The HPV Vaccine as Cancer Prevention:  

Efforts to Increase Vaccination

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When you think of HPV what comes to mind?

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If you see this message in presentation mode, install the add-in or get help at PollEv.com/app
TRUE OR FALSE:

“The HPV Vaccine prevents cancer.”
TRUE OR FALSE:

“The HPV Vaccine is only recommended for girls.”
TRUE OR FALSE:

“The HPV Vaccine is not safe.”
TRUE OR FALSE:

“The HPV Vaccine is necessary, regardless of sexual activity.”
TRUE OR FALSE:

“Most people know about HPV.”
PARTICIPANTS WILL BE ABLE TO:

- Define the importance of HPV vaccination to prevent cancer and the rationale for vaccinating at ages 11 or 12
- Implement best-practices for recommending HPV vaccination using current, evidence-based guidelines
- Provide useful and compelling information about HPV to aid parents in making a decision about vaccination
- Identify missed opportunities for HPV vaccination
- Locate free, evidence-based resources to educate students, parents, school staff and SBHC staff about HPV vaccination
Adolescent Vaccination Coverage
United States, 2006-2014
U.S. HPV Vaccination Aged 13-17 yrs 2015

The graph shows the percentage of vaccinated individuals for different vaccines and HPV vaccination status from 2006 to 2015. The vaccinated status includes:

- ≥1 Tdap
- ≥1 MenACWY
- ≥2 MenACWY
- ≥1 HPV vaccine (females)
- ≥3 HPV vaccine (females)
- ≥1 HPV vaccine (males)
- ≥3 HPV vaccine (males)

The Revised APD definition is indicated on the graph as a vertical dashed line in 2013.
Average Number of New Cancers Probably Caused by HPV, by Sex, United States 2006-2010

Women (n = 17,600)
- Cervix: n=10,400 (59%)
- Oropharynx: n=1,800 (10%)
- Vulva: n=2,200 (13%)
- Anus: n=2,600 (15%)
- Vagina: n=600 (3%)
- Vulva: n=2,200 (13%)
- Anus: n=2,600 (15%)
- Oropharynx: n=1,800 (10%)
- Cervix: n=10,400 (59%)

Men (n = 9,300)
- Oropharynx: n=7,200 (77%)
- Anus: n=1,400 (15%)
- Penis: n=700 (8%)

Vulva: n=2,200 (13%)
- Anus: n=2,600 (15%)
- Oropharynx: n=1,800 (10%)
- Cervix: n=10,400 (59%)

Women (n = 17,600)

Men (n = 9,300)
Average Number of New Cancers Probably Caused by HPV, by Sex, United States 2008-2012

Females = 23,000
- Cervix 11,771 (73%)
- Oropharyngeal 3,100 (19%)
- Vulvar 3,554 (18%)
- Anus 513 (3%)
- Vaginal 802 (5%)  

Males = 15,793
- Oropharyngeal 12,638 (90%)
- Penile 1,168 (8%)
- Anus 237 (2%)
HPV VACCINATION...

SAFE

LASTS

WORKS
ECONOMIC IMPACT

$8 billion

3 million

330,000
BARRIERS: WE CAN CHANGE THESE!

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

Not recommended

Safety concerns

Lack of knowledge

Not needed

Not sexually active
# HPV Vaccines Licensed in U.S.

<table>
<thead>
<tr>
<th>HPV Vaccine</th>
<th>HPV strains</th>
<th>Guidelines for Immunization</th>
<th>Recommended Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cervix</strong> – Bi Valant 2vHPV</td>
<td><strong>Oncogenic</strong> 16 &amp; 18</td>
<td><strong>Females</strong>: 11 - 26 yrs</td>
<td>Not currently distributed in U.S. 0, 1-2 months, 6 months</td>
</tr>
<tr>
<td><strong>Gardasil</strong> – 4 4vHPV</td>
<td><strong>Warts</strong> 6 &amp; 11 plus <strong>Oncogenic</strong> - 16 &amp; 18</td>
<td><strong>Females</strong>: 11 - 26 yrs <strong>Males</strong>: 11 – 21 yrs</td>
<td>Not currently distributed in U.S. 0, 1-2 months, 6 months</td>
</tr>
<tr>
<td><strong>Gardasil</strong> – 9 9vHPV</td>
<td><strong>Warts</strong> - 6 &amp; 11 plus <strong>Oncogenic</strong> 16, 18, 31, 33, 45, 52, 58</td>
<td><strong>Males</strong>: 11 or 12yrs - 21 yrs <strong>Females</strong>: 11 or 12 yrs - 26 yrs</td>
<td>Only HPV vaccine currently distributed in U.S. 0, 6-12 months (2 dose regimen)**</td>
</tr>
</tbody>
</table>
### Recommended Number of Doses and Dosing Schedule

