

You Are the Key to HPV Cancer Prevention: Using Motivational Interviewing (MI) to improve vaccine uptake

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Disclosures

- CDC, our planners, our content experts, and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias.
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- CDC did not accept commercial support for this continuing education activity.
- Dr. Emily Messerli has no disclosures
- https://www2.cdc.gov/vaccines/ed/hpv_key/downloads/YouAreTheKey_22.pdf

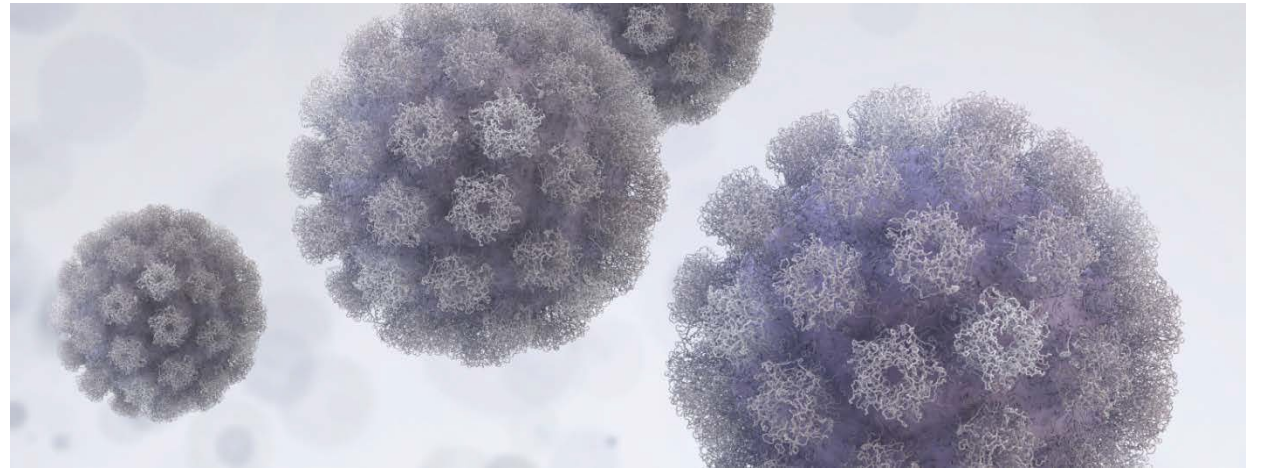
Objectives

1. Describe the burden of HPV infection and disease in the United States.
2. Define the importance of HPV vaccination in cancer prevention.
3. Describe recommendations for HPV vaccination for adolescents and adults.
4. Describe the rationale for the routine HPV vaccination at age 11 or 12 years.
5. List two components of an effective HPV vaccine recommendation.
6. Identify relevant and compelling information to share with parents about HPV vaccine to help inform their decision to vaccinate their child.
7. Locate current immunization resources to increase knowledge of the team's role in program implementation for improved team performance.

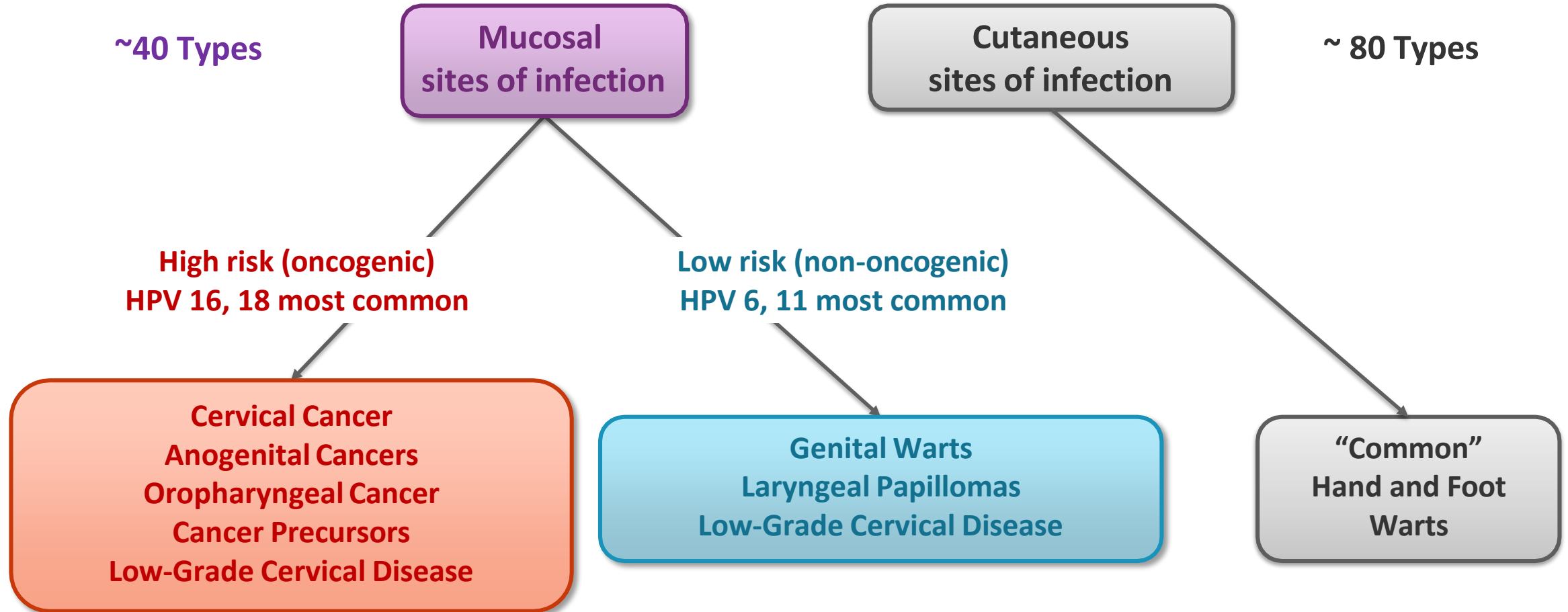
Objectives continued

- Understand the basics of MI and practice these principles
- Strengthen your ability to elicit change talk and commitment language
- Learn communication techniques that encourage HPV vaccine acceptance

HPV INFECTION & DISEASE: UNDERSTANDING THE BURDEN



HPV Types Differ in Their Disease Associations



HPV Infection

- **Most females and males will be infected with at least one type of mucosal HPV at some point in their lives**
 - Estimated 42 million Americans currently infected
 - 13 million persons with a new infection/year in the US
 - HPV infection is most common in people in their teens and early 20s
- **Most people will never know that they have been infected**

Number of HPV-Associated and HPV-Attributable Cancer Cases Per Year, U.S., 2014–2018

Cancer site	Number of HPV-associated cancers	Percentage probably caused by any HPV type	Estimated number probably caused by any HPV type*		
			Female	Male	Both sexes
Cervix	12,200	91%	11,100	0	11,100
Vagina	863	75%	600	0	600
Vulva	4,191	69%	2,900	0	2,900
Penis	1,365	63%	0	900	900
Anus**	7,288	91%	4,500	2,100	6,600
Oropharynx	20,236	70%	2,300	12,100	14,400
TOTAL	46,143	79%	21,400	15,100	36,500

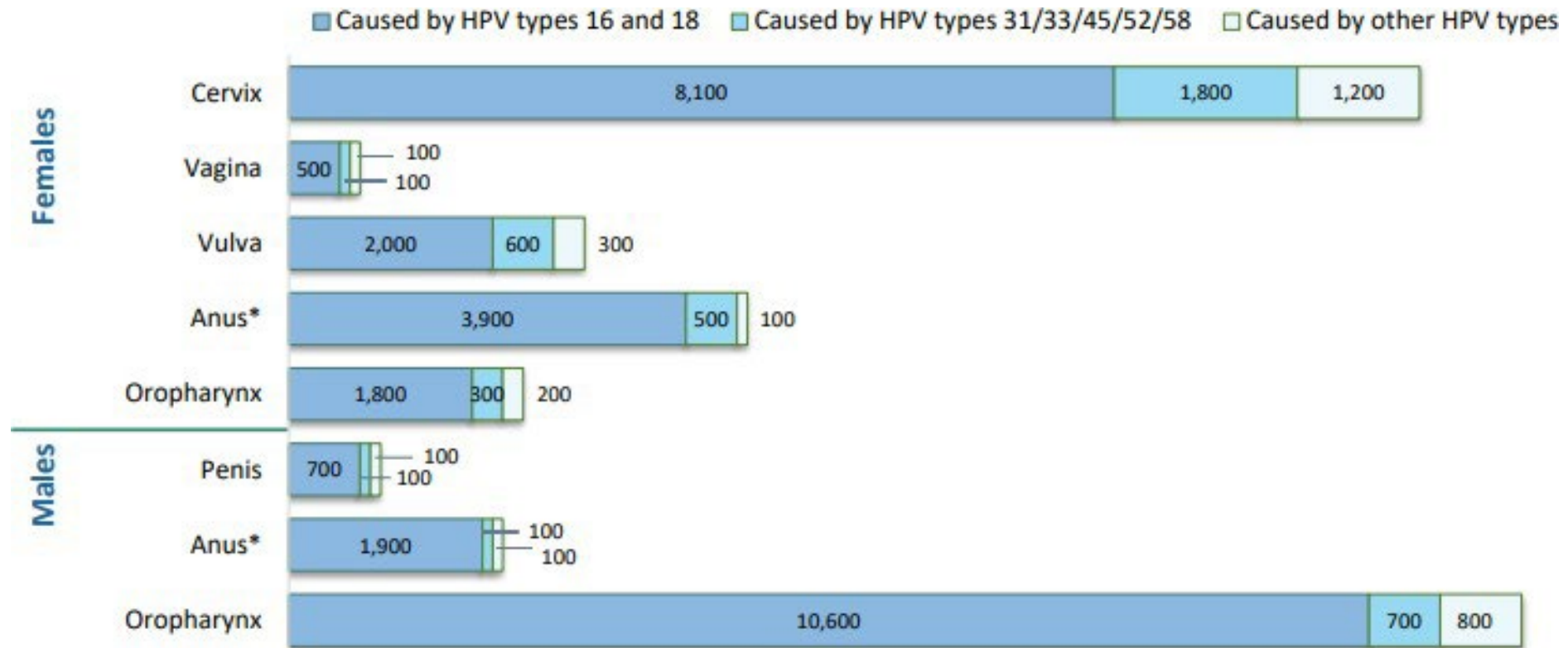
*Estimates were rounded to the nearest 100. Estimated counts might not sum to total because of rounding.

**Includes anal and rectal squamous cell carcinomas

Sources: <https://www.cdc.gov/cancer/hpv/statistics> and <http://www.cdc.gov/cancer/dataviz>



Number of HPV-Associated and HPV-Attributable Cancer Cases Per Year, U.S., 2014–2018



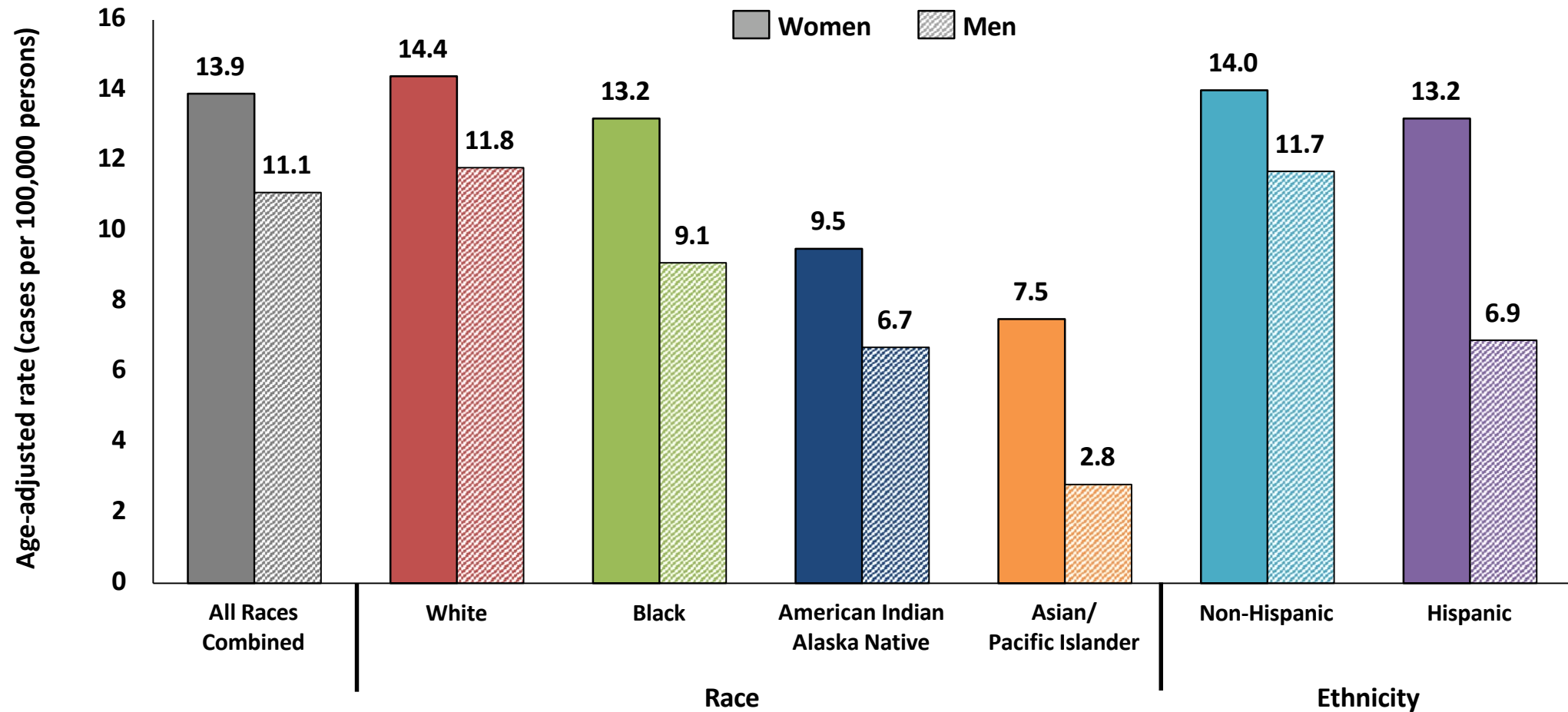
*Includes anal and rectal squamous cell carcinomas

For each cancer type, we estimated HPV-attributable cancers by multiplying the number of cancer cases by the percentage attributable to HPV based on a genotyping study. We estimated that 36,500 cancers (79%) were attributable to HPV each year during 2014–2018. Of these, we estimated that 33,700 cancers could have been prevented by the 9-valent HPV vaccine, including 29,500 caused by HPV types 16 and 18 and 4,200 caused by HPV types 31/33/45/52/58. HPV-negative cancers are not shown in the graph; it is estimated that about 10% of cervical and anal cancers, 30% of oropharyngeal, vaginal, and vulva cancers and 40% of penile cancers are HPV-negative.

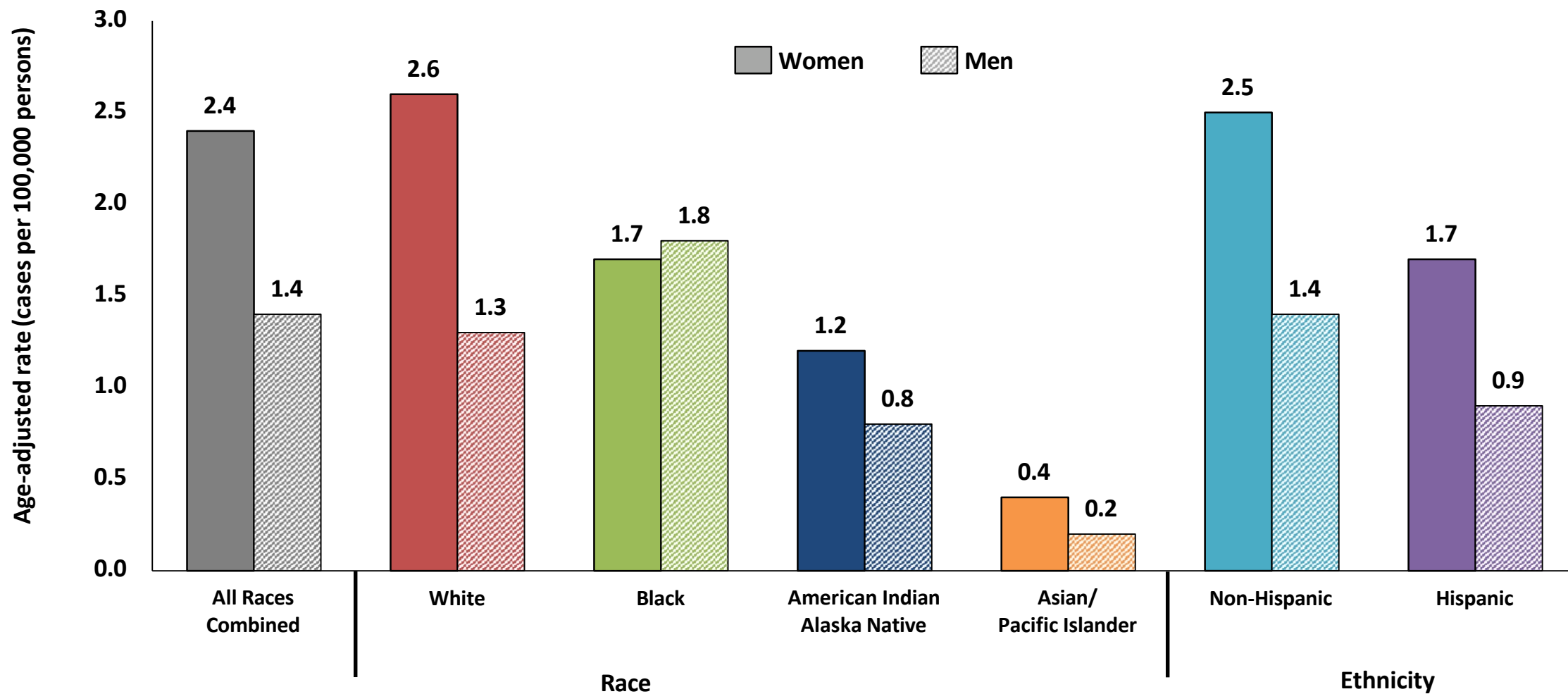
Sources: Data are from cancer registries participating in CDC's National Program of Cancer Registries and/or NCI's Surveillance, Epidemiology, and End Results program that met data quality criteria for 2011–2015, covering 100% of the U.S. population. The analysis and methods were based on: Viens, et al. *MMWR Morb Mortal Wkly Rep.* 2016
<https://www.cdc.gov/cancer/uscs/pdf/USCS-DataBrief-No26-December2021-h.pdf>



HPV-Associated Cancer Rates by Sex, Race, and Ethnicity, United States, 2014–2018



HPV-Associated Anal* Cancer Rates by Sex, Race, and Ethnicity, United States, 2014–2018

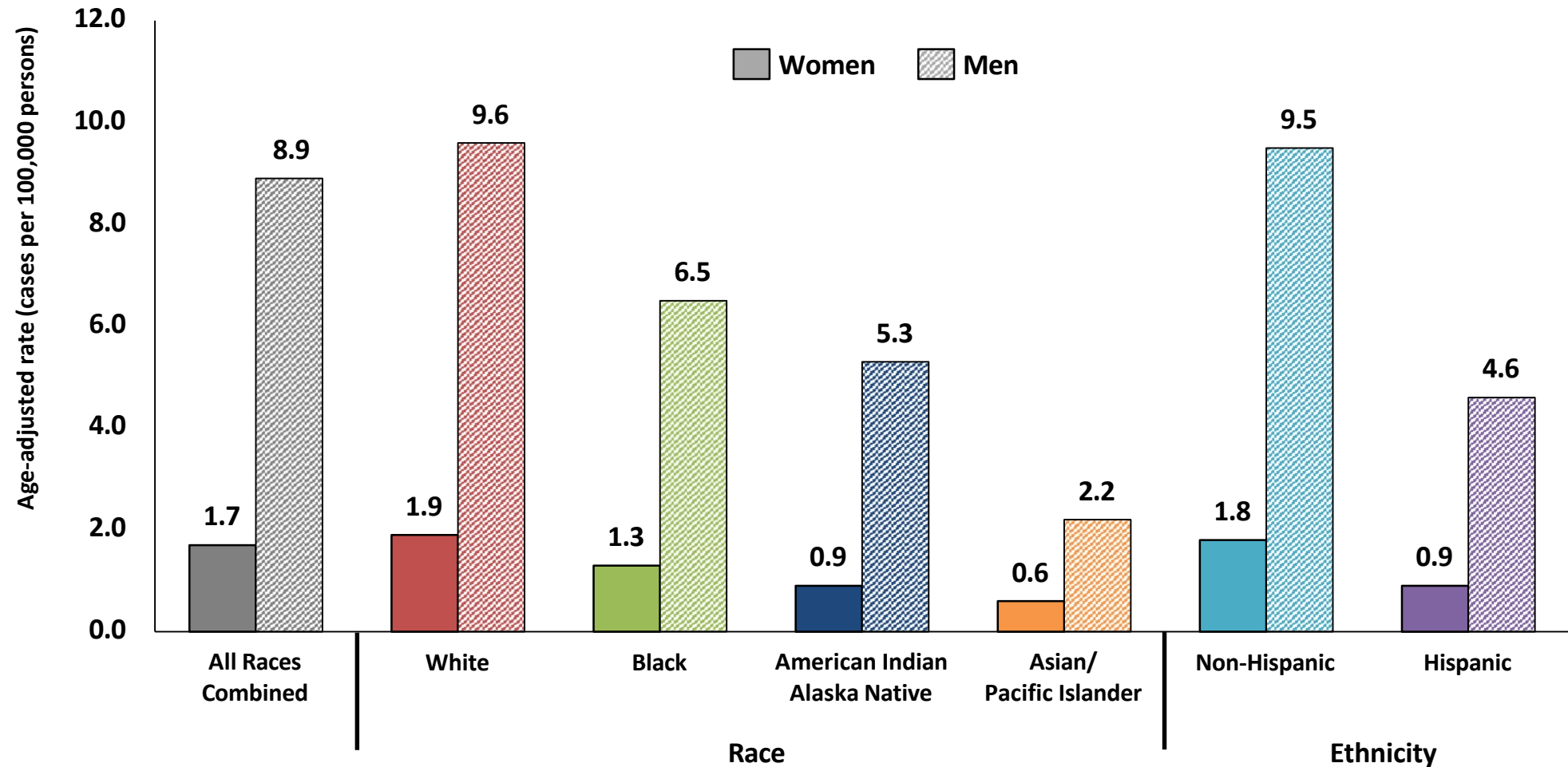


*Includes anal and rectal squamous cell carcinomas.

