WELCOME!

HPV WORKSHOP

LET'S WORK TOGETHER

May 3-4, 2016 • Atlanta, GA
Welcome and Introductions

Randy Schwartz, ACS
Cindy Vinson, NCI
Review Purpose and Agenda

Nikki Hayes, CDC
Comprehensive Cancer Control National Partnership HPV Workshop: Purpose and Review

Nikki Hayes
Branch Chief
Comprehensive Cancer Control Branch

May 3-4, 2016
NCCCP Program Priorities

1. Emphasize Primary Prevention
2. Support Secondary Prevention Activities
3. Address the public health needs of Cancer Survivors
4. Support Policy, Systems and Environmental Approaches to Cancer Control
5. Promote Health Equity
6. Demonstrate outcomes through evaluation
Comprehensive Cancer Control

Collaborating to Conquer Cancer

- American Cancer Society (ACS)
- American Cancer Society Cancer Action Network (ACS-CAN)
- American College of Surgeons Commission on Cancer (ACoS CoC)
- TRUTH (formerly American Legacy Foundation)
- Association of State and Territorial Health Officials (ASTHO)
- Centers for Disease Control and Prevention (CDC)
- Health Resources Services Administration (HRSA)
- Intercultural Cancer Council (ICC)
- LIVESTRONG
- Leukemia and Lymphoma Society (LLS)
- National Association of Chronic Disease Directors (NACDD)
- National Association of County and City Health Officials (NACCHO)
- North American Association of Central Cancer Registries (NAACCR)
- National Cancer Institute (NCI)
- Susan G. Komen for the Cure
- Cancer Support Community (CSC)
- YMCA
- George Washington Cancer Institute
NCCCP Program HPV-related Action Plan Activities

- Partnering with Immunization Programs
- Increasing provider education and awareness opportunities
- Providing support for systems changes to increase the use of client reminders
- Providing support for systems changes to increase the use of provider reminders
- Providing support for the implementation of provider assessments
- Using social, small, and mass media to promote vaccine as a cancer prevention strategy.
Increasing HPV Vax Coverage Rates: Facilitators and Barriers

- Increased collaboration, particularly with state immunization programs- **INVALUABLE!**
- Increased awareness through social, mass, and small media

- Political push-back
- Stigma
- Contend with anti-vaccine messages
- More difficult to obtain male “buy-in”
- Provider training/provider recommendations
## Action-Packed Agenda: Day One