<table>
<thead>
<tr>
<th>Recommended number of doses</th>
<th>Recommended Dosing Schedule</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0, 6-12 months*</td>
<td>Persons initiating vaccination at ages 9-14 years, except immunocompromised persons</td>
</tr>
<tr>
<td>3</td>
<td>0, 1-2, 6 months**</td>
<td>Persons initiating vaccination at 15 – 26 years, and immunocompromised persons initiating vaccination at ages 9-26 years</td>
</tr>
</tbody>
</table>

* In a 2-dose schedule of HPV vaccine, the minimum interval is 5 months between the first and second dose
** In a 3-dose schedule of HPV vaccine, the minimum intervals are 4 weeks between the first and second dose, 12 weeks between second and third dose, and 5 months between first and third dose.
Case Example 1:

A 15 year old is starting the HPV vaccine series. How many doses does she need?

- The adolescent needs 3 doses (0, 1-2, 6 months schedule) because she is starting the series on or after her 15\textsuperscript{th} birthday.
Case Example 2:

A 13 year old has a history of 2 doses of HPV vaccine: 4vHPV given at age 12 years and 9vHPV given 6 months later. How many doses are needed to complete the vaccination series?

• No doses needed because she initiated her HPV series before her 15\textsuperscript{th} birthday and received 2 doses.
Case Example 3:

A 13 year old has a history of 2 doses of HPV: 4vHPV at age 11 and 9vHPV 2 months later. Are there anymore HPHV vaccine doses needed to complete the series?

• Yes, because even though she initiated her HPV vaccination series prior to her 15th birthday, she needs a third dose because the 2 HPV doses were administered less than 5 months apart.
Case Example 4:

A 13 year old received a dose of 4vHPV at 10 years of age. Does she need 1 or 2 doses of HPV vaccine to complete the series?

• This adolescent needs 1 more dose of HPV vaccine to complete the series, because she initiated the series before her 15th birthday. She received the 1st dose over a year ago so she should receive the 2nd dose as soon as possible.
Framing the Conversation: Talking about HPV Vaccine
Talking to parents about HPV VACCINE

**Make a Bundled Recommendation**

Recommend HPV vaccine the same way and on the same day you recommend Tdap and meningococcal vaccines. A strong recommendation from you is the main reason parents decide to vaccinate.

You can say “your preteen needs three vaccines that provide protection against meningitis, HPV cancers, and pertussis.”

Hearing “HPV vaccine is cancer prevention” helps parents make the decision to vaccinate. Parents don’t want to talk about HPV vaccine in the context of sexuality or sexual transmission.

**Address Parents’ Questions**

Help them understand why the vaccine is needed at age 11 or 12, let them know that like any other vaccine, they want their children protected long before exposure.

Emphasize your personal belief in the importance of HPV vaccine to help parents feel secure in their decision. Let them know you have given/will give it to the children in your life.
Parents Want to Know:

HPV Vaccine is **SAFE**
- Benefits of HPV vaccination far outweigh any potential risks
- Safety studies findings for HPV vaccination similar to safety reviews of MCV4 and Tdap vaccination

HPV Vaccine **WORKS**
- Population impact against early and mid outcomes have been reported in multiple countries

HPV Vaccine **LASTS**
- Studies suggest that vaccine protection is long-lasting
- No evidence of waning protection
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

Don’t apologize!
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.
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.

**CDC RESEARCH SHOWS:** 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.

**TRY SAYING:**
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.

**CDC RESEARCH SHOWS:**
Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against.

**TRY SAYING:**
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 25,000 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.

**CDC RESEARCH SHOWS:**
Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine.

**TRY SAYING:**
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.

**CDC RESEARCH SHOWS:**
Parents may be concerned that vaccinating may be perceived by the child as permission to have sex.

**TRY SAYING:**
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.

**CDC RESEARCH SHOWS:**
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.

**TRY SAYING:**
HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with 14 million new HPV infections each year. Most people infected will never know. So even if your son/daughter waits until marriage to have sex, or only has one partner in the future, he/she could still be exposed if that partner has been exposed.

**CDC RESEARCH SHOWS:**
Emphasizing your personal belief in the importance of HPV vaccine helps parents feel secure in their decision.

**TRY SAYING:**
I strongly believe in the importance of this cancer-preventing vaccine, and I have given HPV vaccine to my son/daughter/grandchild/niece/nephew/friend’s children. Experts (like the American Academy of Pediatrics, cancer doctors, and the CDC) also agree that this vaccine is very important for your child.

**CDC RESEARCH SHOWS:**
Understanding that the side effects are minor and emphasizing the extensive research that vaccines must undergo can help parents feel reassured.

