“Ask me about the HPV vaccine”

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DISCLOSURE:

Dr. Humiston’s institution (CMH) receives funding from "Pfizer Independent Grants for Learning & Change" for her work to develop and test a curriculum to teach residents about how to manage vaccine hesitancy. This relationship is not relevant to this presentation.

Dr. Humiston’s participation today was funded by a grant from CDC to APA.
The learner should be able to:

1. Describe the importance of HPV vaccination.

2. Implement the same way, same day approach to HPV vaccination for 11- & 12-yr-olds.

3. Demonstrate the ability to answer parents’ FAQs accurately and succinctly.

4. Name 3 ways to increase HPV vaccination rates in a primary care office.
Objective #1

THE IMPORTANCE OF HPV VACCINATION
Human Papillomavirus (HPV)

2 components:
- L1 protein coat
- Double stranded DNA

Note: HPV vaccine is the protein coat, but NO DNA so it’s not alive & cannot reproduce itself

For more details, see You Tube animated videos:
https://www.youtube.com/watch?v=WSL8rBMWW1Y
https://www.youtube.com/watch?v=L7g2LfDwYc8 (from NCI)
In most cases, cells infected with HPV heal on their own.

However, in some cases HPV infection leads to transformation of cells from healthy to cancerous.

How does HPV infection cause cancer?
There’s a protein made by healthy human cells called “tumor suppressor protein” that:

- Scans the cell’s DNA for mutations
- Stops cells from dividing if there’s a DNA mutation

During an HPV infection, the virus can integrate some of it’s DNA into the human cell’s DNA.

Then the human cell’s genome itself starts producing a protein that inhibits its tumor suppressor protein!
Without functioning tumor suppressor protein, a human cell may continue to replicate its DNA even if that DNA is mutated. **Uncontrolled replication leads to cancer.**
Based on data from 2008 to 2012, about 38,793 HPV-associated cancers occur in the US each year: about 23,000 among women, and about 15,793 among men.

https://www.cdc.gov/cancer/hpv/statistics/cases.htm
Where is the oropharynx?

Image Source: American Cancer Society
Catching OP Cancer Early?

- Symptoms commonly mis-interpreted
- Location
  - Back of the throat
  - Deep in crypts
## Side effects of non-surgical therapy

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Percent affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste Disturbance</td>
<td>88%</td>
</tr>
<tr>
<td>Nausea/Vomiting</td>
<td>36%</td>
</tr>
<tr>
<td>Dry Mouth</td>
<td>29-38%</td>
</tr>
<tr>
<td>Esophageal Stricture</td>
<td>5%</td>
</tr>
<tr>
<td>Require G tube &gt; 1 year</td>
<td>9%</td>
</tr>
</tbody>
</table>


Oropharyngeal Cancer Survivor

A Survivor’s Story:

https://www.youtube.com/watch?v=qnwb2-y_yPU&t=41s
Cervical Cancer & Pre-cancers

Drawing from http://www.womeningovernment.org/oncology/hpv
Even pre-cancerous lesions have implications for a woman and her offspring.

New cases of cervical dysplasia each year in the US:

- 1.4 million low grade
- 330,000 high grade

Loop electrosurgical excision procedure (LEEP) or a cold-knife cone biopsy
LEEP and Cone Biopsy

- May be used to treat moderate to severe types of abnormal cell changes (CIN II or CIN III) or even very early stage cervical cancer.

- Subsequent pregnancies are at risk of:
  - Perinatal mortality
  - Preterm delivery
  - Low birth weight
Cervical Cancer During Child-bearing Years

38% of cervical cancers occur in women between the ages of 20 & 44 years.

Cervical Cancer Incidence Rates by State, 2013

4,120 deaths from cervical cancer anticipated in the US in 2016

Data Source: www.cdc.gov/cancer/cervical/statistics/state.htm
State-based disparities in HPV-associated oropharyngeal cancer

Data Source: Adapted from [www.cdc.gov/cancer/hpv/statistics/state/oropharyngeal.htm](http://www.cdc.gov/cancer/hpv/statistics/state/oropharyngeal.htm)
Deaths from Diseases Covered in Adolescent Vaccine Series

Estimated Annual Deaths

- Meningococcal Disease (all serogroups): 70
- Meningococcal Disease Serogroup B: 7,500
- Pertussis: 6
- Cervical cancer (HPV associated): 4,210

Data Sources: CDC, 2016; CDC 2015; American Cancer Society
THE IMPORTANCE OF HPV VACCINATION?

