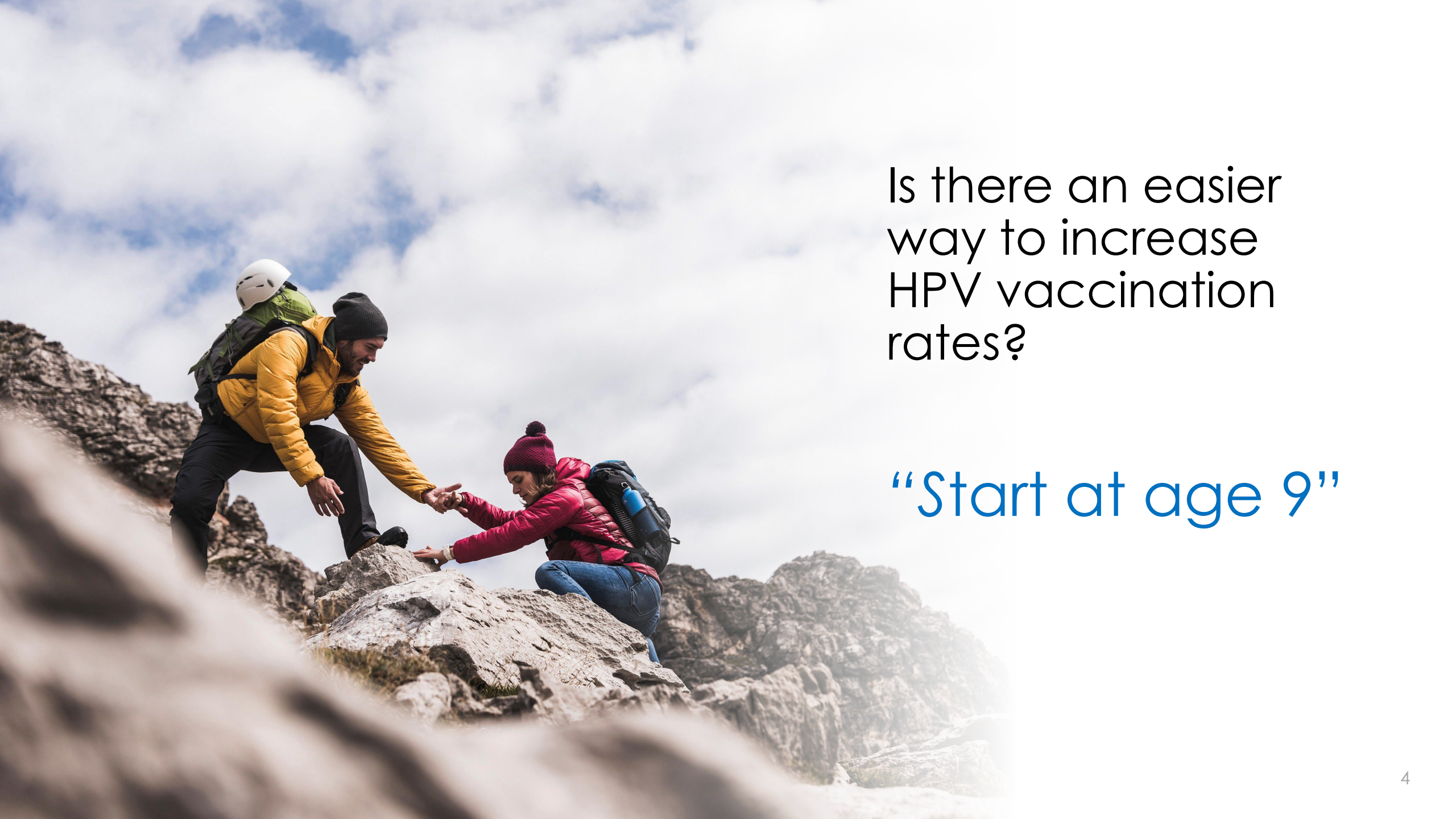
Sex/STD stigma – “my child isn’t at risk”,  
“it might promote sexual activity”

*Vaccine hesitancy*: concerns about safety or effectiveness

→ 23% of US parents of 11-17-year-olds are hesitant about HPV vaccine

*Vaccine fatigue*: providers are frustrated with hesitancy and may be fearful of negative interactions with parents

“Too many” shots in the adolescent bundle,  
→ HPV may get pushed off



Is there an easier way to increase HPV vaccination rates?

“Start at age 9”

# STARTING HPV VACCINATION AT AGE 9 (BEFORE THE ADOLESCENT BUNDLE AT 11-12)

Best  
Practice

On-time  
completion

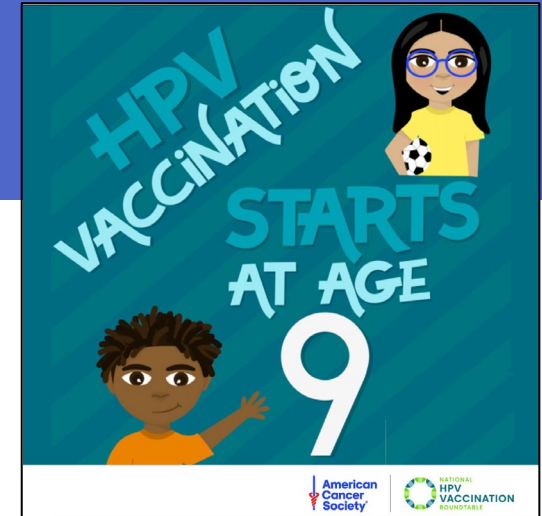
Easier



# GROWING BODY OF EVIDENCE SUPPORTS STARTING AT AGE 9 YEARS

## Best practice:

- American Academy of Pediatrics (since 2018)
- American Cancer Society (since 2020)
- National HPV Vaccination Roundtable
- Supported by ACIP guidelines



- **Why the American Academy of Pediatrics recommends initiating HPV vaccine at age 9.**

O'Leary, S. T. (2022). *Human Vaccines & Immunotherapeutics*, 18(6). doi.org/10.1080/21645515.2022.2146434

- Human Vaccines and Immunotherapeutics

Special Collection of 22 articles, all on HPV at age 9-10

## Start HPV at 9 Landing Page:

Information, reference articles, tools, resources, videos, and more !

<https://hpvroundtable.org/start-hpv-vaccination-at-age-9/>

# STARTING AT 9 FITS WITHIN THE CDC SCHEDULE

RECOMMENDED VACCINES	7 YEARS	8 YEARS	9 YEARS	10 YEARS	11 YEARS	12 YEARS	13 YEARS	14 YEARS
HPV								
Tdap <sup>1</sup>								
Meningococcal ACWY								

**KEY**

- ALL children in age group should get the vaccine
- ALL children in age group can get the vaccine

## *CDC/ACIP:*

HPV vaccination is routinely recommended at age 11 or 12 years; **vaccination can be given starting at age 9 years.**

# BENEFITS OF STARTING AT AGE 9

- ✓ easier conversations with parents
  - focus on cancer prevention – NOT on sex
- ✓ more time and opportunities to vaccinate - 4 full years
  - helps mitigate disruptions in care and access issues
- ✓ increases on-time HPV completion by age 13
- ✓ fewer shots per visit
  - many parents, patients and healthcare professionals prefer spacing shots out instead of bundling
- ✓ allows for simplified yearly outreach
  - use a 0,12-month dosing schedule (skip the 6-month shot only visit)
- ✓ more relaxed approach to hesitancy
  - less pressure to resolve hesitancy in a single visit
  - more time to build trust



Robust durable immunity at age 9-12 with no sign of waning

O'Leary, *HVI* (2022)  
Biancarelli, *Journal of Pediatrics* (2020)  
Kahn, *HVI* (2023)  
Saxena, *HVI* (2023)

