

HPV Vaccine is Cancer Prevention: CDC's Clinician Engagement Initiative

**Centers for Disease Control and Prevention
National Center for Immunization and Respiratory Diseases**

Thursday, April 30, 2015

11:00 AM – 12:00 PM ET



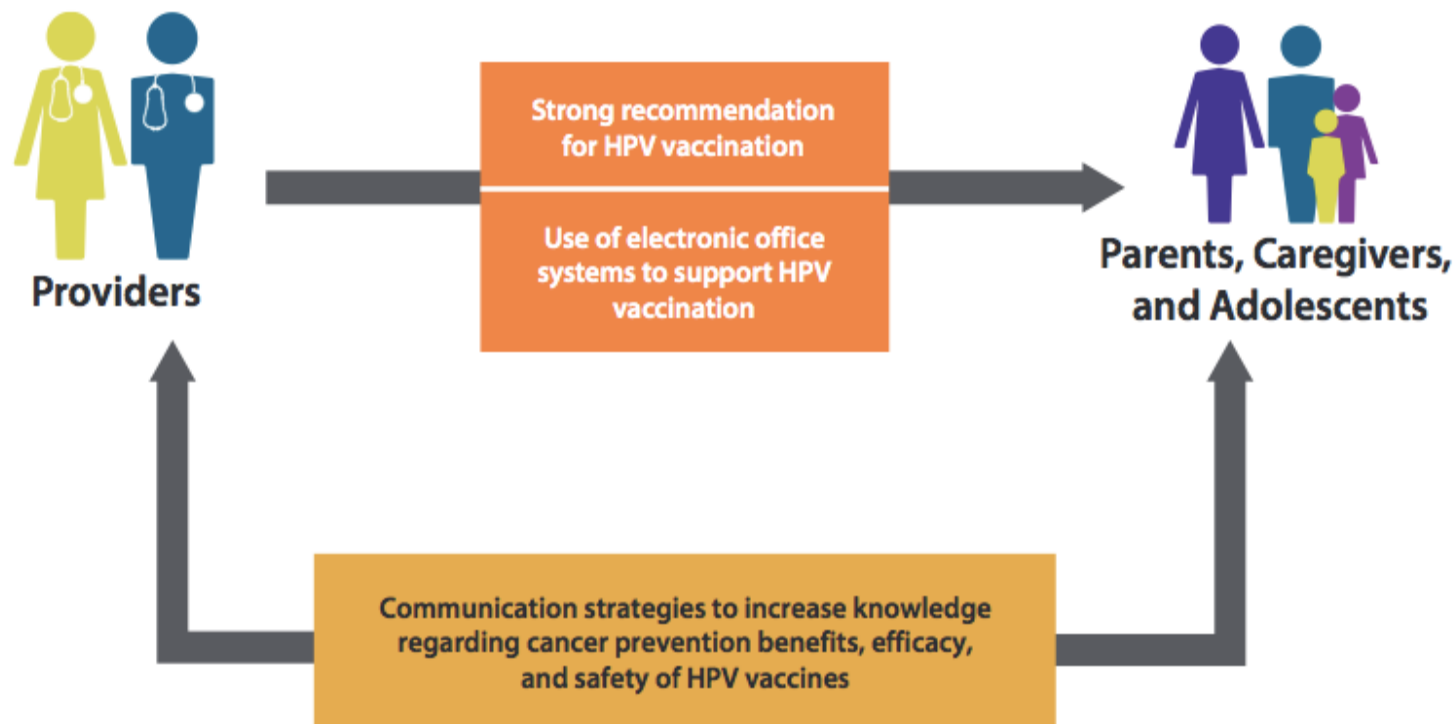
Centers for Disease
Control and Prevention
National Center for Immunization
and Respiratory Diseases

Webinar Logistics

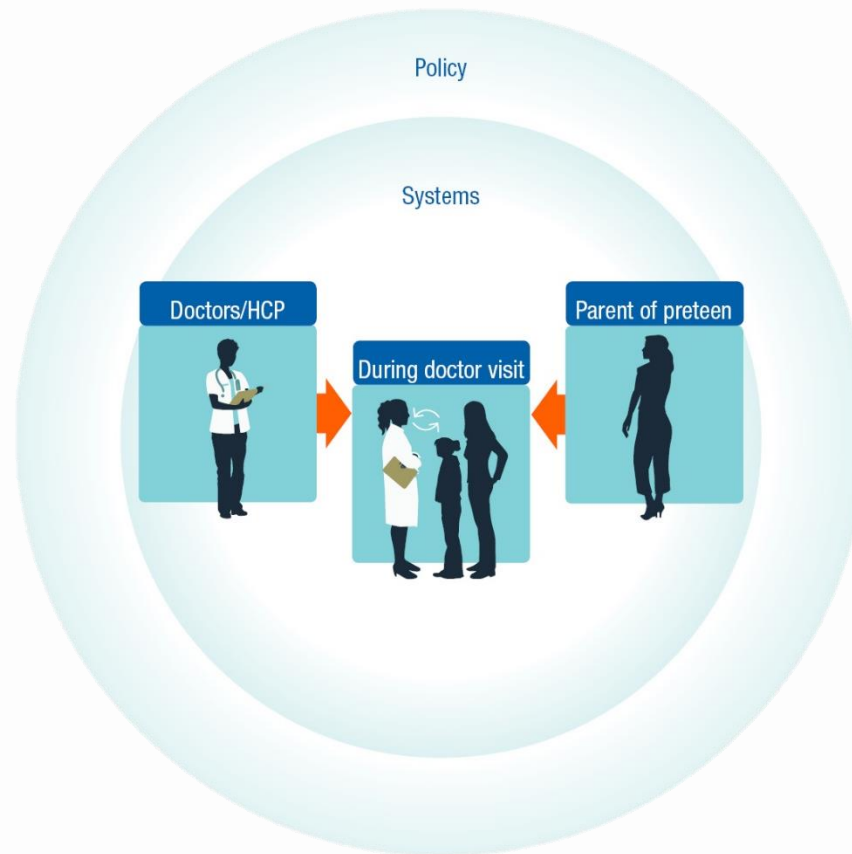
- **Audio:** All participant lines are muted.
- **Webinar Recording:** We are recording this webinar. We will notify all participants when the recording and presentation are available online.
- **Q&A Session:** Type your question into the “Questions” panel. We will read selected questions out loud for the presenters to answer.

Welcome Remarks – Jill Roark, MPH

How to accelerate HPV vaccine uptake in the US.



How and when communications can impact the HPV vaccine decision process



Behavioral objectives and desired outcomes

- **Clinician:**

- ☐ **Objective:** Clinicians begin the vaccine discussion with all parents of patients aged 11 or 12 years by saying, “” *Your child needs 3 vaccines today: meningococcal, HPV, and Tdap vaccines.*
- ✓ **Outcome:** HPV vaccination coverage rates for 13 year olds improve for individual doctors, with each reaching at least 80% coverage for HPV vaccine series initiation with their patients.

Behavioral objectives and desired outcomes

- **Parent of Preteen:**

- ❑ **Objective:** Parents of preteens accept recommendation to initiate HPV vaccine series for their preteen in time to complete series by age 13 yrs.

- ✓ **Outcome:** Preteens will start HPV vaccine series by age 11 or 12 years, and in time to complete series before age 13 years

Behavioral objectives and desired outcomes

- **During Visit:**

- ☐ **Objective:** Improve the conversation between clinicians, parents, and preteens about adolescent immunization, including HPV vaccination.
- ✓ **Outcome:** Every 11 and 12 year old initiates the HPV vaccine series on the same day they receive Tdap and/or meningococcal vaccines.