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda Item</th>
<th>Description</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 9:00</td>
<td>Registration</td>
<td></td>
<td>ACS Staff</td>
</tr>
<tr>
<td>9:00 - 9:20</td>
<td>Welcome, Introductions, Present R2R HPV Platform</td>
<td></td>
<td>Cindy Vinson, NCI</td>
</tr>
<tr>
<td>9:20 - 9:30</td>
<td>Review Purpose and Agenda</td>
<td>Two opening speakers 20 minutes each. State of the Science (latest vaccination information, ages, schedule, etc.) and national importance and efforts (HPV Roundtable, etc.)</td>
<td>Nikki Hayes, CDC</td>
</tr>
<tr>
<td>9:30 - 10:15</td>
<td>Our Opportunity to Prevent Cancer</td>
<td></td>
<td>Melinda Wharton, CDC, Noel Brewer, HPV Roundtable/UNC</td>
</tr>
<tr>
<td>10:15 - 10:30</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:30 - 11:30</td>
<td>A Look at Successful HPV Efforts Round 1</td>
<td>Three examples of successful evidence-based HPV efforts (focus on policy and system change EBIs) 15 minutes each</td>
<td>Citseko Staples, ACS-CAN - Policy from national standpoint</td>
</tr>
<tr>
<td></td>
<td>Efforts Round 1: Focus on Policy and System Change Evidence Based Interventions</td>
<td>Time for large group Q&amp;A</td>
<td>Robin Curtis, CDC (confirmed - VAX program working on policy/system change)</td>
</tr>
<tr>
<td>11:30 - 11:45</td>
<td>Team Brainstorming</td>
<td>Discussion at team tables re: information heard this morning and opportunities to incorporate into work back home; provide questions for teams to react to/answer during this time; answers will help shape action plan</td>
<td>Heather Brandt, U of SC, Policies to support pharmacists administering vaccine</td>
</tr>
<tr>
<td>11:45 - 12:15</td>
<td>Show case of Partner Resources</td>
<td>A brief overview of existing HPV resources. Approx 5 minutes per person. Resource table in the meeting room with examples of toolkits, handouts, campaigns NOTE: One slide per organization that has links to resources</td>
<td>Aubrey Villalobos, GW (confirmed) Sarah Comstock, ACS (confirmed) Cindy Vinson, NCI (confirmed) Jill Roark, CDC (confirmed) Katy Gore, NACCHO (confirmed)</td>
</tr>
<tr>
<td>12:15 - 1:15</td>
<td>Lunch provided in room</td>
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</table>
## Day Agenda 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda Item</th>
<th>Description</th>
<th>Who</th>
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</thead>
<tbody>
<tr>
<td>1:15 – 2:00</td>
<td><strong>A Look at Successful HPV Efforts: Round 2: Focus on Partnerships</strong></td>
<td>Two examples of successful HPV efforts (focus on innovative partnerships) Time for large group Q&amp;A</td>
<td>Deanna Kepka, Utah, collaboration across states, and among coalitions and programs</td>
</tr>
<tr>
<td>2:00 – 2:15</td>
<td>Team Brainstorming</td>
<td>Discussion at team tables re: information heard this morning and opportunities to incorporate into work back home; provide some questions for the teams to react to/answer during this time, answers will help shape action plan</td>
<td>Krystal Morwood, Colorado, internal department of health cross-collaboration on HPV efforts</td>
</tr>
<tr>
<td>2:15 – 2:45</td>
<td>“Just the Facts”</td>
<td>Utilize information from ACS HPV Staff Institute</td>
<td>Molly Black, ACS</td>
</tr>
<tr>
<td>2:45 – 3:30</td>
<td><strong>A Look at Successful HPV Efforts: Round 3: Working with Large Health Systems</strong></td>
<td>Two examples of successful HPV efforts (focus on efforts that had to deal with challenges, barriers and how they overcame them) Time for large group Q&amp;A</td>
<td>Lexi Haux and Tracy Bieber, South Dakota; Marisa Nelson, Arkansas</td>
</tr>
<tr>
<td>3:30 – 3:45</td>
<td>Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:45 – 5:00</td>
<td>Team Action Planning</td>
<td>Utilizing an action plan form – the team engages in initial discussions about an effort to begin, expand, enhance back home</td>
<td>SHC to set up action planning session Facilitators with teams</td>
</tr>
<tr>
<td>5:00</td>
<td>Adjourn for the day</td>
<td></td>
<td></td>
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</tbody>
</table>
# Day 2 Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda Item</th>
<th>Description</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 8:45</td>
<td>Welcome Back and Today’s Agenda</td>
<td></td>
<td>Citseko Staples, ACS-CAN</td>
</tr>
<tr>
<td>8:45 – 9:15</td>
<td>Examples of monitoring progress and impact</td>
<td>A brief overview of ways to evaluate HPV specific policy and system change efforts</td>
<td>Kristi Fultz-Butts, CDC</td>
</tr>
</tbody>
</table>
| 9:15 – 10:30 | Roundtables on the following topics   | Each team member chooses two 30-minute roundtable topic discussions to participate in. A facilitator will be at each table to kick start and moderate the discussions. Emphasis in each roundtable is to share information and learn from other efforts. | Identify Roundtable Subject Matter Experts  
1. Advocating for policy changes (including coverage, cost/reimbursement) – Citseko Staples, ACS-CAN  
2. Making system changes to support vaccination – Debbie Saslow, ACS  
3. Working with physicians and other providers – Sarah Kobrin, NCI  
4. Increasing vaccination of boys – Robin Vanderpool, U of KY  
5. Countering anti-vaccine press, advocates and reframing the vaccine message, to be about cancer  
6. Linkages to immunization programs – Achal Bhatt, CDC |
| 10:30 - 10:45| Break                                 |                                                                                                      |                                                                      |
| 10:45 – 12:00| Team Action Planning                  | Teams finalize action plans  
Create Team Poster                                                      | Facilitators with teams                                               |
| 12:00 - 1:00 | Poster Session/Team Sharing Evaluation Wrap Up | Poster session - teams share highlights of action plans. Evaluation  
Wrap up comments - address next steps, follow up and TA               | Lisa Richardson, CDC  
“hello”  
Cindy Vinson, NCI and Citseko Staples, ACS-CAN                           |
| 1:00         | Adjourn / Box Lunches To Go           |                                                                                                      |                                                                      |
Questions?

Contact

Nikki Hayes, MPH
Comprehensive Cancer Control Branch
Division of Cancer Prevention and Control

nhayes2@cdc.gov

Thank you!
Our Opportunity to Prevent Cancer

Melinda Whartton, CDC
Noel Brewer, HPV Roundtable / UNC
If there were a vaccine against cancer, wouldn’t you get it for your kids?

