Getting Back on Track with Cancer Prevention and Adolescent Immunizations

Sharon Humiston

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Getting Back on Track with Cancer Prevention and Adolescent Immunizations

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VISITING IMMUNIZATION EXPERT INITIATIVE

- The Visiting Immunization Expert Initiative through the national American Academy of Pediatrics provides support for immunization experts to virtually visit organizations to address pediatric influenza and Human Papillomavirus (HPV) in effort to help physicians and practice staff make strong recommendations for HPV and pediatric influenza vaccination.

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DISCLOSURES

Dr. Humiston’s employer receives a grant from the Pediatric Infectious Disease Foundation, which is funded for the project through unrestricted educational grants from Sanofi Pasteur US, Merck & Co., Inc., Pfizer, Inc., GlaxoSmithKline, and Seqirus USA, Inc.

Dr. Humiston is a consultant to

- Sanofi Pasteur, a vaccine manufacturer that does not make an HPV vaccine
- Universities, including UCLA and University of Rochester
- Not-for-profit organizations, including AAP and its chapters, Immunization Action Coalition, and Immunize Kansas Coalition
1. Explain why HPV vaccine is important enough to be routinely recommended for young people (i.e., HPV cancer prevention).

2. Give an HPV vaccination recommendation that is effective and succinct using the same way, same day approach to the introduction of HPV vaccine.

3. Answer the most frequently asked questions about HPV vaccine accurately and succinctly.
1: Why HPV vaccine is important enough to be routinely recommended for young people
NEW HPV-ASSOCIATED CANCER CASES EACH YEAR
BASED ON DATA FROM 2012-2016

Females (24,886)
- Cervix: 48.6%
- Oropharynx: 17.6%
- Anus*: 16.2%
- Vagina: 14.0%

Males (19,113)
- Cervix: 11.9%
- Oropharynx: 81.3%
- Anus*: 6.8%

CANCERS CAUSED BY THE 9 VACCINE TYPES OF HPV

<table>
<thead>
<tr>
<th>Cancer site</th>
<th>% caused by 9 vaccine HPV types</th>
<th># probably caused by 9 vaccine types-HPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Cervix</td>
<td>81%</td>
<td>9,700</td>
</tr>
<tr>
<td>Vagina</td>
<td>73%</td>
<td>600</td>
</tr>
<tr>
<td>Vulva</td>
<td>63%</td>
<td>2,500</td>
</tr>
<tr>
<td>Penis</td>
<td>57%</td>
<td>0</td>
</tr>
<tr>
<td>Anus*</td>
<td>88%</td>
<td>4,100</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>66%</td>
<td>2,100</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>19,000</td>
</tr>
</tbody>
</table>

*Includes anal and rectal squamous cell carcinomas

Source: [https://www.cdc.gov/mmwr/volumes/68/wr/mm6833a3.htm](https://www.cdc.gov/mmwr/volumes/68/wr/mm6833a3.htm)
Our Understanding of HPV-Associated Cancers Is Evolving

Prostate cancer -causal role for HPVs is highly likely.

Source: Lawson and Glenn
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7359253/
HPV-associated cancers were defined as cancers at specific anatomic sites with specific cellular types in which HPV DNA frequently is found.

All cancers were confirmed histologically.

Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population.
They should change the name! I thought "HPV" was an STD, not a virus that causes cancer.
• Human stories usually influence people more than statistics

• To understand the human stories behind HPV, listen to survivors
  o Shot By Shot.org
  o ACS HPV survivor stories
OROPHARYNGEAL CANCER SURVIVOR

American Cancer Society
HPV Survivor – Frank Summers
https://www.youtube.com/watch?v=D2Ki-gC7OhM
A virus that causes cancer... effective, safe, long-lasting vaccine... so everyone’s knocking down the door to get their child protected, right?
≥1 Dose HPV Vaccination Coverage among Adolescents Age 13-17 Years, 2019, National Immunization Survey-Teen

Source: https://app.powerbigov.us/view?r=eyJrIjoiMDY2OWM2ZmEtYjE2Yy00MTM5LWI2ZGItNDRmZC1hYmU4LWQyNzY3MDC3ZmM4ZiI9&imageName=ReportSection561f78b2709c4087d370
2: Identify patients for whom HPV vaccine is recommended
**Routine on-time vaccination**