HPV Vaccine is Cancer Prevention: Three Key Pillars

- Commit to the Cause
- Know the Facts
- Lead the Conversation

Presenters

- **Benard Dreyer, MD, FAAP**
2015 President-Elect
American Academy of Pediatrics
- **Rebecca B. Perkins MD, MSc, FACOG**
Boston University Medical Center
- **Sharon G. Humiston, MD, MPH, FAAP**
Children's Mercy Hospitals and Clinics

The AAP Commitment to HPV Vaccination

- The AAP recommends HPV vaccine at 11 to 12 years of age.
- Parents trust their pediatrician's recommendation.
- Today you will hear about strategies to improve HPV vaccination acceptance, including making a bundled recommendation such as “Today your child is due for 3 vaccines: HPV, Tdap and meningococcal.”
- We have an opportunity to prevent HPV related cancers. NOW is the time to protect our patients.



HPV Vaccination from a Gynecologist's Perspective

Rebecca B. Perkins MD, MSc

Associate Professor of Obstetrics and Gynecology

Boston University School of Medicine/ Boston Medical Center

Thursday, April 30, 2015

www.aap.org/hpvtoolkit

Disclosure Information for Dr. Perkins

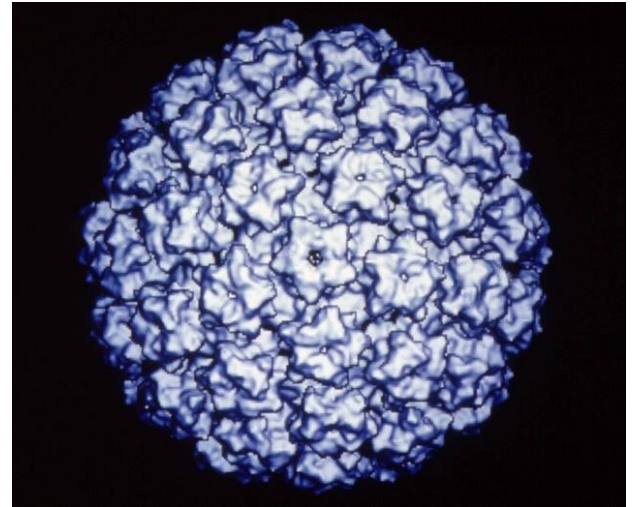
- ➡ I have no relationships to disclose.
- ➡ I may discuss the use of vaccines in a manner not approved by the U.S. Food and Drug Administration.
 - ➡ But in accordance with ACIP recommendations.

I want to convince you:

- 1. HPV vaccination is worth your *passionate* advocacy.**
- 2. HPV vaccine is worth giving long *before* infection.**
- 3. Your recommendation can make all the difference to the family's acceptance.**

What is HPV?

- ▶ A virus that infects human skin and mucosal surfaces
- ▶ Transmitted easily by touching
- ▶ >80% of people are exposed during their lifetime
- ▶ Classified as a carcinogen



HPV

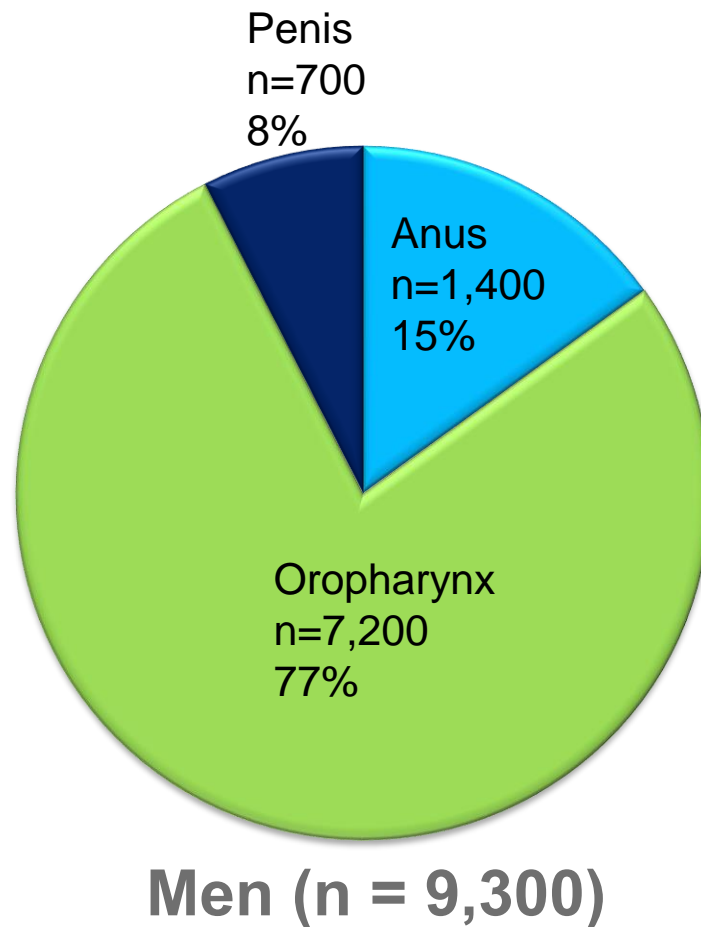
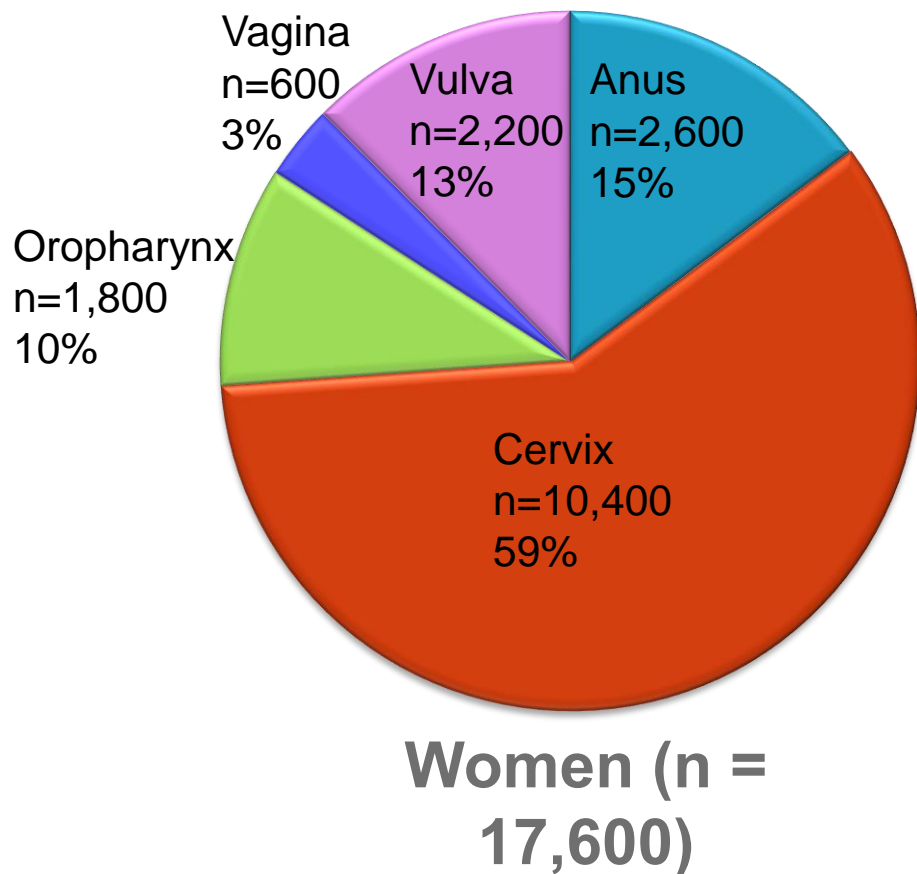
How much disease does HPV cause?