**TRY SAYING:**
HPV vaccine has been carefully studied by medical and scientific experts. HPV vaccine has been shown to be very effective and very safe. Like other shots, most side effects are mild, primarily pain or redness in the arm. This should go away quickly, and HPV vaccine has not been associated with any long-term side effects. Since 2006, about 57 million doses of HPV vaccine have been distributed in the U.S., and in the years of HPV vaccine safety studies and monitoring, no serious safety concerns have been identified.

**CDC RESEARCH SHOWS:**
Parents want to know that HPV vaccine is effective.

**TRY SAYING:**
In clinical trials of boys and girls, the vaccine was shown to be extremely effective. In addition, studies in the U.S. and other countries that have introduced HPV vaccine have shown a significant reduction in infections caused by the HPV types targeted by the vaccine.

**CDC RESEARCH SHOWS:**
Many parents do not know that the full vaccine series requires 3 shots. Your reminder will help them to complete the series.

**TRY SAYING:**
I want to make sure that your son/daughter receives all 3 shots of HPV vaccine to give them the best possible protection from cancer caused by HPV. Please make sure to make appointments on the way out, and put those appointments on your calendar before you leave the office today!
Role Play Activity:
Tips for Talking with Parents
What are Partners Doing about HPV?

The National HPV Vaccination Roundtable

Taking Action to Help Save Lives

The purpose of the National HPV Vaccination Roundtable is to increase HPV vaccination coverage. Key activities include: raise awareness, provider education, public education, systems changes, and health policy efforts.

The American Cancer Society has led the development of the Roundtable by convening a national coalition of public, private, and voluntary organizations dedicated to increasing HPV vaccination coverage in the United States. Through coordinated leadership, strategic planning, and action, we can reduce HPV-associated cancer and related deaths.

HPV Vaccination and Cancer

Recurrent and/or persistent infection by high-risk types of human papillomavirus (HPV) is the virus that is believed to cause most of the cancers and genital warts, but the virus exists at a very low level and is not associated with an infectious process. That's why, in part, the American Cancer Society recommends that all boys and girls receive HPV vaccination twice at ages 11-12. (By age 15, HPV infection increases by 30% in girls and boys.)

What the Society Will Do

The National HPV Vaccination Roundtable develops and implements pilot projects focused on overcoming barriers to HPV vaccination by focusing on the priority areas.

- Providers—Strengthening HPV vaccination recommendations and decrease missed opportunities.
- Parents—Educate and raise awareness about the importance of vaccinating girls and boys aged 11-12 to prevent cancers and to increase acceptance of vaccination against HPV infection.
- Systems—Address barriers such as inadequate reimbursement for vaccine administration and the lack of reminder systems.
- Policies—Promote access to and opportunities for vaccination (e.g., by supporting alternative settings such as pharmacies).
- Health Care Providers—For underserved populations as high-risk for cervical and other HPV-related cancers; address barriers including cultural factors, distrust of the medical system, and limited access to healthcare.

To Find Out More

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National Primary Care Initiatives

- Denver Health Care System
- Integrated SBHCs with FQHCs
- Partnerships with State DOH
- Partnerships with local pharmacies
- Universal Vaccine Programs
- Affordable Care Act of 2010
New Mexico Initiatives

• NM Vaccine Purchase Act – 2015
• NMSIIS – State Vaccine Registry
• Statewide Clinician Education Programs
• Collaborative Partnerships in Communities
• Collaborative Partnerships in Schools
Clinic System Initiatives

• Team Responsibility/Approach to HPV Vaccine
• Standing Orders for HPV vaccinations
• Reminder/Recall Protocols
• Updating Clinical decision supports in EHR
• Functional system for F/U for #2 HPV vaccine
• Performance Feedback/clinician & Clinic
TOOLS:

Steps for Increasing HPV Vaccination in Practice
# HPV VACs

## Step 1: Assemble a Team
- Identify an HPV vaccination champion.
- Form a Quality Improvement Team for HPV vaccination.
  - Identify clinical and non-clinical staff to serve as change agents.
  - Agree on team tasks.
- Identify external organizations and resources to support your efforts.

Your clinic system may not initially tackle every step. **Steps 1-3** can help you build capacity to implement the evidence-based strategies in **Step 4**. Consider starting with one or two strategies that are most realistic for your clinic.

## Step 2: Make a Plan
- Identify opportunities to increase HPV vaccination.
  - Complete a capacity assessment.
  - Map your current vaccination process.
  - Share the results with staff.
- Determine baseline vaccination rates for 11- and 12-year-olds.
  - Calculate the baseline vaccination rates for each HPV dose, Tdap, and Meningococcal.
  - Improve accuracy of the baseline rates.