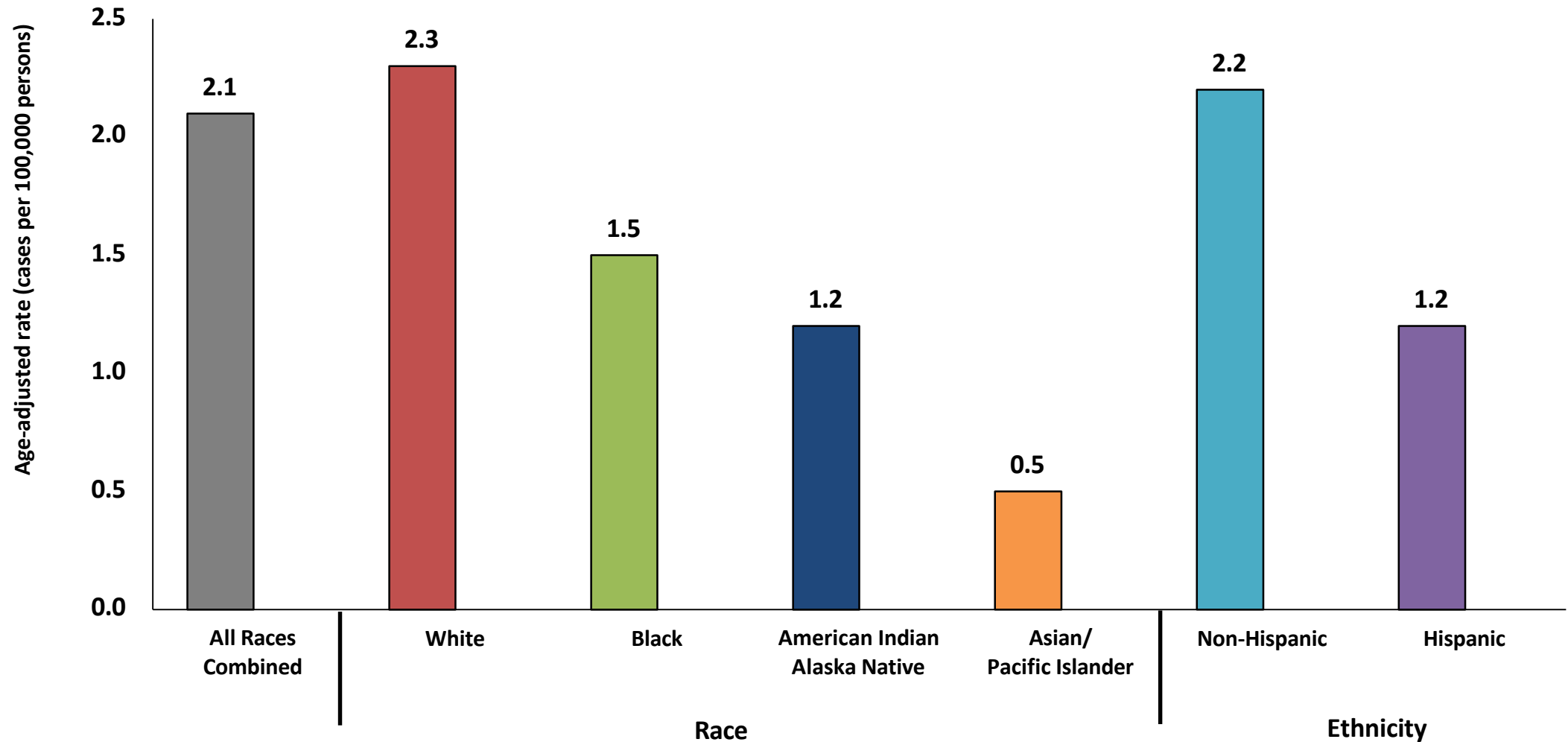
<https://www.cdc.gov/cancer/hpv/statistics>

<https://gis.cdc.gov/Cancer/USCS/#/RiskFactors/>

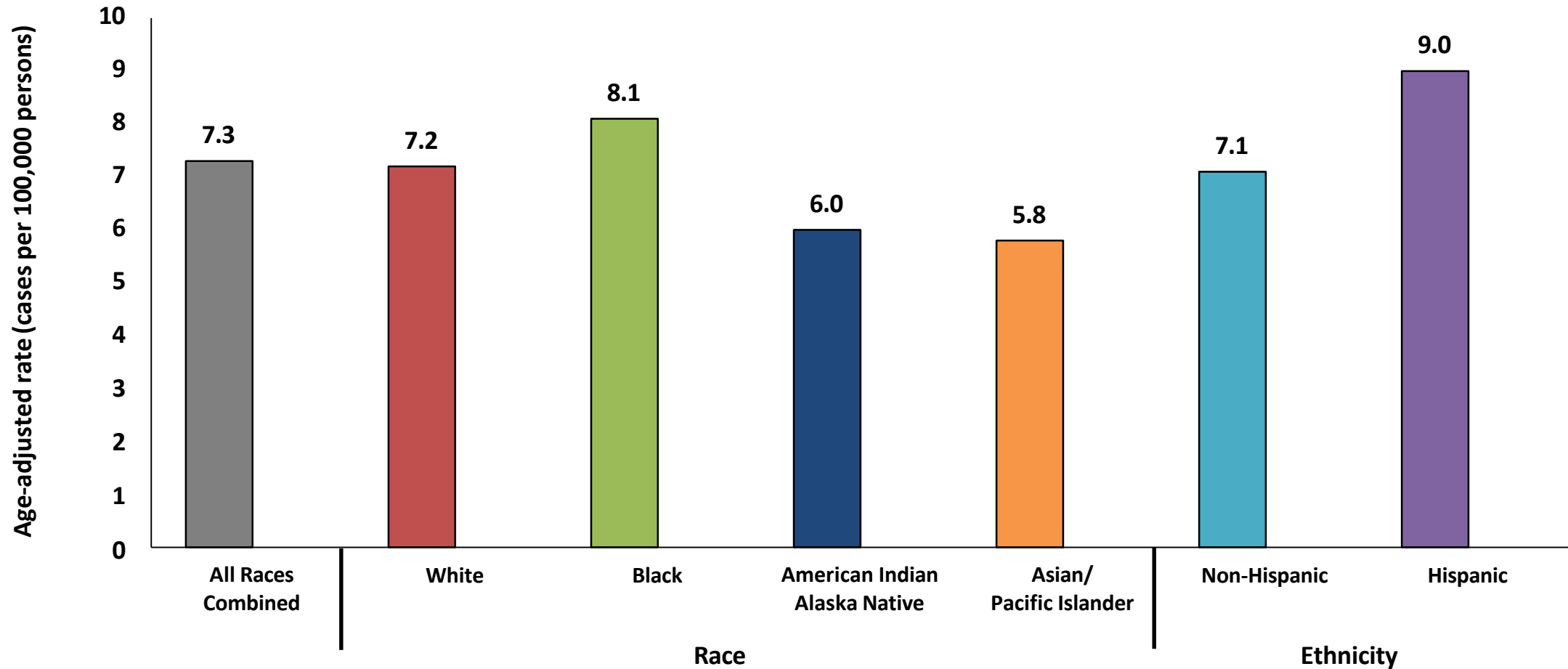
HPV-Associated Oropharyngeal Cancer Rates by Sex, Race, and Ethnicity, United States, 2014–2018



HPV-Associated Vulvar Cancer Rates by Race, and Ethnicity, United States, 2014–2018

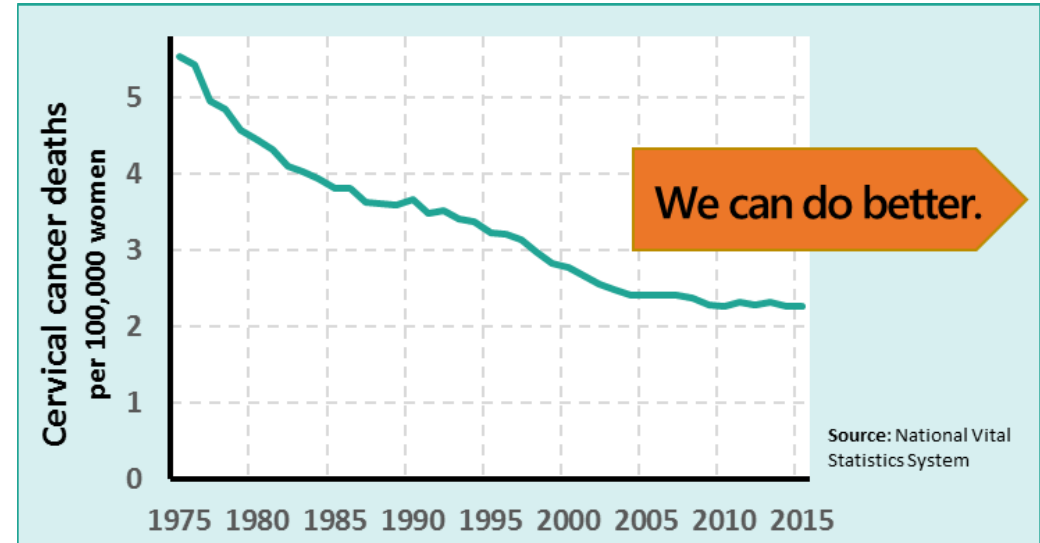


HPV-Associated Cervical Cancer Rates by Race, and Ethnicity, United States, 2014–2018



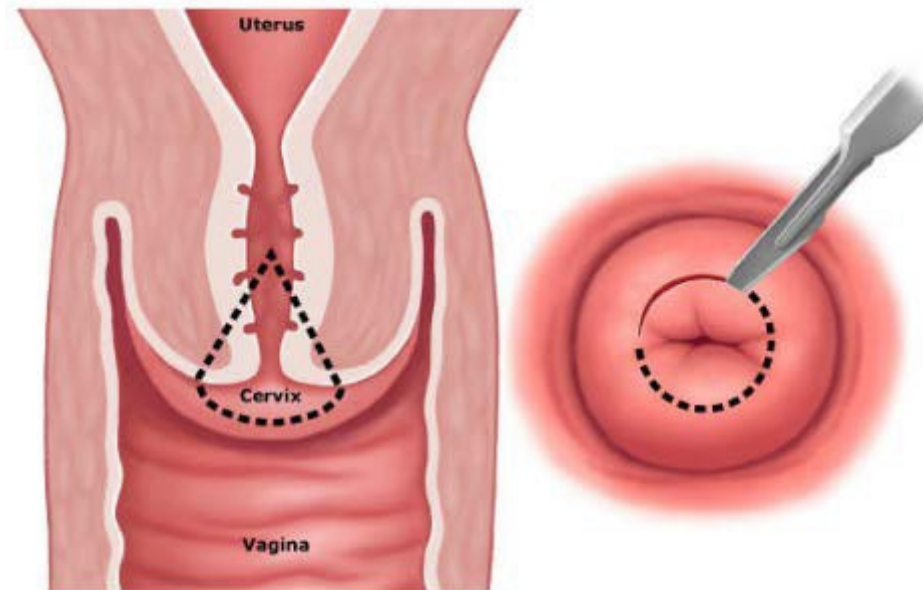
Cervical Cancer

- **Cervical cancer is the most common HPV-associated cancer among women**
 - Estimated 569,847 new cases and 311,365 deaths worldwide in 2018
 - Each year approx. 12,000 new cases and 4,000 deaths in the U.S.
- **Half of cervical cancers occur in women <50 years**
 - A quarter of cervical cancers occur in women 25-39 years



Cervical Precancer in the United States

- ~196,000 high grade cervical lesions every year

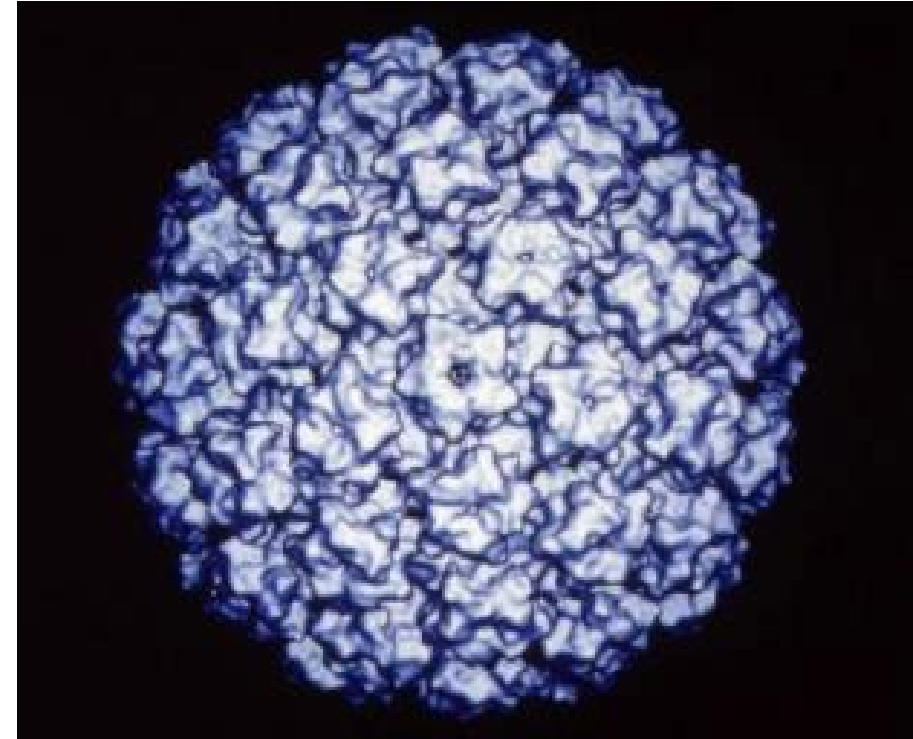


HPV VACCINES AND VACCINE RECOMMENDATIONS



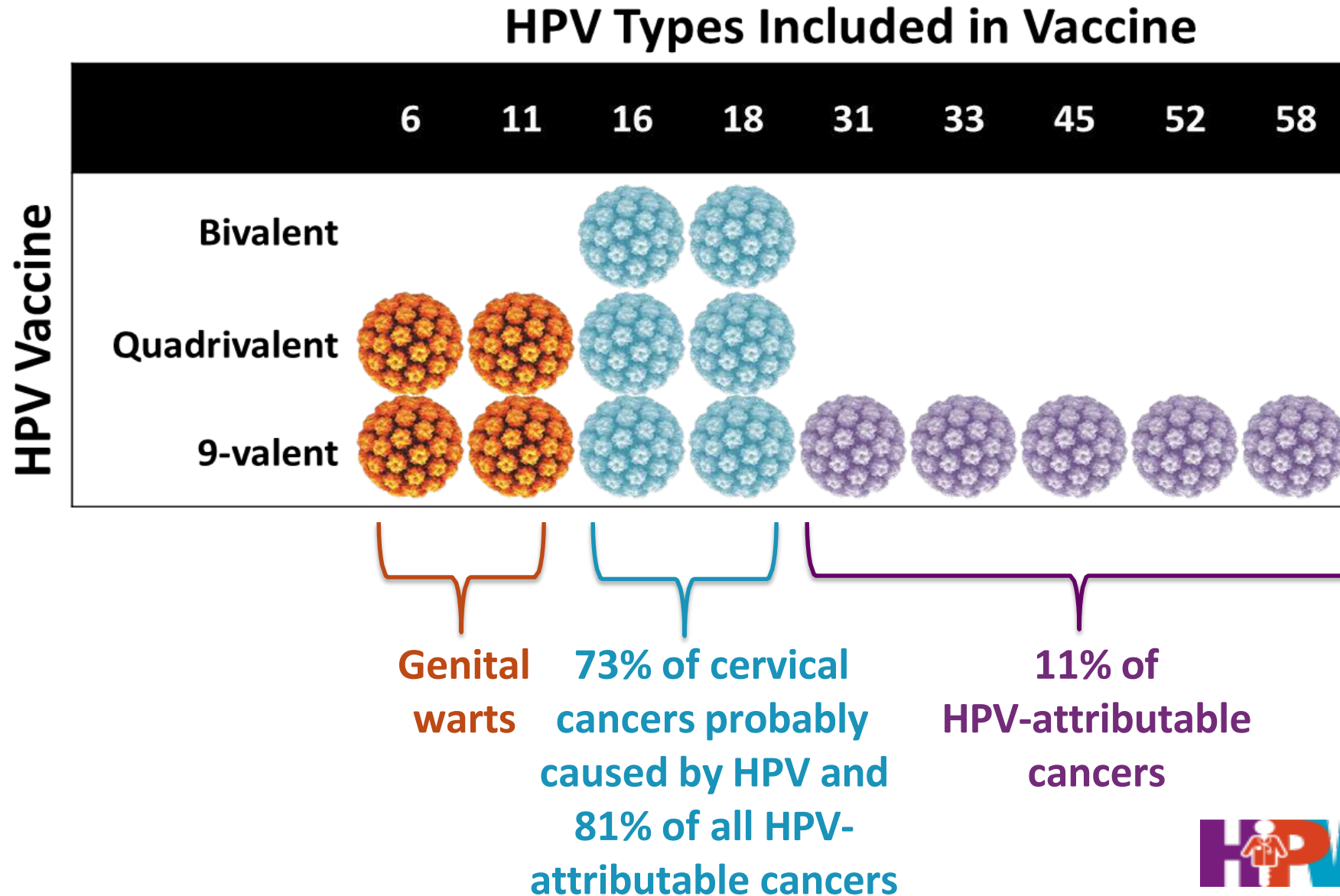
HPV Vaccines

- Recombinant L1 capsid proteins that form “virus-like” particles (VLP)
- Non-infectious and non-oncogenic
- Produce higher levels of neutralizing antibody than natural infection



HPV Virus-Like Particle

HPV Vaccine Comparison



HPV Vaccine Recommendations

**CDC recommends routine vaccination
at age 11 or 12 years to prevent HPV cancers**

- The vaccination series can be started at age 9 years.
- Two doses of the vaccine are recommended if the series is started before the 15th birthday.
- The second dose of the vaccine should be administered 6 to 12 months after the first dose.

