You are the Key to HPV Cancer Prevention

Understanding the Burden of HPV Disease, the Importance of the HPV Vaccine Recommendation, and Communicating about HPV Vaccination

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Objectives

1. Describe the burden of HPV disease.
2. Define the importance of HPV vaccination for cancer prevention.
3. Explain the rationale for vaccinating youth at ages 11 and 12.
4. List the recommendations for HPV vaccine for girls and boys.
5. Provide useful and compelling information about HPV vaccine to parents to aid in making the decision to vaccinate.
6. Locate resources relevant to current immunization practice.
Understanding the Burden

HPV INFECTION & DISEASE
HPV Infection

- Most females and males will be infected with at least one type of mucosal HPV at some point in their lives
  - Estimated 79 million Americans currently infected
  - 14 million new infections/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

New Cancers Caused by HPV per Year
United States 2006-2010

Women (n = 17,600)
- Cervix: 59%
- Vulva: 15%
- Anus: 13%
- Vagina: 3%
- Oropharynx: 10%

Men (n = 9,300)
- Oropharynx: 77%
- Penis: 8%
- Anus: 15%

CDC, United States Cancer Statistics (USCS), 2006-2010
Without vaccination, annual burden of genital HPV-related disease in U.S. females:

4,000 cervical cancer deaths
10,846 new cases of cervical cancer

330,000 new cases of HSIL: CIN2/3
(high grade cervical dysplasia)

1 million new cases of genital warts

1.4 million new cases of LSIL: CIN1
(low grade cervical dysplasia)

Nearly 3 million cases and $7 billion

American Cancer Society. 2008; Schiffman Arch Pathol Lab Med. 2003; Koshiol
Sex Transm Dis. 2004; Insinga, Pharmacoeconomics, 2005
HPV vaccine is cancer prevention.

Talk to the doctor about vaccinating your 11–12 year old sons and daughters against HPV.

#UCanStopHPV

Evidence-Based HPV Disease Prevention

HPV VACCINE
Girls & Boys can start HPV vaccination at age 9

Preteens should finish HPV vaccine series by 13th birthday

Plus girls 13-26 years old who haven’t started or finished HPV vaccine series

Plus boys 13-21 years old who haven’t started or finished HPV vaccine series
**HPV Vaccine Comparison**

### HPV Types Included in Vaccine

<table>
<thead>
<tr>
<th>HPV Types Included in Vaccine</th>
<th>6</th>
<th>11</th>
<th>16</th>
<th>18</th>
<th>31</th>
<th>33</th>
<th>45</th>
<th>52</th>
<th>58</th>
</tr>
</thead>
</table>

###HPV Vaccine

- **Bivalent**
- **Quadrivalent**
- **9-valent**

### HPV Types Cause:

- **Genital warts**: ~66% of Cervical Cancers
- **Cervical Cancers**: ~15% of Cervical Cancers
Updated ACIP Recommendations

Age

- Routine vaccination at age 11 or 12 years*
- Vaccination recommended through age 26 for females and through age 21 for males not previously vaccinated
- Vaccination recommended for men through age 26 who have sex with men (MSM) or are immunocompromised (including persons HIV-infected)

Formulation by gender (assuming availability)

<table>
<thead>
<tr>
<th></th>
<th>9vHPV</th>
<th>4vHPV</th>
<th>2vHPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Males</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

*vaccination series can be started at 9 years of age

MMWR 2015;64:300-4
Updated ACIP Recommendations: Interchangeability

If vaccination providers do not know, or do not have available the HPV vaccine product previously administered, or are in settings transitioning to 9vHPV:

For protection against HPV 16 and 18,

- Females: Any HPV vaccine product may be used to continue or complete the series
- Males: 4vHPV or 9vHPV may be used to continue or complete the series
ACIP Recommendations: Timing of the Series

- 2vHPV, 4vHPV and 9vHPV are each administered in a 3-dose schedule
  - Interval between doses 1 → 2: ~6 weeks (1-2 months)
  - Interval between doses 1 → 3: 6 months

- If the vaccine schedule is interrupted, the series does not need to be restarted
HPV VACCINE SAFETY

Vaccine efficacy: Ability of a vaccine to work as intended to protect from illness.

Vaccine-associated risk: Probability increased adverse event that harm the individuals or population.
VAERS: HPV Vaccine Safety Monitoring

- Ongoing safety monitoring has shown most reports are non-serious.
- Among the 7.6% of reports coded as “serious,” most frequently cited possible side effects are headache, nausea, vomiting, and fever.
- Syncope (fainting) continues to be reported following vaccination among adolescents.
  - Adherence to a 15-minute observation period after vaccination is encouraged.