It prevents infection with HPV types that cause cancer and pre-cancers
Prevalence of HPV before & after US introduction of HPV vaccination in 2006

http://pediatrics.aappublications.org/content/early/2016/02/19/peds.2015-1968
Does immunity last?
Follow-up through month 60

RESULTS: Antibody kinetics
• Similar in 2 groups
• Steady
• > Natural infection

Data Source: Adopted from Romanowski, 2016
Antibody measured by ELISA
Evidence of lasting immunity

- For 2 or 3-dose schedule?
  - No evidence of waning protection after a 3-dose schedule
  - So far, antibody persistence for 2-dose schedule appears similar to 3-dose schedules

- How long?
  - Data available through ~10 years for 2vHPV and 4vHPV
  - Longer follow-up, through 14 years, ongoing in some studies
### 2017 Immunization Schedule

Age at 1\(^{st}\) dose of HPV vaccine
- Before 15\(^{th}\) Bday: 2 doses
- On or after 15\(^{th}\) Bday: 3 doses

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#### Table: Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger—United States, 2017.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Birth</th>
<th>4 mos</th>
<th>6 mos</th>
<th>12 mos</th>
<th>15 mos</th>
<th>19 mos</th>
<th>2 yrs</th>
<th>4 yrs</th>
<th>6 yrs</th>
<th>11 yrs</th>
<th>13 yrs</th>
<th>15 yrs</th>
<th>17 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A (HAV)</td>
<td>2 doses</td>
<td></td>
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<tr>
<td>Rotavirus (RV) (2-dose series)</td>
<td>2 doses</td>
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<tr>
<td>Diphtheria, tetanus &amp; acellular pertussis (DTaP)</td>
<td>4 doses</td>
<td></td>
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<tr>
<td>Haemophilus influenzae type b (Hib)</td>
<td>4 doses</td>
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<tr>
<td>Pneumococcal conjugate (PCV13)</td>
<td>4 doses</td>
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<tr>
<td>Inactivated poliovirus (IPV)</td>
<td>4 doses</td>
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<tr>
<td>Influenza (IV)</td>
<td>4 doses</td>
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<tr>
<td>Varicella, mumps, measles (MMR)</td>
<td>4 doses</td>
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<tr>
<td>Varicella (VAR)</td>
<td>4 doses</td>
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<tr>
<td>Hepatitis B (HBV)</td>
<td>4 doses</td>
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<tr>
<td>Meningococcal B (MenB)</td>
<td>4 doses</td>
<td></td>
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<tr>
<td>Human papillomavirus (HPV)</td>
<td>4 doses</td>
<td></td>
<td></td>
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<tr>
<td>Pneumococcal polysaccharide (PPV23)</td>
<td>4 doses</td>
<td></td>
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<td></td>
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</tbody>
</table>

**NOTE:** The above recommendations must be read along with the footnotes of this schedule.
2017 Immunization Schedule


Age at 1\textsuperscript{st} dose of HPV vaccine

- Before 15\textsuperscript{th} Bday: 2 doses
- On or after 15\textsuperscript{th} Bday: 3 doses

Immunocompromised: 3 doses
What forms of “immunocompromise” necessitate a 3-dose HPV vaccine series?

<table>
<thead>
<tr>
<th>Needs 3 doses irrespective of age:</th>
<th>Can use 2 dose series for those initiating before 15th birthday:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary or secondary conditions that might reduce cell-mediated or humoral immunity</strong></td>
<td><strong>Examples:</strong></td>
</tr>
<tr>
<td>o B lymphocyte Ab deficiencies</td>
<td>o Asthma</td>
</tr>
<tr>
<td>o T lymphocyte complete or partial defects</td>
<td>o Asplenia</td>
</tr>
<tr>
<td>o HIV infections</td>
<td>o Diabetes mellitus</td>
</tr>
<tr>
<td>o Malignant neoplasm</td>
<td>o Sickle cell disease</td>
</tr>
<tr>
<td>o Transplantation</td>
<td>o Chronic granulomatous disease</td>
</tr>
<tr>
<td>o Autoimmune disease</td>
<td>o Chronic disease of liver, lung, kidneys</td>
</tr>
<tr>
<td>o Immunosuppressive therapy</td>
<td>o Heart disease</td>
</tr>
<tr>
<td></td>
<td>o CNS barrier defects (eg, cochlear implant)</td>
</tr>
<tr>
<td></td>
<td>o Complement deficiency, persistent complement component deficiency</td>
</tr>
</tbody>
</table>
# Recommended # of Doses & Dosing Schedule for HPV Vaccine