HPV Vaccine Recommendations: Catch-Up/Late

- **Vaccination for everyone through age 26 years if not previously adequately vaccinated.**
- **Vaccination is not recommended for everyone older than 26 years.**
 - However, some adults ages 27 through 45 years may decide to get the HPV vaccine based on discussion with their clinician, if they were not adequately vaccinated when they were younger.
 - HPV vaccination of people in this age range provides less benefit, as more have already been exposed to HPV.

HPV Vaccine Dosing Schedule, United States

Population	Number of vaccine doses	Interval between doses
Persons initiating vaccination at 9 through 14 years, except persons with immunocompromising conditions	2	0, 6–12 months*
Persons initiating vaccination at 15 through 26 years and persons with immunocompromising conditions initiating vaccination at 9 through 26 years	3	0, 1–2, 6 months ⁺

* In a 2-dose schedule of HPV vaccine, the minimum interval between first and second doses is 5 months.

⁺ In a 3-dose schedule of HPV vaccine, the minimum intervals are 4 weeks between the first and second doses, 12 weeks between the second and third doses, and 5 months between the first and third doses

- **Persons are considered adequately vaccinated if they completed a recommended schedule with 9vHPV, 4vHPV, or 2vHPV vaccine.**

HPV Vaccine Administration

- **Administer HPV vaccines via intramuscular (IM) injection**
 - Needle size: 1- to 1½- inch, 22- to 25-gauge
 - Site: Deltoid muscle in the upper arm
- **Follow proper injection practices**
 - Use aseptic technique
 - Use a new needle and syringe for each injection
- **Administer at the same medical visit as other adolescent vaccines**

HPV Vaccine: Contraindications and Precautions

- HPV vaccines **should not** be given to anyone who has had a **severe allergic reaction** to a previous dose or to a vaccine component, including yeast
- HPV vaccination is not recommended for women who are known to be pregnant; **wait until after pregnancy to vaccinate**
- HPV vaccination may be delayed in persons with moderate or severe acute illness with or without fever

HPV Vaccine Storage and Handling

- **Store HPV vaccine in a refrigerator between 2°C - 8°C (36°F - 46°F)**
- **Store HPV vaccines:**
 - In the original packaging with the lids closed
 - In a clearly labeled bin and/or area of the storage unit
- **Do not freeze the vaccine**

HPV VACCINE SAFETY



CDC Vaccine Safety Monitoring Systems

System	Collaborators	Description
Vaccine Adverse Event Reporting System (VAERS)	CDC and FDA	Frontline, spontaneous reporting system to detect potential vaccine safety issues
Vaccine Safety Datalink (VSD)	CDC and 9 integrated health care systems	Large, linked database system used for active surveillance and research ~13 million members (~4% of US pop)
Clinical Immunization Safety Assessment (CISA) Project	CDC and 7 academic centers	Expert collaboration that conducts individual clinical vaccine safety assessments and clinical research

Evaluating and Monitoring: HPV Vaccine Safety in the United States

- **Monitoring of VAERS reports**
 - Clinical review of serious reports and other prespecified adverse events
 - Premature ovarian insufficiency, postural orthostatic tachycardia syndrome, pregnant persons
 - Data mining to identify disproportional reporting
- **Vaccine Safety Datalink**
 - Near real-time monitoring of prespecified outcomes
 - Evaluation of specific adverse events
 - Venous thromboembolism, Guillain-Barre Syndrome, primary ovarian insufficiency, long-term risk of developing type-1 diabetes, spontaneous abortion
- **Manufacturer post-marketing commitments**
 - Observational study to further characterize the safety and long-term studies
 - Pregnancy registry

HPV Vaccine Safety in the United States

- We have more than **15 years** of HPV vaccine safety data.
- With more than **135 million doses** of HPV vaccines distributed in the United States, there are robust data showing that HPV vaccines are safe.
- As with all vaccines, CDC and FDA continue to monitor and evaluate the safety of HPV vaccines.
- **Clinicians can reassure parents who may have concerns about HPV vaccination.**

HPV Vaccine Adverse Reactions

- **Reactions after vaccination can include:**
 - Injection site reactions: pain, redness, and/or swelling in the arm where the shot was given
 - Systemic: fever, headaches, nausea, muscle or joint pain
- **Life threatening allergic reaction can occur after any vaccine, including HPV vaccines**
- **Brief fainting spells (syncope) and related symptoms (such as jerking movements) can happen soon after any injection, including HPV vaccine**
 - Patients should be seated (or lying down) during vaccination and remain in that position for 15 minutes

HPV Vaccine Safety and Effectiveness Data

Human Papillomavirus (HPV)

CDC > HPV Home > For Healthcare Professionals

HPV Home

- For Parents +
- For Healthcare Professionals -**
- HPV Cancers are Preventable
- Vaccine Schedule and Dosing
- Answering Parents Questions
- HPV Vaccine Safety and Effectiveness Data**
- Boosting Vaccination Rates
- Educational Materials
- Continuing Education
- HPV Vaccine Champions Award Winner Spotlights

HPV Vaccine Safety and Effectiveness Data

More than 15 years of monitoring and research have accumulated reassuring evidence that human papillomavirus (HPV) vaccination provides safe, effective, and long-lasting protection against cancers caused by HPV infections.

Data from Clinical Trials

Each HPV vaccine—9-valent HPV vaccine (Gardasil® 9), quadrivalent HPV vaccine (Gardasil®), and bivalent HPV vaccine (Cervarix®)—went through years of strict safety testing before the U.S. Food and Drug Administration (FDA) licensed it. **Each vaccine was found to be safe and effective in clinical trials.**

- 15k** Gardasil 9 was studied in clinical trials with more than 15,000 females and males.
- 29k** Gardasil was studied in clinical trials with more than 29,000 females and males.

IMPACT OF HPV VACCINATION PROGRAM



Impact of HPV Vaccination Programs

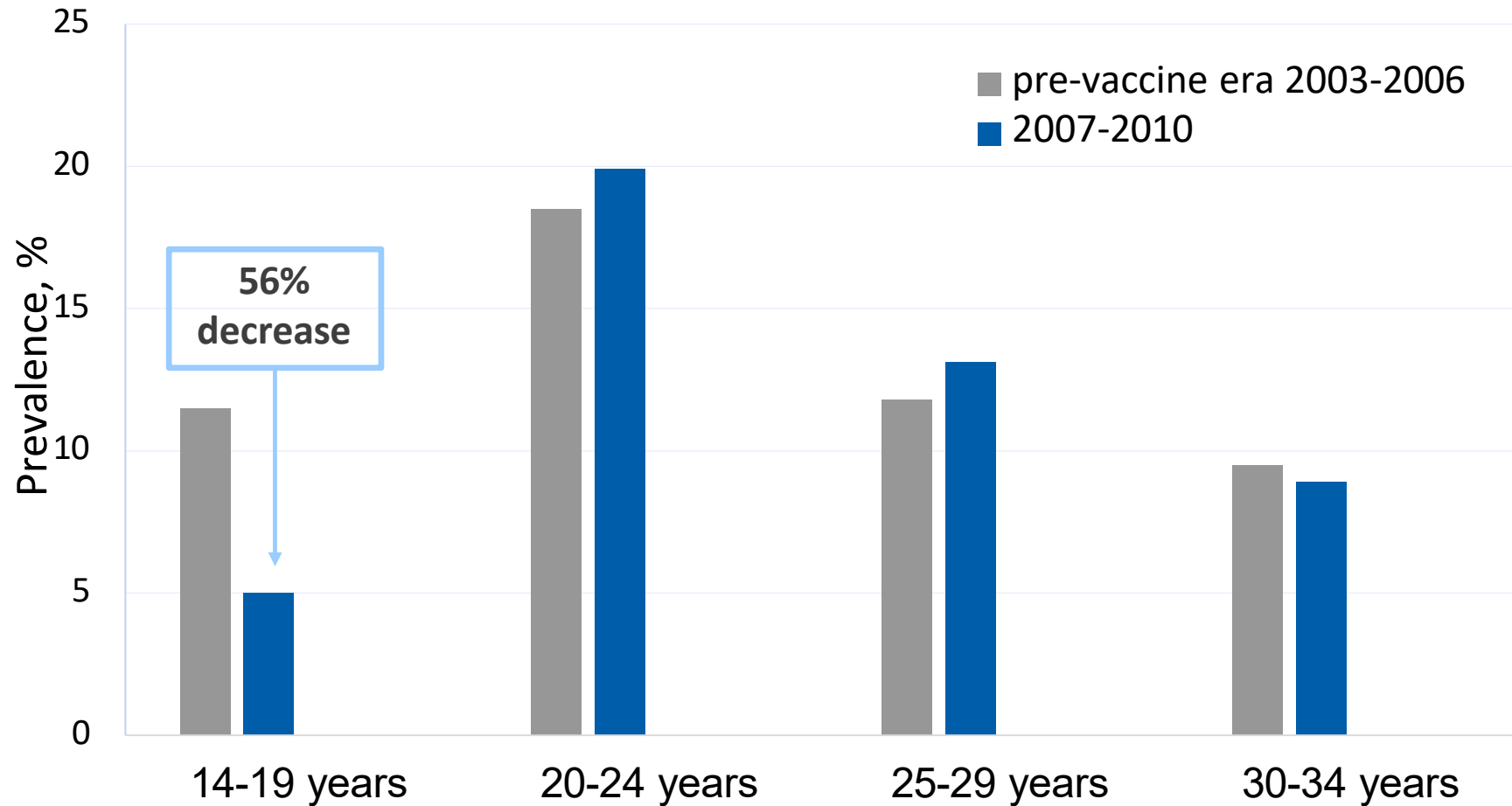


- Post-licensure evaluations are important to assess real-world effectiveness of vaccines
- Population impact against early and mid outcomes has been reported in many countries

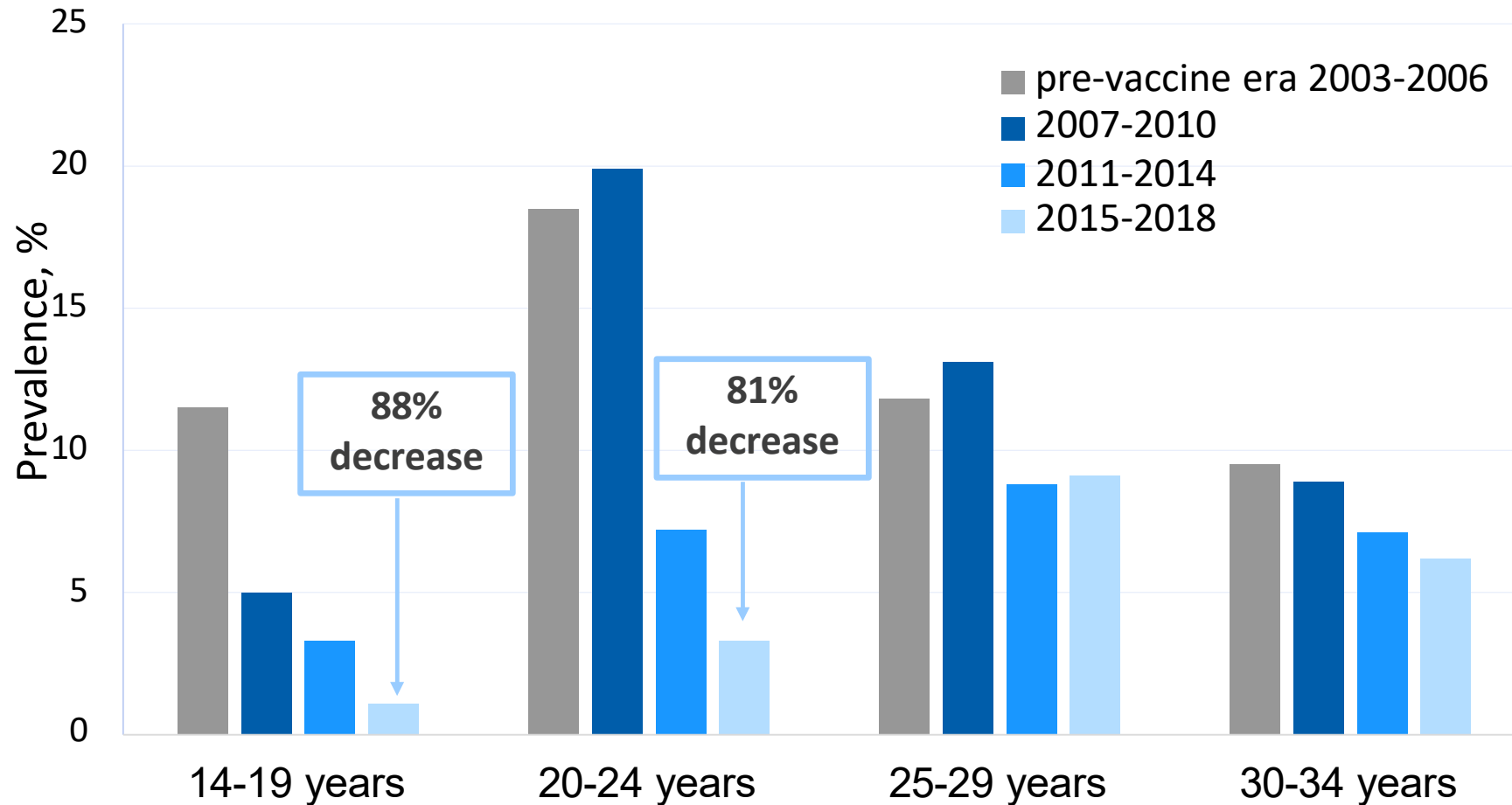
HPV Vaccine Impact in the United States

- **Declines observed in:**
 - Vaccine-type infections
 - Genital warts
 - Cervical precancers
 - Juvenile-onset recurrent respiratory papillomatosis

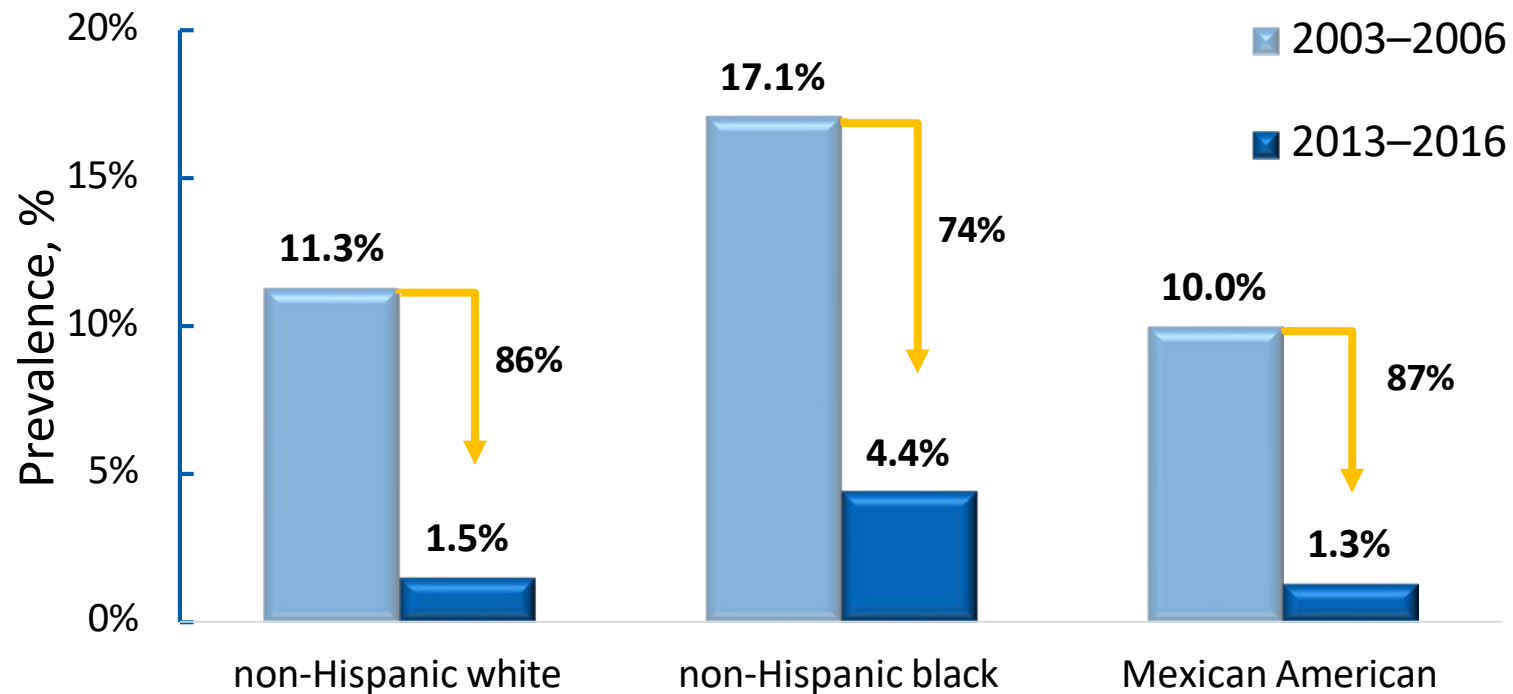
Vaccine-Type HPV Prevalence Among Females, NHANES



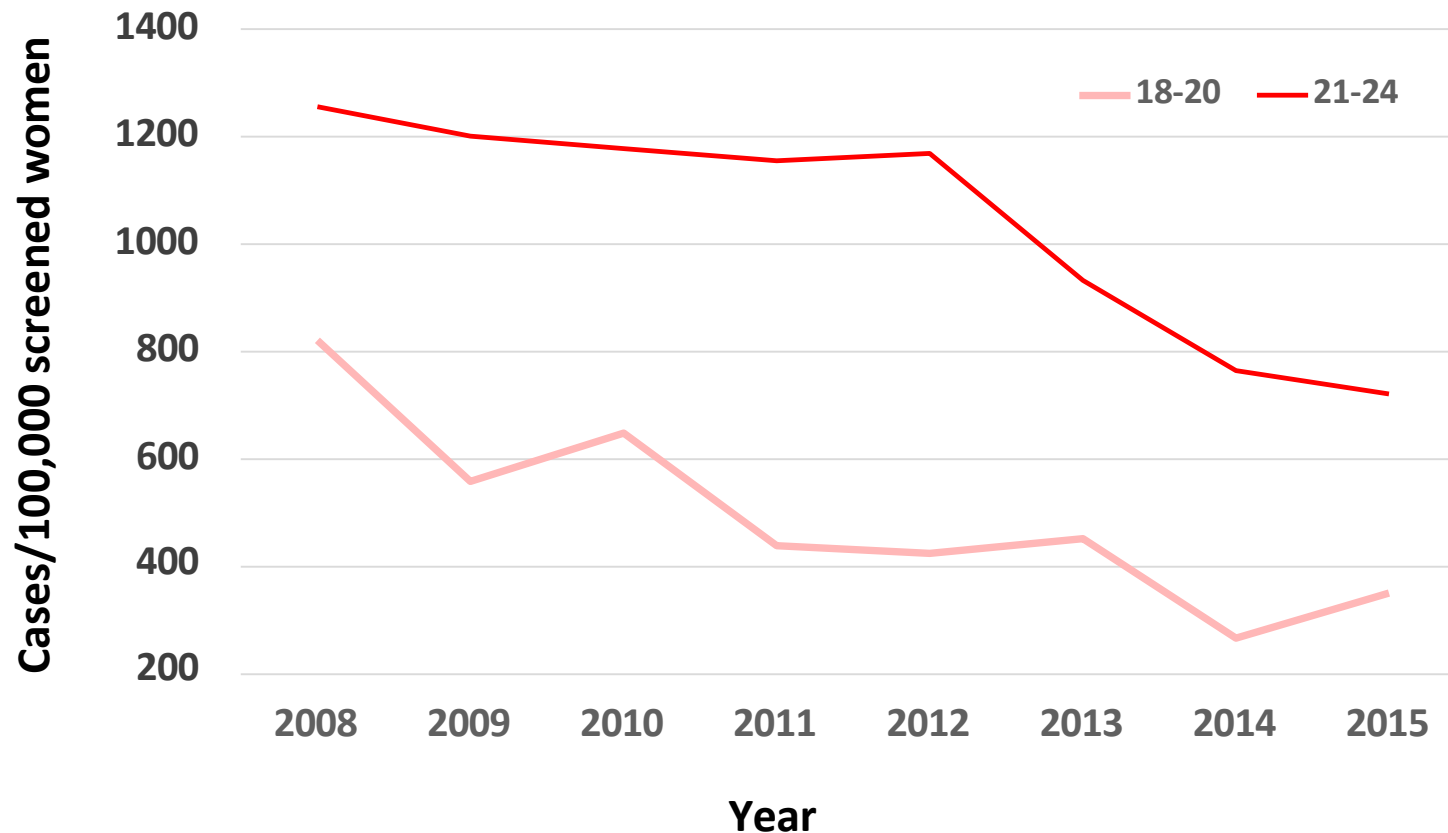
Vaccine-Type HPV Prevalence Among Females, NHANES