HPV vaccine is cancer prevention. Talk to your doctor about vaccinating your 11–12 year old sons and daughters against HPV.
HPV vaccine: how we’re doing and how we can do better
ACIP Recommendations

- 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 who have sex with men and immunocompromised men (including persons HIV-infected) through age 26
- Vaccination of females is recommended with 2vHPV, 4vHPV (as long as this formulation is available), or 9vHPV
- Vaccination of males is recommended with 4vHPV (as long as this formulation is available) or 9vHPV

*Vaccination series can be started at 9 years of age

MMWR 2015;64:300-4
Provider motivation and skill

Parental acceptance

Systems support
Lack of provider motivation and skill

Lack of parental acceptance

Barriers
## Reasons for Not Vaccinating Adolescents with HPV Vaccine, Unvaccinated Adolescents* Aged 13-17 Years, NIS-Teen, United States, 2014

<table>
<thead>
<tr>
<th>Reason</th>
<th>Parents of Girls (% (95% CI))</th>
<th>Parents of Boys (% (95% CI))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not needed/necessary</td>
<td>18.3 (15.8-21.1)</td>
<td>18.9 (16.8-21.1)</td>
</tr>
<tr>
<td>Safety concerns/side effects</td>
<td>16.2 (13.6-19.2)</td>
<td>Not recommended</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.0 (16.0-20.3)</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>12.9 (9.9-16.7)</td>
<td>13.7 (11.8-15.8)</td>
</tr>
<tr>
<td>Not recommended</td>
<td>9.8 (7.9-12.0)</td>
<td>Not sexually active</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.9 (8.2-12.0)</td>
</tr>
<tr>
<td>Not sexually active</td>
<td>8.8 (7.0-11.0)</td>
<td>Safety concerns/side effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.3 (5.6-9.4)</td>
</tr>
</tbody>
</table>

* Analysis limited to adolescents with zero HPV vaccine doses, whose parents reported that they were not likely to seek HPV vaccination for their adolescent in the next 12 months

Unpublished NIS-Teen 2014 data
“optional”

“new vaccine”

“not at risk”

“you can wait”
Physicians’ Perceptions of Adolescent Vaccine Endorsement for Patients Ages 11-12, 2014

Proportion endorsing highly (physicians) and physicians’ estimate of parents

- **Tdap**
  - Physicians themselves: 100%
  - Parents: 60%

- **Meningococcal**
  - Physicians themselves: 80%
  - Parents: 40%

- **HPV**
  - Physicians themselves: 70%
  - Parents: 10%

Gilkey MB et al, Preventive Medicine 2015;77:181-185
Parent opinions on the importance of vaccines and provider estimates of parental responses

Why don’t adolescents finish the HPV vaccine series?

Perkins RB et al. Human Vaccines and Immunotherapeutics, 2016
What can we do about it?
Changing Clinical Practice

- Evidence-based practice standards, guidelines, or recommendations
- Clinical and staff knowledge and skill
- Professional norms and peer influence
- External pressure, incentives, and expectations for improvement
- Patient acceptance
- Evidence of deviations from recommended practices that are accepted by providers as valid and accurate
- Understanding of the etiology of deviations (causes/influences, barriers, facilitators)
- Feasible operational methods

Dr. Brian Mittman, NAIIS 2015
## States and Local Areas with Increases* in HPV Vaccination Coverage among Females Aged 13–17 Years, NIS-Teen, 2014

<table>
<thead>
<tr>
<th></th>
<th>≥ 1 HPV Dose</th>
<th></th>
<th>≥ 3 HPV Doses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (95% CI)</td>
<td>Percentage point increase</td>
<td>Estimate (95% CI)</td>
<td>Percentage point increase</td>
</tr>
<tr>
<td>Dist. of Columbia**</td>
<td>75.2(±9.4)</td>
<td>22.8</td>
<td>56.9(±10.9)</td>
<td>† 28.6</td>
</tr>
<tr>
<td>Georgia**</td>
<td>--</td>
<td>--</td>
<td>47.1(±9.7)</td>
<td>14.5</td>
</tr>
<tr>
<td>Illinois††</td>
<td>64.4(±6.5)</td>
<td>13.2</td>
<td>47.7(±6.9)</td>
<td>15.4</td>
</tr>
<tr>
<td>Illinois-Chicago**</td>
<td>78.1(±8.1)</td>
<td>20.5</td>
<td>52.6(±10.7)</td>
<td>† 16.1</td>
</tr>
<tr>
<td>Montana</td>
<td>57.2(±9.2)</td>
<td>13.8</td>
<td>42.9(±9.1)</td>
<td>16.0</td>
</tr>
<tr>
<td>North Carolina</td>
<td>71.1(±8.1)</td>
<td>13.9</td>
<td>54.0(±9.2)</td>
<td>22.3</td>
</tr>
<tr>
<td>Utah**</td>
<td>59.2(±8.3)</td>
<td>17.7</td>
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</tbody>
</table>

* Statistically significant difference from 2013 (Revised) estimates (p<0.05).
** Received 2013 Prevention and Public Health Fund (PPHF) awards to increase HPV vaccination coverage.
†† Received 2014 PPHF award to increase HPV vaccination coverage.
† Estimates with confidence interval (CI) half-widths >10 may not be reliable.

†† Received 2014 PPHF award to increase HPV vaccination coverage.