- ➡ 3 million Americans seek medical care for HPV each year
- ➡ 27,000 develop HPV-related cancers
- ➡ HPV currently causes as many deaths annually as measles did in the pre-vaccine era

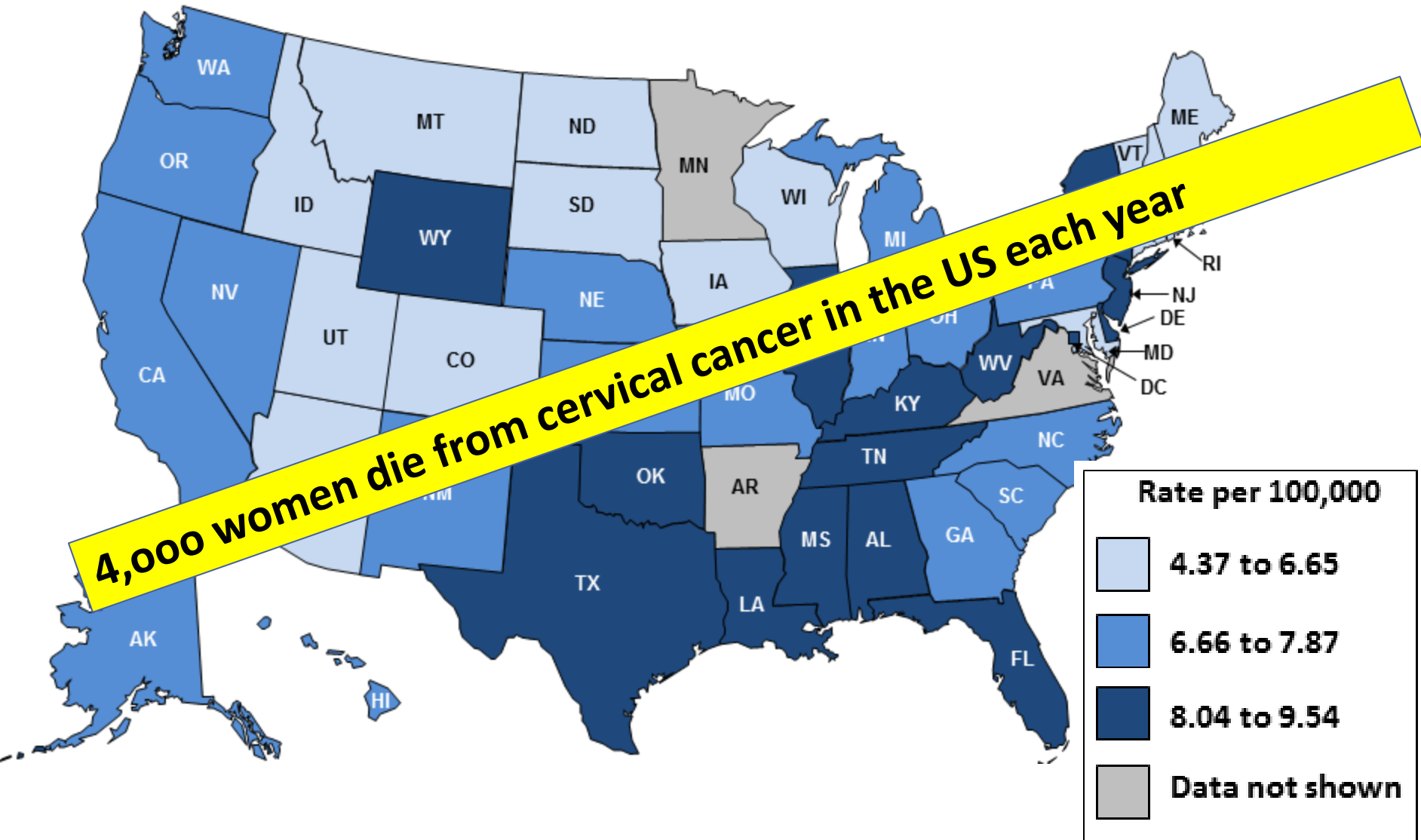
Why do we vaccinate?

- ➡ To prevent HPV-associated cancer
- ➡ Current screening is NOT enough to prevent HPV-associated cancers

Average Number of New Cancers Probably Caused by HPV, by Sex, United States 2006-2010



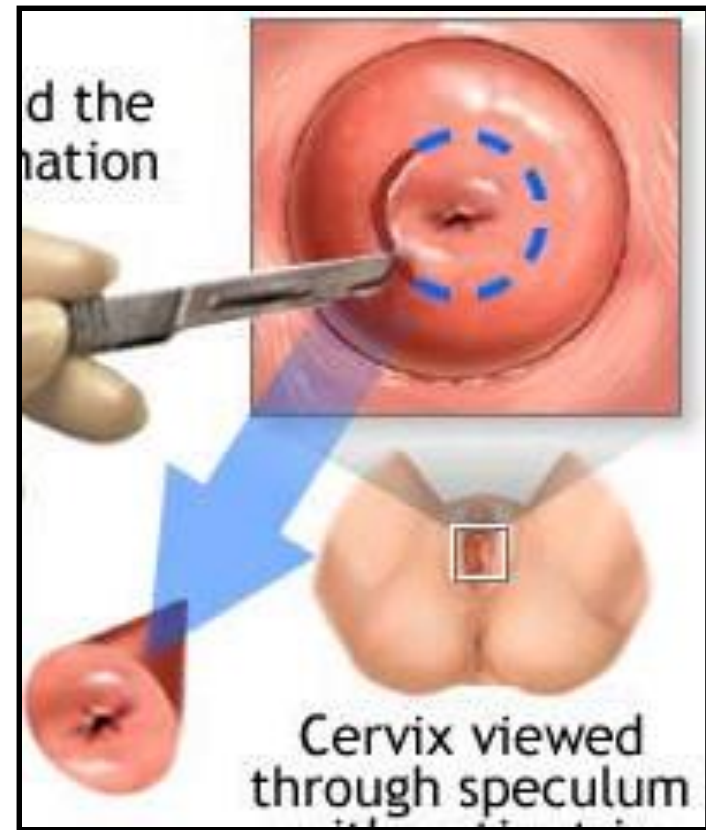
HPV-Associated Cervical Cancer Incidence Rates by State, United States, 2006-2010



HPV infection may cause preterm delivery

- ➡ 330,000 women undergo cone/LEEP procedures every year
- ➡ LEEP/HPV infection associated with obstetric morbidity
 - ➡ Preterm delivery
 - ➡ Preterm rupture of membranes
 - ➡ Low birth weight
 - ➡ *Long term developmental outcomes, neonatal intensive care costs*

Why remove part of the cervix, when you can get a shot in the arm instead?

