HPV 101: An Overview of HPV Vaccination

Debbie Saslow, PhD
American Cancer Society
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The National HPV Vaccination Roundtable....

is a national coalition of 75+ organizations working together to prevent HPV-associated cancers and pre-cancers by increasing and sustaining U.S. HPV vaccination.


Supported by grant #16IP922551, funded by the Centers for Disease Control and Prevention
Long-term Outcomes:

- Increase frequency and strength of clinician recommendation
- Decrease missed opportunities
- Increase HPV vaccination rates

Priority Impact Areas:

- Providers
- Parents
- Systems
- Policies
- Health Disparities
WHAT WE DO:

- Convene stakeholders
- Increase exchange of information
- Catalyze efforts
- Identify gaps and opportunities
HPV 101
What Is HPV?

Human Papilloma Virus

- >100 types
- About 15 types cause cancer
- VERY common
Can HPV cancers be prevented?

- Screen (cervical cancer only)
- Vaccinate (male and female HPV cancers)
with Cervical Cancer Each Year

Average Annual Number of Cervical Cancer Cases Linked to HPV, by Age Group

<table>
<thead>
<tr>
<th>Age</th>
<th># of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>12</td>
</tr>
<tr>
<td>20-29</td>
<td>636</td>
</tr>
<tr>
<td>30-39</td>
<td>2350</td>
</tr>
<tr>
<td>40-49</td>
<td>3028</td>
</tr>
<tr>
<td>50-59</td>
<td>2542</td>
</tr>
<tr>
<td>60-69</td>
<td>1740</td>
</tr>
<tr>
<td>70-79</td>
<td>919</td>
</tr>
<tr>
<td>&gt;80</td>
<td>545</td>
</tr>
</tbody>
</table>

>1.7 Million Women Affected Each Year:

Cervical Pre-Cancer Cases in the U.S.

- **1.4 million** new cases of low grade cervical dysplasia
- **330,000** new cases of high grade cervical dysplasia (also known as “pre-cancer”)
Average Number of New Cancers Probably Caused by HPV, by Sex, United States 2008-2012

Women (n = 19,200)

- Cervix: 56% (n=10,700)
- Oropharynx: 10% (n=2,000)
- Vulva: 13% (n=2,400)
- Anus: 16% (n=3,000)

Men (n = 11,600)

- Oropharynx: 78% (n=9,100)
- Anus: 14% (n=1,600)
- Penis: 6% (n=700)
HPV Vaccination
HPV Vaccine Licensed in the U.S.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Gardasil-9 (Nonavalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Merck</td>
</tr>
<tr>
<td>HPV types</td>
<td>16, 18, 31, 33, 45, 52, 58, 6, 11</td>
</tr>
<tr>
<td>Schedule</td>
<td>2 OR 3 doses</td>
</tr>
<tr>
<td>Population</td>
<td>Males and Females ages 9-26</td>
</tr>
<tr>
<td>Delivery Ages</td>
<td>PERMITTED EARLY: 9-10</td>
</tr>
<tr>
<td></td>
<td>ON TIME: 11-12 years old</td>
</tr>
<tr>
<td></td>
<td>LATE: 13-26</td>
</tr>
</tbody>
</table>
Broader Protection Against More Cancers

Data accessed at: https://www.merckvaccines.com/Products/Gardasil9/9-types
Vaccination at 11-12 Is Most Effective

- Prevents cervical pre-cancers
- Results in a stronger immune response
- Capitalizes on preventive health visits
Individuals ages 22 to 26 who were not previously vaccinated should be informed that vaccination at older ages is less effective in lowering cancer risk.
PROBLEM:

HPV VACCINATION RATES REMAIN TOO LOW

- Prevents 6 cancers
- Safe
- Underutilized
- Kids get other vaccines
- Rates lowest where cancers highest
Estimated HPV Vaccination Coverage Among Adolescents Aged 13-17 Years, NIS-Teen, United States, 2006-2015
SOLUTION:

FOCUS ON HPV VACCINATION AS CANCER PREVENTION

- We have a vaccine that prevents cancers
- We need to vaccinate more kids
- Success is achievable
- Cancer and immunization need to work together
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
Extrapolating the prior pyramid with projections of vaccine efficacy based on Australian data:

- **Cervical cancer**
  - 46% reduction in CIN2/3 requiring LEEP
  - 75% if vaccination by age 14

- 92% reduction in genital warts

- 35% reduction in CIN1
HPV-Associated Oropharyngeal Cancer: Increasing Incidence

Barriers: We Can Change These!

- Not recommended
- Not sexually active
- Safety concerns
- Not needed
- Lack of knowledge

Not recommended

Not sexually active

Safety concerns

Not needed

Lack of knowledge
What Is ACS Doing about HPV?
Are You In to Prevent HPV Cancer?

We’re In! Campaign


When you sign up, your organization will have access to English and Spanish versions of the “We’re In!” symbol along with a “Quick Action Guide” to get you started.

This symbol is meant to be an easy way for organizations to publicly show support for HPV cancer prevention.
HPV Roundtable Resources:
The **HPV VACs** project is aimed at increasing HPV vaccination rates for adolescents across the nation through improved provider awareness and education and improved system-wide processes—*with a focus on adolescents ages 11 to 12.*

Supported by grant #NH23IP000953-02, funded by the Centers for Disease Control and Prevention

**ACS Health Systems Structure**

<table>
<thead>
<tr>
<th>Hospital Systems</th>
<th>Primary Care Systems</th>
<th>State Health Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cancer Centers</td>
<td>• Federally Qualified Health Centers</td>
<td>• Comprehensive Cancer Coalitions</td>
</tr>
<tr>
<td>• Oncologists</td>
<td>• Primary Care Associations</td>
<td>• State Health Depts.</td>
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<tr>
<td></td>
<td></td>
<td>• Insurers</td>
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</table>
HPV VACs Resources

• National Map of Initiatives: http://Bit.ly/HPVVaccineInitiativeMap


• Strategies for Hospitals and Cancer Centers: http://bit.ly/HPVVACsCancerCenters

HPV Vaccination IS Cancer Prevention

HPV vaccination is the best way to PREVENT many types of CANCER.

HPV vaccination is RECOMMENDED at ages 11 or 12.

HPV vaccination is REDUCING HPV DISEASE.

PROTECTING MORE OF YOUR PATIENTS FROM HPV CANCERS

www.cdc.gov/vaccines/teens