MMWR 64(29);784–792.
2013/2014 PPHF HPV Immunization Awardees

2013 Awardees
- Minnesota
- Massachusetts
- New York
- New York City
- Philadelphia
- District of Columbia
- Ohio
- Chicago
- Georgia
- Utah
- Arizona

2014 Awardees
- Washington
- North Dakota
- Michigan
- Wisconsin
- Rhode Island
- Illinois
- Iowa
- Kentucky
- Kansas
- Nevada
- Alaska

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
2013 and 2014 PPHF HPV Immunization Awardee Activities

- Developing a jurisdiction-wide joint initiative with immunization stakeholders;
- Implementing a comprehensive communication campaign targeted to the public;
- Implementing Immunization Information System (IIS)-based reminder / recall for adolescents aged 11–18 years;
- Using assessment and feedback to evaluate and improve the performance of immunization providers in administering the 3-dose HPV vaccine series consistent with current ACIP recommendations;
- Implementing strategies targeted to immunization providers to:
  - Increase knowledge regarding: HPV-related diseases (including cancers), and HPV vaccination safety and effectiveness;
  - Improve skills needed to deliver strong, effective HPV vaccination recommendations;
  - Decrease missed opportunities for timely HPV vaccination and series completion; and
  - Increase administration of HPV vaccine doses consistent with current ACIP recommendations.

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
Assessment of the healthcare provider’s vaccination coverage levels and immunization practices

Feedback of results to the provider along with recommended quality improvement strategies to improve processes, immunization practices, and coverage levels

Incentives to recognize and reward improved performance

Exchange of information with providers to follow up on their progress towards quality improvement in immunization services and improvement in immunization coverage levels

http://www.cdc.gov/vaccines/programs/afix/index.html
Changing Clinical Practice

- Evidence-based practice standards, guidelines, or recommendations
- Clinical and staff knowledge and skill
- Professional norms and peer influence
- External pressure, incentives, and expectations for improvement
- Patient acceptance
- Evidence of deviations from recommended practices that are accepted by providers as valid and accurate
- Understanding of the etiology of deviations (causes/influences, barriers, facilitators)
- Feasible operational methods
What can healthcare providers do?

• Make an effective recommendation for HPV vaccination as cancer prevention for every 11- or 12-year-old patient

• Assess HPV vaccine coverage for each provider in your practice and develop an office-wide strategy to improve it

• Implement systems strategies to improve HPV vaccine coverage

• Engage the entire practice – not just the healthcare providers – in committing to improve HPV vaccine coverage
HPV Vaccination: What Works

**Parents**
- Parents want to prevent cancer
- Parents trust their provider’s recommendation
- Parents think benefits outweigh risks
- Parents want a strong recommendation

**Providers**
- Providers emphasize cancer prevention
- Providers normalize the HPV vaccine and coadminister with other vaccines
- Providers give a strong recommendation

Perkins RB et al. Pediatrics 2014;134:e666-e674
Health care providers should recommend HPV vaccine the same way they do other preteen vaccines.
Clinicians can give a strong and effective HPV vaccine recommendation by saying:

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.
What can healthcare providers do?

• Make an effective recommendation for HPV vaccination as cancer prevention for every 11- or 12-year-old patient

• Assess HPV vaccine coverage for each provider in your practice and develop an office-wide strategy to improve it

• Implement systems strategies to improve HPV vaccine coverage

• Engage the entire practice – not just the healthcare providers – in committing to improve HPV vaccine coverage
Systems Strategies to Improve HPV Vaccine Coverage

• Establish standing orders for HPV vaccination beginning at age 11-12 years in your practice
• Conduct reminder/recall beginning at 11-12 years of age
• Assess HPV vaccine coverage at every visit and prompt clinical staff to give HPV vaccine at that visit
• Schedule return visit for next dose before the patient leaves the office
• Document each dose in the child’s medical record and the state’s immunization information system
What can healthcare providers do?
• Make an effective recommendation for HPV vaccination as cancer prevention for every 11- or 12-year-old patient
• Assess HPV vaccine coverage for each provider in your practice and develop an office-wide strategy to improve it
• Implement systems strategies to improve HPV vaccine coverage
• Engage the entire practice – not just the healthcare providers – in committing to improve HPV vaccine coverage
What can community- and state-level organizations do?

• Convene and commit to implementing effective strategies
• Immunization programs: AFIX focused on adolescent vaccination
• Provider organizations: help members develop the motivation and skills to make an effective recommendation for HPV vaccination
• Cancer programs: motivate immunization providers to prevent cancers caused by HPV in their patients
• Health care payers: use HPV vaccination coverage as a quality measure
• All organizations: increase public awareness and support for HPV vaccination as cancer prevention
• All organizations: promote or implement systems strategies to improve HPV vaccine coverage
If there were a vaccine against cancer, wouldn’t you get it for your kids?