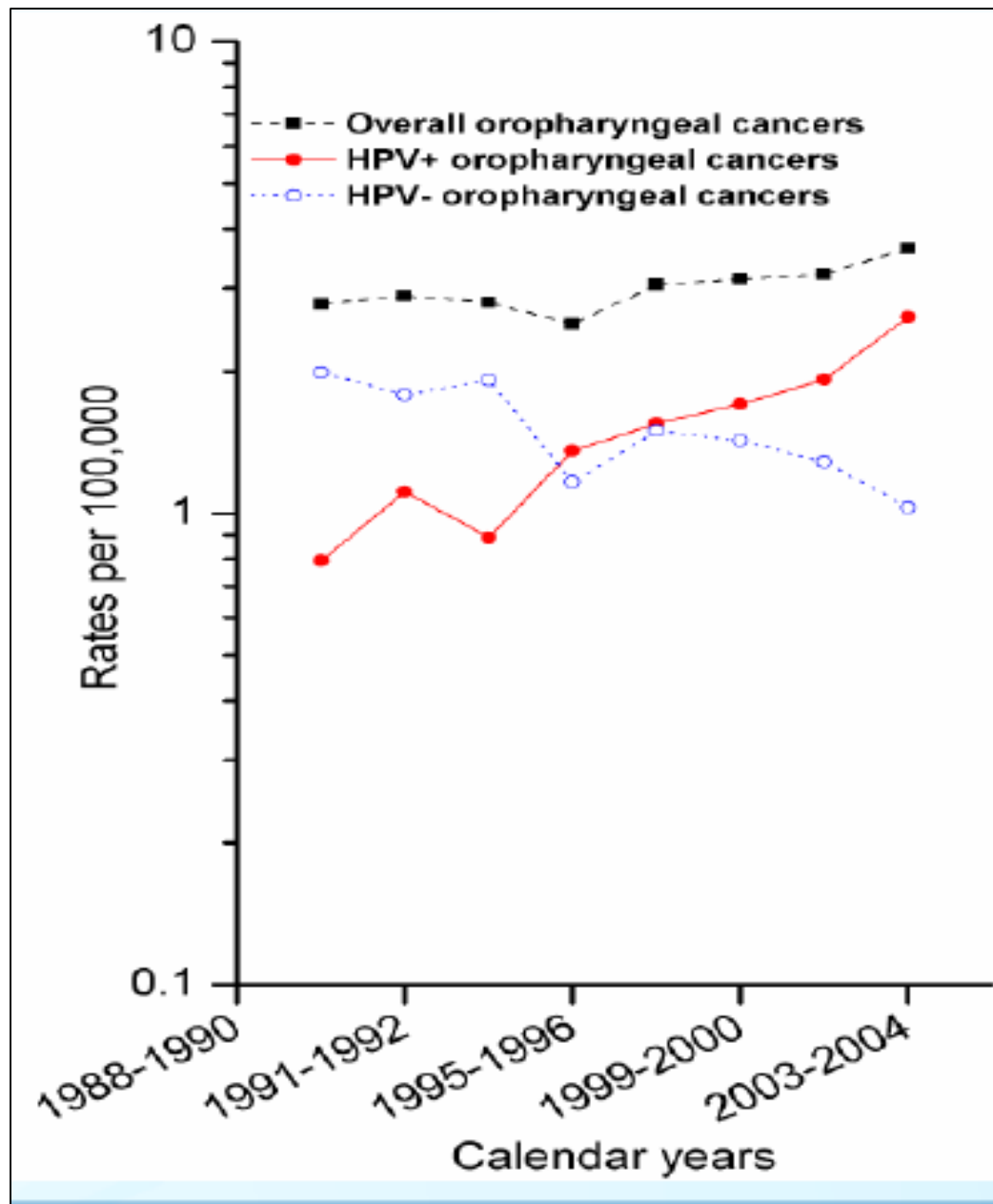


Why do we want to protect boys from HPV?

Oropharyngeal cancers more common in men

No screening test for oropharyngeal cancers

HPV-related
tongue and tonsil
cancers have
more than
doubled in the
past 20 years