- Ages 9 through 14
- 2 doses (unless immunocompromised relative to HPV)
- Separated by 6-12 months (minimum 5 months)

Source: [https://www.cdc.gov/hpv/hcp/schedules-recommendations.html](https://www.cdc.gov/hpv/hcp/schedules-recommendations.html)
Immunizations for Adolescents
Proportion of adolescents who received recommended vaccines by their 13th birthday

- Meningococcal vaccine
- Tdap vaccine
- HPV vaccine

**Combination Rate**
Meningococcal, Tdap, and HPV vaccines
Start Talking Early
Ages 9-10
2 doses

On Time
Ages 11-12
2 doses

Late
Ages 13-14
2 doses

Late
Ages 15-26
3 doses

Source: https://www.cdc.gov/hpv/hcp/schedules-recommendations.htm
HPV VACCINE RECOMMENDATIONS - ROUTINE

• **Routine On-time Vaccination**
  - Ages 9 through 14
  - 2 doses (unless immunocompromised relative to HPV)
  - Separated by 6-12 months (minimum 5 months)

• **Routine Delayed Vaccination**
  - Ages 15 through 26
  - 3 doses
  - Doses 1 & 2 separated by 1-2 months (min 4 wks)
    - Doses 1 & 3 separated by 6 months (min 5 mos)
    - Doses 2 & 3 separated by at least 12 weeks
  - If started at age 26, complete series when 27

**If the series is interrupted, it does not need to be restarted.**
HPV VACCINE RECOMMENDATIONS—SCDM

- **For adult ages 27-45 years** ACIP has voted to recommend “shared clinical decision making”
- **3 doses, same schedule as young adults**
- **Risks?** Very low
- **Benefit?**

<table>
<thead>
<tr>
<th>Age at vaccination</th>
<th>Anogenital warts</th>
<th>Cervical intraepithelial neoplasia (CIN) grade 2+</th>
<th>Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-26 years of age</td>
<td>9</td>
<td>22</td>
<td>202</td>
</tr>
<tr>
<td>Include adults through age 45 years</td>
<td>120</td>
<td>800</td>
<td>6500</td>
</tr>
</tbody>
</table>

Source: [https://www.cdc.gov/vaccines/acip/recs/grade/HPV-adults-etr.html](https://www.cdc.gov/vaccines/acip/recs/grade/HPV-adults-etr.html)
3: Explain why HPV vaccine is more likely to protect women from fertility issues than to cause them
HPV VACCINATION ELIMINATES HPV INFECTION AND THE DOWNSTREAM CONSEQUENCES

Source: Schiffman M et al., 2013
Cervical Cancer During Child-Bearing Years

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

WITHOUT VACCINATION, ANNUAL BURDEN OF GENITAL HPV-ASSOCIATED 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 intraepithelial neoplasia)
- 350,000 new cases of genital warts
- 1.4 million new cases of LSIL: CIN1 (low grade cervical intraepithelial neoplasia)

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

Source: https://www.cancer.gov/types/cervical/understanding-abnormal-hpv-and-pap-test-results#treatment-for-high-grade-cervical-cell-changes
https://www.cdc.gov/hpv/partners/establishing-partners/prioritization.html
Picture: https://medlineplus.gov/ency/presentations/100080_4.htm
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
Study also found vaccine type-HPV decreased 89% for vaccinated girls and 34% for unvaccinated girls: herd immunity

Source: Oliver, et al. JID 2017
COCHRANE REVIEW: HPV VACCINE Effectiveness against Cervical Precancer

• Among previously un-infected women -
  # of women who developed cervical precancer
  o Placebo: 164 per 10,000 women
  o HPV vaccine: 2 per 10,000 women who got the vaccine

• Regardless of infection status at outset -
  HPV vaccines reduced the risk of cervical precancer
  o Associated with HPV16/18: from 341 to 157/10 K
  o Any precancer lesions: from 559 to 391/10 K

Source: https://www.cochrane.org/news/does-hpv-vaccination-prevent-development-cervical-cancer-are-there-harms-associated-being
HPV Vaccination and the Risk of Invasive Cervical Cancer

Jiayao Lei, Ph.D., Alexander Ploner, Ph.D., K. Miriam Elfström, Ph.D., Jiangrong Wang, Ph.D., Adam Roth, M.D., Ph.D., Fang Fang, M.D., Ph.D., Karin Sundström, M.D., Ph.D., Joakim Dillner, M.D., Ph.D., and Pär Sparén, Ph.D.
We found that the risk of cervical cancer among participants who had initiated vaccination before the age of 17 years was **88% lower** than among those who had never been vaccinated.