# LIGHTER LIFT:



## 9-10 year well visit

Routine Check up  
Mental Health Screen  
HPV vaccine

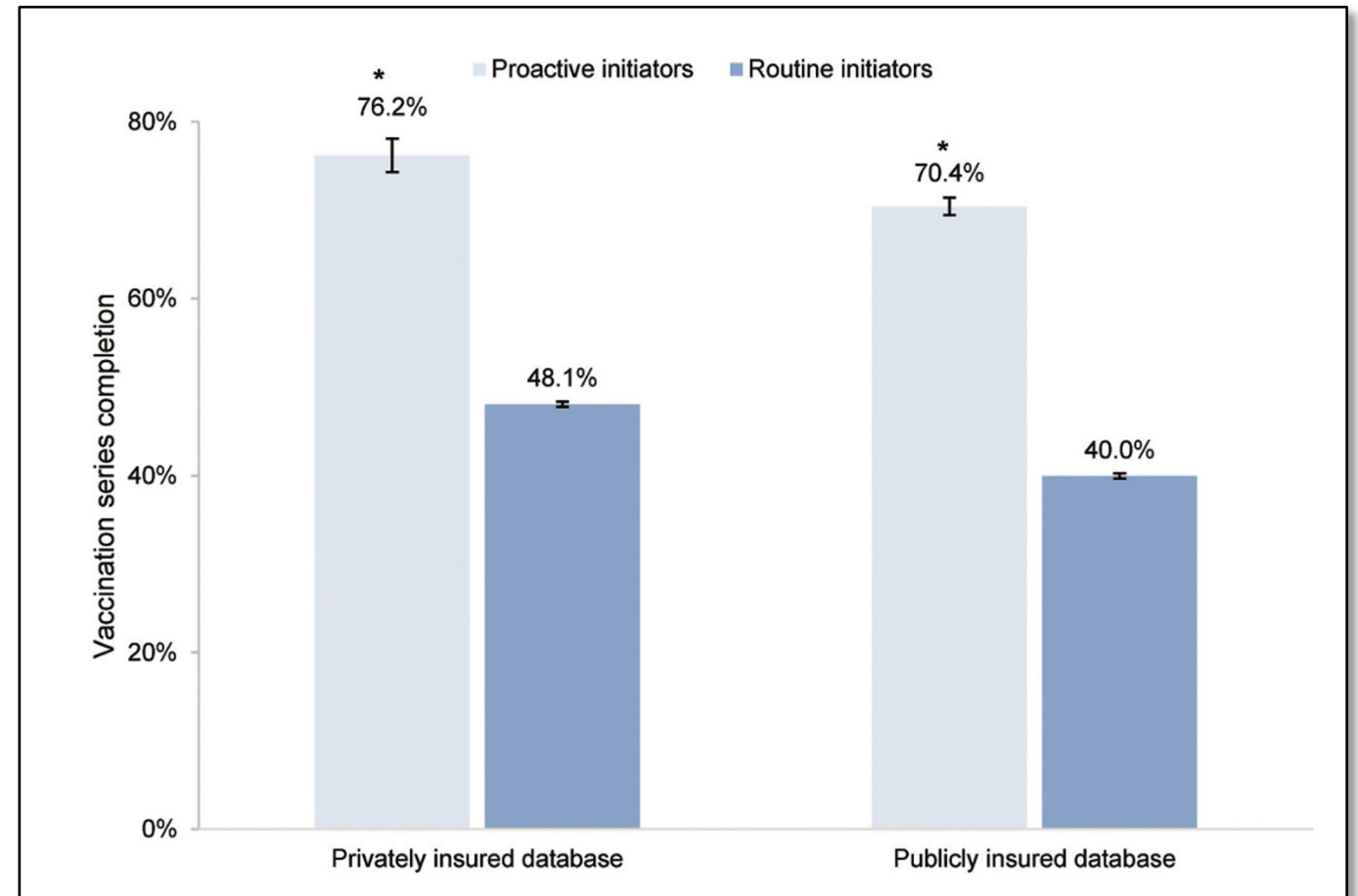


## 11-12 year well visit

Routine Check up  
Mental health screen  
Sports clearance, sports forms  
3 P's: puberty, periods, pimples  
3 vaccines (Tdap, MenACWY, HPV)

# HIGHER RATES OF ON-TIME COMPLETION BY AGE 13

	HPV completion by age 13	
Age of HPV initiation	Privately Insured	Publicly Insured
9-10 (proactive initiators)	76.2%	70.4%
11-12 (routine initiators)	48.1%	40.0%



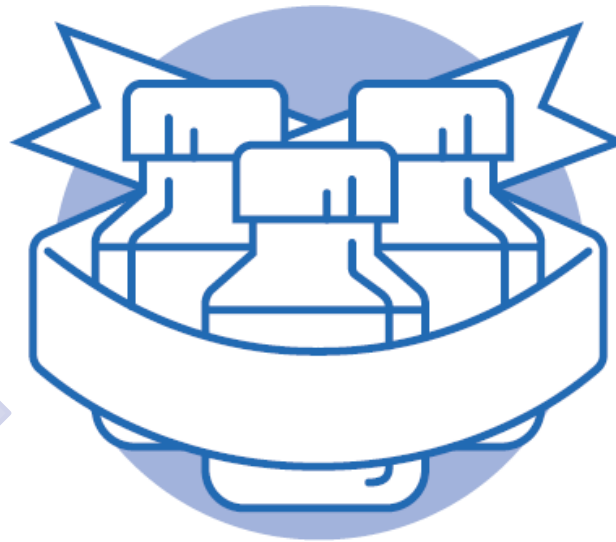
National Claims Data

# BEGINNING HPV PRIOR TO THE ADOLESCENT BUNDLE MAY IMPROVE ON-TIME SERIES COMPLETION

HPV starts  
before Tdap  
&  
MenACWY

- 40% higher likelihood of HPV series on-time completion
- aOR 1.38-1.62

Adolescent Bundle:  
Tdap/HPV/MenACWY



HPV starts  
after Tdap  
&  
MenACWY

- 32% lower likelihood of HPV series on-time completion
- aOR 0.68-0.62

Cohort of 100,857 eligible children, age 9-13  
National Claims Data: MarketScan Database

# NIS-TEEN DATA ANALYSES: YOUNGER INITIATION AGE → HIGHER COMPLETION RATES



## 2020 NIS-Teen Analysis (Bednarczyk)

UTD HPV vaccination rate at age 13

- 93% if initiated (first dose) at 9-10 years
- 66% if initiated (first dose) at 11-12 years; this group reached 90.2% UTD at age 16



## 2016-2020 NIS-Teen Analysis (pooled data) (Minihan)

UTD HPV vaccination rate for 13-17-year-olds

- 93% if initiated (first dose) at 9-10 years; UTD equal between females & males
- 72% if initiated (first dose) at  $\geq 11$  years; females more likely to be UTD

# MULTI-LEVEL QUALITY IMPROVEMENT STUDY IN BOSTON

2 Boston FQHC's:

HPV starting at 10

→ Increased series completion by 13<sup>th</sup> birthday

DOSE HPV Study

2016: HPV Vaccination education & EMR prompt at age 10

**2020: HPV completion rates by 13<sup>th</sup> birthday increased from 62% to 88%**



“DOSE HPV” = Development of Systems and Education for Human Papillomavirus Vaccination

Is it OK with CDC?

YES!

Is it too early?

NO!  
9-12 is Optimal

Will immunity last?

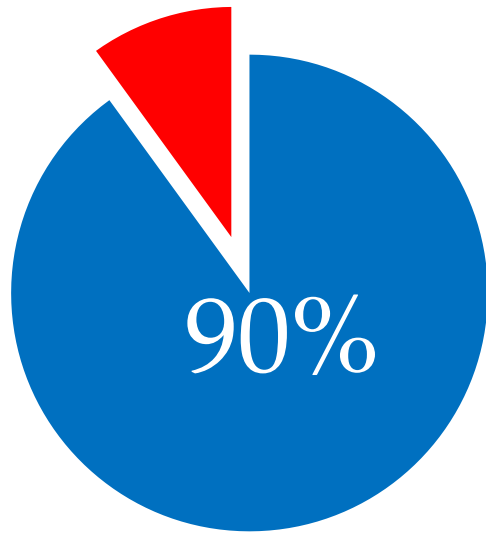
YES!  
Robust  
Doesn't wane

Before exposure to prevent HPV infection  
More effective at younger ages to prevent cancers

Multiple long-term studies with >10-year follow-up; higher titers when vaccinated at younger ages  
Modeling >30-70 years



HPV vaccination  
prevents  
90% of 6 HPV cancers



- safe,
- effective,
- long-lasting immunity



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### Starting at age 9:

- Easier conversations with parents
- More opportunities to complete 2 dose series before age 13
- Higher on-time vaccination rates

# STRONG RECOMMENDATION IS THE MOST IMPORTANT FACILITATOR OF VACCINATION

*We are trusted sources for vaccine information!*



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## Strong Recommendation:

### Presumptive announcement

Statement, not a question

Indicates that vaccines are important

“Your child is due for HPV vaccine today”

- results in higher vaccine uptake
- faster conversations

## Weak Recommendation:

Sounds optional and not important

“What would you like to do about HPV?”

“Do you want to do HPV; it’s not required for school?”