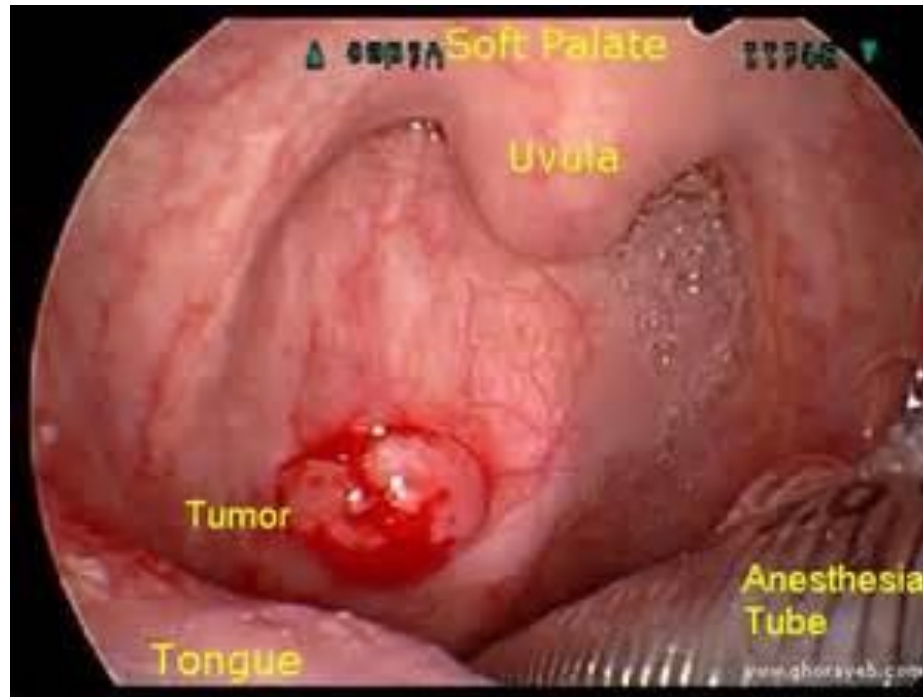


Oropharyngeal Cancer

11,000 cases annually, 7,000 in men

Will be more common than cervical cancer by 2020

J Clin Oncol 29:4294-4301. © 2011 by American Society of Clinical Oncology



<http://www.ghorayeb.com/OropharyngealCarcinoma.html>

RISK OF HPV ACQUISITION

*Almost everyone will be
exposed to HPV*

Infections may be lifelong

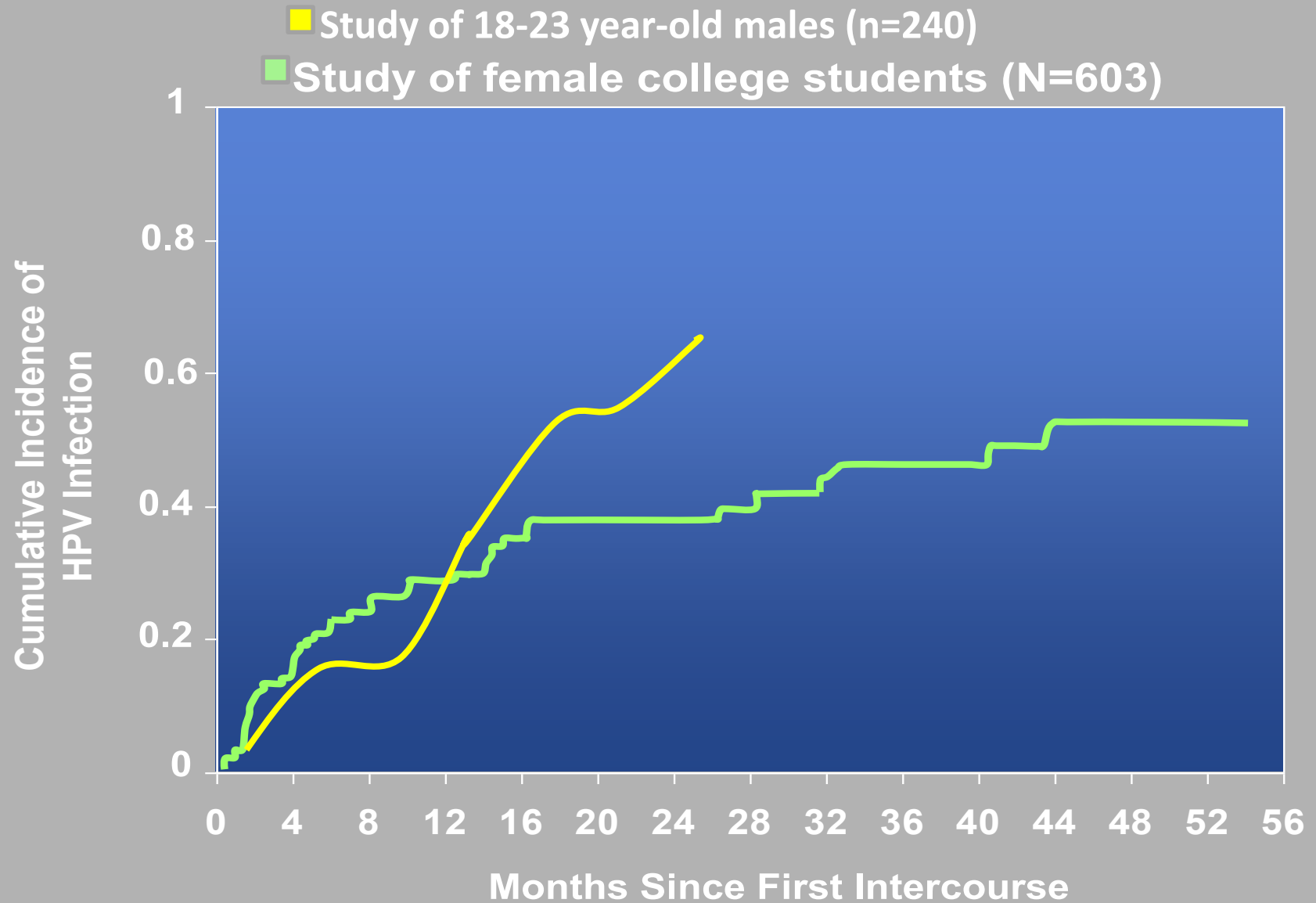
HPV Transmission

- ➡ 80% of people will be infected with HPV
- ➡ Most common route is sexual intercourse
 - ➡ genital-genital, anal-genital, oral-genital, manual-genital
- ➡ Nearly 50% of high school students have already engaged in sexual (vaginal-penile) intercourse
 - ➡ 1/3 of 9th graders and 2/3 of 12th graders have engaged in sexual intercourse
 - ➡ 24% of high school seniors have had sexual intercourse with 4 or more partners

HPV is found in virgins

- ➡ Study examined the frequency of vaginal HPV and the association with non-coital sexual behavior in longitudinally followed cohort of adolescent women without prior vaginal intercourse
- ➡ HPV was detected in 46% of women prior to first vaginal sex
- ➡ 70% of these women reported non-coital behaviors that may in part explain genital transmission

Rapid acquisition of HPV following sexual debut



From Winer RL, Lee S-K, Hughes JP, Adam DE, Kiviat NB, Koutsky LA. Genital human papillomavirus infection: incidence and risk factors in a cohort of female university students. *Am J Epidemiol.* 2003;157:218–226. Reprinted with the permission of Oxford University Press. Partridge, JID 2007

HPV may never go away

Infection remains dormant for decades, then reactivates later in life as immune system declines

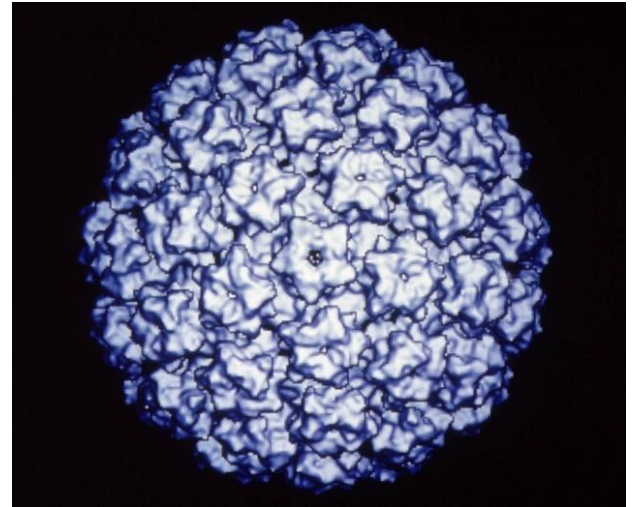
- ➡ 700 women aged 35-60
- ➡ Only 13% of incident infections attributed to new sexual partners
- ➡ 85% of incident infections occurred during periods of abstinence or monogamy

Early vaccination can prevent initial infection

HPV VACCINE SAFETY

HPV Prophylactic Vaccines

- ➡ No virus in the vaccine, so cannot cause cancer
- ➡ Recommended for all boys and girls ages 11-12
- ➡ Catch-up vaccination ages 13-26 for girls, 13-21 for boys, 22-26 for MSM or HIV+ men



HPV VLP

HPV vaccine is safe

- ➡ 170 million doses worldwide (Europe, Australia)
- ➡ Most common adverse events reported were considered mild
- ➡ For serious adverse events reported, no unusual pattern or clustering that would suggest that the events were caused by the HPV vaccine
- ➡ These findings are similar to the safety reviews of MCV4 and Tdap vaccines
- ➡ 57 million doses of HPV vaccine distributed in US since 2006

HPV vaccine long-term safety data

- ➡ Kaiser-Permanente: 190,000 females who received \geq 1 dose of HPV vaccine August 2006 and March 2008
- ➡ No increase in emergency room visits, hospitalizations, or any of 200 categories of illnesses
- ➡ Register based cohort studies, Denmark and Sweden, 2006-2010 and 2006-20131.
- ➡ Study 1: 997,585 girls
- ➡ Study 2: 3,983,824 girls and women
- ➡ No increase in auto-immune disease, thromboembolic disease, neurologic disease