**Figure 2. Cumulative Incidence of Invasive Cervical Cancer According to HPV Vaccination Status.**

Age at follow-up is truncated in the graph because no cases of cervical cancer were observed in girls younger than 18 years of age.
4: Recommend this vaccine the same way you recommend other vaccines
Our recommendations matter to parents!

MN Dept of Health’s “Just another shot: Reframing the HPV vaccine”

https://www.youtube.com/watch?v=vFHjK5L0t-Y&feature=emb_title

Source: http://www.health.state.mn.us/divs/idepc/immunize/hcp/ado1/hpvvideos.html
OPTIONAL VERSUS HIGH QUALITY

• Optional approach: “Have you thought about what shots you’d like to get today?”
  o Unintentionally implies shot is not important or few get it
  o 20-30% vaccination rate in studies of child & teen vaccines

• High quality: “Today we have some shots for you.”
  o Implies shot is important and most people get it
  o 70-90% vaccination rate in studies of child & teen vaccines

Sources: Brewer NT, Hall ME, Malo TL, Gilkey MB, Quinn B, Lathren C. Announcements vs conversations to improve HPV vaccination coverage: a randomized trial. Pediatrics. 2017;139(1):e20161764
**MAKE AN EFFECTIVE RECOMMENDATION**

- **Same day:** Group all the adolescent vaccines, recommend HPV vaccination the same way you recommend Tdap & meningococcal vaccines
- **Same day:** Recommend HPV vaccine *today*, i.e., the **same day** you recommend Tdap & meningococcal vaccines
- **Put HPV in the middle** between Tdap & meningococcal vaccines
PUTTING HIGH QUALITY RECOMMENDATIONS INTO PRACTICE: SAME WAY, SAME DAY

“Your child needs 3 vaccines today- Tdap, HPV and meningococcal”

If starting before age 11, you can say:

“Today, your child needs the HPV vaccine to protect him against cancers and other diseases caused by HPV.”
EVERY PART OF YOUR PRACTICE INFLUENCES PARENTS’ PERCEPTIONS
THE OPENER BY THE NURSE/MA

• Encourage convenient same-day vaccination
  “Today, Pat should have 3 vaccines to protect him from meningitis, HPV cancers, and pertussis. Do you have any questions for me?”

• If a parent hesitates, the MA/nurse should say
  “I’m sure the doctor will want to talk with you about your concerns.”
5: Answering parents’ questions
TIP #1: REFLECT, ASK PERMISSION

Reflect back what the parent said to be sure he/she understands (empathy) and asks permission to share their own perspective.

“You feel that she’s too young for the HPV vaccine because HPV is transmitted by sexual activity. I can see what you’re saying. I’ve thought a lot about this. Is it okay if I tell you how I’ve come to think about this?”
Tip #2: Provide info to change parent’s perspective

“I used to think of this vaccine as something to prevent a sexually transmitted disease, but realized it’s really about preventing cancer.”

“We recommend it at this age because younger kids have a better immune response. That’s why they need only 2 doses instead of 3.”

This avoids arguing. You haven’t contradicted the parent’s point.
**Tip #3: Avoid Countering Emotion with Data**

**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.”

*Statistics do not work in an emotional argument.*
Tip #4: If a parent declines the HPV vaccine

• Declination is not final
  o Many parents who decline, will vaccinate later
  o The conversation should be revisited
• Offer reading material
• Don’t over-remember this
• Relax. You’ve done your best for this child.
• Waiting to vaccinate is the risky choice, so some pediatricians ask parent to sign a Declination Form
How do you handle objections based on religion?
EXAMPLE OF EFFECTIVE PROVIDER COMMUNICATION

Minnesota Department of Health’s “HPV vaccine: It’s effective”

https://www.youtube.com/watch?time_continue=2&v=huyn7M8Vmql&feature=emb_title
GREAT JOB!