## Step 3: Engage and Prepare All Staff
- Engage all clinical and non-clinical staff in your efforts.
  - Train all staff to ensure consistent, positive message delivery to parents and patients.
  - Use human-interest stories to increase staff investment.
- Prepare the clinic system.
  - Modify your EHR system to accommodate the needs of your plan.
  - Ensure your vaccine supply and storage needs are met.

## Step 4: Get Your 11- to 12-Year-Olds Vaccinated
- Make a strong recommendation.
  - Recommend the HPV vaccine series the same day, same way you recommend other vaccines.
- Prompt the health care provider.
  - Ensure clinicians know that a specific patient is due or overdue for HPV vaccination.
- Increase access.
  - Incorporate standing orders into clinic procedures.
  - Provide walk-in or immunization-only appointments.
- Track series completion & follow-up.
  - Remind parents when it's time for the next dose of vaccine or when the vaccine is overdue for their child.
- Measure and improve performance.

## Prepare the Parent and Patient
- Provide targeted education materials.

## Prepare the Clinicians
- Train clinicians on how to effectively communicate with parents and patients.
- Provide targeted provider education materials.
School System Initiatives

SCHOOLS/SCHOOL SYSTEMS

1. Have sports/camp physical forms changed to list all recommended vaccines
2. Adolescent vaccine promotion at high school sporting event venues
3. Send letters to parents of 11-12 y.o. students about recommended vaccinations
4. Invite speakers to health classes to talk about vaccines and VPDs

For more info visit: www.cdc.gov/HPV
Middle School Toolkits for Parents, Teachers, Nurses
Free Resources and Technical Support
https://www.cdc.gov/hpv/

HPV PORTAL FOR PROVIDERS AND PATIENTS/PARENTS
Factsheets for Parents in English & Spanish
Free posters available for ordering in the following sizes: 8.5x11, 11x17, 18x24
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
Host a Movie Night at Your School

"An Accurate, Sobering and Powerful Film!"
— DR. WILLIAM BONNIEZ, UNIVERSITY OF ROCHESTER, NY
The National HPV Vaccination Roundtable

The National HPV Vaccination Roundtable, established by the American Cancer Society (ACS) and the Centers for Disease Control and Prevention (CDC) in 2014, is a national coalition of public organizations, private organizations, voluntary organizations, and invited individuals dedicated to reducing the incidence of and mortality from HPV-associated cancer in the U.S., through coordinated leadership and strategic planning.

Our Goals

The ultimate goal of the Roundtable is to reduce the number of HPV-associated cancers and cervical precancerous lesions as well as non-cancer outcomes through: (1) increased frequency and strength of clinician recommendations for HPV vaccine, (2) increased provider opportunities for HPV vaccine administration, and (3) increased HPV vaccination rates at national and state levels, with a focus on girls and boys ages 11-12.

The National HPV Vaccination Roundtable develops and implements pilot...
1-in-4 men have cancer-causing strain of HPV. WWWTV.com.

A population-based study of sociodemographic and geographic variation in HPV vaccination. Cancer Epidemiology, Biomarkers & Prevention.


I was a proud anti-vaxer, but I have had a change of heart. Scary Mommy.

Motivation for HPV vaccination among young adult men: Validation of TIM decisional balance and self-efficacy constructs. American Journal of Health Promotion.

Parents' willingness to get human papillomavirus vaccination for their adolescent children at a pharmacy. Preventative Medicine.

Pragmatic trial of an intervention to increase human papillomavirus vaccination in safety-net clinics. BMC Public Health.

Results of a Multi-level Intervention Trial to Increase Human Papillomavirus (HPV) Vaccine Uptake among Adolescent Girls. Cancer Epidemiology, Biomarkers & Prevention.

FACT: The HPV vaccine does NOT contain harmful ingredients.

HPV vaccines contain ingredients that have been proven to be safe. Like the hepatitis B and Tdap vaccines, HPV vaccines contain aluminum, which boosts the body's immune response to the vaccine. In addition to certain vaccines, aluminum is found in breast milk, infant formula, antacids, and numerous foods and beverages, including fruits and vegetables, seasonings, flour, cereals, nuts, dairy products, and honey. Typical adults ingest 7 to 9 milligrams of aluminum per day; the HPV vaccines contain .255 milligrams of aluminum per dose. These vaccines, as well as most others, do not contain thimerosal (a preservative that contains mercury).

TALKING POINT: Given the quantities of aluminum we are exposed to on a daily basis, the quantity of aluminum in vaccines is minuscule. Aluminum-containing vaccines have been used for decades and have been given to over 1 billion people without problems.

Reference:

Questions?

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Thank you!