Arnheim-Dahlström, BMJ, Oct 2013

Klein NP, Archives of Pediatrics and Adolescent Medicine Oct 2012

Scheller. *JAMA*. 2015

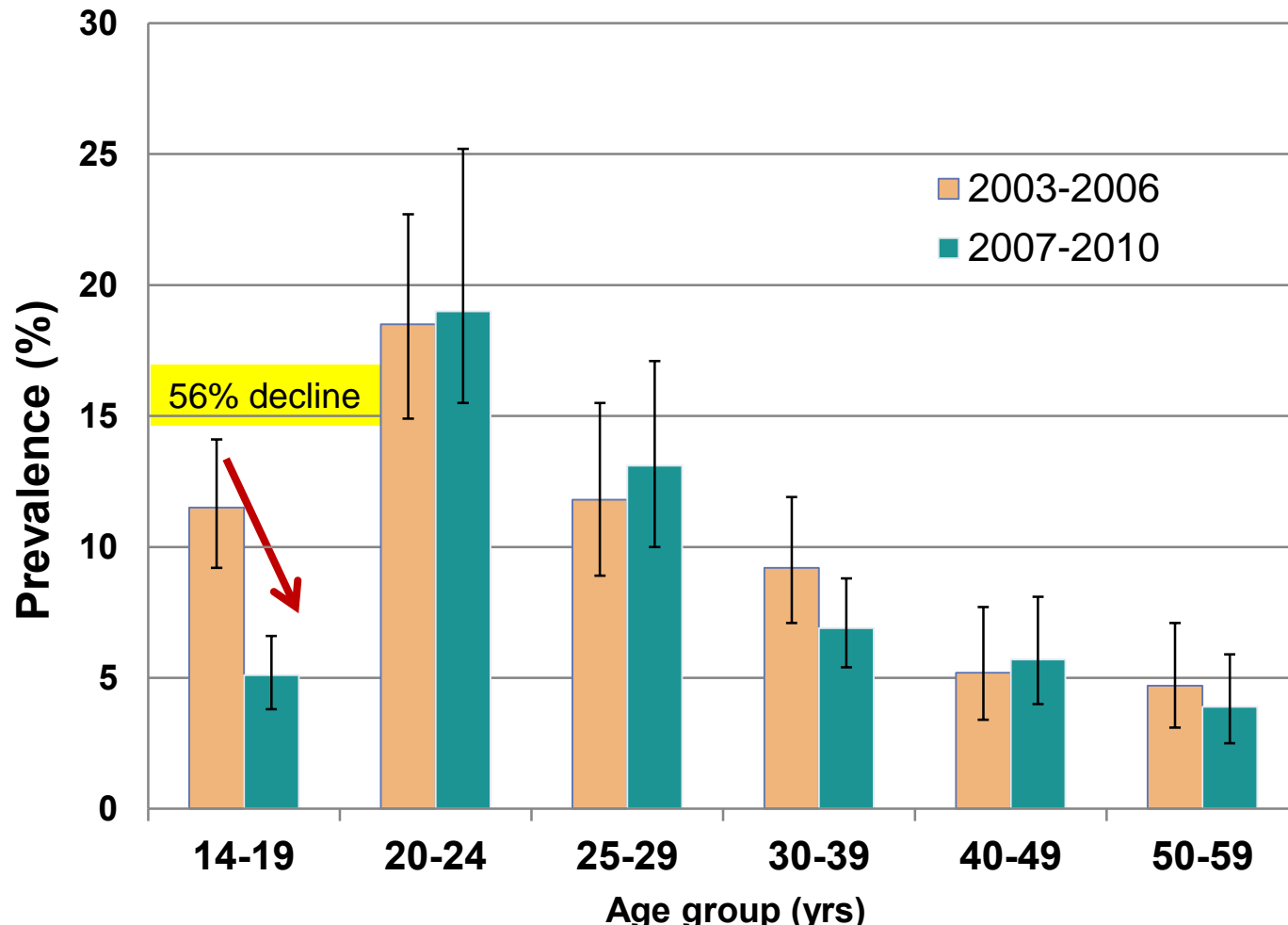


HPV VACCINE EFFECTIVENESS

HPV Vaccine Impact: US

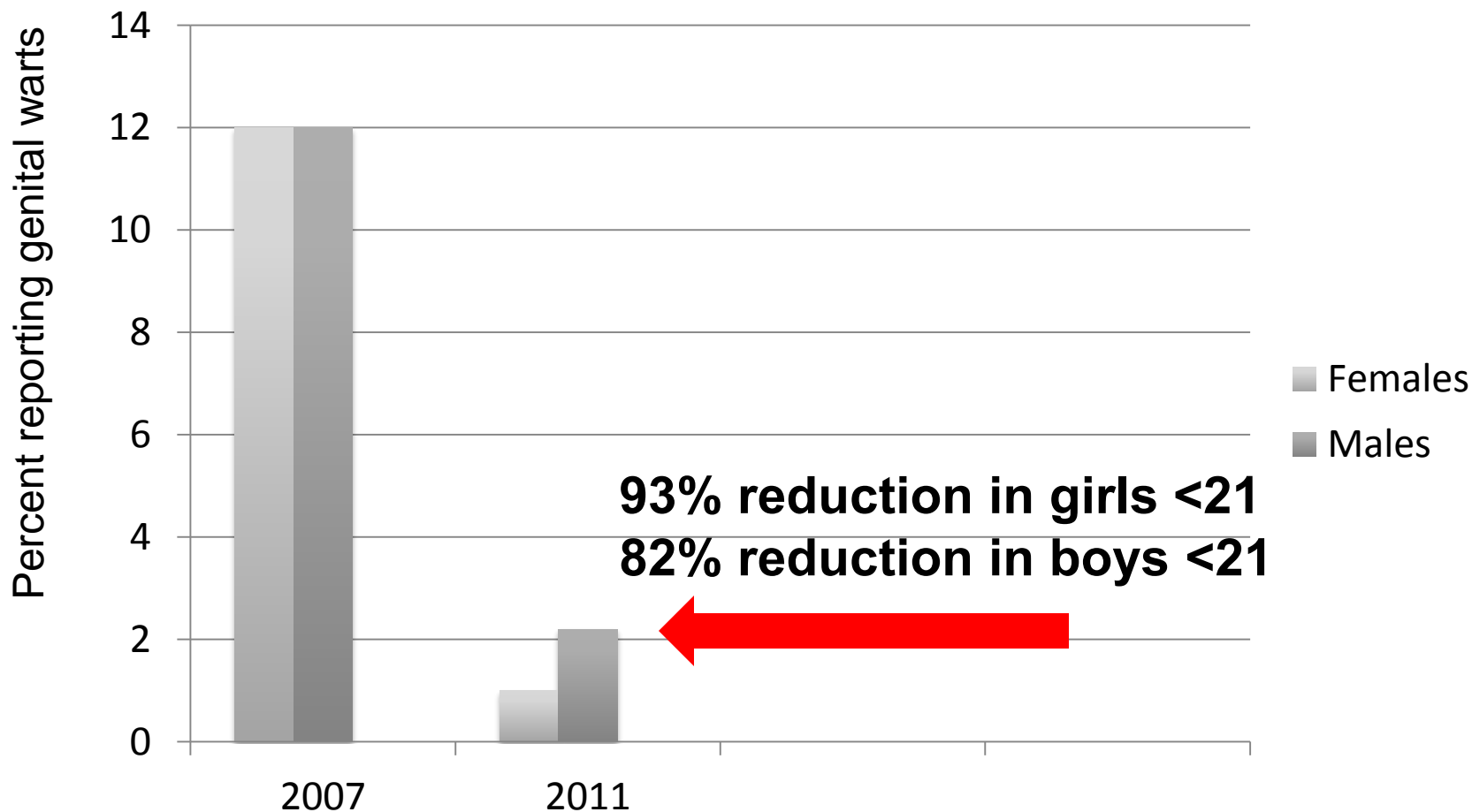
33% of girls received 3 vaccines

Prevalence of vaginal HPV decreased 56%



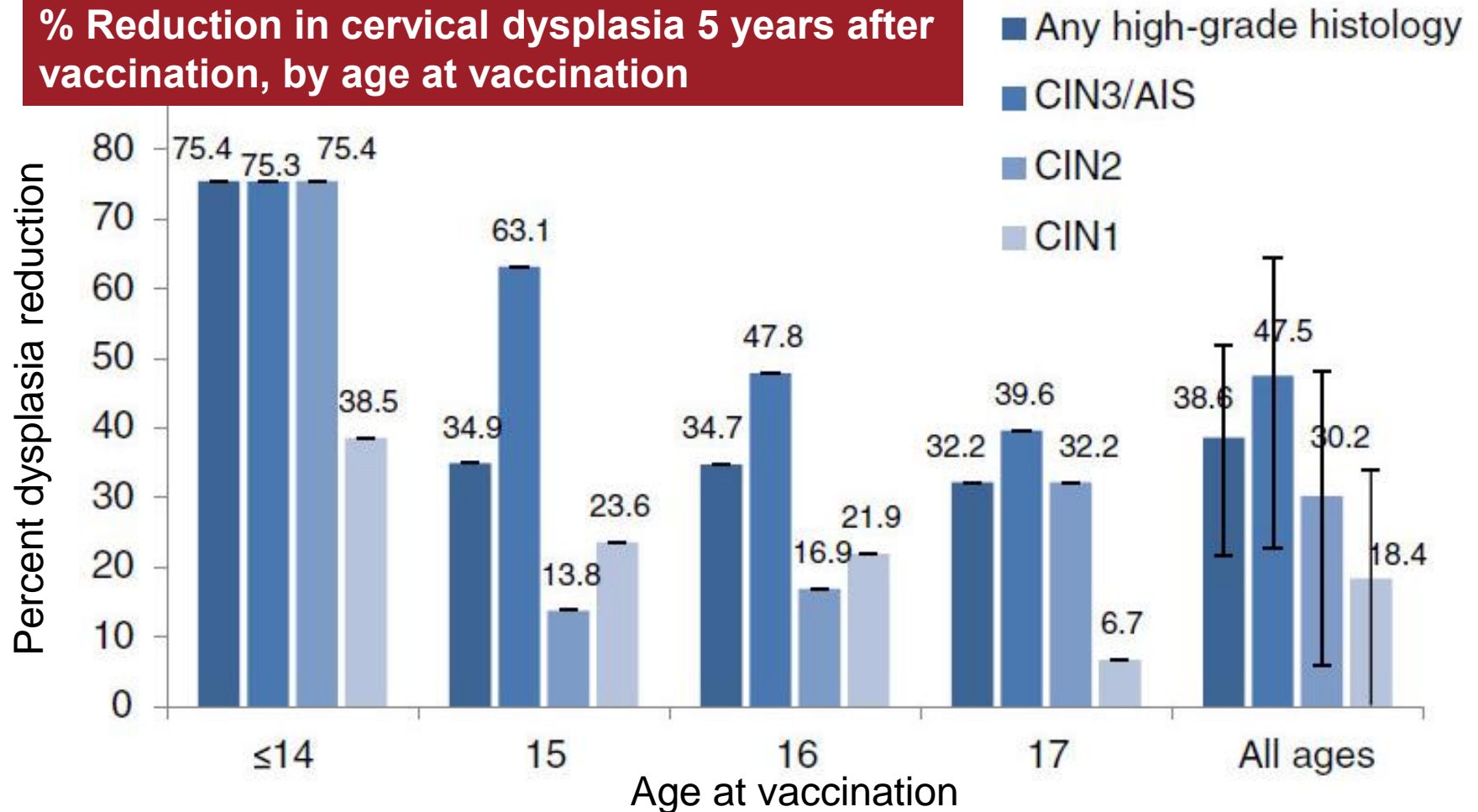
Markowitz, et al. JID 2103 *weighted prevalence