- He seized the moment
- He did not “profile”
- He bundled the recommendation
- He asked for mom’s question
- He answered mom’s question accurately and calmly
- When mom asked the 2nd question: “some people…”, he stayed positive
- He cared (“I’d feel better”)
6: Bring adolescents back to your office
#CALLYOURPEDIATRICIAN CAMPAIGN

The “COVID-19 To-Dos” Campaign
Select Platform ▼ Select Theme ▼
Download

The “20 Minutes” Campaign
Select Platform ▼ Select Theme ▼
Download

The “Moms Text” Campaign
Select Format ▼
Download

The doctor is in!
Pediatricians are taking steps to make sure it’s as safe as possible for office visits:
- Separate “Sick” and “Well” times and areas
- Phone check-in and in-car waiting rooms
- Video visits when possible
- If you have any concerns about your child’s health, please give your pediatrician a call.

Preparing for a Televisit
Select Platform ▼
Download

HealthyChildren.org
Ask the Pediatrician: Is it OK to see my pediatrician during COVID-19?

The “COVID-19 To-Dos” Campaign

Select Platform
- Facebook
- Instagram
- Twitter
- Pinterest
- LinkedIn

Select Theme
- Cut hair
- Drum set
- Find smell
- Do math
- Meditation
- Play-doh
- Plumber
- Puzzle
- Tap shoes
- Zoom

The “COVID-19 To-Dos” Campaign

- Call mom
- Buy milk
- Call pediatrician
- Find that smell

To Do
When you have office systems going well, add reminders or recall messages

• Use reminder or recall messages to bring adolescents in for well care or missed vaccines
• EHR and state Immunization Information Systems (IIS) can support this
• Many media: phone calls, letters, postcards, e-mail, text messages, or patient portals, automated calling services
DON’T MISS ANY OPPORTUNITIES

- Nurse or technician prompts
- EHR prompts

EHR prompts alone may not work.

ANOTHER PAPER PROMPT
**PAPER REMINDER/HUDDLE TOOL**

<table>
<thead>
<tr>
<th>Reason for visit:</th>
</tr>
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<tbody>
<tr>
<td>Acute: ____________________________</td>
</tr>
<tr>
<td>WCC       ADHD       Asthma       Other ________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screening:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing    Vision</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hct    Lead    Other ________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vaccines due:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10 years: 2mo 4mo 6mo 12mo 15mo 4 yr. Flu Other ________</td>
</tr>
<tr>
<td>≥10 years:  Tdap HPV Menactra Varicella Flu Other ________</td>
</tr>
</tbody>
</table>
If you can’t give it, schedule it.
Wrap up
INCIDENCE OF DISEASES PREVENTABLE BY 3 ADOLESCENT VACCINES, US

AAP’s EQIPP: IMMUNIZATIONS – STRATEGIES FOR SUCCESS

HTTPS://SHOP.AAP.ORG/EQIPP-IMMUNIZATIONS-STRATEGIES-FOR-SUCCESS/

• Free to AAP members
• Identify immunization rates in your practice, uncover barriers to immunization delivery systems, and provide techniques to overcome those barriers through clear aims that reflect expert principles and proven quality improvement methods and tools
• Choice of tracks
  – 19-23 months old
  – adolescent

Credit Information

<table>
<thead>
<tr>
<th>Credit Type</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA PRA Category 1 Credit™</td>
<td>6.00</td>
</tr>
<tr>
<td>Enduring Materials</td>
<td></td>
</tr>
<tr>
<td>PI CME</td>
<td>40.00</td>
</tr>
<tr>
<td>AAP Credit Only</td>
<td>48.00</td>
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<tr>
<td>AAP Credit</td>
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<tr>
<td>NAPNAP Credit Contact Hours</td>
<td>48.00</td>
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<tr>
<td>MOC</td>
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<tr>
<td>MOC Part 2</td>
<td>6.00</td>
</tr>
<tr>
<td>MOC Part 4</td>
<td>50.00</td>
</tr>
</tbody>
</table>
Wrap up

Patients for whom HPV vaccination is recommended

HPV vaccination supports healthy pregnancy

The presumptive recommendation for HPV vaccination works

Plan to bring adolescents to your office for vaccination

Evaluate how results of HPV vaccination QI projects could be applied in your office
Questions?