


HPV Vaccine –  
Think *Cancer Prevention*

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**ROME** 2019 NEW ENGLAND  
REGIONAL OSTETRIC  
 MEDICAL EDUCATION Providence, RI, August 8 - 11

**RISOPS**  **COMS**  
COMMISSION ON  
 OBSTETRICS AND GYNECOLOGY COMMISSION ON  
 OBSTETRICS AND GYNECOLOGY

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Conflict of Interest Disclosure

*I have no conflicts and nothing to disclose*

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**Learning Objectives:** 

*At the conclusion of this session, attendees should be able to:*

1. Describe the importance of HPV vaccine for cancer prevention.
2. Explain current HPV vaccination coverage levels.
3. Recognize the critical role of health care providers in recommending HPV vaccination.
4. Name three strategies to improve HPV vaccine acceptance.

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### HPV infection is common

- 79 million persons infected in U.S. with 14 million new infections per year.
- Estimated that 50-70% of sexually active adults will acquire genital HPV by the age of 50.
- In women, immune system clears infection in up to 90% of cases by 2 years; 10% will have prolonged infection.
- 45% of men ages 18-59 are infected (NHANES 2013-14); infections much more likely to persist.

Han et al. JAMA Oncology 2017 4

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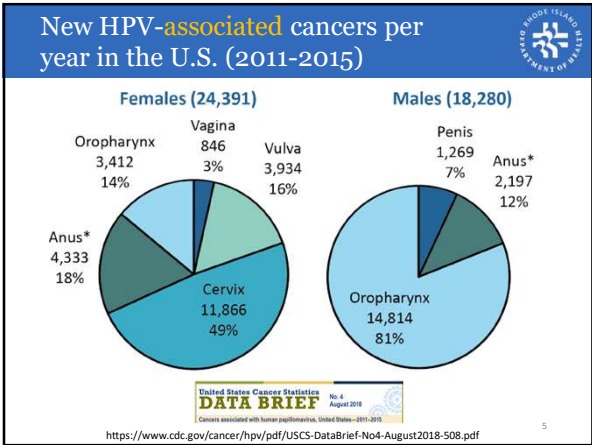
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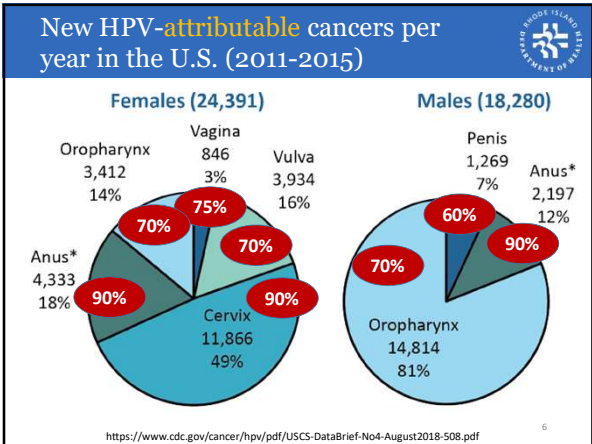
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## HPV and oropharyngeal cancer

- Appears to be associated with oral sexual behavior and number of lifetime partners.
- Estimated **7.1 million men with oral oncogenic HPV infection in U.S.**
- Men more likely than women to carry oncogenic strains and less likely to clear infection than women.

**Increased Risk for OP Cancer in Men**

HPV Type	Risk Increase
HPV-16	22x
Other Oncogenic HPV	7x

Chaturvedi, *Cancer Res* 2015  
D'Souza, *JID* 2009  
D'Souza, *JID* 2016  
Agalliu, *JAMA Oncol* 2016

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## Projected cases of HPV-associated cancers in U.S. over time

**Annual # of Cases**

**Year**

Chaturvedi et al. *J Clin Onc.* 2011.

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## HPV vaccine comparison

**HPV Types Included in Vaccine**

	6	11	16	18	31	33	45	52	58
<b>Bivalent</b>	● ●		● ●						
<b>Quadrivalent</b>	● ● ● ●		● ●						
<b>9-valent</b>	● ● ● ●		● ●		● ●		● ● ● ●		