Near-disappearance of genital warts in Australia following introduction of HPV vaccination 70% vaccination rate



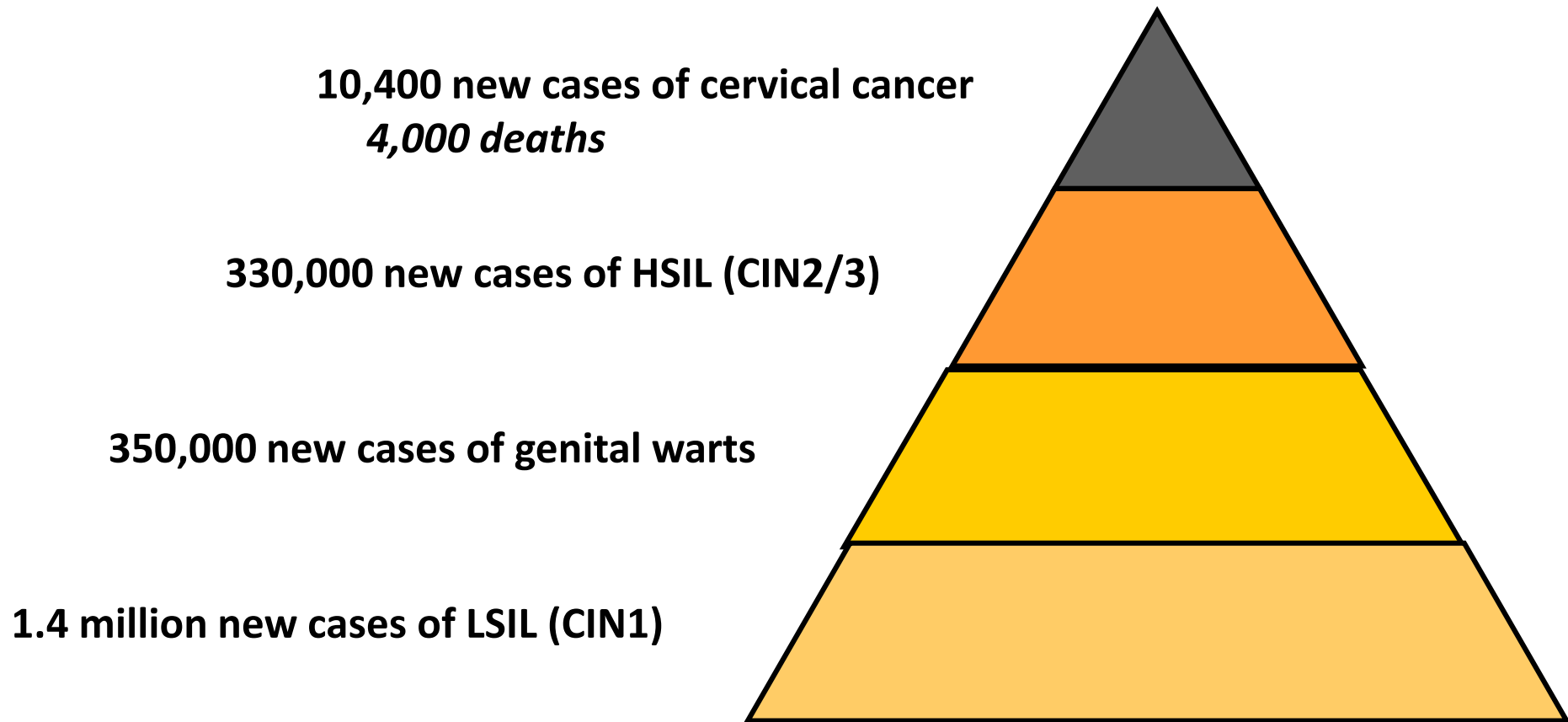
Vaccination by age 14 is twice as effective against cervical dysplasia

% Reduction in cervical dysplasia 5 years after vaccination, by age at vaccination

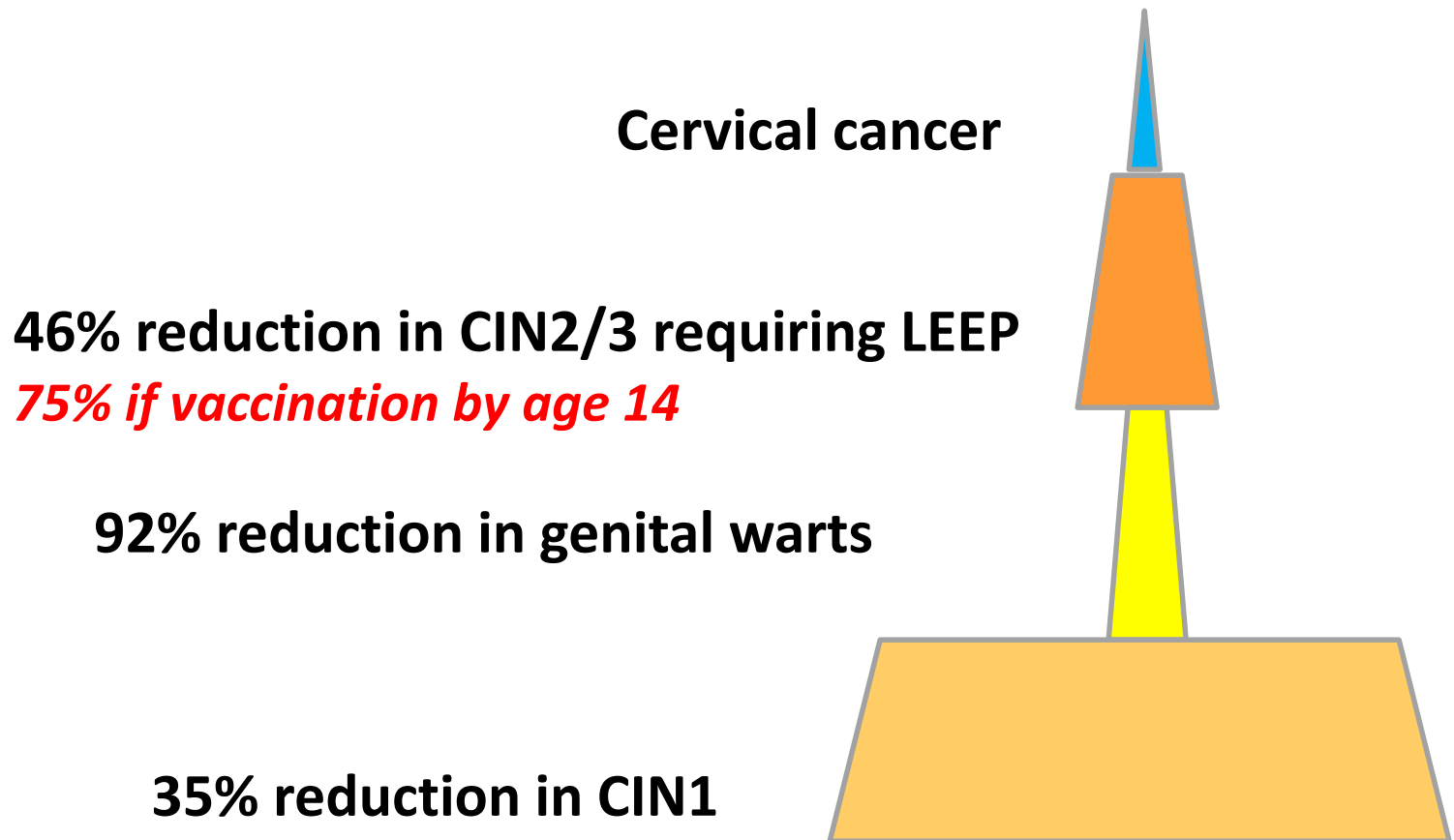


Gertig DM, BMC Med 2013

Without vaccination, annual burden of genital HPV in U.S. females: 3 million cases, \$7 billion