- results in lower vaccine uptake



O’Leary & Opel,  
*Pediatrics* (2024)  
Fenton, *Vaccine* ( 2022)

# MOTIVATIONAL INTERVIEWING: PIVOT with MI



## Pearls for presumptive approach:

- Tone & body language matter:
  - be confident
  - make eye contact
  - square your shoulders
- Know what the child is due for before you go into the room
- Use presumptive approach at subsequent visits, even if parent was hesitant in the past

## Key Skills for MI:

- Open-ended questions
- Affirmations
- Reflections
- Ask permission to share
- Autonomy support

This tool is practical – useful for all vaccine recommendations!  
Concrete examples of “what to say” and “how to say it”

# ANNOUNCEMENT APPROACH FOR HPV



Can be used by:  
Provider  
MA  
Nurse

# ANNOUNCEMENT APPROACH

Use presumptive **announcement** –15 seconds

- Focus on cancer prevention

## ANNOUNCEMENT EXAMPLE

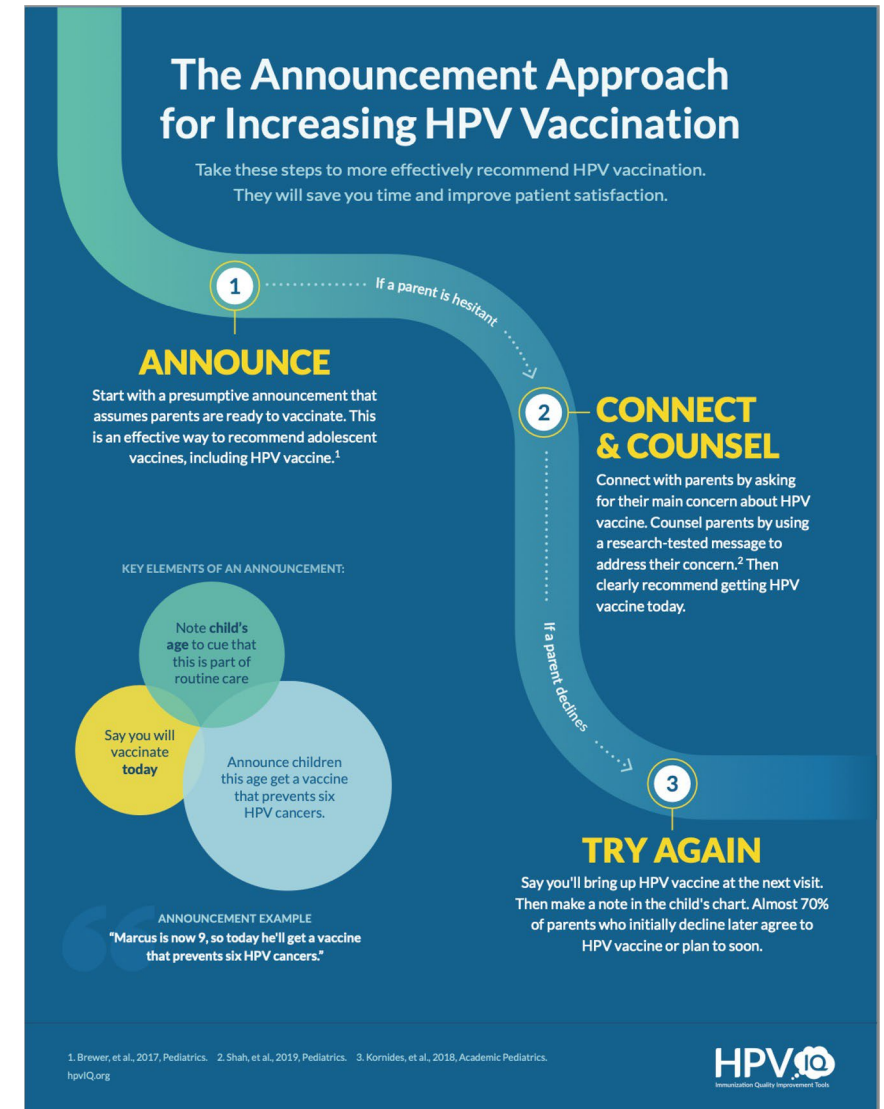
“Marcus is now 9, so today he'll get a vaccine that prevents six HPV cancers.”

If hesitant, **connect with parents**, ask for their **main concern**

- Don't be afraid of questions
- **Counsel** using research-tested messages (on back of flyer) – about 2 minutes

If the parent declines, **try again** another day

- Almost 70% of parents who initially decline HPV, eventually say YES, or plan to soon



# RESEARCH-TESTED MESSAGES ADDRESS HPV VACCINE CONCERNS



Companion article:  
Brewer, *HVI* (2023). How to make effective HPV vaccine recommendations starting at age 9.

FREE training tools and announcement training workshops available at [HPVIQ.org](http://HPVIQ.org) or contact [aat@unc.edu](mailto:aat@unc.edu)

# The Announcement Approach

## Two Short Vignettes

(1.5 - 2 minutes each)

**These short videos are great to play and discuss at staff/provider huddle:**

### **Announcement Approach at ages 9-10 (90 seconds)**

[https://www.hpviq.org/wp-content/uploads/2023/04/the\\_announcement\\_approach\\_\\_\\_ages\\_9-10-1080p.mp4](https://www.hpviq.org/wp-content/uploads/2023/04/the_announcement_approach___ages_9-10-1080p.mp4)

### **Announcement Approach at ages 11-12 (2 minutes)**

bundled approach; how to handle vaccine hesitancy and refusal

[https://www.hpviq.org/wp-content/uploads/2023/04/the\\_announcement\\_approach\\_\\_\\_ages\\_11-12-1080p-1.mp4](https://www.hpviq.org/wp-content/uploads/2023/04/the_announcement_approach___ages_11-12-1080p-1.mp4)





# The Announcement Approach

Ages 9-10



# The Announcement Approach

Ages 11-12

Unbundling can feel awkward the first few times

Majority say yes at 9 or 10

Kids often participate in the decision:

- Kids often choose 9 when given the choice to avoid 3 shots at 11
- Kids want to protect themselves from HPV cancers

Really helpful if MA or Nurse identifies hesitancy

If they say NO at 9-10: Try again next year

Parents' decisions can change overtime – be empathetic but persistent

- Build trust
- Plant the seed
- Keep it short!



# CLINIC LEVEL STRATEGIES



# INVOLVE YOUR WHOLE TEAM: VACCINATION IS A TEAM SPORT

Keep the message  
consistent and accurate  
for all patients

Available in Spanish

## HPV Vaccine: It's Cancer Prevention

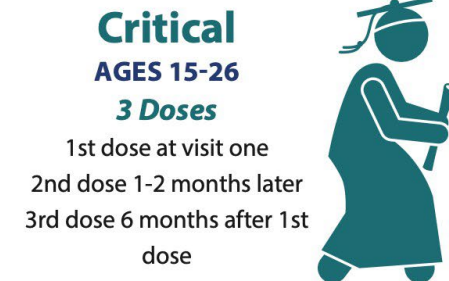
**Who?** All kids (both boys and girls) should get the vaccine starting at age 9.

**What?** The human papillomavirus (HPV) vaccine is a cancer prevention vaccine.

### Why?

- The HPV vaccine prevents 6 different cancers (mouth/throat, cervix, vulva, vagina, penis and anus).
- The HPV vaccine prevents most genital warts.
- The HPV vaccine is safe and effective, with no long term side effects.
- The HPV vaccine has been given for more than 15 years and provides long lasting protection.

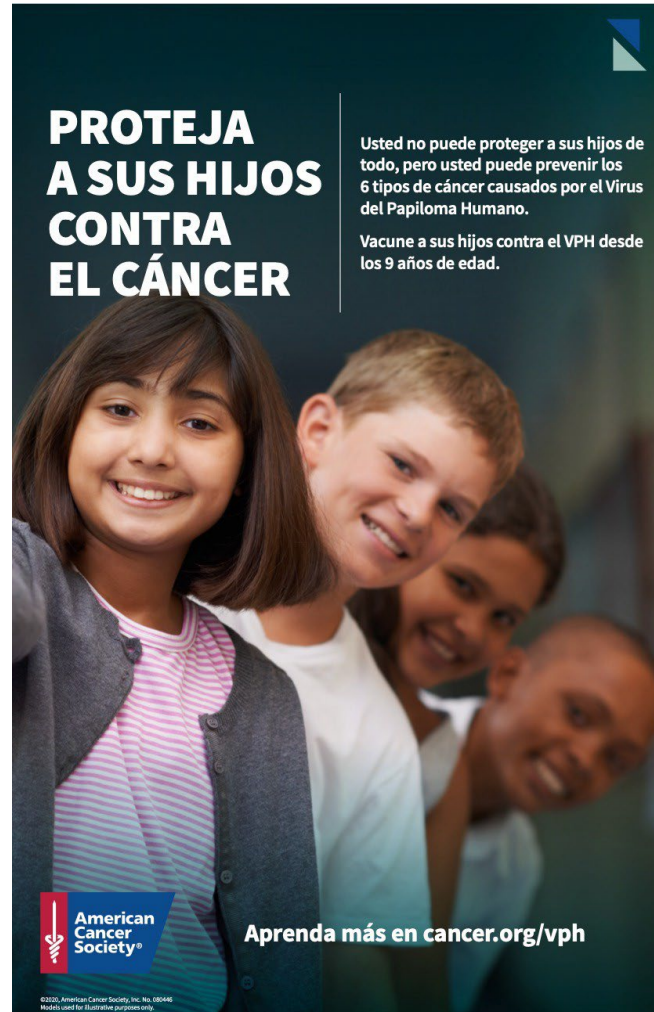
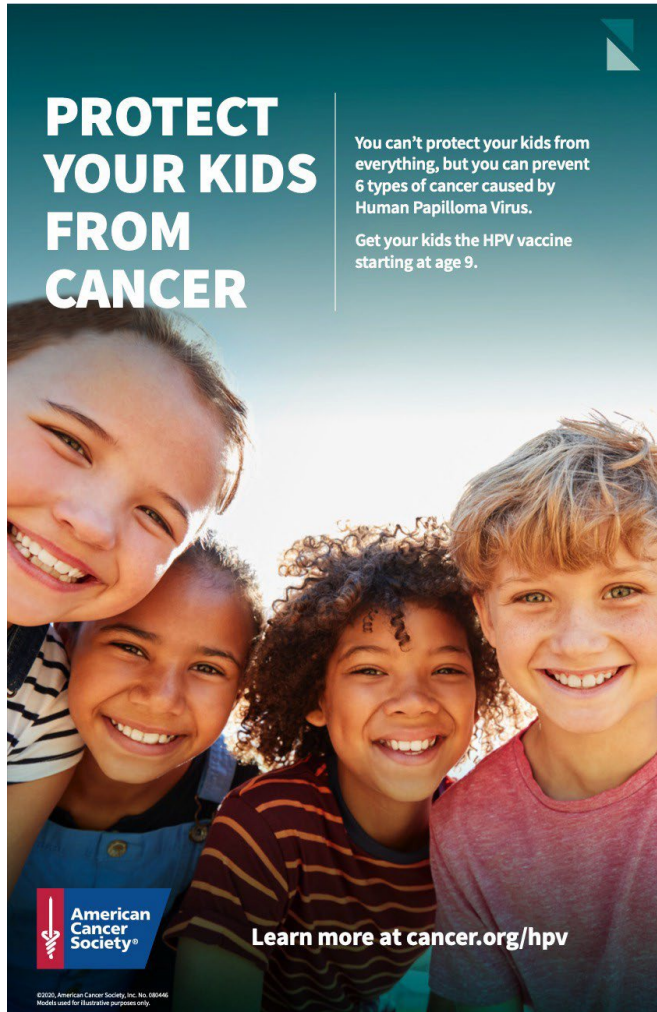
### When?