HPV vaccine is cancer prevention. Talk to the doctor about vaccinating your 11–12 year old sons and daughters against HPV.
Thank you

www.cdc.gov/vaccines
www.cdc.gov/hpv
www.cdc.gov/vaccinesafety
Improving HPV Vaccination Coverage

Noel T. Brewer, PhD
University of North Carolina

@noelTbrewer
Disclosure: Grants and/or advisory boards

American Cancer Society
CDC
GlaxoSmithKline
FDA
Merck
National Cancer Institute
Pfizer
Robert Wood Johnson Fdn
51%
HPV vaccination guidelines

On-time
- 3 doses, ages 11 or 12
- Better immune response in younger adolescents
- Universal vaccination is most effective

Late
- Females to age 26
- Males to age 21 (MSM to 26)
HCPs think…

- Conversation will be uncomfortable (34%)
- Parents don’t want HPV vaccine (even though patients do want it)
- Think discussion will take a long time

Discuss HPV vax last, or not at all
Recommendation quality

Timeliness for males
- Strong: 61%
- Weak: 39%

Timeliness for females
- Strong: 74%
- Weak: 26%

Endorsement
- Strong: 73%
- Weak: 27%

Consistency
- Strong: 61%
- Weak: 39%

Urgency
- Strong: 60%
- Weak: 40%

Gilkey, et al., 2015
Impact of recommendation quality

HPV vaccine initiation rates
  23%, if no recommendation
  53%, if low-quality recommendation
  73%, if high-quality recommendation
Announce

Note child’s age.

Announce the child is due for 3 vaccines recommended for children this age, placing HPV vaccine in middle of list.

Say you will vaccinate today.

Move on with the visit.
“I see here that Michael just turned 11. Because he’s 11, Michael is due for meningitis, HPV, and Tdap vaccines. We’ll give those at the end of the visit.”

“Now that Michael is 12, there are three vaccines we give to kids his age. Today, he’ll get meningitis, HPV, and Tdap vaccines.”
Training satisfaction

100% would recommend training to a colleague

93% planned to routinely use communication strategy

“It’s easier for parents. It’s easier for us.”

Brewer et al., working paper
AAP HPV Champion Toolkit

www.cdc.gov/hpv/hcp/
**Addressing Parents' Top Questions about HPV VACCINE**

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. Try saying, “Your child is due for vaccinations today to help protect against meningitis, HPV cancers, and pertussis. We’ll give those shots at the end of the visit.”

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 accept HPV vaccination when their child is at the recommended ages of 11 or 12 years.

<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>
</tbody>
</table>
Highly Endorsed Brief Messages

I strongly believe in the importance of this cancer-preventing vaccine for Jacob.

65% parents  69% physicians

Emma can get cervical cancer as an adult, but you can stop that right now. The HPV vaccine prevents most cervical cancers.

59% parents  64% physicians

National surveys, 1504 parents, 776 physicians
Malo et al., working paper
Give a strong recommendation for HPV vaccine to increase uptake!

Dear Colleague:

The American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG), American College of Physicians (ACP), the Centers for Disease Control and Prevention (CDC), and the Immunization Action Coalition (IAC) are asking you to urge your patients to get vaccinated against human papillomavirus (HPV).

HPV vaccine is cancer prevention. However, HPV vaccine is underutilized in our country, despite the overwhelming evidence of its safety and effectiveness. While vaccination rates continue to improve for the other adolescent vaccines, data suggest that providers are not giving the HPV vaccine to boys and girls as young as 11 or 12 years old. The healthcare provider is key to the success of HPV vaccination. Recent studies show that adolescents aged 11 to 14 years are five times more likely to receive the HPV vaccine when it is recommended by their healthcare provider.

What you say, and how you say it, matters. The HPV vaccine is an opportunity to protect patients from HPV-related cancers. It is the family physician who will most likely provide the HPV vaccine for your patients. The HPV vaccine is not as important as the other vaccines, but it is important. We hope that this letter, which provides key facts about HPV vaccine safety and effectiveness, will lead you to recommend HPV vaccination—firmly and strongly—to your patients. Your recommendation will reflect your commitment to prevent HPV-associated cancers and disease in the United States.

Signed:

Reid B. Blackwelder, MD
President
American Academy of Family Physicians

Thomas K. McInerny, MD
President
American Academy of Pediatrics
Sources of HPV vaccine communication

- **AAP**: 15% received from Pediatricians, 62% from Family Physicians
- **AAFP**: 1% from Pediatricians, 47% from Family Physicians
- **Drug companies**: 9% from Pediatricians, 60% from Family Physicians
- **CDC**: 9% from Pediatricians, 28% from Family Physicians
- **Insurance companies**: 9% from Pediatricians, 9% from Family Physicians
- **None of These**: 18% from Pediatricians, 30% from Family Physicians

*Pediatricians vs Family Physicians*
Impact on recommendation quality

Had heard from AAFP/AAP to deliver strong HPV vaccine recommendations for...