Extrapolating the prior pyramid with projections of vaccine efficacy based on Australian data



Impact of HPV Vaccine on Oral HPV Infection

- ➡ 7,466 women 18-25 years of age randomized to receive HPV vaccine or hepatitis A vaccine
 - ➡ 5,840 provided oral specimens at the final 4-year study visit
 - ➡ Oral prevalence of HPV 1.7%
- ➡ 15 HPV 16/18 infections in hepatitis A group
- ➡ 1 in the HPV vaccine group
- ➡ ***Estimated vaccine efficacy of 93.3% for oral infection***

In summary:

HPV exposure is ubiquitous

HPV causes many cancers

HPV vaccine is safe

HPV vaccine is effective

WHY ISN'T EVERYONE VACCINATED YET?

Making a Strong Recommendation About HPV Vaccine to Parents in Primary Care

Sharon G. Humiston, MD, MPH, FAAP

Children's Mercy Hospitals and Clinics

Kansas City, MO

and the American Academy of Pediatrics

Based in part on the slides created by **Jill B. Roark, MPH** for the CDC's HPV Speaker's Bureau and research presented at the **April 2015 APA Meeting**

Overview

1. Recruit your **whole office team** to take a role in HPV vaccination communication
2. Recommend HPV vaccine the same way & the same day as other routine adolescent immunizations
3. Use a **practical communication strategy** when a parent has a question

1) Recruit your whole office team to take a role in HPV vaccination communication

- Be sure that everyone who has patient contact:
 - ✓ Gets educated on HPV vaccination
 - ✓ Knows their role in immunization communication
- Key staff roles
 - ✓ Presumptive/normative plan
 - ✓ Give & explain the VISs
 - ✓ Vaccinate
 - ✓ Arrange for the next dose

2) Recommend HPV vaccine the same way & the same day as other routine adolescent immunizations

- **Same way:** Group all of the adolescent vaccines and recommend them all in the same way (i.e., HPV is NOT an optional “add-on”).
- **Same day:** Recommend HPV vaccine *today*, i.e., the *same day* you recommend Tdap & meningococcal vaccines.

Make a presumptive statement

Today, Michelle should have 3 shots that will protect her from the cancers caused by HPV, and infections causing meningitis, whooping cough, tetanus, & diphtheria.

A “participatory” style leads to lower vaccination uptake. Do NOT start with an invitation like, “*Now let’s discuss how you feel about the vaccinations for adolescents.*”

3) Use a practical communication strategy when a parent has a question

- When a parent has a question, don't panic. Interpret a question as a request for reassurance from YOU, the clinician they trust with their child's health care.
- Clarify and re-state their concerns to make sure you understand.
 - *It sounds like you're concerned that the HPV vaccine isn't necessary because Emily is a virgin.*
Am I understanding the question?
- Address the parent's specific concerns.

Be prepared to address the parent's specific concerns

Tips and Time-savers for Talking with Parents about HPV Vaccine

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. For example, you can say "Your child needs these shots today," and name all of the vaccines recommended for the child's age.


Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents' questions helps you save time and give an effective response. CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver.



- | | |
|-----------------------------------|---|
| <p>CDC RESEARCH SHOWS:</p> | The "HPV vaccine is cancer prevention" message resonates strongly with parents. In addition, studies show that a strong recommendation from you is the single best predictor of vaccination. |
| <p>TRY SAYING:</p> | HPV vaccine is very important because it prevents cancer. I want your child to be protected from cancer. That's why I'm recommending that your daughter/son receive the first dose of HPV vaccine today. |
| <p>CDC RESEARCH SHOWS:</p> | Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against. |
| <p>TRY SAYING:</p> | HPV can cause cancers of the cervix, vagina, and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men. There are about 26,000 of these cancers each year—and most could be prevented with HPV vaccine. There are also many more precancerous conditions requiring treatment that can have lasting effects. |
| <p>CDC RESEARCH SHOWS:</p> | Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine. |
| <p>TRY SAYING:</p> | We're vaccinating today so your child will have the best protection possible long before the start of any kind of sexual activity. We vaccinate people well before they are exposed to an infection, as is the case with measles and the other recommended childhood vaccines. Similarly, we want to vaccinate children well before they get exposed to HPV. |
| <p>CDC RESEARCH SHOWS:</p> | Parents may be concerned that vaccinating may be perceived by the child as permission to have sex. |
| <p>TRY SAYING:</p> | Research has shown that getting the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age. |
| <p>CDC RESEARCH SHOWS:</p> | Parents might believe their child won't be exposed to HPV because they aren't sexually active or may not be for a long time. |
| <p>TRY SAYING:</p> | HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with |

If a parent declines vaccination...

- Interpret declining as delaying
- Because delaying is the risky choice, consider asking parents to sign a declination form
(<http://www2.aap.org/immunization/pediatricians/pdf/refusaltovaccinate.pdf>)

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Documenting Parental Refusal to Have Their Children Vaccinated

All parents and patients should be informed about the risks and benefits of preventive and therapeutic procedures, including vaccination. In the case of vaccination, the American Academy of Pediatrics (AAP) strongly recommends and federal law mandates that this discussion include the provision of the Vaccine Information Statements (VISs). Despite our best efforts to educate parents about the effectiveness of vaccines and the realistic chances of vaccine-associated adverse events, some will decline to have their children vaccinated. This often results from families misinterpreting or misunderstanding information presented by the media and on unmonitored and biased Web sites, causing substantial and often unrealistic fears.

Within a 12-month period, 74% of pediatricians report encountering a parent who refused or delayed one or more vaccines. A 2011 survey of children six months to six years of age reported that 13% of parents followed an alternative vaccination schedule. Of these, 53% refused certain vaccines and 55% delayed some vaccines until the child was older. Seventeen percent reported refusing all vaccines. In a 2009 survey, 11.5% of parents of children 17 years and younger reported refusing at least one vaccine. The use of this or a similar form in concert with direct and non-condescending

JUST ANOTHER SHOT: REFRAMING THE HPV VACCINE

From the Minnesota Department of Health



[HTTPS://WWW.YOUTUBE.COM/WATCH?V=VFHJK5L0T-Y](https://www.youtube.com/watch?v=VFHJK5L0T-Y)

Would we ever present a routinely recommended vaccine this way?



Would we ever present a routinely recommended vaccine this way?

Of course, not!

How we recommend childhood vaccines

- As a package of protection
- With a full understanding of and conviction in each vaccine's importance

Putting it all together



Great job!

- He seized the moment
- He did not “profile” (he recommended the vaccine even though this girl does not look like she’s interested in having sex soon)
- He bundled the recommendation
- He asked for mom’s question
- He answered mom’s question accurately and calmly (if a bit long winded)
- When mom asked the 2nd question: “some people...”, stayed positive
- He cared (“I’d feel better”)

Questions and Answers



Polling Question 1: How helpful was the information presented during this webinar?

Polling Question 2: How likely are you to use the information presented during this webinar?

Thank you for participating!

For more information, visit
www.cdc.gov/vaccines/teens