Special Acknowledgements to the WA HPV Free Taskforce for the creation of this resource.



# CLEAR, CONCISE MESSAGING: HPV VACCINE IS CANCER PREVENTION, STARTING AT 9




- Poster for exam room or lobby
- Diverse representation of 9-12-year-olds
- Simple message – kids understand it!

American Cancer Society Brand Toolkit  
<https://brandtoolkit.cancer.org/BMS/>

# SIMPLIFIED IMMUNIZATION SCHEDULE

## 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.



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### Older children and teens need vaccines too!

2024 Recommended Immunizations for Children 7–18 Years Old

Want to learn more? Scan this QR code to find out which vaccines your child might need. Or visit [www.cdc.gov/vaccines/tool/teen.html](http://www.cdc.gov/vaccines/tool/teen.html)



RECOMMENDED VACCINES	7 YEARS	8 YEARS	9 YEARS	10 YEARS	11 YEARS	12 YEARS	13 YEARS	14 YEARS	15 YEARS	16 YEARS	17 YEARS	18 YEARS
HPV			■		■							
Tdap <sup>1</sup>					■	■						
Meningococcal ACWY					■					■		
Meningococcal B										■	■	■
Influenza/Flu	■	■	■	■	■	■	■	■	■	■	■	■
COVID-19	■	■	■	■	■	■	■	■	■	■	■	■
RSV								■	■	■	■	■
Mpox												■
Dengue												■

<sup>1</sup> One dose of Tdap is recommended during each pregnancy.


**KEY**

- ALL children in age group should get the vaccine
- SOME children in age group should get the vaccine
- ALL children in age group can get the vaccine
- Parents/caregivers should talk to their health care provider to decide if this vaccine is right for their child


**Talk to your child's health care provider for more guidance if:**

1. Your child has any medical condition that puts them at higher risk for infection or is pregnant.
2. Your child is traveling outside the United States.
3. Your child misses any vaccine recommended for their age or for babies and young children.

**FOR MORE INFORMATION**  
Call toll-free: 1-800-CDC-INFO (1-800-232-4636)  
Or visit: [www.cdc.gov/vaccines/parents](http://www.cdc.gov/vaccines/parents)



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention



American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN

These posters feature HPV starting at age 9


## ADOLESCENT IMMUNIZATION SCHEDULE At a Glance

Adolescents (age 9-18) need 4 vaccines to protect against meningococcal disease, some cancers, whooping cough, and other serious diseases, according to national guidelines.


AGE	IMMUNIZATIONS
9-10	<ul style="list-style-type: none"> <li>• HPV dose 1</li> <li>• HPV dose 2 (6-12 months after dose 1)</li> </ul>
11-12	<ul style="list-style-type: none"> <li>• HPV doses 1 and 2 (if not given at ages 9-10)</li> <li>• MenACWY dose 1</li> <li>• Tdap (one dose)</li> </ul>
16	<ul style="list-style-type: none"> <li>• MenACWY dose 2</li> <li>• MenB dose 1</li> <li>• MenB dose 2 (1-2 months or 6 months after dose 1, depending on brand)</li> </ul>
YEARLY	<ul style="list-style-type: none"> <li>• Flu Vaccine (every year, every age, for adolescents)</li> </ul>

Stay up-to-date on **COVID-19 Vaccination**

See full schedule at [cdc.gov/vaccines](http://cdc.gov/vaccines).



More languages and information



Washington State Department of Health  
DOH 348-739 March 2023

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email [civilrights@doh.wa.gov](mailto:civilrights@doh.wa.gov).

# SIMPLIFIED IMMUNIZATION SCHEDULE

Rated "Extremely Useful" by 71% of providers

Conversation starter – low tech visual cue

Indicates vaccines are important and routine

Appreciated by all

- Parents & kids:
  - like knowing what is next
- Staff:
  - promotes standard workflow
  - reduces confusion. . . easier for staff
- Providers:
  - adds authority to strong recommendation

## Interact with the poster

*"this is the schedule that our providers recommend . . . take a photo of it "*  
*"as you can see on the poster, your next shots are . . ."*



Influenza vaccine is recommended annually starting at 6 months

Children and teens should stay up-to-date with COVID-19 vaccine

More info:  
[www.doh.wa.gov/you-and-your-family/immunization](http://www.doh.wa.gov/you-and-your-family/immunization)



<b>Birth</b> HepB *RSV	<b>12 months</b> MMR Varicella HepA PCV	<b>9-10 years</b> HPV (2 doses) between 9-12 years
<b>2 months</b> DTaP-IPV-Hib-HepB PCV Rotavirus (oral)	<b>15 months</b> DTaP Hib	<b>11-12 years</b> Tdap MenACWY
<b>4 months</b> DTaP-IPV-Hib-HepB PCV Rotavirus (oral)	<b>18-24 months</b> HepA	<b>16 years</b> MenACWY
<b>6 months</b> DTaP-IPV-Hib-HepB PCV (Flu and Covid shots start at 6 months)	<b>4 years</b> MMRV DTaP-IPV	<b>16-18 years</b> MenB (2 doses) Discuss with your provider

March 2024

### Vaccine Key:

**DTaP:** Diphtheria, Tetanus, Pertussis (whooping cough)  
**HepA:** Hepatitis A  
**HepB:** Hepatitis B  
**Hib:** Haemophilus influenzae type b  
**HPV:** Human Papillomavirus  
**IPV:** Inactivated Polio Virus  
**MenACWY:** Meningococcal A, C, W, Y (meningitis)  
**MenB:** Meningococcal B (meningitis)  
**MMR:** Measles, Mumps and Rubella  
**PCV:** Pneumococcal (pneumonia)  
**Tdap:** Tetanus, Diphtheria, Pertussis (whooping cough)  
**Varicella:** Chickenpox

### Combination Vaccines:

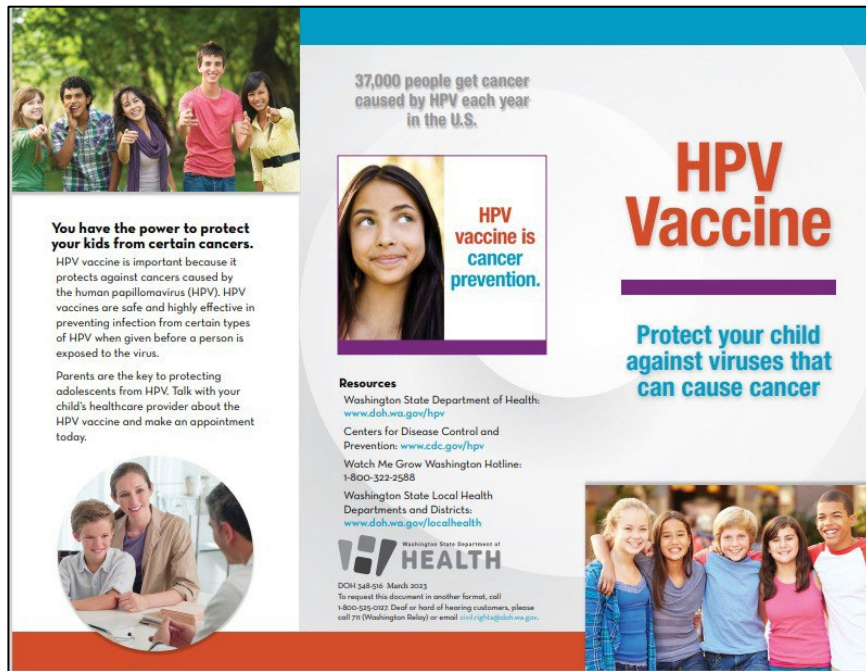
**Vaxelis:** includes DTaP-IPV-Hib-HepB  
**Pediarix:** includes DTaP-HepB-IPV  
**Pentacel:** includes DTaP-IPV/Hib  
**ProQuad MMRV:** includes Measles-Mumps-Rubella-Varicella  
**Quadracel/Kinrix:** includes DTaP-IPV