MMWR. 2014;63(RR05);1-30.
9vHPV Vaccine Safety

- Seven pre-licensure studies including 15,000 males and females
- Generally well tolerated
  - Adverse event profile similar to that of 4vHPV across age, gender, race, and ethnicity
  - More injection-site reactions expected among those who receive 9vHPV
HPV VACCINE IMPACT

Monitoring Impact of HPV Vaccine Programs on HPV-Associated Outcomes

HPV VACCINE IMPACT
HPV vaccine impact monitoring

Post licensure evaluations are important to evaluate real world effectiveness of vaccines.

Population impact against early and mid outcomes have been reported:

**Genital warts**
- Australia, New Zealand, Denmark, Sweden, Germany, Quebec, US

**HPV prevalence**
- Australia, Norway, Denmark, Sweden, UK, US

**Cervical lesions**
- Australia, British Columbia, Denmark, Sweden, US
HPV Vaccine
Duration of Immunity

- Studies suggest that vaccine protection is long-lasting; no evidence of waning immunity
  - Available evidence indicates protection for at least 8-10 years
  - Multiple cohort studies are in progress to monitor the duration of immunity
<table>
<thead>
<tr>
<th>Country</th>
<th>HPV Vaccine Three-Dose Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>71.2%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60.4%</td>
</tr>
<tr>
<td>United States</td>
<td>33.4%</td>
</tr>
</tbody>
</table>

Among Girls in High-Income Countries

United States

**HPV VACCINE COVERAGE**
Impact of Eliminating Missed Opportunities by Age 13 Years in Girls Born in 2000

Missed opportunity: Healthcare encounter when some, but not all ACIP-recommended vaccines are given. HPV-1: Receipt of at least one dose of HPV. MMWR. 63(29);620-624.
Talking about HPV vaccine

FRAMING THE CONVERSATION
Clinicians Underestimate the Value Parents Place on HPV Vaccine

Give a Strong Recommendation to Receive HPV Vaccine at Ages 11 or 12

- Not sexually active
- Not recommended
- Safety concern/Side effects
- Not needed or necessary
- Lack of knowledge

A strong recommendation from you is the main reason parents decide to vaccinate

Many moms in focus groups stated that they trust their child’s doctor and would get the vaccine for their child as long as they received a recommendation from the doctor.

MMWR 2014; 63(29);625-633; Unpublished CDC data, 2013.
Make an Effective Recommendation

**Same way:** Effective recommendations group all of the adolescent vaccines
Recommend HPV vaccination the *same way* you recommend Tdap & meningococcal vaccines.

**Same day:** Recommend HPV vaccine *today*
Recommend HPV vaccination the *same day* you recommend Tdap & meningococcal vaccines.

Unpublished CDC data, 2013.
Clinicians can give a strong and effective HPV vaccine recommendation by announcing:

Sophia is due for three vaccines today. These will help protect her from meningitis, HPV cancers, and pertussis. We’ll give those shots at the end of the visit.
If main concern is “Why does my child need this vaccine” try saying:

*HPV vaccine is very important because it prevents cancer.*

*I know we’d like to protect Maureen from cancer and I’d feel better if she got her first dose of the HPV vaccine series today.*
If main concern is “My daughter will wait for marriage/won’t be exposed”, try saying:

**HPV is so common that almost everyone will be infected at some time.**

**When your daughter marries, she could catch HPV from her husband. He might have been infected before he ever met her.**
If main concern is “why now, let’s wait until child is older,” try saying:

HPV vaccine produces a more robust immune response in preteens than in older teens which is why I recommend starting the HPV vaccine series today.
If main concern is "would you give it to your child," try saying:

Yes, I gave it to my child (or grandchild, etc) because I think preventing cancer is very important.
If main concern is “side effects,” try saying:

Vaccines, like any medication, can cause side effects. With HPV vaccine most are mild, primarily pain or redness in the arm. This should go away quickly.

HPV vaccine has not been linked with any serious or long-term side effects.
Before leaving the exam room, **remind parents when to come back.** Try saying:

*To work, Robert needs the full HPV vaccine series, so . . .*

*Please make sure to make appointments for the next shot on the way out, and put that appointment on your calendar before you leave the office today!*
HPV VACCINE IS CANCER PREVENTION
And YOU are the key!

#WeCanStopHPV