<table>
<thead>
<tr>
<th>Population</th>
<th>Rec. # of doses</th>
<th>Rec. dosing schedule</th>
<th>Minimum intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started series at ages 9 through 14 years, except immunocompromised persons</td>
<td>2</td>
<td>0, 6–12 mos</td>
<td>5 mos between doses</td>
</tr>
<tr>
<td>Started series at ages 15 through 26 years, and immunocompromised persons (any age)</td>
<td>3</td>
<td>0, 1–2, 6 mos</td>
<td>4 weeks btwn doses 1-2 12 weeks btwn doses 2-3 5 mos btwn doses 1-3</td>
</tr>
</tbody>
</table>
Case example - 1

A boy is starting the HPV vaccine series on his 15th birthday. How many doses does he need in total?

A. 0
B. 2
C. 3

This adolescent needs 3 doses (0, 1-2, 6 months schedule) because he is starting the series on (or after) the 15th 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 more doses are needed?

A. 0  
B. 1  
C. 2

No further doses are recommended because she initiated vaccination before the 15th birthday and received 2 doses of vaccine 6 months apart.
Case example - 3

A 13 year old has a history of 2 doses of HPV vaccine:  
4vHPV given at age 11 years &  
9vHPV given 2 months later.  

How many more doses are needed?

A. 0  
B. 1  
C. 2

1 more dose...  
Although she initiated the vaccination series before her 15th birthday, she needs another dose because HPV vaccine doses #1 and #2 were administered <5 months apart.  

Give a 3rd dose with a minimum of 12 weeks between doses 2-3 and a minimum of 5 months between doses 1-3

Photo Credit: https://commons.wikimedia.org/wiki/File:Strawberry_Blond_Girl.jpg
Interrupted Vaccination Schedules

If the vaccination schedule is interrupted, the vaccination series does not need to be restarted.

October 2016: ACIP vote and approved by CDC
<table>
<thead>
<tr>
<th>Vaccine and dose number</th>
<th>Recommended age for this dose</th>
<th>Minimum age for this dose</th>
<th>Recommended interval to next dose</th>
<th>Minimum interval to next dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria-tetanus-acellular pertussis (DTaP)-1⁵</td>
<td>2 months</td>
<td>6 weeks</td>
<td>8 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>DTaP-2</td>
<td>4 months</td>
<td>10 weeks</td>
<td>8 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>DTaP-3</td>
<td>6 months</td>
<td>14 weeks</td>
<td>6-12 months</td>
<td>6 months⁶</td>
</tr>
<tr>
<td>DTaP-4⁶</td>
<td>15-18 months</td>
<td>12 months⁶</td>
<td>3 years</td>
<td>6 months</td>
</tr>
<tr>
<td>DTaP-5</td>
<td>4-6 years</td>
<td>4 years</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Haemophilus influenzae type b (Hib)-1³,⁵</td>
<td>2 months</td>
<td>6 weeks</td>
<td>8 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Hib-2</td>
<td>4 months</td>
<td>10 weeks</td>
<td>8 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Hib-3⁵</td>
<td>6 months</td>
<td>14 weeks</td>
<td>6-9 months</td>
<td>8 weeks</td>
</tr>
<tr>
<td>Hib-4</td>
<td>12-15 months</td>
<td>12 months</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Hepatitis A (HepA)-1⁵</td>
<td>12-23 months</td>
<td>12 months</td>
<td>6-18 months</td>
<td>6 months</td>
</tr>
<tr>
<td>HepA-2</td>
<td>≥18 months</td>
<td>18 months</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Hepatitis B (HepB)-1⁵</td>
<td>Birth</td>
<td>Birth</td>
<td>4 weeks-4 months</td>
<td>4 weeks</td>
</tr>
<tr>
<td>HepB-2</td>
<td>1-2 months</td>
<td>4 weeks</td>
<td>8 weeks-17 months</td>
<td>8 weeks</td>
</tr>
<tr>
<td>HepB-3⁹</td>
<td>6-18 months</td>
<td>24 weeks</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Herpes zoster (HZV)¹⁰</td>
<td>≥60 years</td>
<td>60 years</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Human papillomavirus (HPV)-1¹¹</td>
<td>11-12 years</td>
<td>9 years</td>
<td>8 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td>HPV-2</td>
<td>11-12 years (+ 2 months)</td>
<td>9 years (+ 4 weeks)</td>
<td>4 months</td>
<td>12 weeks¹²</td>
</tr>
<tr>
<td>HPV-3¹²</td>
<td>11-12 years (+ 6 months)</td>
<td>9 years (+24 weeks)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Influenza, inactivated (IIV)¹³</td>
<td>≥6 months</td>
<td>6 months¹⁴</td>
<td>4 weeks</td>
<td>4 weeks</td>
</tr>
</tbody>
</table>
RECOMMEND HPV VACCINE THE “SAME WAY, SAME DAY”
When is a recommendation not a recommendation?