Vaccine-Type HPV prevalence Among 14–19-year-old Females



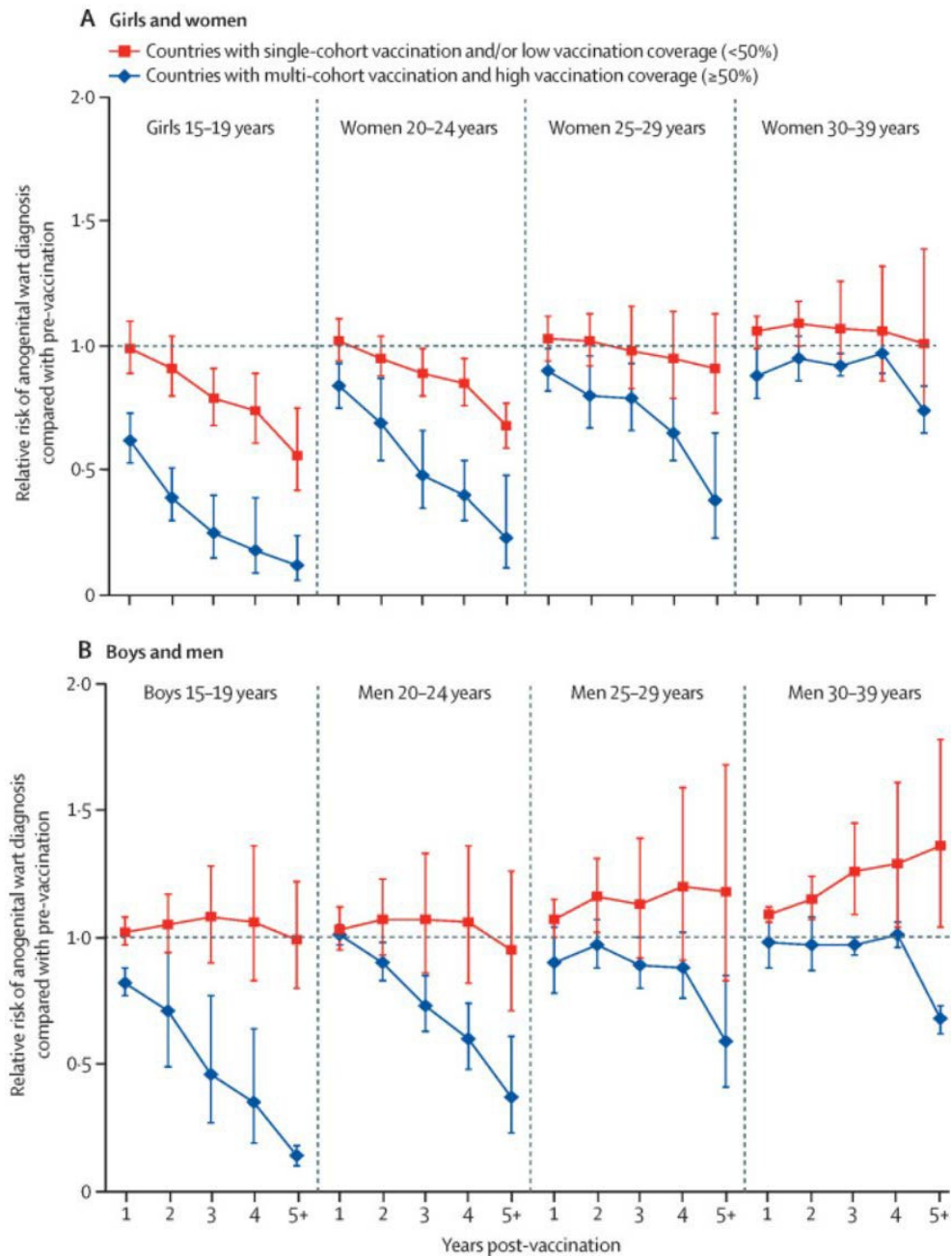
Cervical Precancer Incidence Rates among Screened Women, HPV IMPACT Project, 2008-2015



Cervical precancer rates decreased significantly in screened women aged 18–20 and 21–24 years

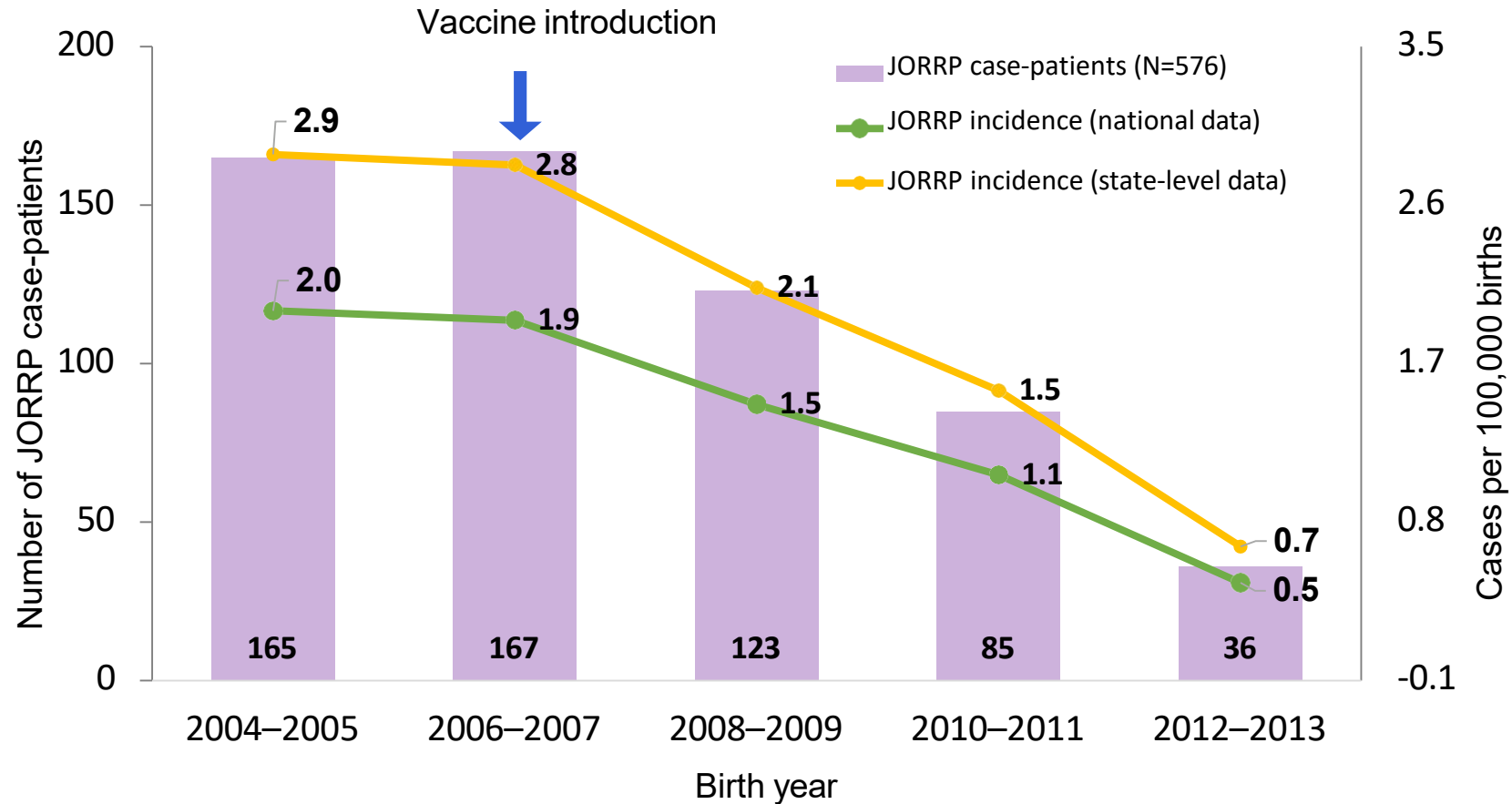
Systematic Review and Meta-Analysis: Population-Level Impact of HPV Vaccination

- Review of 65 studies in 14 high-income countries
- After ~5-8 years of vaccination
 - Among 13- to 19-year-old girls
 - HPV 16/18 prevalence decreased by 83%
 - Anogenital warts decreased by 67%
 - Among 20- to 24-year-old women
 - HPV 16/18 prevalence decreased by 66%
 - Anogenital warts decreased by 54%
 - Among 20- to 24-year-old women screened for cervical cancer
 - Cervical precancers decreased by 31%
- Evidence of herd effects
 - Anogenital warts decreased among men – in countries where men were not vaccinated



Changes in genital wart diagnoses during the first 8 years in countries using the quadrivalent HPV vaccine

JORRP by Birth Year and Incidence Based on National or State-Level Denominator Data



HPV Vaccine Effectiveness Against Cervical Cancer

Sweden started vaccination program with quadrivalent HPV vaccine in 2007

- Evaluation using linked population and health registers
- Risk of cervical cancer
 - 88% lower if vaccinated at age <17 years
 - 53% lower among women who had been vaccinated at age 17–30 years

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

HPV Vaccination and the Risk of Invasive Cervical Cancer

Jiayao Lei, Ph.D., Alexander Ploner, Ph.D., K. Miriam Elfström, Ph.D.,
Jiangrong Wang, Ph.D., Adam Roth, M.D., Ph.D., Fang Fang, M.D., Ph.D.,
Karin Sundström, M.D., Ph.D., Joakim Dillner, M.D., Ph.D.,
and Pär Sparén, Ph.D.

HPV Vaccine Duration of Protection

- **Studies suggest that vaccine protection is long-lasting**
- **No evidence of waning protection**
 - Available evidence indicates protection for *at least* 12 years
 - Multiple studies are in progress to monitor

HPV Vaccination Is Safe, Effective, and Provides Lasting Protection

HPV Vaccine Is **SAFE**

- Benefits far outweigh any potential risks
- Safety studies findings for HPV vaccination are reassuring and similar to MenACWY and Tdap vaccine safety reviews

HPV Vaccine **WORKS**

- Population impact against early and mid outcomes has been reported in multiple countries

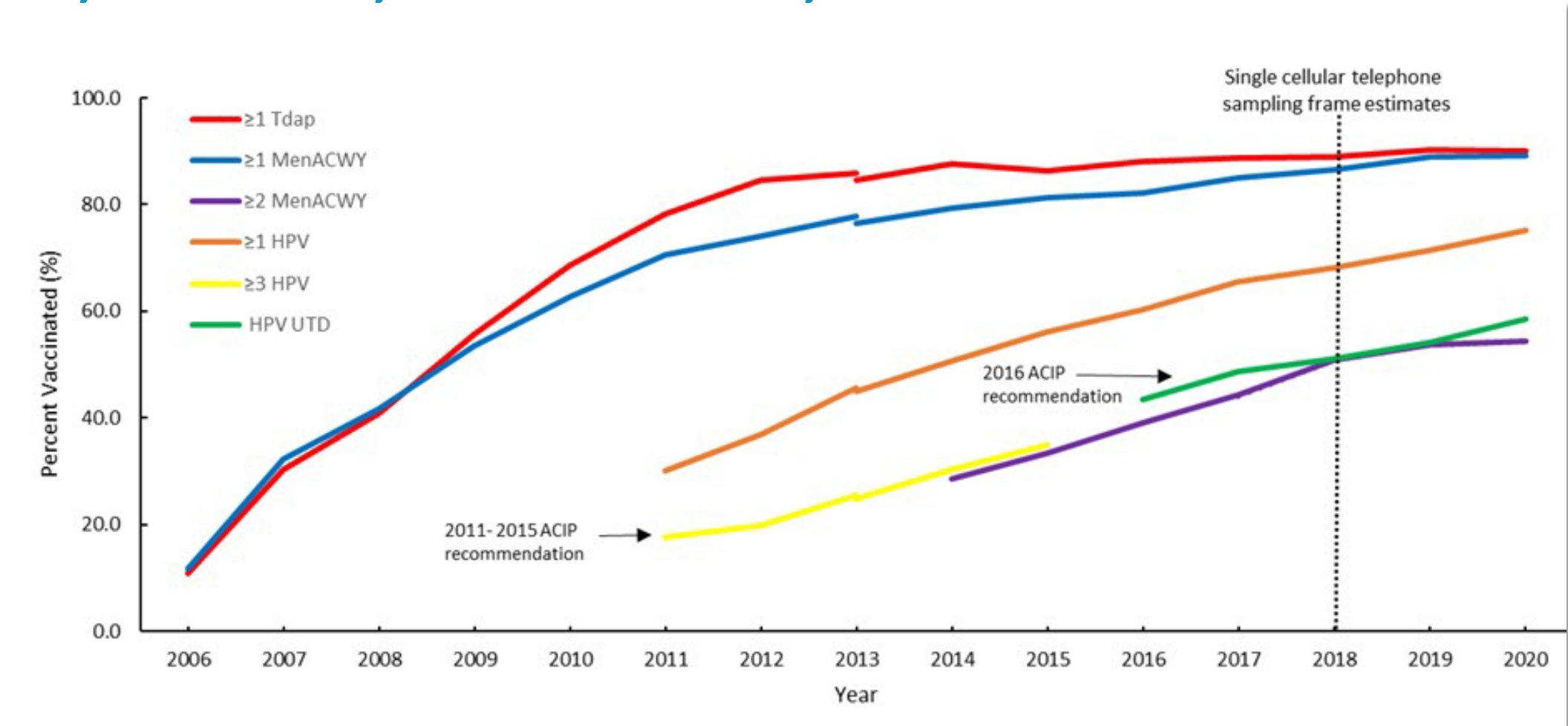
HPV Vaccine Protection **LASTS**

- Studies suggest that vaccine protection is long-lasting
- No evidence of waning protection

HPV VACCINATION COVERAGE



HPV Vaccination Coverage among Adolescents Aged 13-17 Years, NIS-Teen, United States, 2006-2020

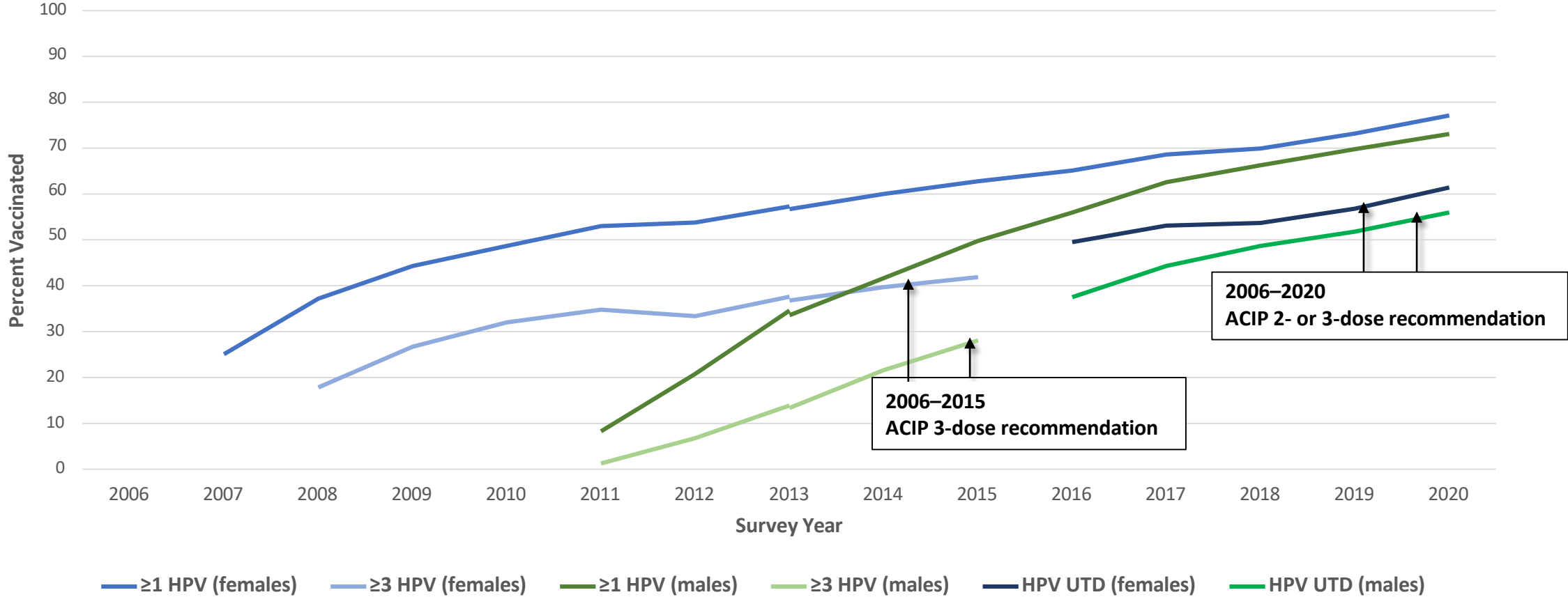


UTD, up-to-date

Source: Pingali C, Yankey D, Elam-Evans LD, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2020. *MMWR Morb Mortal Wkly Rep.* 2021



HPV Vaccination Coverage among Adolescents Aged 13-17 Years, by Sex, NIS-Teen, United States, 2007-2020

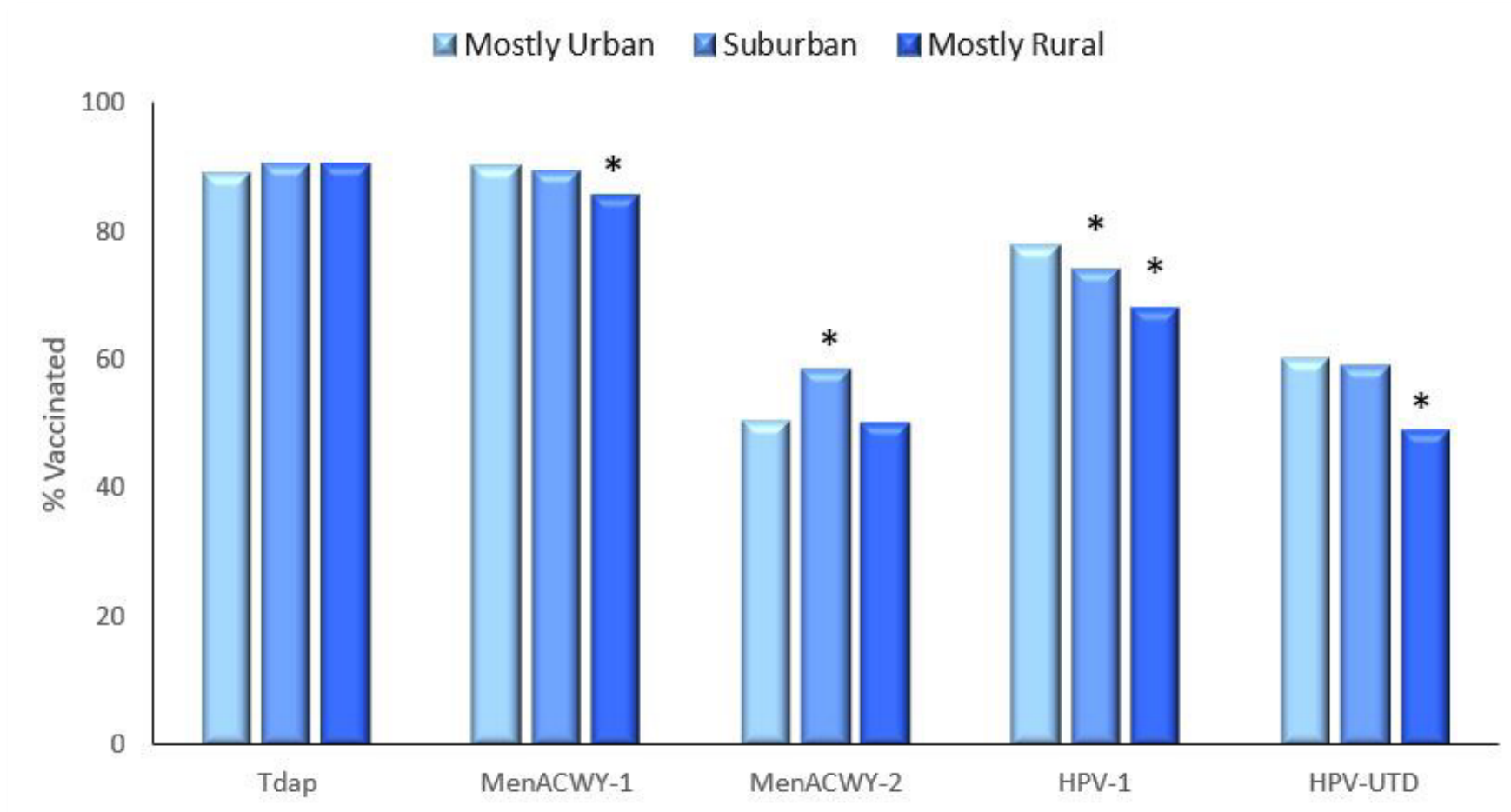


UTD, up-to-date

Source: Pingali C, Yankey D, Elam-Evans LD, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2020. *MMWR Morb Mortal Wkly Rep.* 2021