Knew AAFP/AAP position on HPV vaccination for...
Impact of school requirements
Impact of school requirements

Moss, et al., under review
Summer peaks

Standardized HPV vaccine uptake

NIS-Teen 2007-2012  Moss, Reiter, Rimer, Ribisl & Brewer, in press
The National HPV Vaccination Roundtable is a national coalition of organizations working together to prevent HPV-associated cancers and pre-cancers by increasing and sustaining U.S. HPV vaccination.

Supported by grant #1H23IP000931-01, funded by the Centers for Disease Control and Prevention (Saslow, PI)
Roundtable Members

- Academic Institutions/Cancer Centers
- Advocacy and Survivors
- Cancer Prevention
- Communication
- Government Agencies
- Immunization
- Insurance
- Providers/Professional Societies
- Public Health
- State-based Organizations
- Quality Improvement
- Research
- Special Populations
- Training
- Vaccine Manufacturing
## Roundtable Task Groups

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider training</td>
<td>Sharon Humiston, AAP</td>
</tr>
<tr>
<td>National campaign</td>
<td>Marsha Wilson, FWC</td>
</tr>
<tr>
<td>Pharmacy-located vaccination</td>
<td>Bruce Gellin, NVPO</td>
</tr>
<tr>
<td>School-based parent education</td>
<td>Nichole Bobo, NASN</td>
</tr>
<tr>
<td>Electronic health records</td>
<td>Paul Throne, WA DOH</td>
</tr>
<tr>
<td>Survivor involvement</td>
<td>Rebecca Perkins, ACOG</td>
</tr>
<tr>
<td>Best practices</td>
<td>Paul Reiter, OHSU</td>
</tr>
</tbody>
</table>
Summary

- HPV vaccination is the new norm
- "On time"... and late
- Announcements work

- Promotion in the summer
- Systems changes in the winter
- Require meningitis and Tdap vax for school
- Partner with key stakeholders
Noel Brewer, ntb@unc.edu
@noelTbrewer
BREAK
A Look at Successful HPV Efforts: Focus on Policy and System Change Evidence Based Interventions

Citseko Staples, ACS CAN
Heather Brandt, University of South Carolina
Robin Curtis, CDC
HPV Policies and Trends
An ACS CAN Perspective

Citseko Staples Miller
American Cancer Society Cancer Action Network (ACS CAN)
Policy...Big “P” versus Little “p”
HPV Vaccination Policy - Federal

- Federal
  - Access
  - Education: President’ Cancer Panel Report & Global efforts
  - Education
  - Funding

![Image of the United States Capitol](image1)

[Image of USAID logo]

[Image of map showing cervical cancer incidence]

[Image of chart showing increase in HPV vaccination]

[Image of report cover: "Accelerating HPV Vaccine Uptake: Urgency for Action to Prevent Cancer"]

A Report to the President of the United States from The President’s Cancer Panel
HPV Vaccination Policy in the States

- Trends
  - School mandates
  - Education (parent, children, providers)
  - Access (schools, pharmacies)
  - Funding
  - Vaccine opt-outs

- HPV & ACS CAN
  - State & Local
  - CCC

Figure 4
HPV Vaccination Policies- Mandates, Education, and Funding
Questions??

Thank You!
Policy-level Change to Support HPV Vaccination in South Carolina

Heather M. Brandt, PhD, CHES
Associate Professor, Dept. of Health Promotion, Education, and Behavior
Scientific Member, Cancer Prevention and Control Program
Public Health Director, Center for Colon Cancer Research
Faculty Affiliate, Women’s and Gender Studies
University of South Carolina

hbrandt@sc.edu • 803.576.5649

Disclosure: Member of Merck US HPV Advisory Board
Policies are the basis for decisions.

Attempting to change policies can start conversations about the issues in question.

Changing policy is easier in the long run than fighting the same battles over and over again.

Changed policies can change people's minds, attitudes, and practices.

Changed policies have effects on the next generation.

Policy change is one path to permanent change.
Some of the promising strategies that have been effective in combination at increasing receipt of HPV vaccine include:

- Establishing links between cancer organizations and immunization organizations;
- Health care provider education initiatives;
- Practice-based quality improvement efforts by state and local health departments;
- Public communication campaigns; and,
- Reminder-recall interventions.
## HPV Vaccination Strategies

<table>
<thead>
<tr>
<th>Provider- or System-Based Interventions</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Care System-Based Interventions</strong></td>
<td><strong>Recommended</strong></td>
</tr>
<tr>
<td>Implemented in Combination</td>
<td><strong>October 2014</strong></td>
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<tr>
<td><strong>Immunization Information Systems</strong></td>
<td><strong>Recommended</strong></td>
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<tr>
<td></td>
<td><strong>July 2010</strong></td>
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<tr>
<td><strong>Provider Assessment and Feedback</strong></td>
<td><strong>Recommended</strong></td>
</tr>
<tr>
<td></td>
<td><strong>February 2008</strong></td>
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<tr>
<td><strong>Provider Education when Used Alone</strong></td>
<td><strong>Insufficient Evidence</strong></td>
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<td><strong>March 2010</strong></td>
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<tr>
<td><strong>Provider Reminders</strong></td>
<td><strong>Recommended</strong></td>
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<td></td>
<td><strong>June 2008</strong></td>
</tr>
<tr>
<td><strong>Standing Orders</strong></td>
<td><strong>Recommended</strong></td>
</tr>
<tr>
<td></td>
<td><strong>June 2008</strong></td>
</tr>
</tbody>
</table>

The Community Guide, Increasing Appropriate Vaccination  
http://www.thecommunityguide.org/vaccines/index.html
HPV vaccination is the best way to prevent many types of cancer.