“I vaccinate whenever a parent requests HPV vaccine.”

“I just can’t bring myself to talk about the possibility that this child will have sex when she’s an 11-year old.”

To parent: “Today we have 3 vaccines for your child: Tdap – which is required for school, MCV – which is required for a lot of colleges, and HPV – which is optional.”
Recommend HPV vaccine the **same day** & the **same way** as other adolescent immunizations

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

Unpublished CDC data, 2013.
Recommend HPV vaccine the same day & the same way as other adolescent immunizations:

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

- More convenient for the parent
- More reliable

Unpublished CDC data, 2013.
Recommend HPV vaccine the **same day** & the **same way** as other adolescent immunizations

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

**Same way**: Bundle all the ROUTINELY RECOMMENDED adolescent vaccines and recommend them all in the same way with the assumption that the parent will want protection for their child.

Unpublished CDC data, 2013.
Today, Pat should have 3 shots that will protect her from a form of meningitis, some cancers caused by HPV, and whooping cough.

What questions do you have for me?
If a parent hesitates...

The MA/nurse should say ...

“Our team is so dedicated to cancer prevention. I’m sure the doctor will want to respond to your concerns.”
If a parent has a question...

Don’t panic!

My 2 knee jerk rxns:

- Feel like we’re heading into time-sucking conflict
- Feel like my authority’s being challenged

Interpret a question as a request for reassurance from YOU, a clinician they trust
Case example: The hesitant parent

- An 11 year old girl comes to your office for well-care.
- You offer a ‘presumptive’ recommendation for the vaccines, saying “Great, you’re here for your vaccines. We can go ahead and do her tetanus/diphtheria/whooping cough vaccine, her HPV vaccine, and her meningitis vaccine.”

Not so fast. The mother says:

“We’re okay doing that tetanus shot and the meningitis one, but we’re going to hold off on the HPV vaccine.”
How to Handle Resistance:  
#1: Ask the parent to share her/his concern(s)

**Example:**

“So you seem to have concerns about the HPV vaccine. Well, that’s perfectly understandable – I’ve had a number of questions about this one. Would you mind sharing what your particular concerns are?” (Note: non-threatening)

“Well, I’ve heard that it’s a vaccine to prevent a disease that’s transmitted by having sex, and she is a looooong way from having sex.”
How to Handle Resistance:

#2 – Reflect, summarize, ask, advise

The provider reflects back what the parent is saying to be sure he/she understands (empathy) and summarizes what has been heard before proceeding, again with permission, to make a recommendation.