**\*RSV immunization** (respiratory syncytial virus): 1 dose for infants younger than 8 months during the RSV season, depending on maternal RSV vaccination status

Customizable template, use your logo-  
[www.wcaap.org/resources/vaccines/](http://www.wcaap.org/resources/vaccines/)  
 (ensure compliance with ACIP & AAP guidelines)



# PATIENT EDUCATION FLYERS – IN MULTIPLE LANGUAGES



**37,000 people get cancer caused by HPV each year in the U.S.**

**HPV vaccine is cancer prevention.**

**HPV Vaccine**

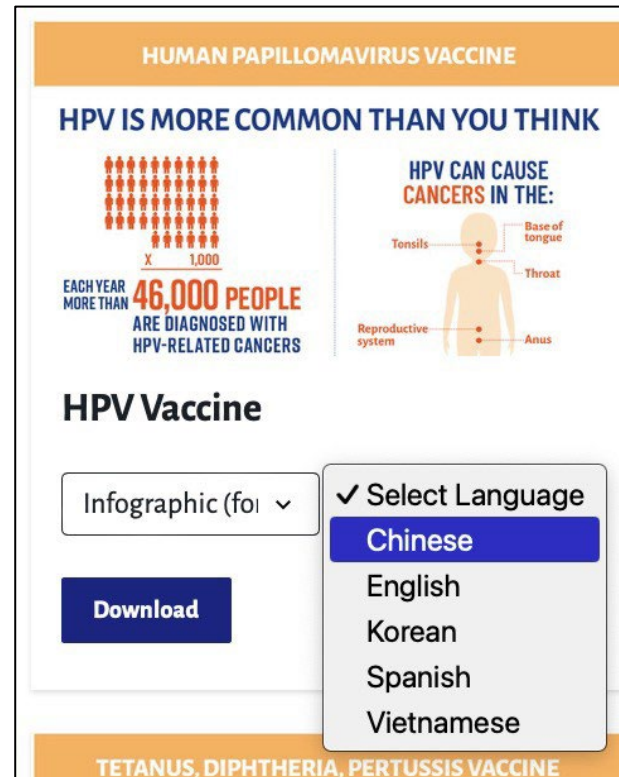
**Protect your child against viruses that can cause cancer**

**You have the power to protect your kids from certain cancers.** HPV vaccine is important because it protects against cancers caused by the human papillomavirus (HPV). HPV vaccines are safe and highly effective in preventing infection from certain types of HPV when given before a person is exposed to the virus.

Parents are the key to protecting adolescents from HPV. Talk with your child's healthcare provider about the HPV vaccine and make an appointment today.

**Resources**  
 Washington State Department of Health: [www.doh.wa.gov/hpv](http://www.doh.wa.gov/hpv)  
 Centers for Disease Control and Prevention: [www.cdc.gov/hpv](http://www.cdc.gov/hpv)  
 Watch Me Grow Washington Hotline: 1-800-322-2588  
 Washington State Local Health Departments and Districts: [www.doh.wa.gov/localhealth](http://www.doh.wa.gov/localhealth)

Washington State Department of Health  
 DOH 348-516 March 2013  
 To request this document in another format, call 1-800-932-0122. Chief or head of hearing customers, please call 715 (Washington State) or email [ondr@hqs.doh.wa.gov](mailto:ondr@hqs.doh.wa.gov).



**HUMAN PAPILLOMAVIRUS VACCINE**

**HPV IS MORE COMMON THAN YOU THINK**

**HPV CAN CAUSE CANCERS IN THE:**

Tonsils, Base of tongue, Throat, Reproductive system, Anus

**EACH YEAR MORE THAN 46,000 PEOPLE ARE DIAGNOSED WITH HPV-RELATED CANCERS**

**HPV Vaccine**

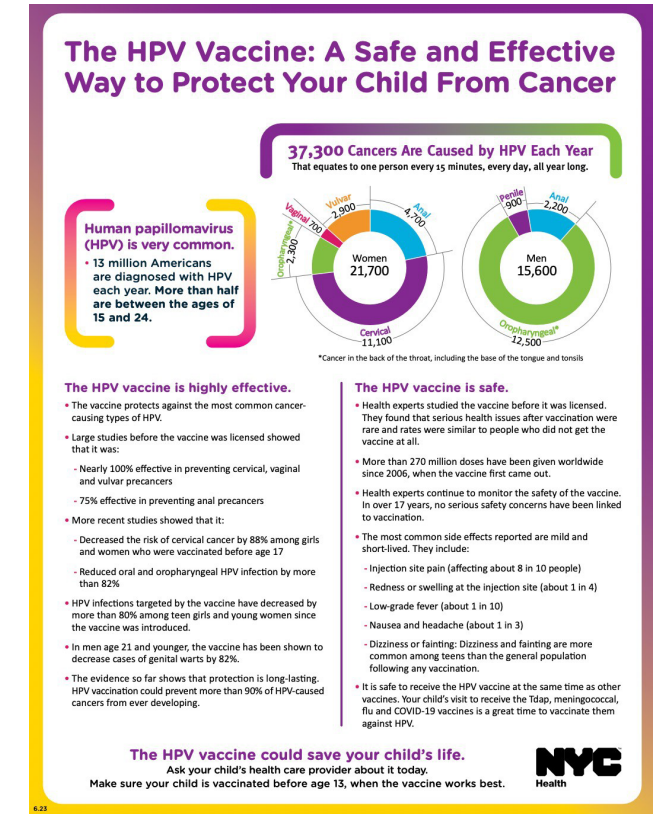
Infographic (for) ▼

Select Language

- Chinese
- English
- Korean
- Spanish
- Vietnamese

**Download**

**TETANUS, DIPHTHERIA, PERTUSSIS VACCINE**



**The HPV Vaccine: A Safe and Effective Way to Protect Your Child From Cancer**

**37,300 Cancers Are Caused by HPV Each Year**  
 That equates to one person every 15 minutes, every day, all year long.

**Human papillomavirus (HPV) is very common.**  
 • 13 million Americans are diagnosed with HPV each year. More than half are between the ages of 15 and 24.

**37,300 Cancers by HPV by Gender:**

Gender	Age Group	Cancers
Women (21,700)	Vulvar	2,000
	Vaginal	300
	Cervical	11,100
Men (15,600)	Oral/Pharyngeal*	12,500
	Anal	2,200
	Penile	900

\*Cancer in the back of the throat, including the base of the tongue and tonsils

**The HPV vaccine is highly effective.**

- The vaccine protects against the most common cancer-causing types of HPV.
- Large studies before the vaccine was licensed showed that it was:
  - Nearly 100% effective in preventing cervical, vaginal and vulvar precancers
  - 75% effective in preventing anal precancers
- More recent studies showed that it:
  - Decreased the risk of cervical cancer by 88% among girls and women who were vaccinated before age 17
  - Reduced oral and oropharyngeal HPV infection by more than 82%
- HPV infections targeted by the vaccine have decreased by more than 80% among teen girls and young women since the vaccine was introduced.
- In men age 21 and younger, the vaccine has been shown to decrease cases of genital warts by 82%.
- The evidence so far shows that protection is long-lasting. HPV vaccination could prevent more than 90% of HPV-caused cancers from ever developing.

**The HPV vaccine is safe.**

- Health experts studied the vaccine before it was licensed. They found that serious health issues after vaccination were rare and rates were similar to people who did not get the vaccine at all.
- More than 270 million doses have been given worldwide since 2006, when the vaccine first came out.
- Health experts continue to monitor the safety of the vaccine. In over 17 years, no serious safety concerns have been linked to vaccination.
- The most common side effects reported are mild and short-lived. They include:
  - Injection site pain (affecting about 8 in 10 people)
  - Redness or swelling at the injection site (about 1 in 4)
  - Low-grade fever (about 1 in 10)
  - Nausea and headache (about 1 in 3)
  - Dizziness or fainting: Dizziness and fainting are more common among teens than the general population following any vaccination.
- It is safe to receive the HPV vaccine at the same time as other vaccines. Your child's visit to receive the Tdap, meningococcal, flu and COVID-19 vaccines is a great time to vaccinate them against HPV.

**The HPV vaccine could save your child's life.**  
 Ask your child's health care provider about it today.  
 Make sure your child is vaccinated before age 13, when the vaccine works best.

**NYC Health**

WA DOH flyers in English, Spanish, Ukrainian, Russian, Marshallese, Vietnamese, Chinese  
[www.doh.wa.gov/hpv-at-nine](http://www.doh.wa.gov/hpv-at-nine)

HPV infographics and discussion guides in Chinese, English, Korean, Spanish, Vietnamese  
[www.aap.org/](http://www.aap.org/)

NYC HPV flyer in 12 languages  
[www.nyc.gov/site/doh/provider-s/resources/public-health-action-kits-hpv.page](http://www.nyc.gov/site/doh/provider-s/resources/public-health-action-kits-hpv.page)

# STANDING ORDERS: USE EVERY OPPORTUNITY TO VACCINATE

- **Get leadership approval**—medical director or lead physician signs the standing order
- **Empower your team**—nursing and medical assistant staff can vaccinate without an additional order from a provider
- **Avoid missed opportunities**
- **Vaccinate before the provider visit**
- **Use every opportunity to vaccinate**—or at least to make a strong recommendation
- **Templates available at Immunize.org**

Standing orders for other vaccines are available at [www.immunize.org/standing-orders](http://www.immunize.org/standing-orders).  
NOTE: This standing orders template may be adapted per a practice's discretion without obtaining permission from Immunize.org. As a courtesy, please acknowledge Immunize.org as its source.