Current HPV vaccination rates are leaving many unprotected.

Nationwide, 4 out of 10 girls are unvaccinated.

Nationwide, 6 out of 10 boys are unvaccinated.
# HPV Vaccination in South Carolina

## 2014 NIS-TEEN Data

- **South Carolina:**
  - Summary, 2014 HPV vaccination levels dropped for females and increased for males

## Table

<table>
<thead>
<tr>
<th>HPV Vaccination</th>
<th>United States</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1 dose</td>
<td>60.0 (56.7)</td>
<td>41.7 (33.6)</td>
</tr>
<tr>
<td>&gt;2 doses</td>
<td>50.3 (46.9)</td>
<td>31.4 (22.6)</td>
</tr>
<tr>
<td>&gt;3 doses</td>
<td>39.7 (36.8)</td>
<td>21.6 (13.4)</td>
</tr>
</tbody>
</table>

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6429a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6429a3.htm)
Health insurance plan benefits:

• South Carolina Public Employee Benefit Authority (PEBA), which administers South Carolina State Health Plan, covers adult vaccinations beginning in fall 2015
  – Including HPV vaccination for adults aged 18-26!
Health insurance plan benefits:

- South Carolina PEBA considering using U.S. Preventive Services Task Force recommendations for cervical cancer screening coverage, which will include coverage of liquid-based testing and HPV DNA testing.

- In progress
State-level policy:

Cervical Cancer Prevention Act (H.3204/S.278)

• Contingent on full federal and state funds, permits the South Carolina Department of Health and Environmental Control to:
  – 1) Offer the HPV vaccination (also referred to as the cervical cancer vaccine) to students enrolling in the seventh grade of any public or private school in South Carolina; and
  – 2) Provide parents and guardians who have children in the public school system with printed information on HPV vaccination.

• Passed Senate on April 6, 2016 (38-5); House concurrence on April 13, 2016 (107-1); Ratified on April 19, 2016; Sent to Gov. Haley...
Today, April 21, 2016, Governor Haley signed the following bills:

1. R153, S.850  
   Principle Based Reserve Requirements of DOI Regulated Insurance Providers

2. R154, S.1049  
   Reinstatement of Marketing Cooperative Associations

3. R155, S.1076  
   Navigational Canal Dredging Permitting Exemptions

4. R156, H.3204  
   Cervical Cancer Prevention Act

5. R157, H.3265  
   CPR Instruction in High School

6. R158, H.3325  
   Clementa C. Pinckney
Mandatory **South Carolina Immunization Registry** was approved in May 2013 (Regulation 61-120)

- Phased in starting in January 2014; required as of January 1, 2017

- Registry consolidates the vaccination history for patients who visit multiple providers

- Having all immunizations in one system reduces over- and under-immunization

Regulation 61-120:
http://www.scdhec.gov/Health/FHPF/VaccineResources/SCImmunizationRegistryRegulation
• Partner state of the Cervical Cancer-Free Coalition focused on eliminating cervical cancer using comprehensive approaches to:
  – increase participation in cervical cancer screening (including HPV testing/co-testing);
  – increase adherence to follow-up care of abnormal screening results;
  – increase rates of HPV vaccination; and
  – seek additional funding to support cervical cancer screening and HPV vaccination.

• Cervical Cancer-Free South Carolina consists of a diverse group of individual and organizational partners committed to moving South Carolina to becoming cervical cancer-free.

Dr. Jennifer Young Pierce | youngjl@musc.edu, Co-Founder and Co-Chair
Dr. Heather Brandt | hbrandt@sc.edu, Co-Founder and Co-Chair
South Carolina Immunization Coalition

- Improve assessment and documentation of adult immunizations
- Improve immunization rates, especially in minority and underserved populations
- Increase reporting of immunizations

South Carolina Immunization Coalition:
http://atlanticquality.org/initiatives/immunization/immunization-sc/sc-immunization-coalition-materials/
Pharmacist-administered HPV vaccination:

- Signed by Gov. Haley on June 1, 2015; adopted November 4, 2015; revised February 1, 2016

- HPV vaccine can be administered to those 18 and older without a prescription by pharmacists in South Carolina

- HPV vaccine can be administered with a prescription at any age (i.e. no age restrictions) by pharmacists in South Carolina

- Pharmacist reports to immunization registry and to designated provider or primary care provider, as available

http://www.scrx.org/immunization-protocol-summary
https://www.sccp.sc.edu/content/medical-board-authorizes-pharmacists-vaccinations-without-prescriptions
Scripts Immunization Expansion Bill S. 143: http://www.scstatehouse.gov/sess121_2015-2016/bills/413.htm
HPV vaccination today is cancer prevention for the future.