Estimated Vaccination Coverage among Teens Aged 13-17 Years by Urbanicity



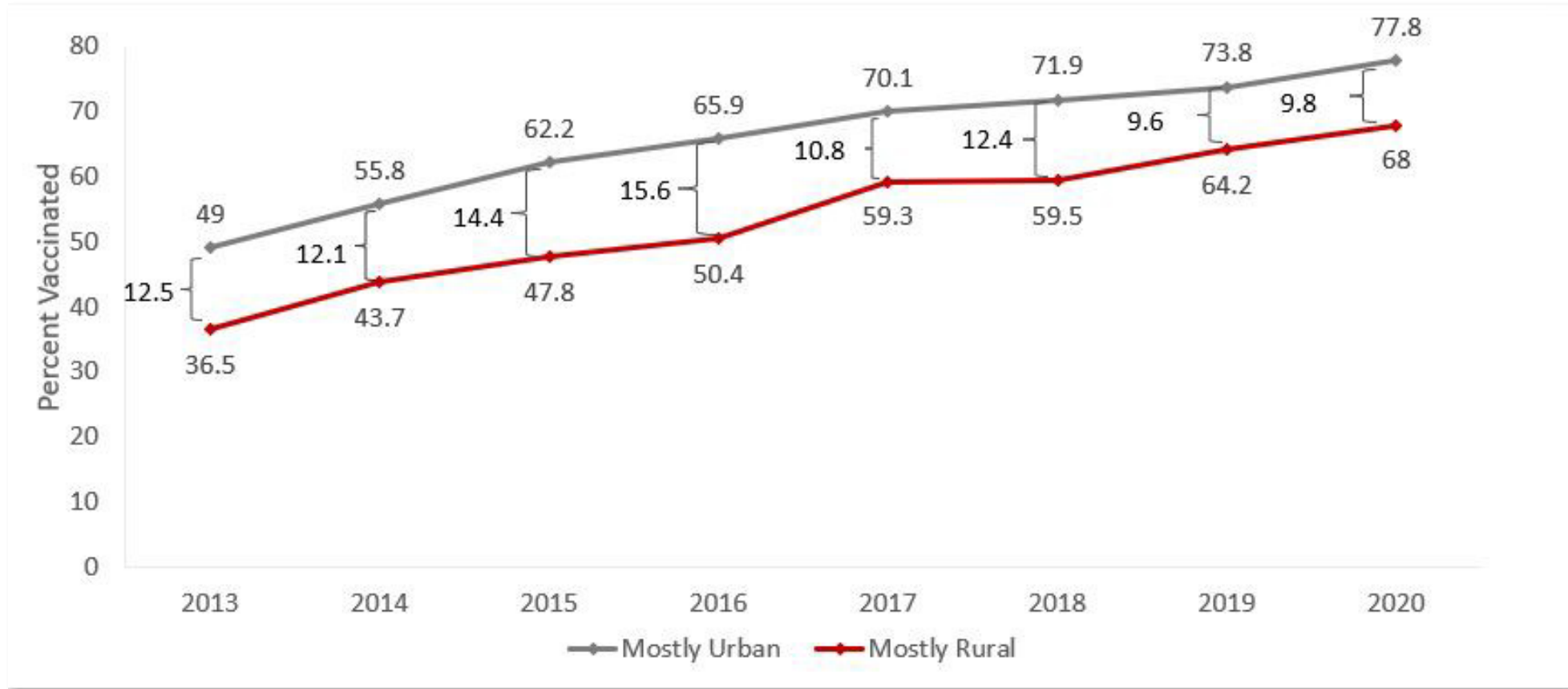
*statistically different from adolescents living in mostly urban area ($p < 0.05$)

UTD, up-to-date

Source: Pingali C, Yankey D, Elam-Evans LD, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2020. *MMWR Morb Mortal Wkly Rep* 2021

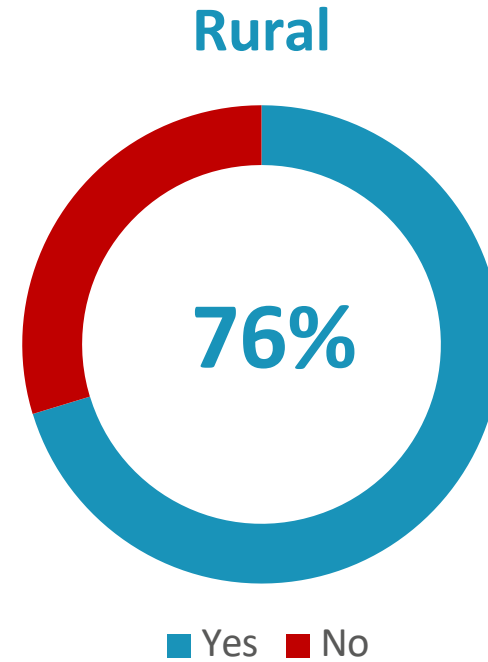
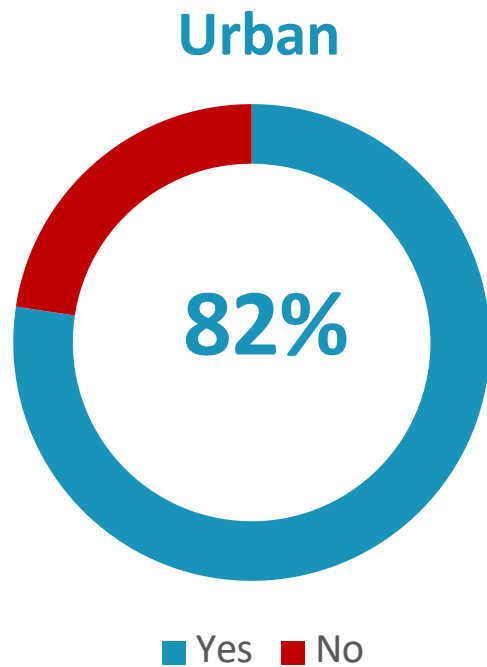


≥1 HPV Vaccination Coverage in Rural Areas Consistently Lower than in Urban

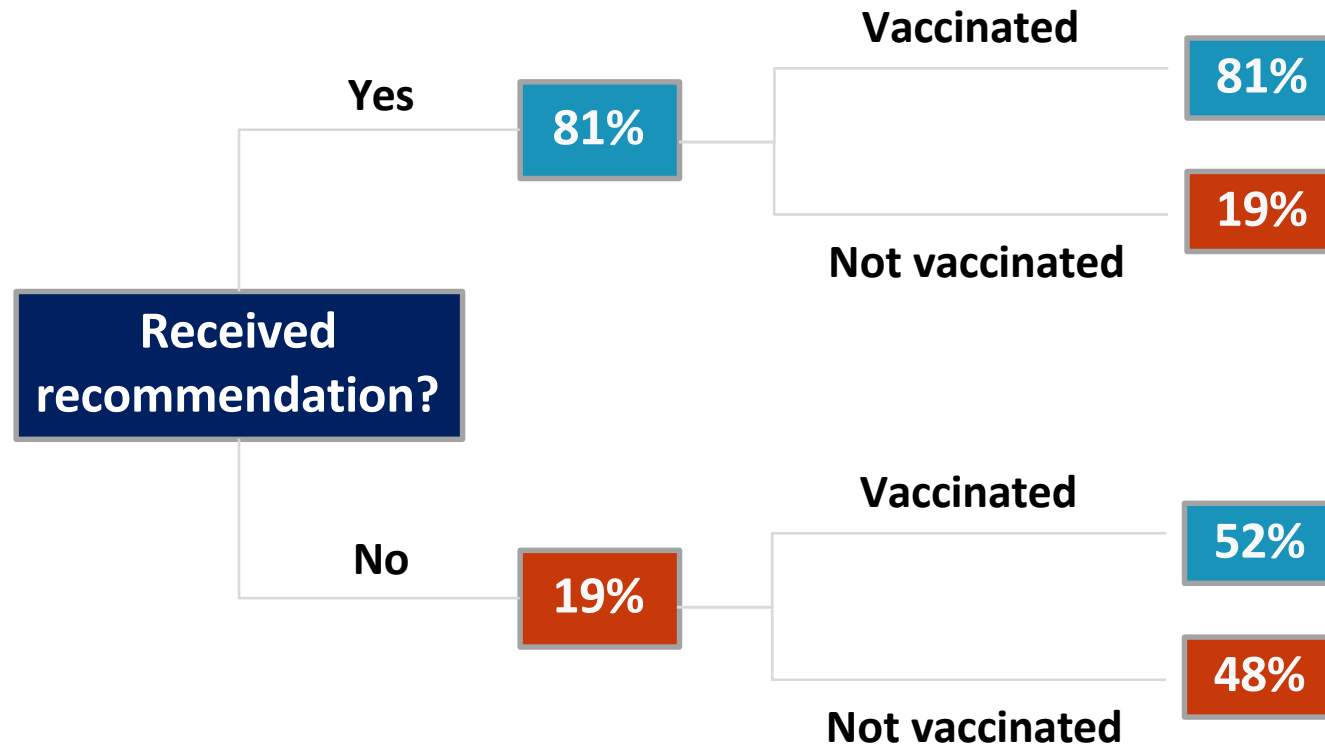


Source: Walker et al. Trends in human papillomavirus (HPV) vaccination initiation among adolescents aged 13–17 by metropolitan statistical area (MSA) status, National Immunization Survey–Teen, 2013–2017. Human Vaccines & Immunotherapeutics 2020; Source: Pingali C et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2020. *MMWR Morb Mortal Wkly Rep* 2021

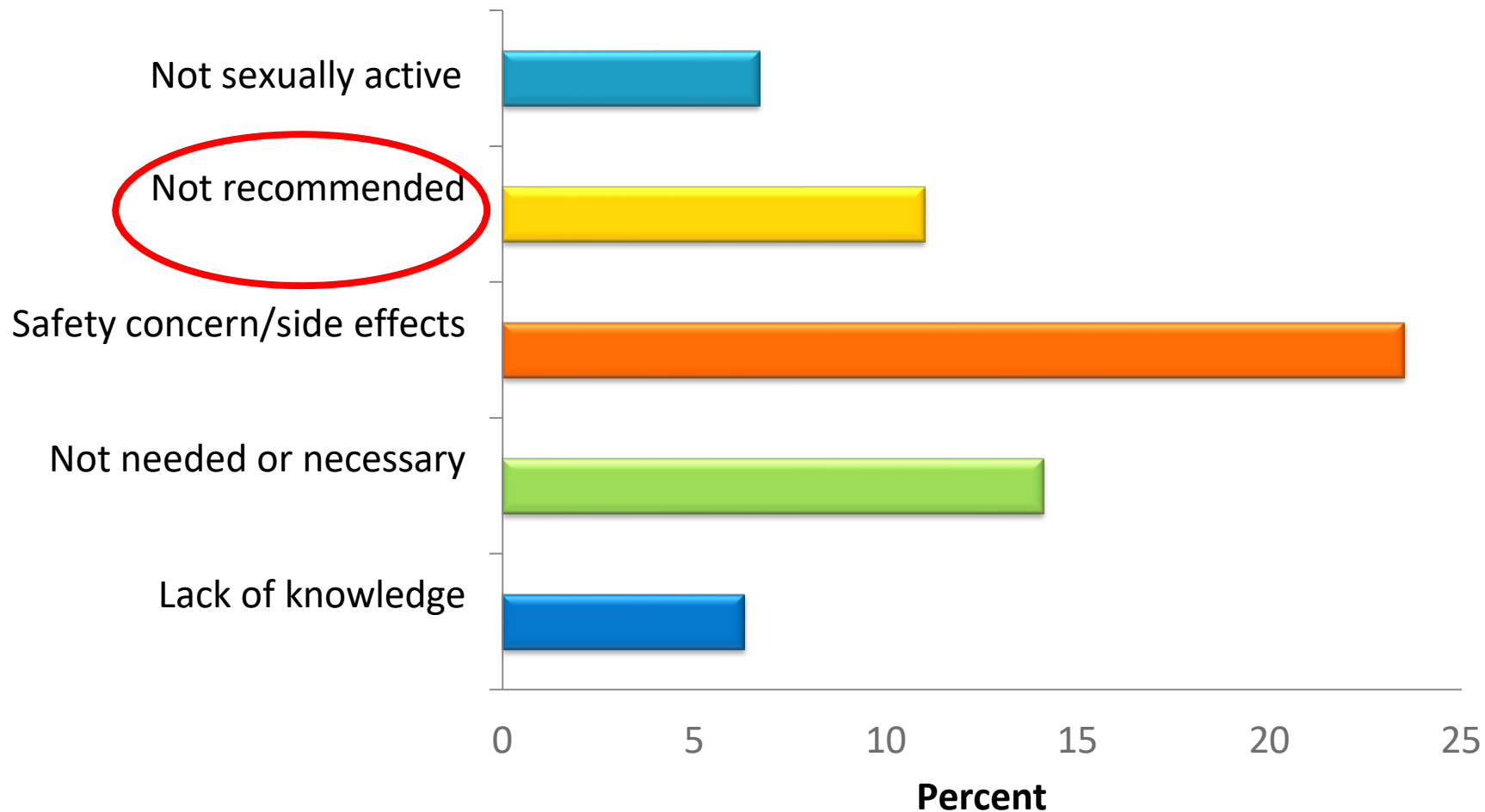
Fewer Parents in Rural Areas Report Receiving a Recommendation for HPV Vaccine from Their Provider



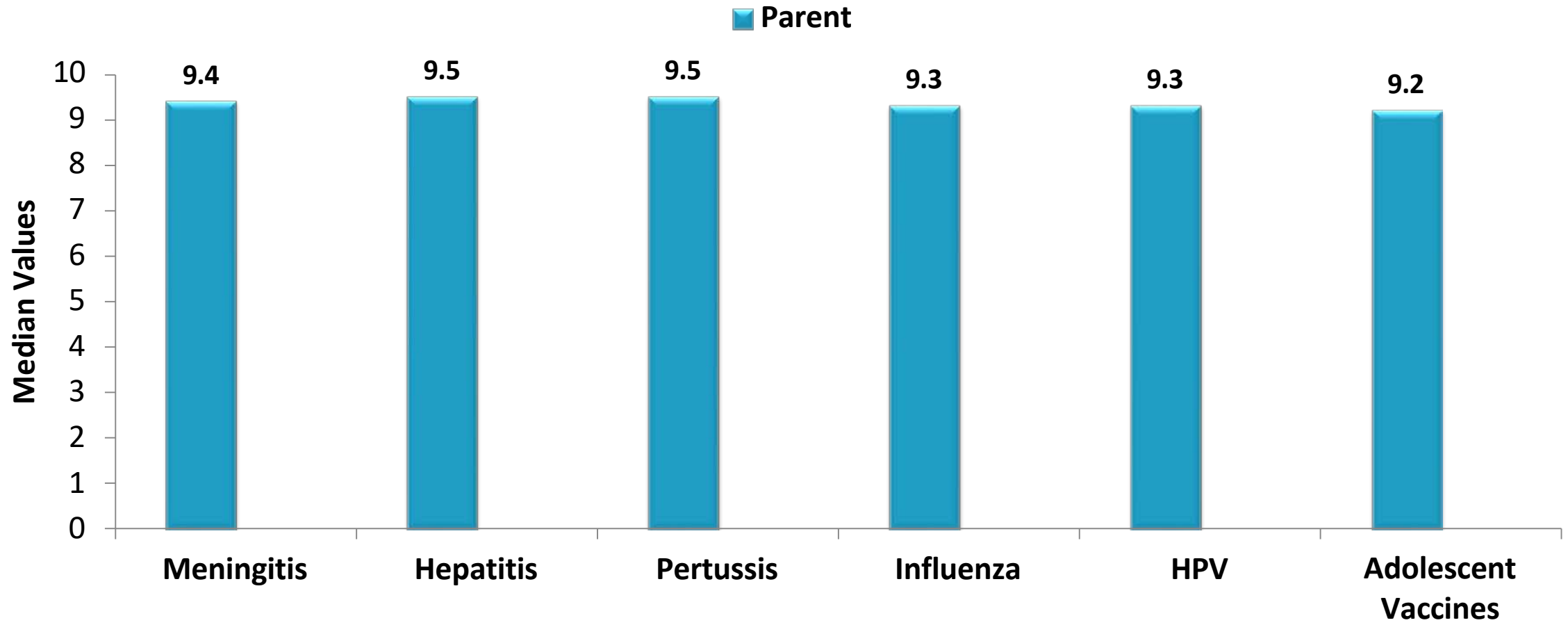
Vaccination Coverage Higher among Those Reporting a Recommendation



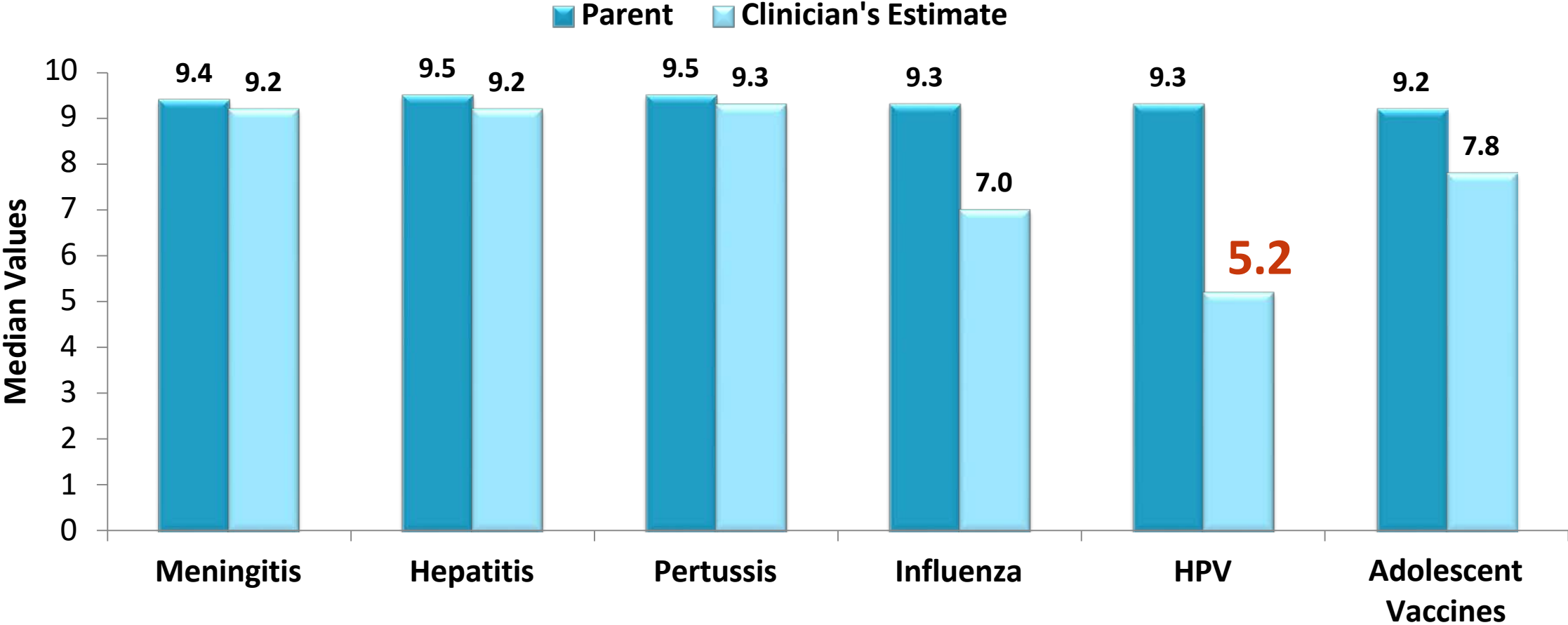
Top Reasons for Not Vaccinating against HPV



Parents Place Similar Value on Vaccines



Clinicians Underestimate the Value Parents Place on HPV Vaccine



Adapted from Healy, et al. *Vaccine*. 2014

TALKING ABOUT HPV VACCINATION: FRAMING THE CONVERSATION



Provider Perceptions of Parental Beliefs Might Not Be Reliable

Both **perceived** and **real** concerns of parents can influence **how clinicians recommend** HPV and other vaccines and **may change** their vaccination recommendations and behaviors.