Genital warts

63% of cancers in body parts where HPV DNA is often found

10% of cancers in body parts where HPV DNA is often found

Adapted from Petrosky et al. *MMWR*. 2015

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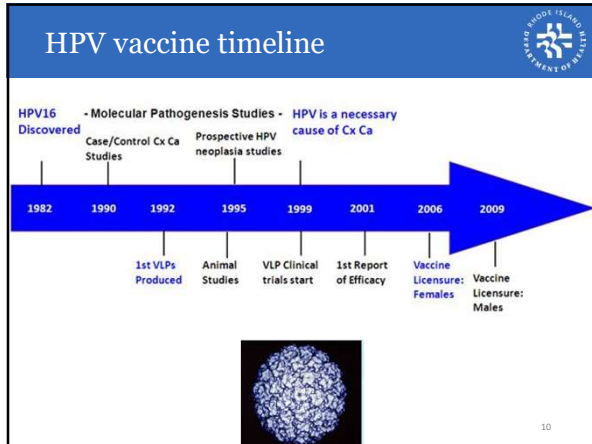
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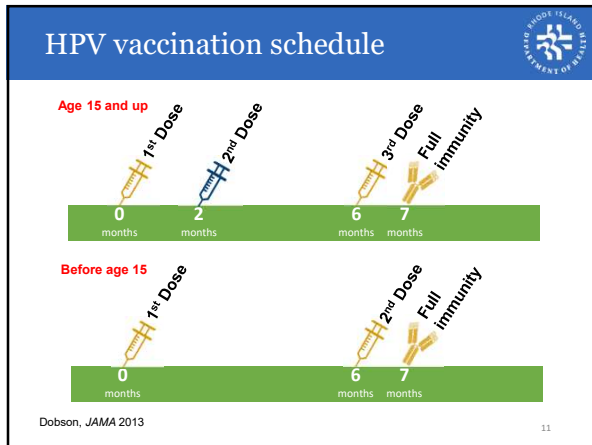
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### HPV vaccination recommendation

**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 vaccine are recommended when first dose is given before age 15.
- The second dose of the vaccine should be administered 6 to 12 months after the first dose.

Source: Meites et al. MMWR. 2016

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### When should the bike helmet go on?

**A**      **B**      **C**

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### HPV Vaccination Coverage 2017 U.S. Adolescents Aged 13–17 Years

% Adolescents up to date on HPV vaccination\*

National coverage is 49%  
Coverage by state:

- 39% and under
- 40-49%
- 50-59%
- 60% or greater

\*Up-to-date means the teen either received 3 doses total or 2 doses initiated before age 15.  
Source: MMWR August 24, 2018

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### HPV Vaccination Coverage Rhode Island, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1+Tdap	41.6	60.1	79.5	87.5	94.0	95.5	92.4	97.1	95.4	94.6
1+MCV	62.6	76.7	83.5	88.9	94.3	92.0	94.1	97.7	96.4	94.1
1+HPV (Female)	54.7	68.3	73.0	76.1	73.7	76.6	76.0	87.9	90.1	88.5
1+HPV (Male)	--	--	--	24.6	55.2	69.3	69.0	80.6	87.8	88.7

Data Source: CDC, National Immunization Survey, 2008-2017

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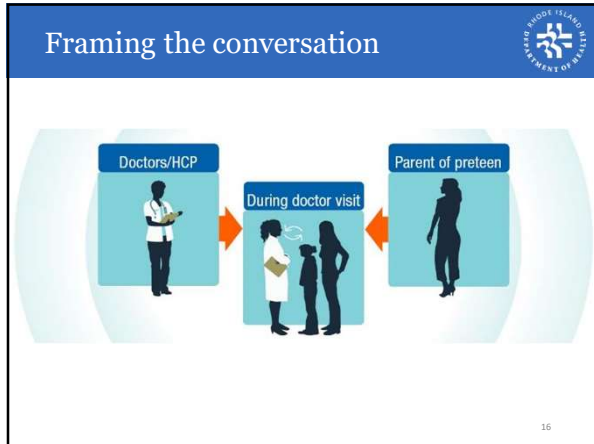
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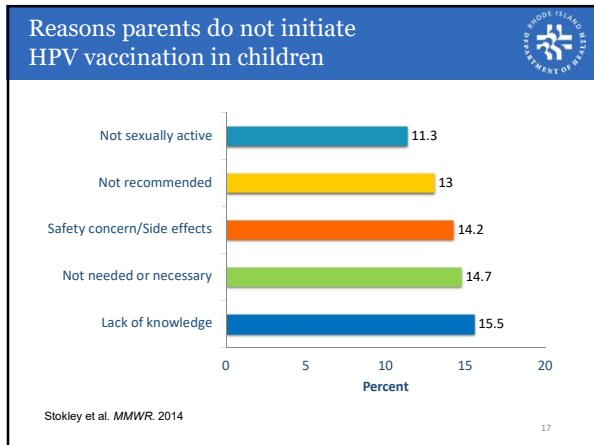
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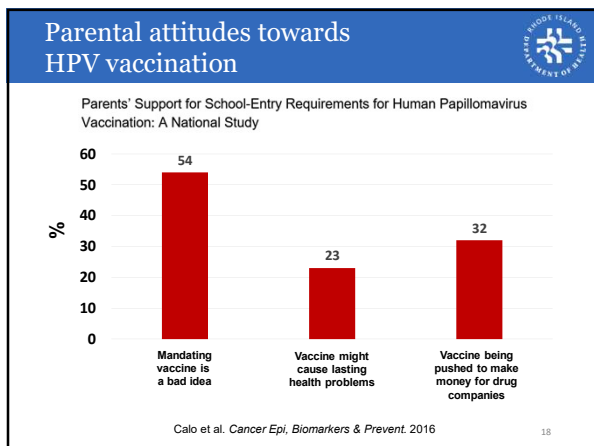
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**Physician communication about HPV vaccine**