## STANDING ORDERS FOR Administering Human Papillomavirus Vaccine to Children and Teens

**Purpose**  
To reduce morbidity and mortality from human papillomavirus (HPV) infection by vaccinating all children and teens who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP).

**Policy**  
Where allowed by state law, standing orders enable eligible nurses, pharmacists, and other healthcare professionals to assess the need for and vaccinate children and teens who meet any of the criteria below.

**Procedure**

- 1 Assess children and teens for need of vaccination against human papillomavirus infection based on the following criteria:**
  - Age 11 or 12 years (may start at age 9 or 10, if preferred)
  - Age 13 through 26 years who have not completed an HPV vaccination series
  - Age 9 years and older with any history of sexual abuse or assault
- 2 Screen for contraindications and precautions**

*Contraindication*  
Do not give HPV vaccine to a child or teen who has experienced a serious systemic or anaphylactic reaction to a prior dose of HPV vaccine or to any of its components (e.g., yeast). For information on vaccine components, refer to the manufacturers' package insert ([www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states](http://www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states)) or go to [www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf](http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf).


*Precaution*  
Moderate or severe acute illness with or without fever

*Pregnancy*  
Delay vaccination until after completion of the pregnancy.
- 3 Provide Vaccine Information Statements**  
Provide all patients (or, in the case of minors, their parent, or legal representative) with a copy of the most current federal Vaccine Information Statement (VIS). Provide non-English speaking patients with a copy of the VIS in their native language, if one is available and desired; these can be found at [www.immunize.org/vis](http://www.immunize.org/vis). (For information about how to document that the VIS was given, see section 6 titled "Document Vaccination.")
- 4 Prepare to Administer Vaccine**  
Choose the needle gauge, needle length, and injection site according to the following chart:

AGE OF INFANT/CHILD	NEEDLE GAUGE	NEEDLE LENGTH	INJECTION SITE
9 through 10 years	22–25	5/8"–1"	Deltoid muscle of arm**
		1–1¼"	Anterolateral thigh muscle
11 through 18 years	22–25	5/8"–1"	Deltoid muscle of arm**
		1–1½"	Anterolateral thigh muscle

\* A 5/8" needle may be used for children for IM injection in the deltoid muscle only if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle.  
\*\* Preferred site.

CONTINUED ON THE NEXT PAGE ►


FOR PROFESSIONALS [www.immunize.org](http://www.immunize.org) / FOR THE PUBLIC [www.vaccineinformation.org](http://www.vaccineinformation.org)  
[www.immunize.org/catg.d/p3090.pdf](http://www.immunize.org/catg.d/p3090.pdf) • Item #P3090 (7/22)

# INCREASE THE OPPORTUNITIES TO VACCINATE

## Outreach/Reminder Recall – Be Strategic

- Remind 9-12 year olds to schedule annual well child visit (and HPV vaccine)
  - This may be easier than trying to bring in older teens!
- Remind 12-13 year olds who are due/overdue for HPV vaccine
- Plan outreach methods to be sustainable and recurring – consider batches
  - Methods: mail, phone, text, EMR portal message
  - Consider: staffing, cost, patient preference
  - Data source: EMR-based, IIS registry-based (Immunization Information System)



**TIP:** Make sure you don't run out of HPV vaccine – watch your stock closely!  
If you expand to 9-10, you may need to double your HPV vaccine order

# EMR CAN HELP IN SEVERAL WAYS: → OFTEN REQUIRES LEADERSHIP AND IT SUPPORT



- Several large organizations have successfully used EMR prompts to promote HPV vaccination at age 9-10
- May improve durability of practice change – “hardwire”
- Ideas to optimize EMR:
  - Change EMR HPV prompt to at age 9
    - Health Maintenance or Care Gap Alert, Best Practice Advisory
  - Care Gap Order Sets
  - Well-Child Order Sets with HPV preselected at age 9-10
  - Automated Reminder/Recall with personalized messages
  - Standing Order Sets—for MAs to order HPV accurately and easily with just a few clicks and avoid missed opportunities

## Common barriers (not unsurmountable):

Requires custom build

Waiting for ACIP to change the recommendation to emphasize age 9

Difficult for multi-state organizations or those with shared EMRs

Goleman, *Acad Pediatrics* (2018)  
Smajlovic, *J Adolesc Health* (2023)  
O’Leary Sonja, *HVI* (2023)  
Zorn, *HVI* (2023)



# STORIES FROM WASHINGTON

USING MULTI-LEVEL  
STRATEGIES TO  
INCREASE HPV  
VACCINATION

# “HPV VAX AT 9” MULTI-LEVEL QUALITY IMPROVEMENT: SUCCESS STORIES FROM 2 PRIVATE PEDIATRIC CLINICS IN WASHINGTON

HPV vaccine at 9 & 10 year well child visit

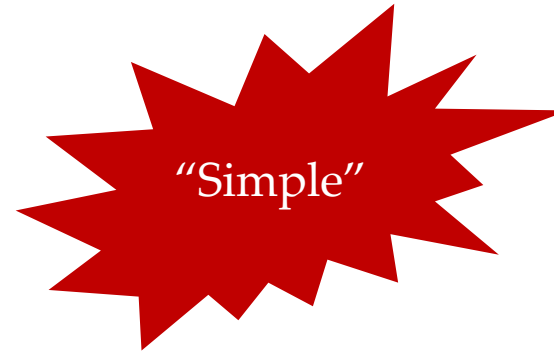
12-month dosing interval

Strong Provider Recommendation

Cancer Prevention Messaging

Immunization Schedule Poster

Streamlined workflows: EMR supports



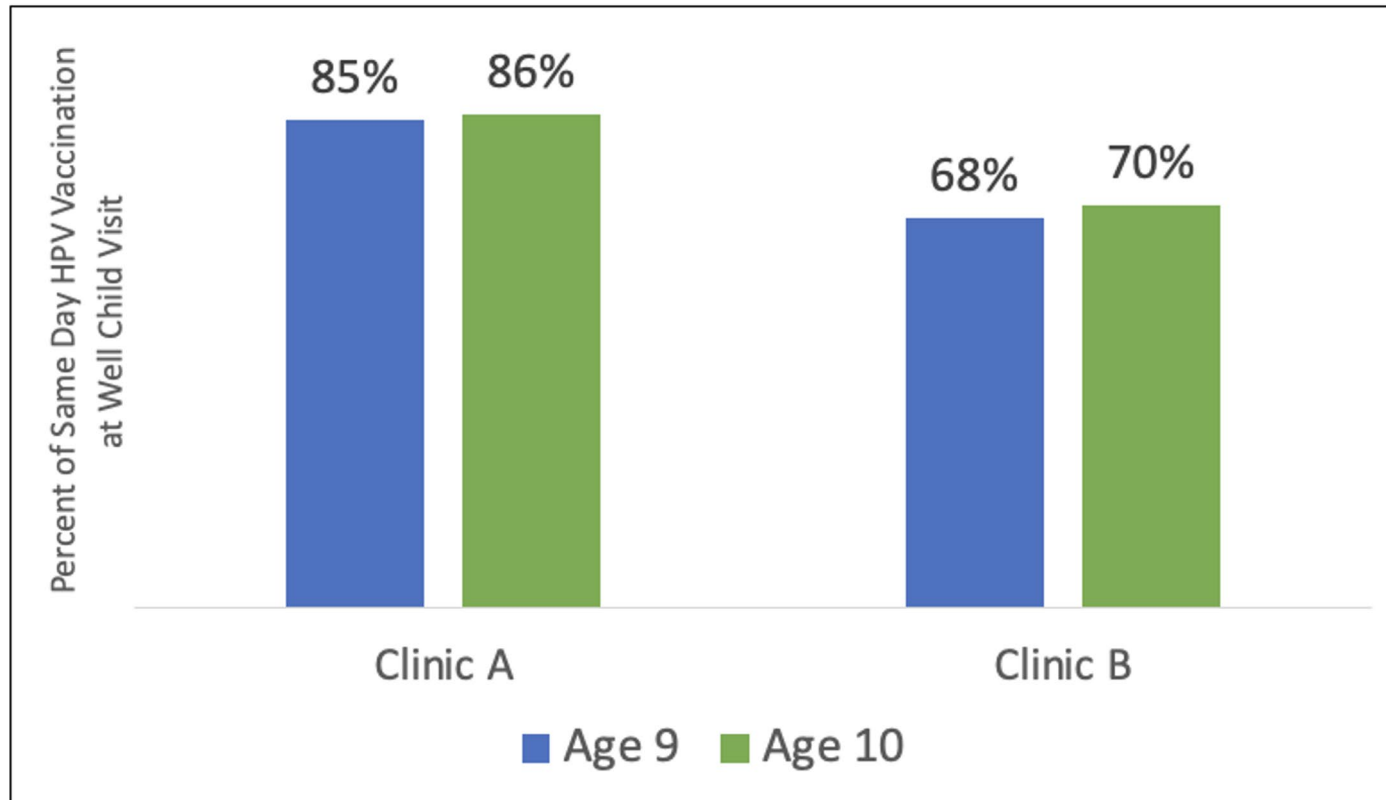
**“I wish we had started vaccinating at age nine sooner. It is so important, and it’s made it so simple”**