Strong Evidence Base Supports the Importance of an Effective Recommendation

- HPV vaccination coverage was higher among patients whose parents reported receiving a recommendation.
 - **An effective recommendation from you is the main reason parents decide to vaccinate**
- Many mothers in focus groups stated they trust their child's clinician and would get the vaccine for their child as long as they received a recommendation from the clinician.

Make an Effective Recommendation: SAME WAY, SAME DAY

Group all the adolescent vaccines

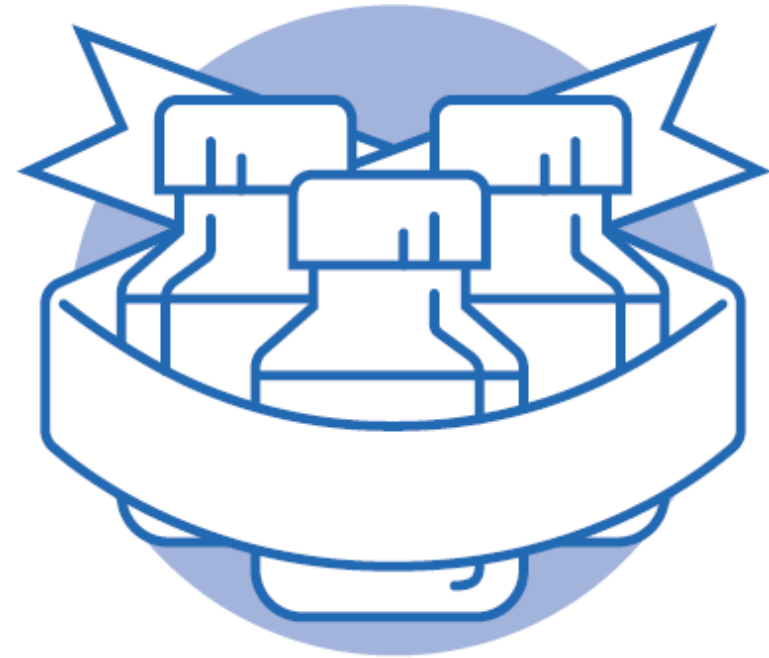
- Recommend HPV vaccination the **same way** you recommend Tdap and meningococcal vaccines

Recommend HPV vaccine **TODAY**

- Recommend HPV vaccination the **same day** you recommend Tdap and meningococcal vaccines

Bundled Recommendation

*Your preteen
needs three vaccines
today
to protect against
meningitis,
HPV cancers,
and pertussis.*



Bundled Recommendation – Example 1

Now that Sophia is 11, she is **due** for **three vaccines**.

These will help protect her from the infections that can cause meningitis, HPV cancers, and pertussis.

We'll give those shots **today**.

Bundled Recommendation – Example 2

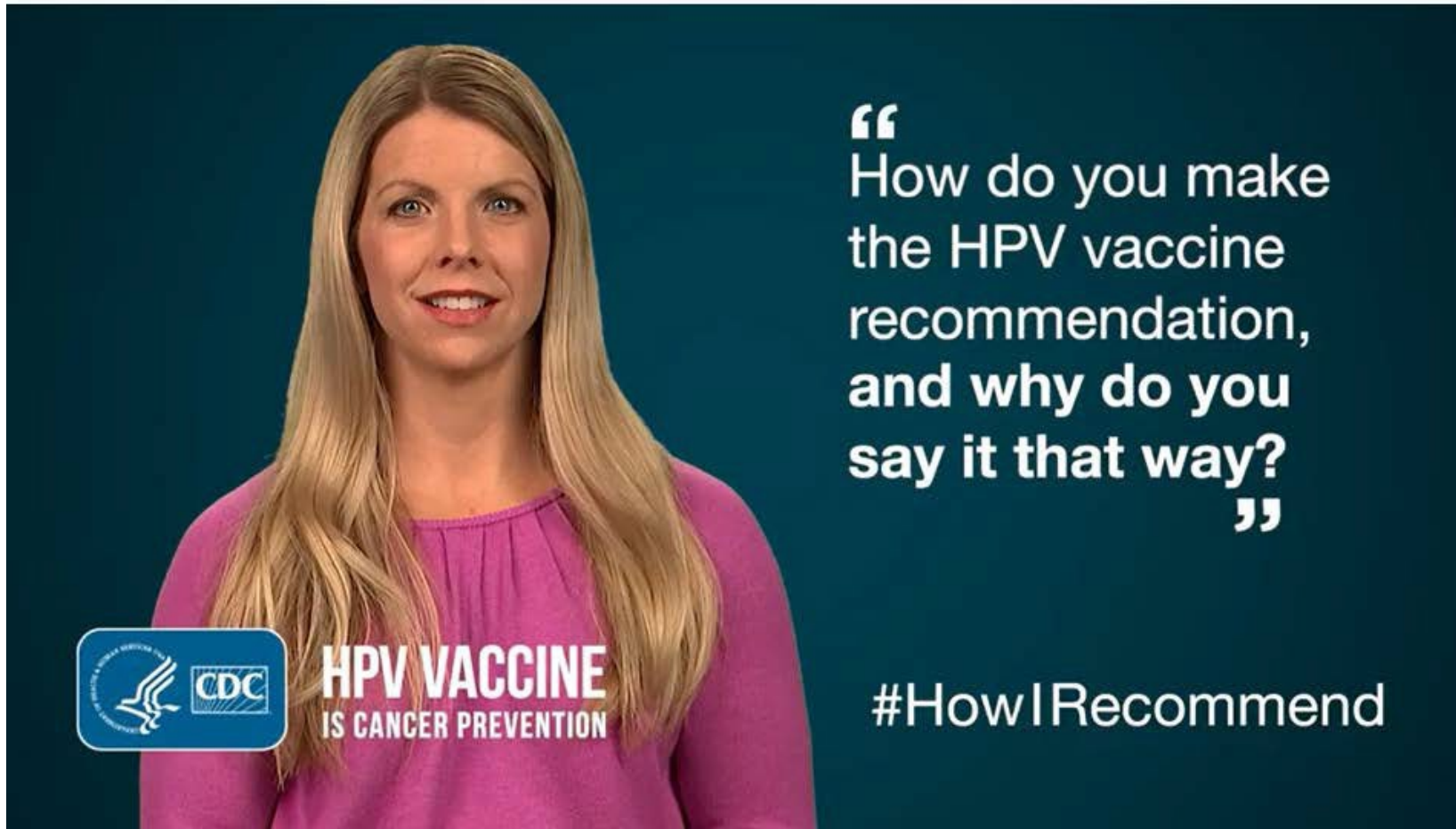
Now that Sophia is 11, she is **due today** for **three important vaccines**.

The first is to help prevent an infection that can cause meningitis, which is very rare, but potentially deadly. The second is to prevent a very common infection, HPV, that can cause several kinds of cancer. The third is the tetanus booster which also protects against pertussis, so she doesn't get whooping cough.

We'll give those shots at the end of the visit. Do you have any questions for me?

How do you Recommend HPV Vaccine?

Video with Lacey Eden, NP



Speaking to Parents

- Many parents simply accept this bundled recommendation.
- Some parents may be interested in vaccinating, but still have questions.
- Interpret a question as they need additional reassurance from **YOU**, the clinician they trust with their child's health care.
- Ask parents about their **main** concern and be sure you are addressing the **right** concern.

Q: Why does my child need HPV vaccine?

HPV vaccination is important because it **prevents cancer.**

That's why I'm recommending that your child start the HPV vaccine series today.

Q: What cancers are caused by HPV infection?

Persistent HPV infection can cause cancer of the cervix, vagina, and vulva in females, cancer of the penis in males, and cancers of the anus and the throat in both.

We can help prevent infection with the HPV types that cause these cancers by starting the HPV vaccine series today.

Q: Is my child really at risk for HPV?

HPV is a very common virus that infects both women and men.

We can help protect your child from the cancers and diseases caused by the virus by starting HPV vaccination today.

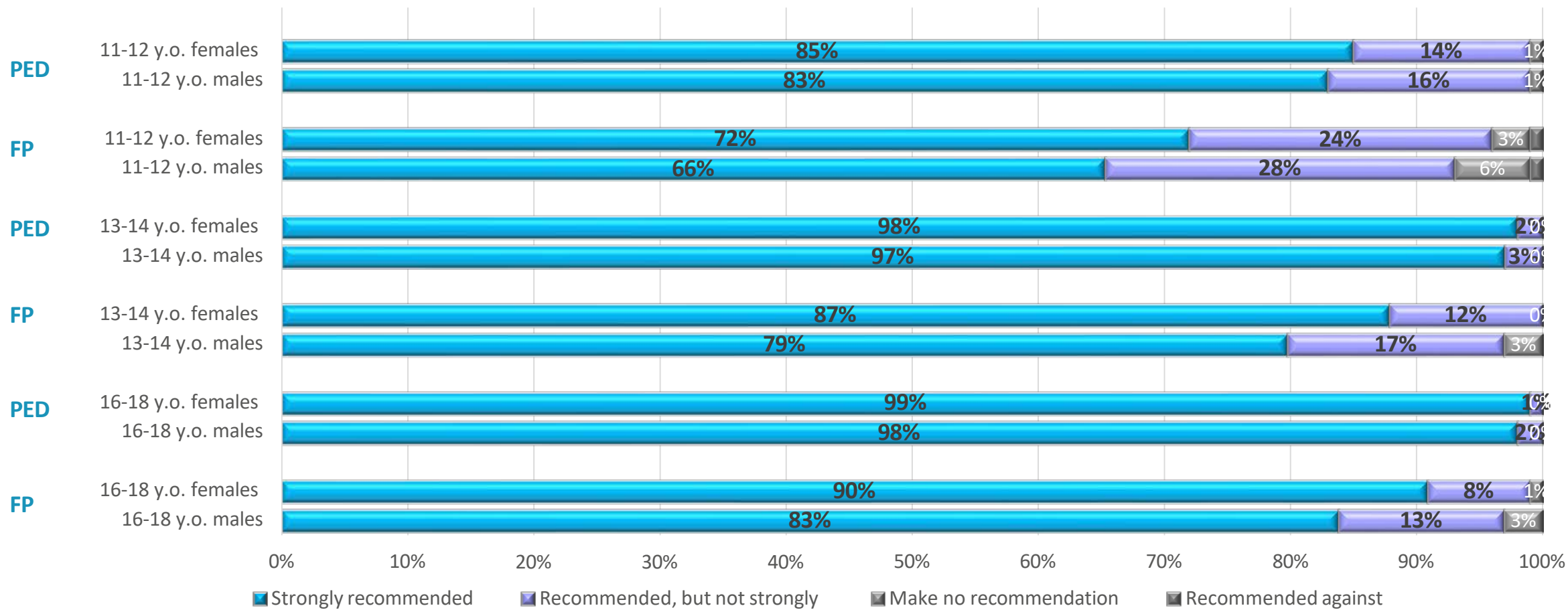
Q: Why at 11 or 12 years old?

When should the bike helmet go on?

- A. Before they get on their bike
- B. When they are riding their bike in the street
- C. When they see the car heading directly at them
- D. After the car hits them

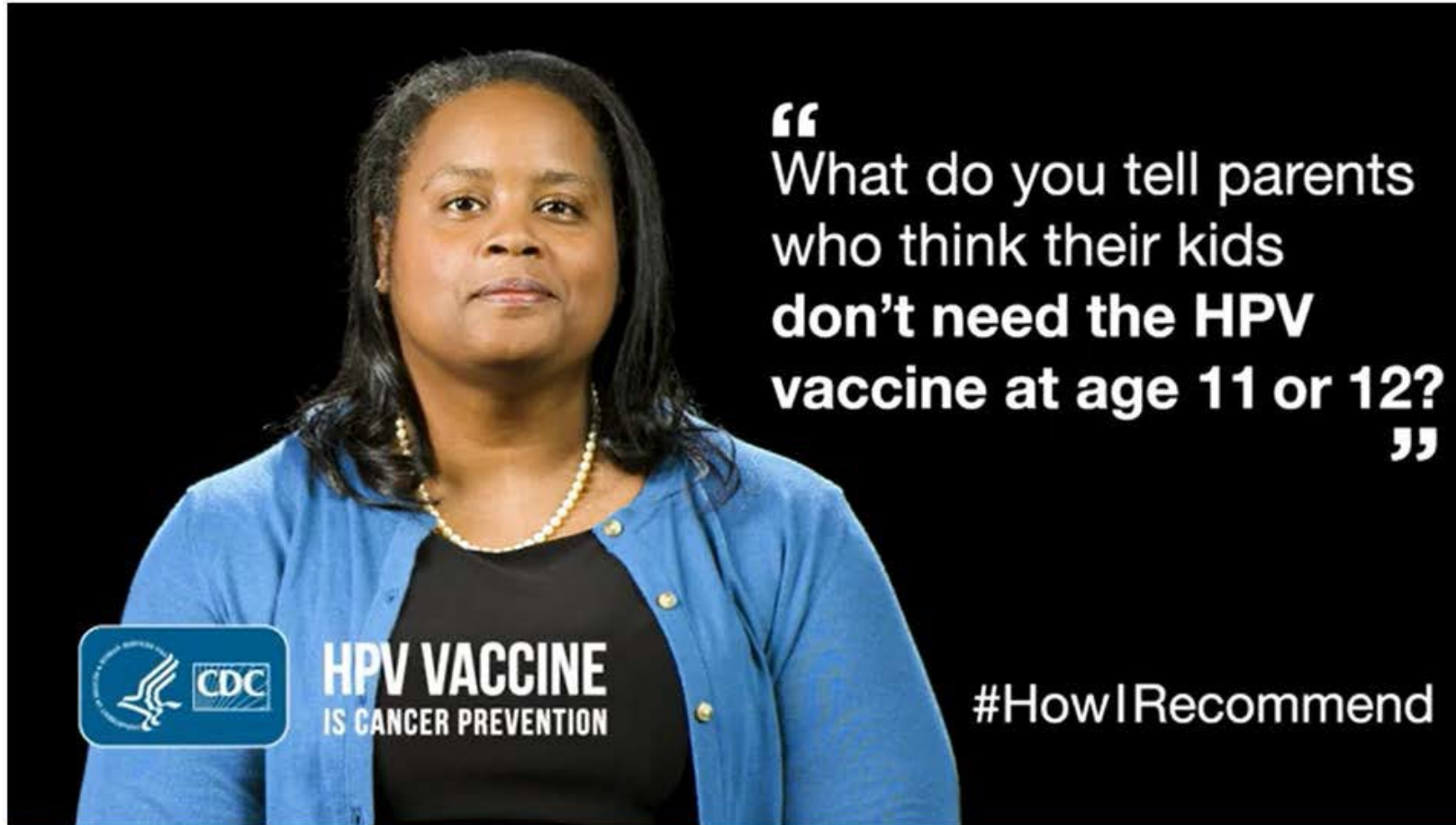


Most Clinicians Wait Too Long to Make Strong Recommendation for HPV Vaccine



Q: Why at 11-12 years old?

Video with Dr. Margot Savoy



Q: I'm just worried that my child will perceive this as a green light to have sex.

Studies tell us that getting HPV vaccine doesn't make kids more likely to start having sex.

I made sure my child (or grandchild, etc.) got HPV vaccine, and I recommend we give your child her/his first shot today.

Q: How long can we wait and still give just two doses?

The two-dose schedule is recommended if the series is started before the 15th birthday.

However, I don't recommend waiting to give this cancer-preventing vaccine. Older teens have busier schedules and it becomes more difficult to schedule an appointment.

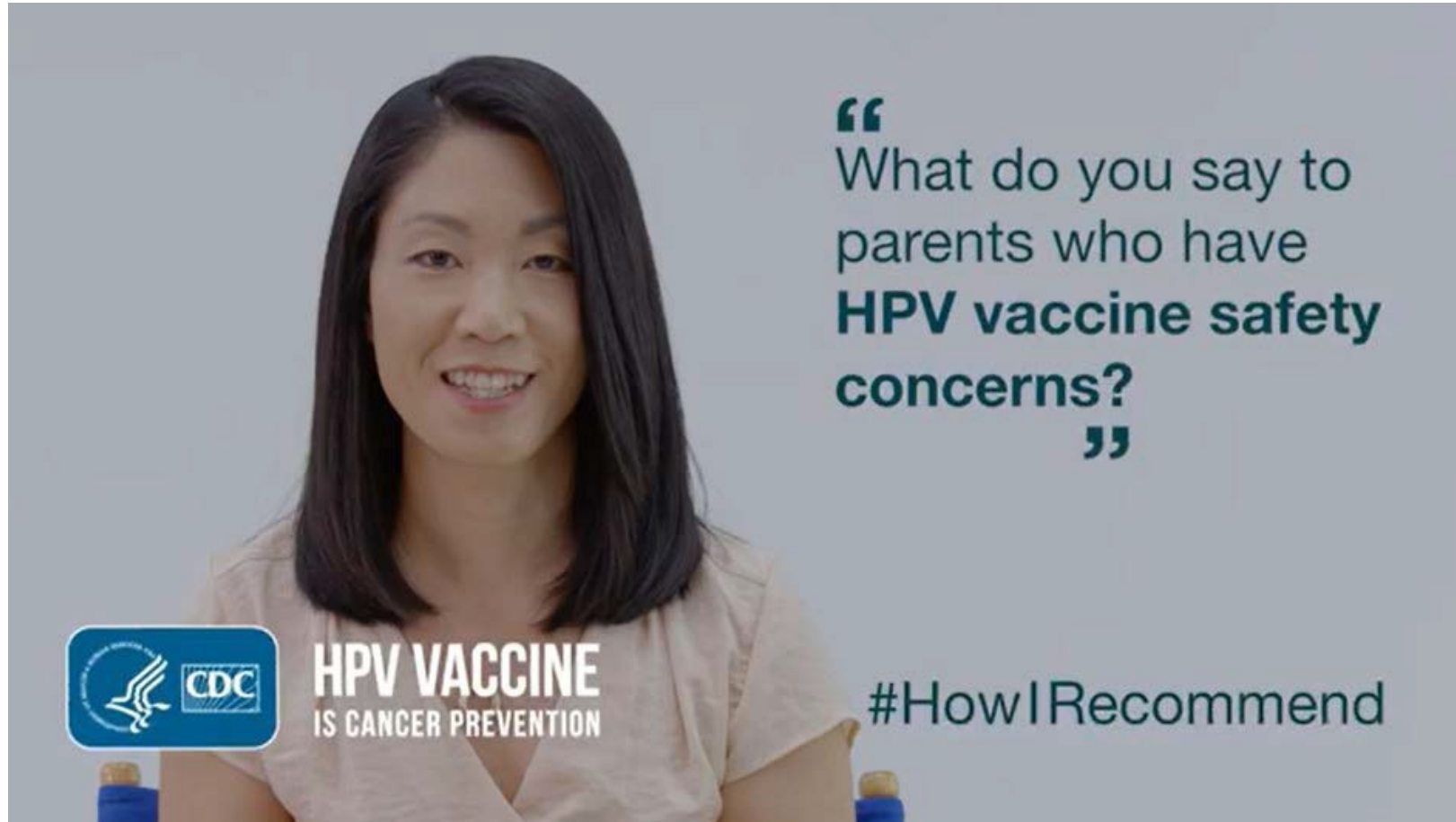
It's best to start the series today so your child is protected as soon as possible.