**Example:**

“So I can hear that you’re concerned that she’s too young for the HPV vaccine because HPV is transmitted by sexual activity. Well, I completely get that – she’s only 11 after all. I’ve thought a lot about this. Is it okay if I go over how I’ve come to think about this vaccine?”
How to Handle Resistance: #3 – The crucial step

**Example:**

*What NOT to say:* “Well, data shows that many adolescents will be having sex by middle school, and if you’re worried about her having sex, studies have shown that it won’t increase the likelihood of her having sex.”
How to Handle Resistance: #3 – The crucial step

Example:

What TO say: “I used to think of this vaccine as something to prevent a sexually transmitted disease, but I’ve realized it’s really about preventing cancer. Almost everyone gets this virus, so I think it’s important for everyone.”
How to Handle Resistance:
#4 – Make a personalized recommendation

**Example:**

“If she were my daughter I wouldn’t hesitate to recommend this vaccine for her, and most of my patients now are getting the vaccine.

Having said that, this is a decision that only you and your daughter can make. What do you think?”
Summary: How to Handle Resistance

- Engage the parent & patient respectfully and fully in the discussion
- Use empathy, collaboration, evocation and support for autonomy
- Use open-ended questions and reflections
- Use behavior change principles-emphasizing social norms, pivoting from debunking the myth that she is too young, and focusing on the disease that is prevented rather than negatives (eg, side effects)
- Make a clear, strong, & personalized recommendation
A small percentage of parents will decline or delay
If a parent **declines**...

- Declination is not final. The conversation can be revisited.
  Declining = Delaying

- End the conversation with **at least 1 action** you both agree on.

- Because waiting to vaccinate is the risky choice, many pediatricians ask the parent to sign a *Declination Form*
https://www2.aap.org/immunization/pediatricians/pdf/refusaltovaccinate.pdf
ANSWER FREQUENTLY ASKED QUESTIONS FROM PARENTS & OTHER CLINICIANS
# Addressing Parents' Top Questions about HPV VACCINE

Parents may be interested in vaccinating, yet still have questions. Some parents might just need additional information from you, the clinician they trust. Taking the time to answer their questions and address their concerns can help parents to accept a recommendation for HPV vaccination.

<table>
<thead>
<tr>
<th>WHEN PARENTS SAY:</th>
<th>TRY SAYING:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why does my child need the HPV vaccine?</td>
<td>HPV vaccine is important because it prevents cancer. That is why I recommend that your daughter/son be vaccinated today.</td>
</tr>
<tr>
<td>What diseases are caused by HPV?</td>
<td>Certain HPV types can cause cancer of the cervix, vagina, and vulva in females, cancer of the penis in men, and in both females and males, cancers of the anus and the throat. We can help prevent infection with the HPV types that cause these cancers by starting the HPV vaccine series for your child today.</td>
</tr>
<tr>
<td>Is my child really at risk for HPV?</td>
<td>HPV is a very common and widespread virus that infects both females and males. We can help protect your child from the cancers and diseases caused by the virus by starting HPV vaccination today.</td>
</tr>
<tr>
<td>Why do they need HPV vaccine at such a young age?</td>
<td>HPV vaccination works best at the recommended ages of 11 or 12 years.</td>
</tr>
<tr>
<td>I have some concerns about the safety of the vaccine—I keep reading things online that says</td>
<td>I know there are stories in the media and online about vaccines, and I can see how that could concern you. However, I want you to know that HPV vaccine has been carefully studied for many years by medical and</td>
</tr>
</tbody>
</table>

Why give HPV vaccine at 11-12 years of age rather than later?

- 2 doses instead of 3 if started before 15\(^{th}\) bday
- Long-lasting protection
- Optimal vaccine efficacy if the vaccine series is **completed** before onset of sexual activity

http://pediatrics.aappublications.org/content/129/3/602.full
Higher effectiveness with vaccination at younger ages

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

Age at vaccination

Percent dysplasia reduction

Gertig DM, BMC Med 2013
“Profiling” does not work.

Do I really want to bet your patient’s life on guessing right?
Marriage is not an anti-viral.

A newlywed can catch HPV from her/his spouse.
“I don’t want to talk about sex.”
“I don’t want to talk about sex.”

Did you explain fecal-oral spread before you gave the polio vaccine?