**“Ask any of our providers, we’d never go back to 11”**

Clinic A:	Clinic B:
Started 2018	Started 2021 (during pandemic)
Urban	Urban/Suburban
10 pediatricians (MD)	85 pediatric providers (MD, DO, ARNP)
1,128 (ages 9-10)	11,436 (ages 9-10)
1,128 (ages 11-12)	11,155 (ages 11-12)
EMR: Well Child Order Sets	EMR: Prompt at age 9

Zorn, Darville-Sanders, Vu, Carter, Treend,  
Raunio, Vasavada,  
*Human Vaccines and Immunotherapeutics* (2023)

# ACCEPTABLE TO PROVIDERS AND PARENTS!



Majority of patients received the HPV vaccine on the same day as the 9-year and 10-year well child visits

“Giving a simple strong recommendation focused on cancer prevention is easier and more effective than getting into an awkward discussion about sex”

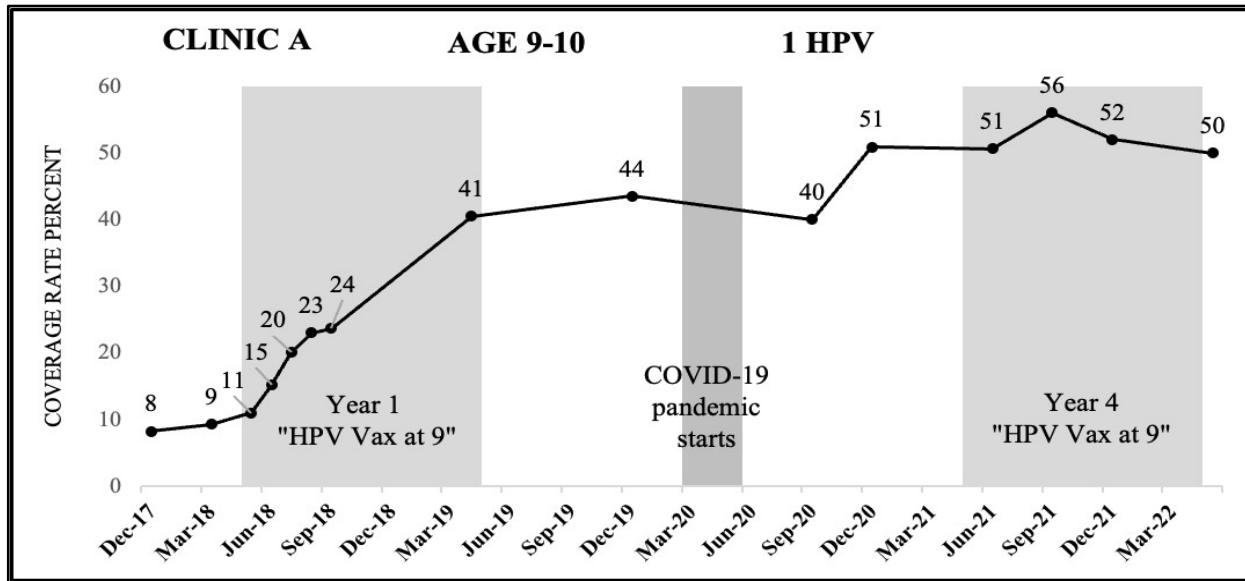
# 9-10 HPV INITIATION COVERAGE RATE TRENDS (WAIS)\*

Coverage rates for first dose HPV increased quickly!



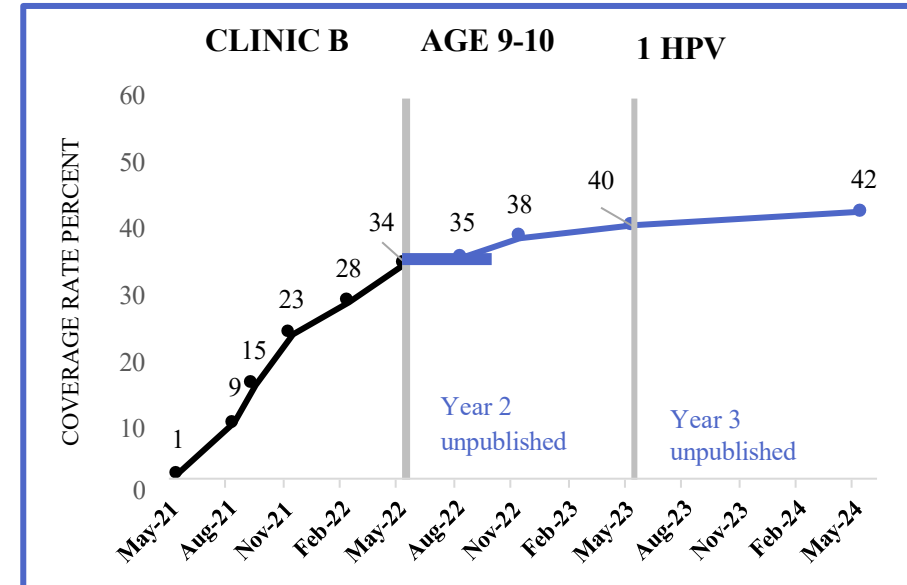
## Clinic A:

Year 1: ↑ 30 percentage points  
Reached maximum of 56% in 3.5 years



## Clinic B:

Year 1: ↑ 33 percentage points  
Reached 42% in 3 years

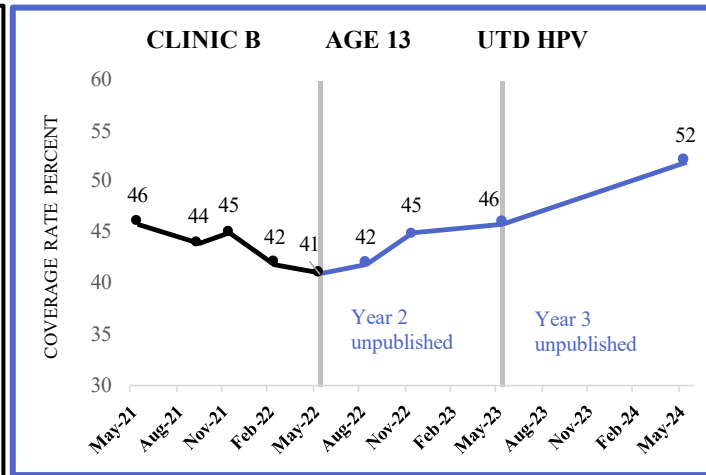
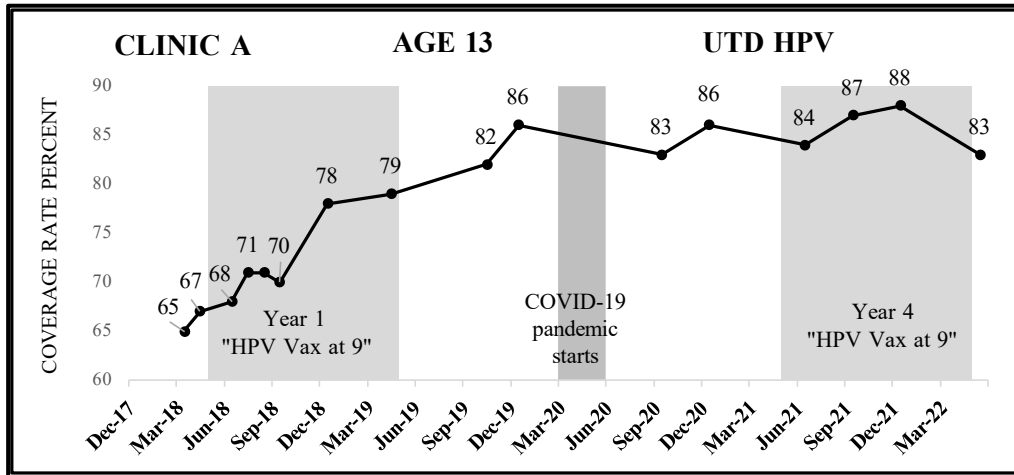
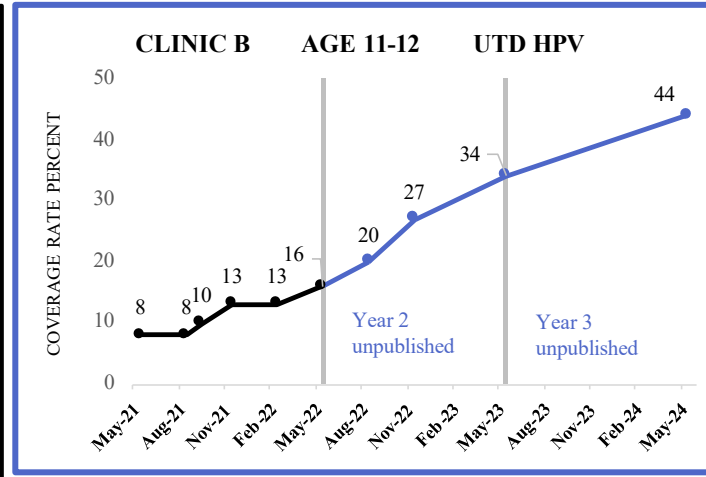
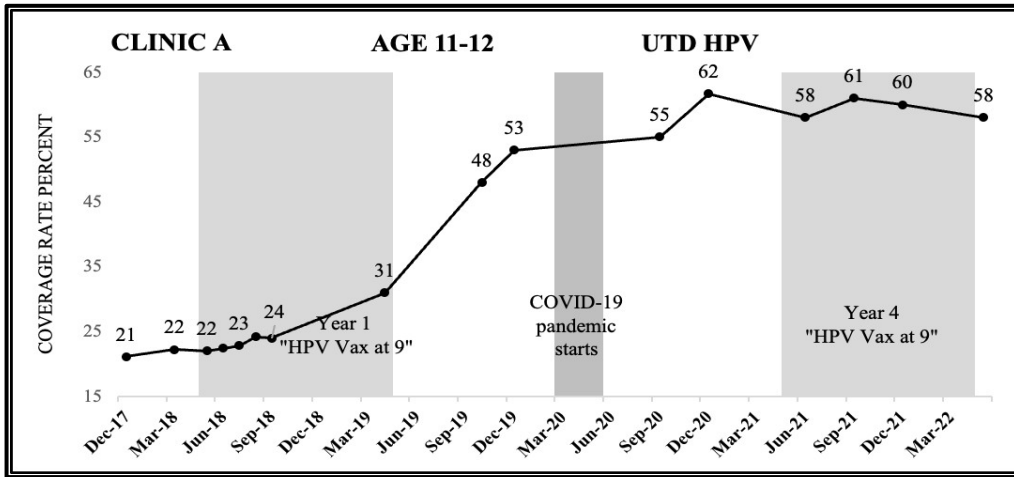