Q: I'm concerned about the safety of the vaccine. I read online that HPV vaccine isn't safe. Do you really know if it's safe?

As of 2021, more than 135 million doses of HPV vaccines have been distributed in the United States since they were licensed. Data continue to show the vaccines are safe and effective.

Is HPV Vaccine Safe?

Video with Dr. Linda Fu



Is HPV Vaccine Safe?

Video with Dr. Alix Casler



Q: Can HPV vaccine cause future fertility problems?

There is no evidence to suggest that getting HPV vaccine will affect future fertility.

However, women who develop an HPV precancer or cancer might need treatment that could limit their ability to have children.

Q: Why should I get my child the HPV vaccine if it's not required?

School-entry requirements don't always reflect the current recommendations to keep your child healthy and often focus on prevention of highly contagious diseases.

HPV vaccine, along with other adolescent vaccines, will provide your child with the best protection.

Q: Would you give HPV vaccine to your kids?

Yes, I have given HPV vaccine to my child. I strongly believe this cancer-preventing vaccine is very important.

Also, the American Academy of Pediatrics, the American Academy of Family Physicians, NIH cancer centers, and CDC agree that HPV vaccination is very important for your child.

Q: When do we need to come back? (<15-years-old)

Since your child is younger than 15, she will need one more dose in 6 months to a year.

When you check out, please make an appointment for the second shot and put that appointment on your calendar before you leave today.

Q: When do we need to come back? (≥ 15 -years-old)

Since your child is already 15, she will need two more doses: a second one in 1-2 months and a third shot is due 6 months from today.

When you check out, please make an appointment for about 1-2 months from now and another one 6 months from now, and put those appointments on your calendar before you leave today.

If a Parent Has Questions After Your Recommendation

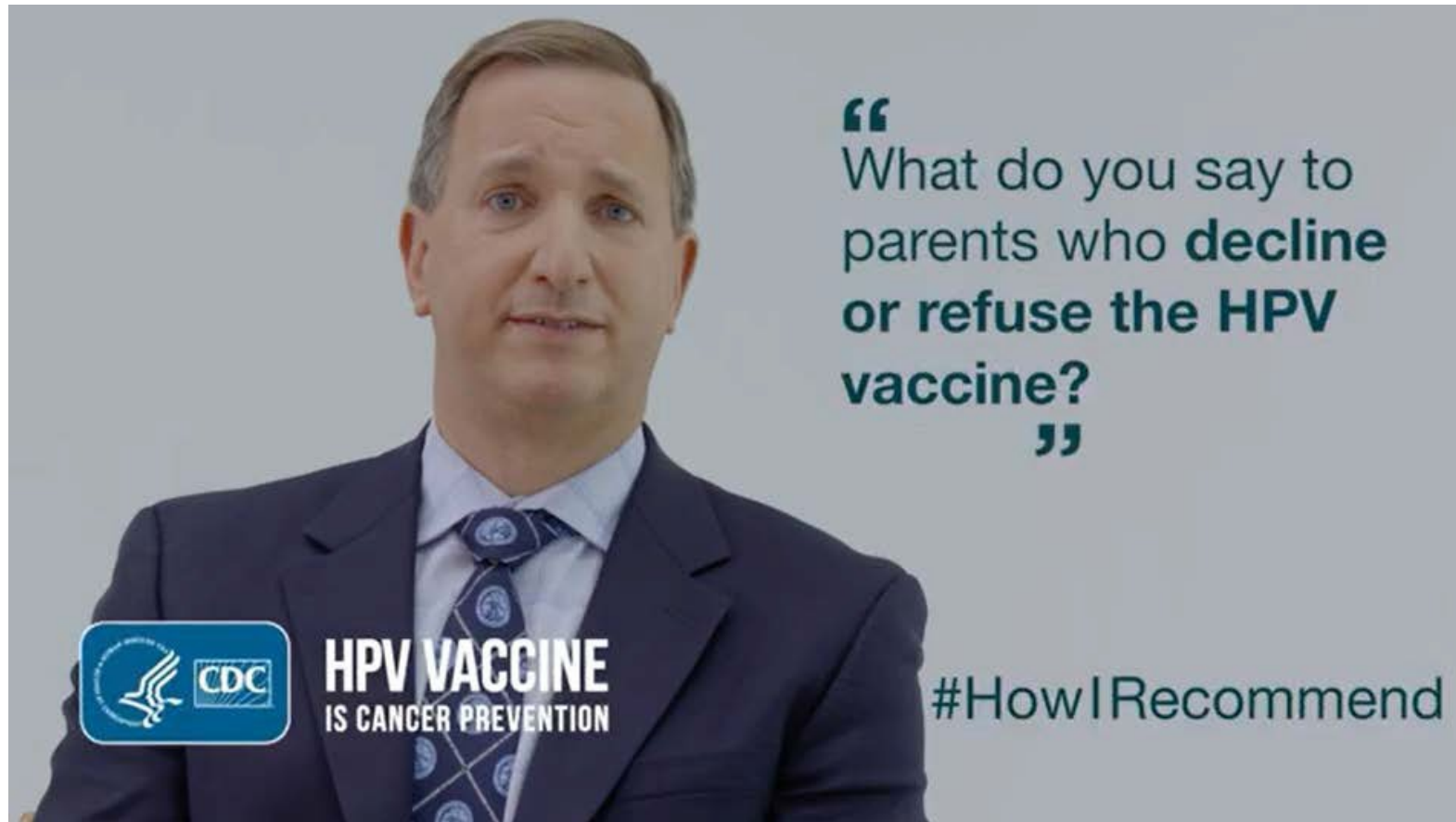
- Listen to and respond to parents' questions.
 - Sometimes parents simply want **your** answers to their questions.
 - Your willingness to listen to parents' concerns will play a major role in building trust in you and your recommendation.
- If you encounter questions you do not know the answer to or information from sources you are unfamiliar with, it is best to acknowledge the parent's concerns and share what you **do** know.

If a Parent Declines Today...

- End the conversation with at least one action you both agree on.
- Refusal today may not be final. Revisit the conversation at the next opportunity.
- Because waiting to vaccinate is the risky choice, many pediatricians ask the parent to sign a declination form.

If parents decline HPV vaccination...

Dr. Todd Wolynn



Jointly provided by The National AHEC Organization and the following partners



Strong Provider Recommendation: What if I'm not a provider?

Recommend all vaccines this patient is due for, encouraging all shots in the same day, if applicable.

Consult the clinical staff for additional information

Avoid assuming the parent will decline vaccines

Place equal important on recommended AND required (ex. School) vaccines

You have these types of conversations with family and friends as well!

Traditional (Non-MI) Style of Conversation

Traditionally, when a provider recommends the HPV vaccine, the parent/caregiver responds in 1 of 3 ways;

“Yes” (acceptance of the recommendation) and the vaccine is given.

“No” (resistance to the recommendation) OR “Not Sure” (hesitancy/ambivalence about the recommendation)

Provider may ask why the vaccine is not wanted or why there is hesitation

Parent will likely state the reasons he/she does not want the child to be vaccinated.

This prevents parents from being more open to the possibility of vaccination and possibly strengthens his/her argument against it by voicing these concerns.

Possible Conversational Traps

Persuasion Trap- provider becomes the champion for the vaccine and tries to convince the hesitant parents of the benefits.

Usually ends up in an argumentative type of “yes, but” cycle.

Lecture (Data Dump Trap)- tendency to provide the full story about some aspects of the vaccine.

Usually end up putting people off because it implies, they don't know the whole story.

Can be counter-productive if you end up raising concerns that the parent hadn't considered.

“Yes/No” Question & Answer Trap- provider begins asking a series of closed questions that require a yes or no answer and does not invite any insight.

In summary

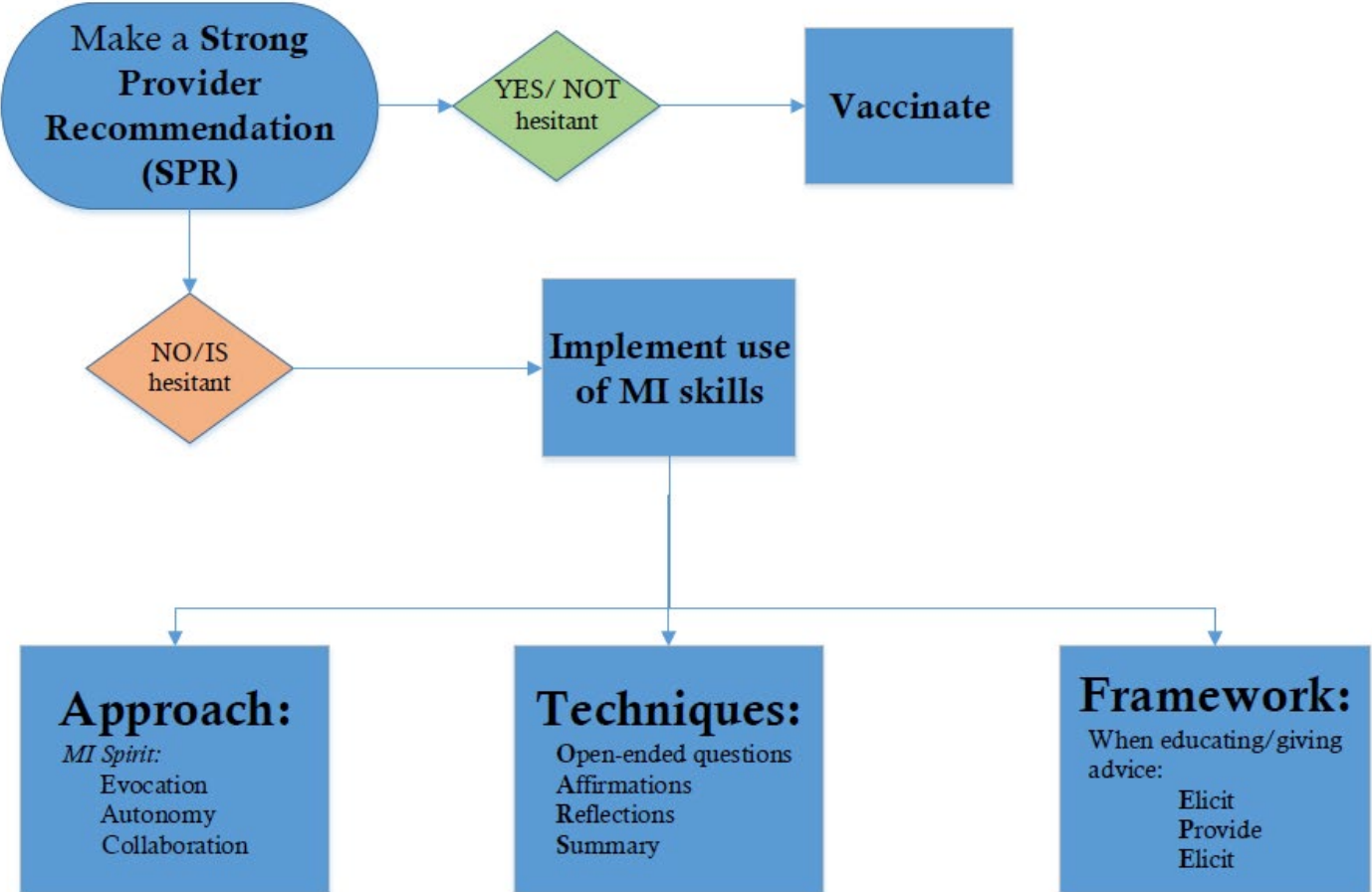
A strong recommendation works for the parent who is ready to have his/her child vaccinated or expects the doctor to tell him/her what to do.

We recommend you begin with a strong provider recommendation for every family.

For parents who are unsure/resistant, a closed question following a recommendation can lead to less productive conversations.

Where MI Fits In

HPV Vaccine Provider Communication Flow Sheet





OVERVIEW OF MOTIVATIONAL INTERVIEWING

Motivational Interviewing in a Nutshell

Motivational interviewing is a collaborative conversation style for strengthening a person's own motivation and commitment to change.

The Key to MI

Adopt the right “heart-set.” This includes P.A.C.E



Partnership

Active Collaboration

Acceptance

Non-judgmental

Compassion

Focus on well-being

Evocations

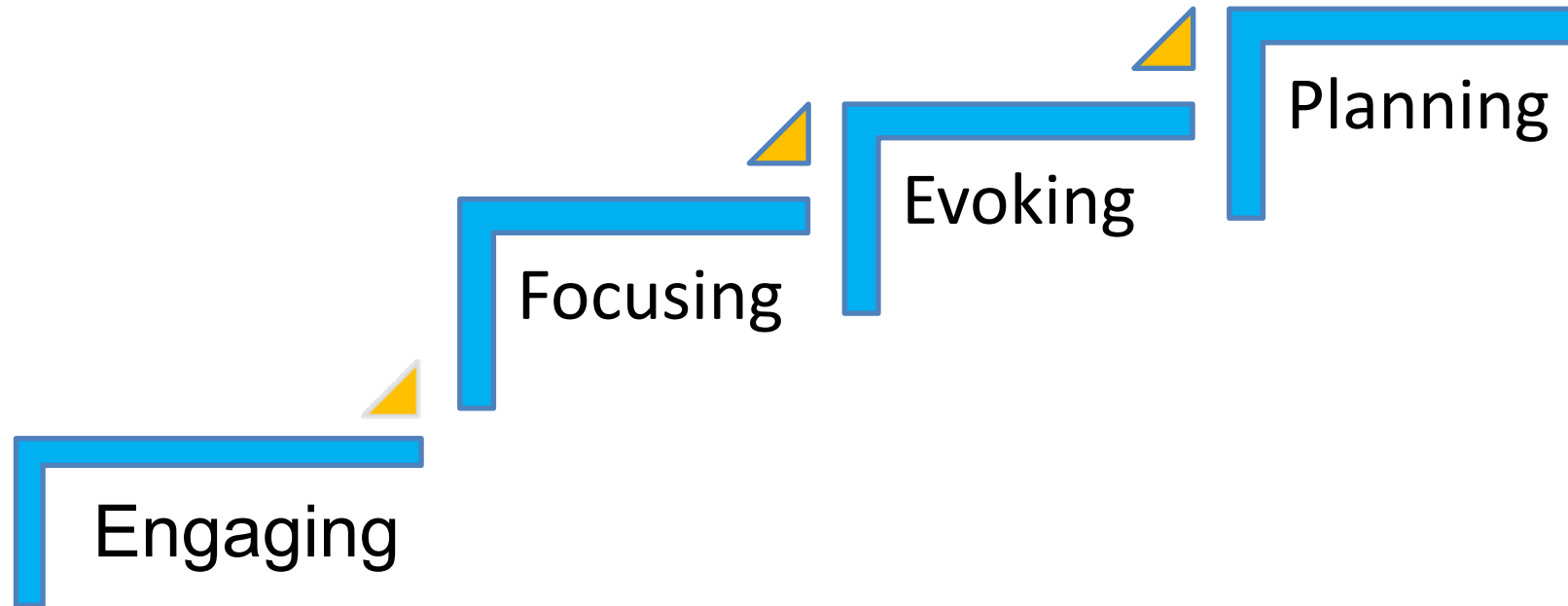
Strength and resources

Primary Goal of MI

Interact with a person in a way that increases motivation to change and evokes change talk.

Change talk is a person's own statement that favors change.

Four Processes in MI



Four Processes in MI: Engaging

The process of positive engagement involves:

1. Establishing a trusting and mutually respectful working relationship
2. Agreement on treatment goals
3. Collaboration on ways to achieve these goals



Four Processes in MI: Focusing

Focusing in MI is an ongoing process of seeking and maintaining direction



Four Processes in MI: Evoking

Evoking is the process of eliciting a person's own motivation for change by resolving ambivalence to change



Four Processes in MI: Planning

Planning involves commitment to change and the formulation of a concrete change plan

MI Skills

O
A
R
S

Open Questions

Affirmations

Reflections

Summarization



Open Questions

Difficult to answer with brief replies or simple “yes” or “no” answers

Allow for a fuller, richer discussion

Conversational door-openers that encourage people to talk, using their own words.

Keeps the conversation focused on the individual.

Close Questions

Do you want your child to be healthy?

You do know that boys need the HPV vaccine too?

Are you going to get all three vaccines today, as I've recommended.

What do you need to change to make this an open-ended question?

Affirmations

Statements or gestures that recognize a person's strengths
Lead in the direction of positive change
Confidence builders
Must be genuine and congruent
Use sparingly – a little goes a long way.

You are making the best choice for your child

Your commitment to your child's healthy is obvious.

You want the best for your child.

You are doing an excellent job.

You are thoughtful is your decision-making.



Reflective Listening

Ready

Reflect back all the reasons (pros) the parent has stated

Unsure

Reflect back what you hear (stating the cons before the pros so that you end on the positive)
You have not take either side of the internal argument but reflected back on both sides.
The parent sees his/her ambivalence and is not pressured to defend his/her stance.

Not Ready

Reflect back that you hear the parent's concerns and affirm that their concerns make sense in the context of how they are thinking.

Reflections

Reflections all the person to:

Voice thoughts or feelings they may not have talked about before

Feel understood

Feel accepted without judgement

Hear their thoughts and feelings

Reflection Statement

“I know that my daughter will get the HPV vaccine, but not today. She’s too young and I’m not ready to start thinking about any of that right now.”

What reflection statements could you respond with?

Summarizing

Summaries allow people to:

Recall the conversation

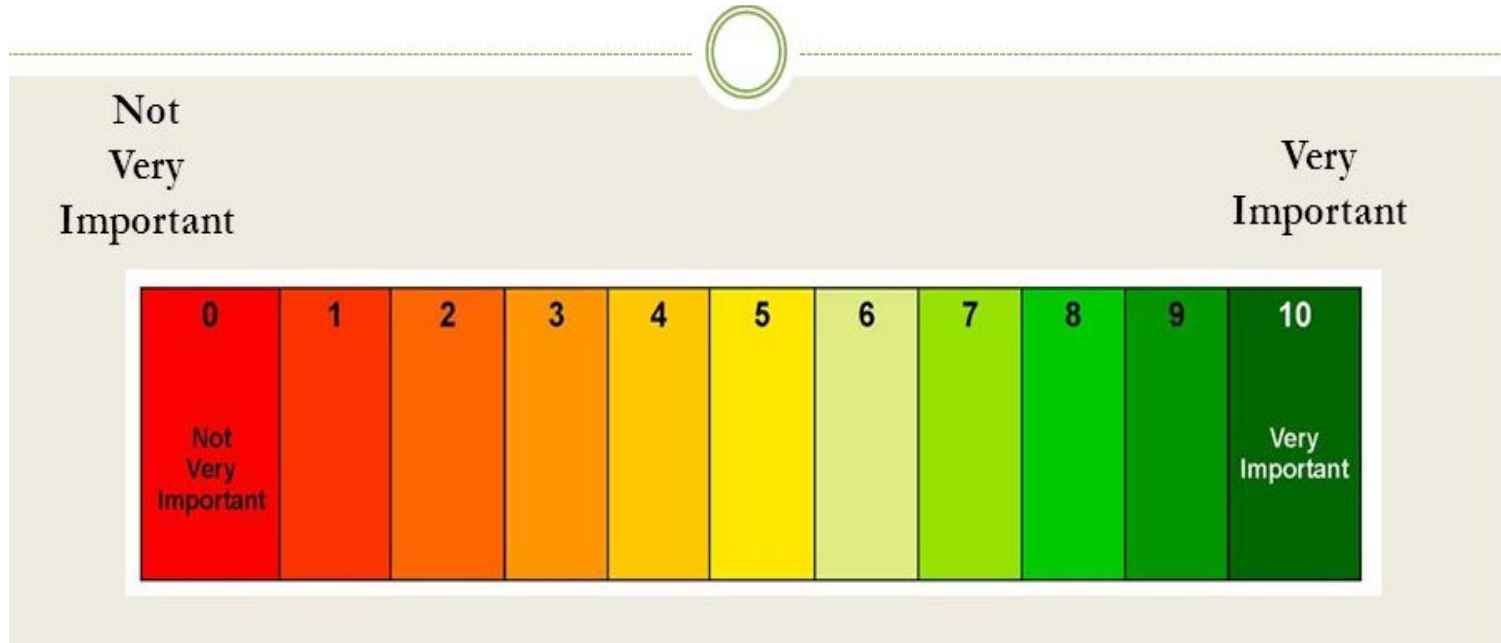
Think of new ideas

Transition from one theme to another

Plan their next steps

Feel more confident moving forward

Strategies for Evoking Importance



On a scale from 0 (not important at all) to 10 (extremely important), how important is it to you to change right now?