“Is HPV vaccine safe?”
Studies on Gardasil (vs unvaccinated) have shown that vaccinated females are **not** more likely to develop:

- **2011** - allergic reactions, anaphylaxis, Guillain–Barré Syndrome, stroke, blood clots, appendicitis, or seizures (than unvaccinated or who received other vaccines)
- **2013** – (almost 1 million girls) blood clots or AEs related to the immune & CNS
- **2014** – (>1 million women) venous thromboembolism or blood clots
- **2012 and 2014** – (2 studies) autoimmune disorders
- **2015** - MS or similar diseases

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2012 - vaccine may be associated with skin infections where the shot is given during the two weeks after vaccination and fainting on the day the shot is received
INCREASE HPV VACCINATION RATES IN A PRIMARY CARE OFFICE
Estimated vaccination coverage with selected vaccines and doses among adolescents aged 13–17 years, by survey year - National Immunization Survey-Teen, US, 2006–2015
Estimated vaccination coverage among adolescents aged 13–17 years, by state— National Immunization Survey-Teen (NIS-Teen), US, 2015

<table>
<thead>
<tr>
<th>State</th>
<th>Tdap (%)</th>
<th>MenACWY (%)</th>
<th>FEMALES Only HPV Doses (≥1, ≥2, ≥3)</th>
<th>MALES Only HPV Doses (≥1, ≥2, ≥3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>86.4</td>
<td>81.3</td>
<td>62.8, 52.2, 41.9</td>
<td>49.8, 39.0, 28.1</td>
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<tr>
<td>IA</td>
<td>85.5</td>
<td>75.0</td>
<td>66.7, 62.3, 49.8</td>
<td>48.0, 37.0, 23.9</td>
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<tr>
<td>KS</td>
<td>87.3</td>
<td>63.7</td>
<td>50.9, 43.6, 31.7</td>
<td>36.0, 26.3, 18.5</td>
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<tr>
<td>MO</td>
<td>85.7</td>
<td>69.7</td>
<td>59.3, 43.4, 31.5</td>
<td>44.7, 33.7, 25.1</td>
</tr>
<tr>
<td>NE</td>
<td>87.7</td>
<td>78.1</td>
<td>67.3, 55.5, 48.2</td>
<td>54.3, 46.9, 32.2</td>
</tr>
</tbody>
</table>
# of Doses Distributed

Year-to-date Total of Distributed† 4-valent HPV vaccine and 9-valent HPV vaccine Doses in the United States (2012-2016)

<table>
<thead>
<tr>
<th>Year-to-Date Total of Distributed† 4-Valent and 9-Valent HPV Vaccine, US (2015-2016)</th>
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<tbody>
<tr>
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<td>Nov</td>
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<td>Dec</td>
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</table>

†These data represent an estimate of all Gardasil and Gardasil 9 HPV vaccine doses distributed in the United States.

Note: Cervarix doses, which represent less than 1% of the HPV vaccine doses distributed in the United States, are not included in this report.
Every part of your practice influences parents’ perceptions
Create Immunization Champions
Be sure everyone in the office understands the mission

Human stories usually influence people more than statistics

To understand the human stories behind HPV, listen to survivors

Shot By Shot
Unprotected People on www.immunize.org
How to improve: 2 Approaches

Increase the # of target patients who:

1. **Come in**
   - Reminder/recall
   - Office hours
   - Nurse only visits to complete series

2. **Leave the office vaccinated**
   - Use every visit
   - Use provider prompts
   - Use standing orders
For more information, including free resources for yourself and your patients/clients, visit: cdc.gov/vaccines/YouAreTheKey

Email questions or comments to CDC Vaccines for Preteens and Teens: PreteenVaccines@cdc.gov
For More Information

- **Shot by Shot**
  [http://shotbyshot.org/story-gallery](http://shotbyshot.org/story-gallery)

- **AAP**
  Info for parents ([healthychildren.org](http://healthychildren.org))
  Info for clinicians ([http://www2.aap.org/immunization/illnesses/hpv/hpv.html](http://www2.aap.org/immunization/illnesses/hpv/hpv.html))

- **Immunization Action Coalition**

- **CHOP Vaccine Education Center**
  [http://vec.chop.edu/](http://vec.chop.edu/)

- **EZ IZ**

- **American Cancer Society**
1. The importance of HPV vaccination.

2. The same way, same day approach to HPV vaccination for 11- & 12-yr-olds

3. Answer parents’ FAQs accurately and succinctly.

4. Increase HPV vaccination rates in a primary care office