\*Note: Coverage rates in IIS likely underestimate true rates

Clinic B graph updated with unpublished NEW data for years 2 & 3

# HPV UTD COMPLETION RATE TRENDS AT AGE 11-12 AND AGE 13\* (WAIS)

HPV UTD = 2 or more valid doses



Coverage Rates	Clinic A	Clinic B
Max increase	2018-2022 4 years	2021-2024 3 years
11-12 HPV UTD	↑ 40 % pts 22% → 62%	↑ 36 % pts 8% → 44%
13 HPV UTD**	↑ 21 % pts 67% → 88%	↑ 6 % pts 46% → 52%

\*age 13 coverage rates include vaccination through age 13, up until the 14<sup>th</sup> birthday (not by the 13<sup>th</sup> birthday)

\*\*COVID-19 pandemic and Tdap school entry requirement change from 6<sup>th</sup> to 7<sup>th</sup> grade in August 2020 likely contributed to dip in age 13 rates in 2021-2022 at both clinics

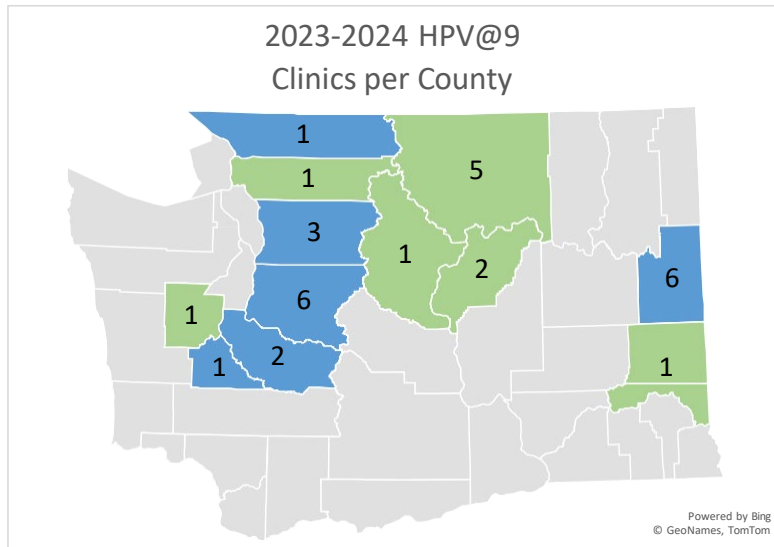
WCAAP  
HPV@9 QI

2023-2024

# 31 Pediatric & Family Medicine Clinics Impact to 7% of Washington's youth

## Multi-level QI:

- Focus on age 9-12, use 12-month dosing schedule
- Training Webinars: HPV education, Announcement Approach (AA)
- Immunization Schedule Poster
- Printed Materials: Cue Card, AA tool, HPV posters
- Coaching
- Outreach if possible
- EMR supports if possible



“Wow, I didn’t think it would be this easy”  
→ referring to implementing HPV@9

“I feel like a million times more confident  
recommending it [HPV] to my vaccine  
hesitators after doing this course ”



# RECOMMENDING HPV AT 9-10 IS OFTEN *EASIER*

Survey of 58 providers  
in 13 clinics serving  
8 Washington state counties  
(urban and rural)



## Recommending HPV at 9-10 compared to 11-12

- 50% somewhat or much easier
- 41% same
- 8% somewhat or much harder

“This has been an eye-opening experience and a big surprise that parents are welcoming of HPV at age 9-10”  
– rural pediatrician

WCAAP “HPV@9” QI Project  
Cohort 1&2 (unpublished)

# ACTION: START TODAY!

Strong Recommendation:  
Announcement Approach



Cancer Prevention Message



Start at 9-10



Bundle at 11-12



# ACTION: CLINIC/ORGANIZATIONAL LEVEL

## Low Tech:

Train the whole team

- HPV Cue Card
- Announcement Approach Tool

Posters

- Simplified immunization Schedule
- HPV Poster

## High Tech (if possible):

EMR Prompts  
Care Gap Order Sets  
Standing Orders

Outreach

- Annual Well Child Visits
- Due/Overdue HPV

# ACKNOWLEDGEMENTS – THANK YOU!

More than 50 pediatric and primary care clinics in Washington informed this “HPV@9” work

## Collaboration:

- WA HPV Free Task Force
- Washington Chapter of the American Academy of Pediatrics
- WA Department of Health
- National HPV Vaccination Roundtable
- American Cancer Society
- University of Washington Health Promotion Research Center



A decorative graphic in the top right corner featuring the text "START AT AGE" in a stylized, bold font. Below the text is a large, white number "9" with a blue outline. The background of the graphic is light blue with white and blue curved lines.

# HPV VACCINATIONS: 9 BENEFITS OF STARTING AT AGE 9

<https://www.youtube.com/watch?v=hCpNJ1Rv9YQ>

2-minute video

START  
AT AGE

9



## HPV Vaccine Toolkits

- AAP: [www.aap.org/en/news-room/campaigns-and-toolkits/human-papillomavirus-hpv/](http://www.aap.org/en/news-room/campaigns-and-toolkits/human-papillomavirus-hpv/)
- National HPV Vaccination Roundtable: <https://hpvroundtable.org/start-hpv-vaccination-at-age-9/>
- CDC: [www.cdc.gov/hpv/index.html](http://www.cdc.gov/hpv/index.html)
- WA DOH:
  - <https://doh.wa.gov/hpv-at-nine>
- HPV IQ: [www.hpviq.org](http://www.hpviq.org)
- ACS: [www.cancer.org/HPV](http://www.cancer.org/HPV)
- NYC: [www.nyc.gov/site/doh/providers/resources/public-health-action-kits-hpv.page](http://www.nyc.gov/site/doh/providers/resources/public-health-action-kits-hpv.page)

## Featured Materials

- Announcement Approach: [www.hpviq.org/wp-content/uploads/2021/01/AAT-flyer.pdf](http://www.hpviq.org/wp-content/uploads/2021/01/AAT-flyer.pdf)
- HPV Cue Card:
  - [http://hpvroundtable.org/wp-content/uploads/2023/08/HPV-Cue-Card\\_Single\\_Printing\\_English.pdf](http://hpvroundtable.org/wp-content/uploads/2023/08/HPV-Cue-Card_Single_Printing_English.pdf)
- HPV Poster: <https://brandtoolkit.cancer.org/BMS/>
- Immunization Schedule Posters:
  - [http://hpvroundtable.org/wp-content/uploads/2023/05/Co-brand\\_HP\\_V\\_Roundtable\\_2022\\_Flier\\_8-5x11\\_PRINT-v1.pdf](http://hpvroundtable.org/wp-content/uploads/2023/05/Co-brand_HP_V_Roundtable_2022_Flier_8-5x11_PRINT-v1.pdf)
  - <https://downloads.aap.org/HC/EN/adolescentvaccineschedule.pdf>
  - <https://doh.wa.gov/hpv-at-nine>
  - <https://wcaap.org/resources/vaccines/#editable-immunization-schedule-template>
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