Strategies for Evoking Importance

- **Querying Extremes**

Imagine your child doesn't get the vaccine, what's the worst that can happen?

- **Looking back**

What do you remember about him getting three shots at once when he was a baby?

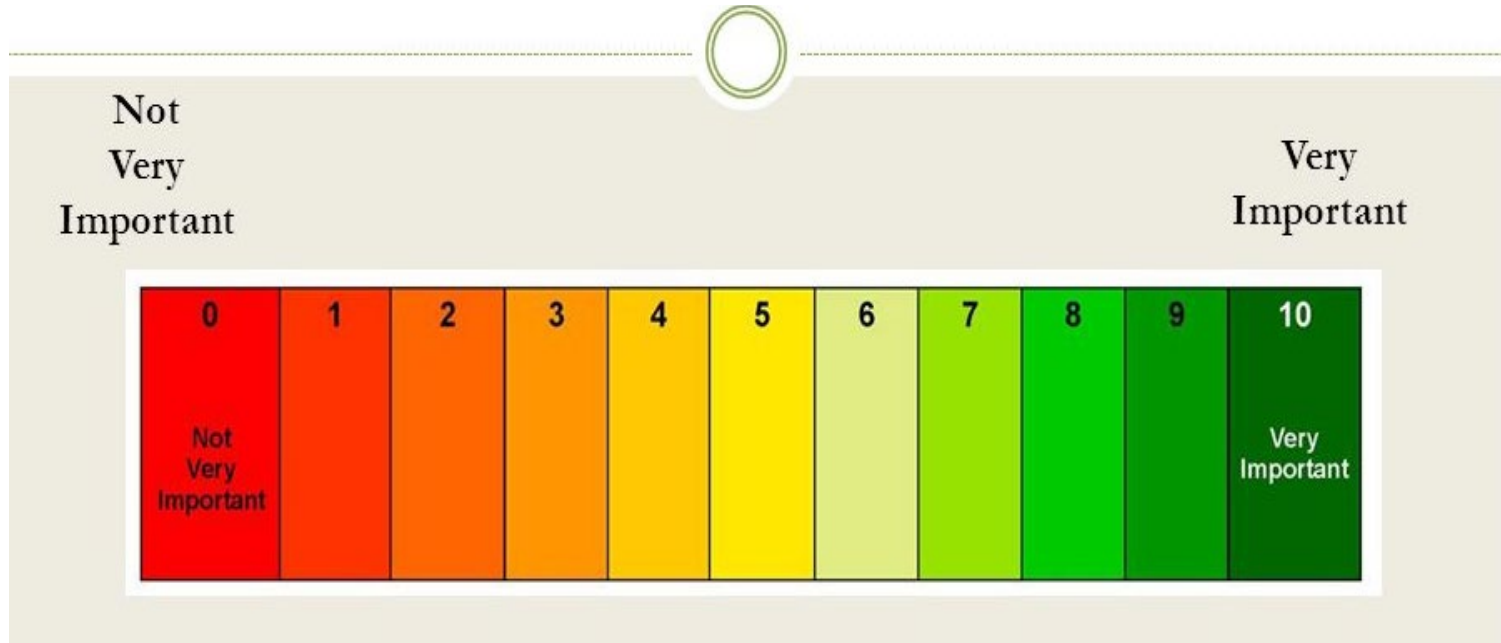
- **Looking forward**

If you decide on this vaccine, what do you hope will be the benefits to your daughter?

- **Exploring goals and values**

What are your goals for your child's health?

Strategies for Evoking Confidence



On a scale from 0 (not confident at all) to 10 (extremely confident), how confident are you that you can change right now?

Strategies for Evoking Confidence

- **Reviewing past successes**

In the past, what has helped you make up your mind when you felt uncertain?

- **Personal Strengths/supports**

What supports do you have that can help you make this decision?

- **Hypothetical Change**

Suppose you opt for the recommended vaccines today. Looking forward, what might you see as the benefits for her?

Signs of Readiness for Planning

- **Increased change talk**
- **Taking steps**
- **Diminished sustain talk**

I'm open to getting the vaccine

I'll talk about the HPV vaccine with my husband

I would like my child to be healthier.

Signs of Readiness for Planning

- **Resolve**

I really want to do all we can to prevent cancer.

- **Envisioning**

When the time comes for her to engage in intimate relationships, she will be protected

- **Questions about change**

What's the best way to explain this to my husband?

INCORPORATING MI INTO AN HPV VACCINE CONVERSATION



Suggested Conversation Style (Including Use of MI as Necessary)

Make a personalized, strong provider recommendation

“So I see that Mary has just turned 12. Since you’re here, this would be a great time for her to get those vaccines which are recommended at that age. These are Tdap, HPV, and Meningococcal. What questions, if any, do you have?”

Continuing the Conversation Using MI

The parent/caregiver responds in 1 of 3 ways:

1. “Yes” and the vaccine is given
2. “No” (resistance to the recommendation) OR
3. “Not Sure” (hesitancy/ambivalence about the recommendation)
 - Explore parents thought about the vaccine (evocation)
 - Reflect back on cons and/or pros of what is stated (express empathy, roll with resistance)
 - Engage in a two way conversation (collaboration) and provide an equal and common ground for beginning the discussion.
 - Support autonomy and parent’s decision

Continuing the conversation using MI

The provider begins the conversation with an exploration of the parent's thoughts about the vaccine (*evocation*).

“It seems like you may have some questions or concerns about the vaccines Mary is due today. I'd love to hear what you are thinking. Would it be ok if we discussed those?”

The provider reflects back what the parent is saying to convey understanding (*empathy*) and summarizes what has been heard before offering, with permission, additional information. The provider also supports *autonomy*.

“You have concerns about the side-effects of the HPV vaccine given that Lisa has had reactions to other shots. That's understandable. May I share some information that might ease some of your concerns? Ultimately, however, the final decision is yours.”



Closing the Conversation the MI-Way: Planning

Summarize all you have heard and then ask the key open-ended question: *“So where are you now?”*

Parent is ready now: Vaccinate today

Parent is ready but not now: Pick a date and schedule the first appointment

Parent is still unsure: They may still need more time to think things over.

Parent does not want the vaccine: Reinforce autonomy and encourage them to reconsider in a year or two since the vaccine can be given up to age 26.

In Summary

This style allows parents to feel heard and respected

When parents don't feel pressured they are more likely to explore openly and honestly their thoughts about the vaccine.

May lead parents to see the situation in a new way and to form different conclusions.

Whole process takes only 3-5 minutes!

Motivational Interviewing

PRACTICE SESSIONS



The Hesitant Parent Role Play Directions

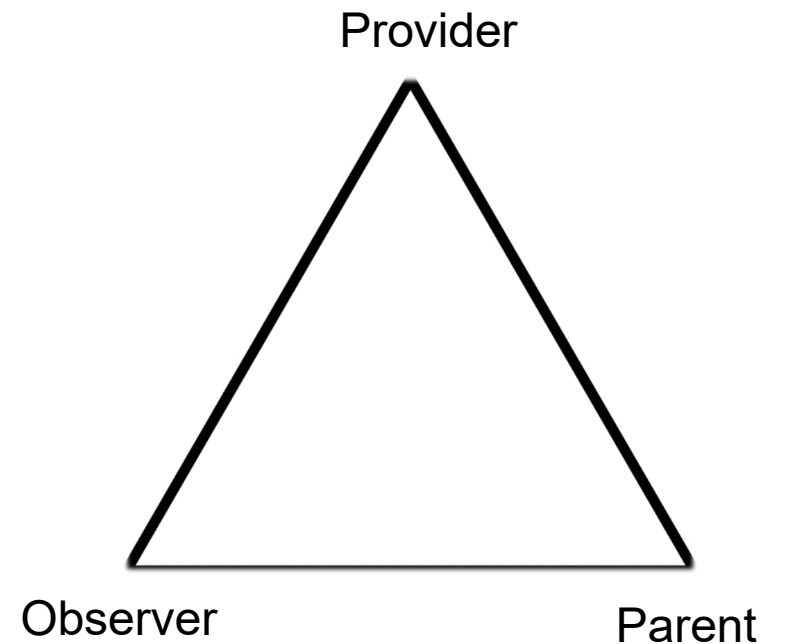
Provider- Make the presumptive bundled recommendation. Pay close attention to the parent's disposition. Use your MI skills to engage the patient.

Observer-Pay careful attention to what the provider says and does. Note any changes in the parent's motivation to accept. Which MI Skills were used during the interaction?

Parent-You are hesitant because of an internal conflict but you are not resistant. If the provider becomes overly directive, or does not demonstrate a desire to understand, your motivation will go down. If the provider asks open-ended questions, listens and affirms, your motivation will go up.

The Hesitant Parent Role Play Directions

1. Role play- 15 minutes
2. Observer feedback- 5 minutes
3. Switch Roles
4. You have 60 minutes total for this activity.



RESOURCES FOR HEALTHCARE PROVIDERS



CDC Website

www.cdc.gov/hpv

Human Papillomavirus (HPV)

[f](#) [t](#) [in](#) [+](#)



HPV is a common virus that can cause certain cancers later in life. Protect your child from these cancers with HPV vaccine at age 11–12 years.

HPV Vaccine for Your Child



HPV is a common virus that can lead to certain types of cancer later in life. Getting your 11-12 year-old child two doses of the HPV vaccine can prevent these cancers.

[Learn more about HPV vaccine for your child](#)

HPV Vaccine Safety



HPV vaccination is very safe and effective in protecting against HPV and the cancers it causes.

[Learn more about HPV vaccine safety](#)

Cancers Caused by HPV



HPV infections can cause certain cancers in men and women. Learn more about cancers caused by HPV.

[Learn more about HPV cancers](#)

#HowIRecommend Videos

[HowIRecommend Vaccination Video Series | CDC](#)


The screenshot shows the CDC website's page for the #HowIRecommend Vaccination Video Series. At the top left is the CDC logo with the text "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives, Protecting People™". To the right is a search bar and a dropdown menu for "Vaccines site". Below the header is a green banner with the text "#HowIRecommend Vaccination Video Series". Underneath is a sub-header "Vaccines" and social media icons for Facebook, Twitter, LinkedIn, Email, and YouTube. The main content area features a large image of a doctor talking to a patient. To the left of the image is a text box with the heading "#HowIRecommend" and the text "When it comes to vaccination, parents trust your expertise more than anyone else. Watch CDC's newest video now." Below this text is a green button that says "Watch Videos". To the right of the image is a paragraph of text: "The #HowIRecommend video series features short, informative videos from clinicians like you. These videos explain the importance of vaccination, how to effectively address questions from parents about vaccine safety and effectiveness, and how clinicians routinely recommend same day vaccination to their patients." At the bottom of the page are six teal buttons, each with a video icon and a category name: "Childhood Vaccination Videos", "Adolescent Vaccination Videos", "Adult Vaccination Videos", "Maternal Vaccination Videos", "Flu Vaccination Videos", and "Videos by Subject or Clinician Type".

“Can I Ask You a Question?” Videos


[Pediatricians Answer Questions About the HPV Vaccine | CDC](#)

Human Papillomavirus (HPV)

In CDC's new video series, real pediatricians use their expertise to answer parents' questions about the HPV vaccine and why it's important for preventing cancer.




Why Do Kids Need HPV Vaccine at Ages 11 and 12?




As with any vaccine, it's best to give HPV vaccine earlier rather than later. See why it's important for 11-12 year olds to be vaccinated. Watch this video in Spanish [here](#).

Do Boys Need HPV Vaccine?



Boys can and do get HPV infections, just like girls, and they can cause certain types of cancer. See why boys need the vaccine.

Why Do Kids Need Protection Against HPV?



HPV infections can lead to cancers later in life. See why it's important to protect your child long before they are ever exposed to the virus.

Keep All Staff on the Same Page

- **Align communication with mission**
 - Give staff a cancer-prevention mission: HPV vaccination prevents cancer-causing infections & precancers
 - Reinforce HPV vaccination as the norm, just like parents chose to vaccinate their child as infants
 - All staff should use clear, consistent messages
 - Share key points
 - Use the **Talking to Parents** handout
 - Educate staff about HPV vaccine recommendations including schedule, administration, storage, and handling

The image displays two CDC handouts. The top handout, titled "Talking to Parents About Infant Vaccines," addresses common parental concerns such as vaccine safety, timing, and the benefits of early vaccination. The bottom handout, titled "Talking to Parents about HPV Vaccine," provides information on the HPV vaccine's role in cancer prevention, its safety, and the importance of timely administration. Both handouts feature a Q&A format with colorful callout boxes and the CDC logo.



Keep All Staff Up To Date on Recommendations and Best Practices

- Multiple education products available free through the CDC website:
 - Immunization courses (webcasts and online self-study)
 - Webinars
 - You Call the Shots self-study modules
 - Continuing education available

Immunization Education & Training

[CDC A-Z INDEX](#)

Education and Training Home

[You Call The Shots](#)

[Current Issues in Immunization NetConferences \(CIINC\)](#)

[Immunization Courses](#) +

[Continuing Education](#)

[Pink Book Webinars](#)

[Patient Education](#)

[Quality Improvement Projects](#)

Related Link

- [Vaccines & Immunizations](#)
- [VIS](#)
- [ACIP Recommendations](#)
- [Schedules](#)

[Back to Vaccines Home](#)

CDC offers numerous education and training programs for healthcare personnel. A variety of topics and formats are available. All are based on vaccine recommendations made by the Advisory Committee on Immunization Practice (ACIP).

Physicians, nurses, health educators, pharmacists, and other healthcare professionals are invited to apply for continuing education credits/contact hours, when available.



YOU CALL THE SHOTS
Series of modules that explain the latest recommendations for vaccine use that include self-test practice questions

CURRENT ISSUES IN IMMUNIZATION NETCONFERENCE (CIINC)
Live, 1-hour presentations via conference call including question and answer session

IMMUNIZATION COURSES
Webcasts, and self-study education and training programs for healthcare personnel

PATIENT EDUCATION
Educational materials that complement personal education and advice for patients

Expert Commentary

Running Time: 5:07 mins
Date Released: 06/27/2011 [CDC Commentary - Make No Mistake: Vaccine Administration, Storage, and Handling](#)

Dr. Andrew Kroger offers 7 steps to help prevent vaccine administration errors and vaccine storage and handling errors.

Ensure ALL Your Patients are Protected

- **Immunization Quality Improvement for Providers (IQIP) provides strategies and technical assistance for VFC providers**
 - Check with health department and professional organization for immunization quality improvement program that works for your practice
- **Know your vaccination rates**
 - Clinic-level rates are great
 - Individual clinician rates are even better
- **Finding and monitoring your vaccination rates**
 - Electronic Health Records (EHR)
 - Immunization Information Systems (IIS)



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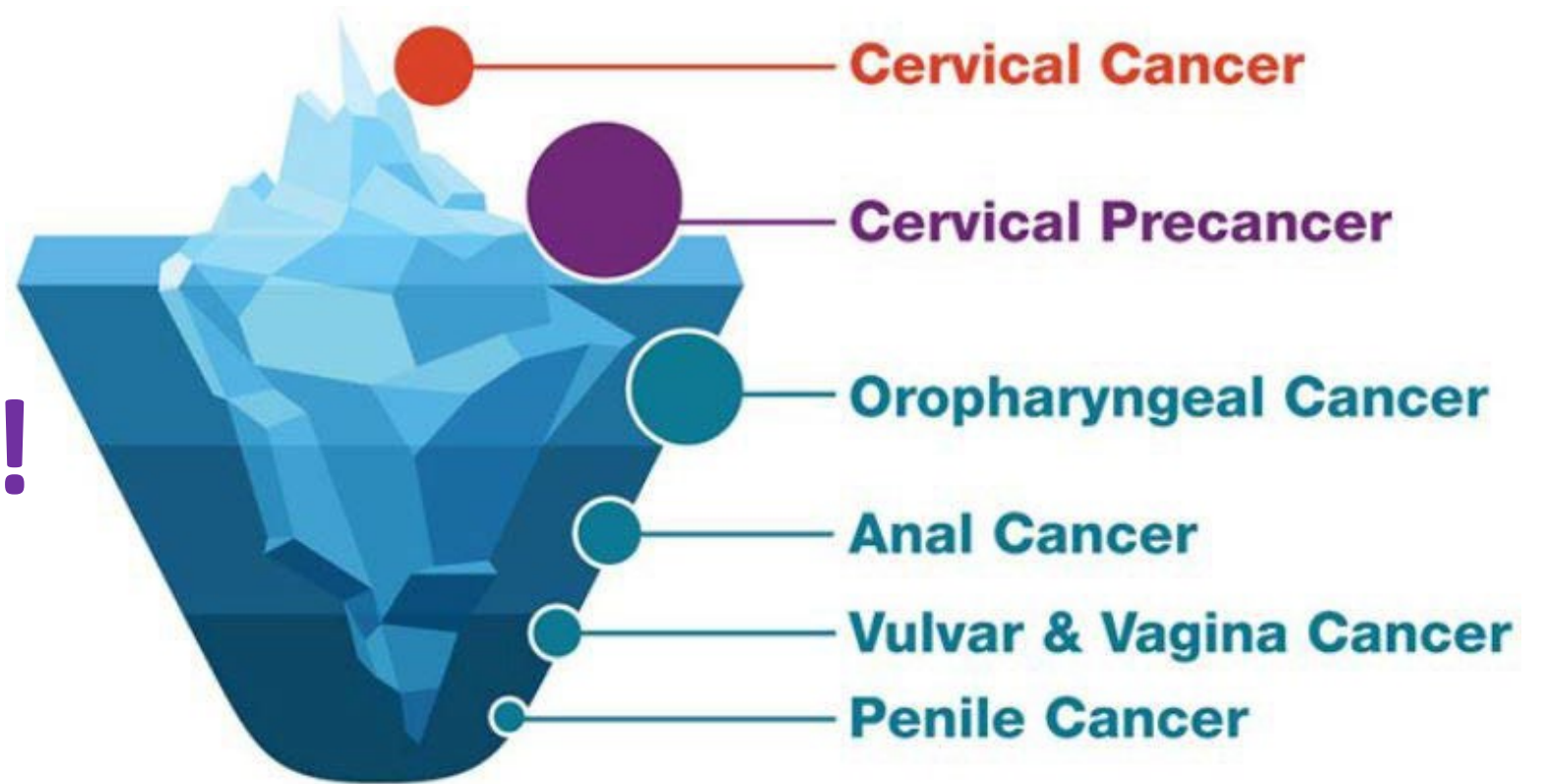
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HPV VACCINE IS CANCER PREVENTION

AND

YOU

ARE THE KEY!



MI Training for the COVID-19 Vaccine

<https://www.hdilearning.org/courses/motivational-interview-training/>



PROTECTING AMERICA'S SAFETY, HEALTH, AND SECURITY

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