- National survey of 776 pediatricians and family physicians.<sup>1</sup>
  - Up to 27% do not strongly endorse.
  - 26% do not recommend at age 11-12 for girls and 39% do not for boys.
  - Only 51% usually recommended same-day vaccination.
  - **59% used a "risk-based" approach to recommend HPV vaccine.**
- One third of FPs reported little or no confidence in pre-licensure vaccine safety studies.<sup>2</sup>
- Only 40% of 928 respondents of a national sample of Peds/FPs/OBs reported always recommending HPV vaccine to female patients age 11-12 yo, 55% for 13-17 yo.<sup>3</sup>

<sup>1</sup>Gilkey MB. *Cancer Epi Biomarkers Prev.* 2015  
<sup>2</sup>O'Leary ST. *Prev Med.* 2013  
<sup>3</sup>Vadaparampil ST. *Am J Prev Med.* 2014

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**Conversations about vaccines**




verywell health

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**If a parent declines vaccination**

**Ask, Acknowledge, Advise**



<b>Ask</b>	<ul style="list-style-type: none"> <li>• Clarify and restate their concerns to make sure you understand.</li> </ul>
<b>Acknowledge</b>	<ul style="list-style-type: none"> <li>• Acknowledge risks and conflicting info sources.</li> <li>• Applaud them for wanting what is best for their child.</li> <li>• Be clear that you are concerned for the health of their child, not just public health safety.</li> </ul>
<b>Advise</b>	<ul style="list-style-type: none"> <li>• Clarify their concerns: make sure you understand and are answering the question they actually care about.</li> <li>• Allow time to discuss the pros and cons of vaccines.</li> <li>• Be willing to discuss parents' ideas.</li> <li>• Offer written resources to parents.</li> <li>• Tailor your advice using this presentation.</li> </ul>

Vax Northwest  
<https://immunitycommunitywa.org/conversation-guide/>

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## HPV vaccination conversations

Talking to Parents about HPV Vaccine



HPV VACCINE IS CANCER PREVENTION

[ #HowIRecommend ]

### 5 Ways to Boost Your HPV Vaccination Rates

Implement these practical and proven strategies and increase your HPV vaccination rates.

<https://www.cdc.gov/hpv/hcp/index.html>

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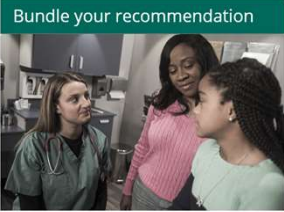
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## Starting the conversation

Bundle your recommendation



<https://www.cdc.gov/hpv/hcp/boosting-vacc-rates.html>

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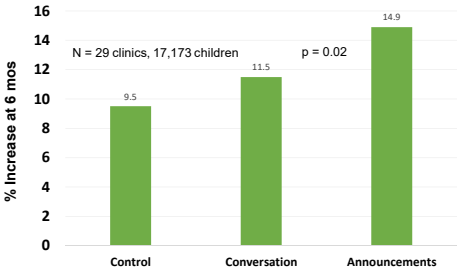
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## Improving HPV vaccine acceptance - announcements vs. conversation



Group	% Increase at 6 mos
Control	9.5
Conversation	11.5
Announcements	14.9

N = 29 clinics, 17,173 children p = 0.02

Brewer et al. *Pediatrics* 2016

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Educate staff



Ensure a consistent message

<https://www.cdc.gov/hpv/hcp/boosting-vacc-rates.html>

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Clinical quality improvement



Use every opportunity to vaccinate

<https://www.cdc.gov/hpv/hcp/boosting-vacc-rates.html>

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Provider prompts



**Cue providers that patient is due for specific vaccinations.**

**Nurse prompts:**

- Sticky notes
- Checklists
- Preprinted notes in client's chart


**EHR prompts:**

- Automatic pop-ups
- 'To do' task list

Many EHRs have prompts pre-installed that can be customized.  
*Evidence from 14 studies showed 6% vaccination rate increase.*

**Due:**

- Tdap
- HPV
- MCV4



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**Benefits of standing orders**

- For children, use of standing orders is associated with a median increase in vaccination coverage of 28%.
- Most effective evidence-based method.
- Overcome administrative barriers and save time.
- Presumptive recommendation in action.

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN



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**Data can drive improvement**

**Know your coverage rates**

- Practice-level rates and individual clinician rates
- Data from EHR or immunization registry
- Share data with providers and staff



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**Personalize**

Provide personal examples



 <https://www.cdc.gov/hpv/hcp/boosting-vacc-rates.html>

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Be prepared



Effectively answer questions

<https://www.cdc.gov/hpv/hcp/boosting-vacc-rates.html>

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HPV vaccine 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 have been reported in multiple countries.

**HPV Vaccine Protection LASTS**

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

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If a parent declines...



- The conversation can be revisited. Keep the door open.
- End the conversation with **at least one action** you both agree on.
- Some providers choose to document declining of vaccines with specific forms signed by parent or guardian.

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**HPV vaccine information** 

 <https://www.cdc.gov/hpv/parents/index.html>

For Clinicians

<https://www.cdc.gov/hpv/hcp/index.html>

 <http://www.immunize.org/>

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