- Parents
- Providers
- Partners
- Policy
• Expanded health insurance coverage

• Increased access to HPV vaccination for medically underserved achieved (Cervical Cancer Prevention Act)

• Partnerships with key stakeholders in place

• Expanded access to HPV vaccination through pharmacies
Thank you!

Heather M. Brandt, PhD, CHES
Associate Professor, Dept. of Health Promotion, Education, and Behavior
Scientific Member, Cancer Prevention and Control Program
Public Health Director, Center for Colon Cancer Research
Faculty Affiliate, Women’s and Gender Studies
University of South Carolina

hbrandt@sc.edu • 803.576.5649
Robin Curtis, CDC
Progress Update: Programmatic Strategies to Increase HPV Vaccination Coverage among U.S. Adolescents

C. Robinette Curtis, MD, MPH
Medical Officer, Immunization Services Division (ISD), National Center for Immunization and Respiratory Diseases (NCIRD), Centers for Disease Control and Prevention (CDC)

Comprehensive Cancer Control National Partnership HPV Workshop
Presentation Outline

• **Background:**
  - NIS-Teen vaccination coverage estimates, 2006-2014
  - ISD strategies to increase HPV vaccination coverage
  - PPHF HPV Immunization Awardees

• **What worked for public health jurisdictions with improvements in HPV vaccination coverage among females in 2014?**

• **Partnership cooperative agreements, late 2014–present**

• **Moving forward: Challenges and opportunities**

**Abbreviations:**
NIS-Teen=National Immunization Survey-Teen; ISD=Immunization Services Division; HPV=Human papillomavirus; PPHF=Prevention and Public Health Fund
Estimated Vaccination Coverage among Adolescents Aged 13-17 Years, NIS-Teen†, United States, 2006-2014

Source: MMWR. 2014;63;625-33

Revised APD* definition

≥1 Tdap
≥1 MenACWY
≥1 HPV (F)
≥3 HPV (F)
≥1 HPV (M)
≥3 HPV (M)

MMWR 64(29);784–792. † NIS-Teen=National Immunization Survey-Teen * APD=Adequate provider data
Estimated Vaccination Coverage with ≥1 HPV Dose among Females Aged 13-17 Years, NIS-Teen, United States, 2014

MMWR 64(29);784–792.
### States and Local Areas with Increases* in HPV Vaccination Coverage among Females Aged 13–17 Years, NIS-Teen, 2014

<table>
<thead>
<tr>
<th>Area</th>
<th>≥1 HPV Dose</th>
<th>Percentage point increase</th>
<th>≥3 HPV Doses</th>
<th>Estimate (95% CI)</th>
<th>Percentage point increase</th>
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<td>Dist. of Columbia**</td>
<td>75.2(±9.4)</td>
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<td>57.2(±9.2)</td>
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* Statistically significant difference from 2013 (Revised) estimates (p<0.05).
** Received 2013 Prevention and Public Health Fund (PPHF) awards to increase HPV vaccination coverage.
†† Received 2014 PPHF award to increase HPV vaccination coverage.
† Estimates with confidence interval (CI) half-widths >10 might not be reliable.
ISD Strategies to Increase HPV Vaccination Coverage

• Support state and local immunization programs
• Mobilize partners and stakeholders
• Strengthen provider commitment
• Improve and utilize systems
• Increase public awareness
2013/2014 PPHF HPV Immunization Awardees

2013 Awardees
- Minnesota
- Massachusetts
- New York
- New York City
- Philadelphia
- District of Columbia
- Ohio
- Chicago
- Georgia
- Utah
- Arizona

2014 Awardees
- Washington
- North Dakota
- Michigan
- Wisconsin
- Rhode Island
- Illinois
- Iowa
- Kentucky
- Kansas
- Nevada
- Alaska

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
2013 and 2014 PPHF
HPV Immunization Awardee Activities
Specified in the Funding Opportunity Announcement (FOA)

- Developing a jurisdiction-wide joint initiative with immunization stakeholders
Stakeholders

Slide courtesy of Maribel Chavez-Torres and the Chicago Department of Public Health; presented at PPHF HPV Immunization Reverse Site Visit, Atlanta, GA, 11/17/14.
2013 and 2014 PPHF
HPV Immunization Awardee Activities
Specified in the Funding Opportunity Announcement (FOA)

• Developing a jurisdiction-wide joint initiative with immunization stakeholders
• Implementing a comprehensive communication campaign targeted to the public

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- Implementing Immunization Information System (IIS)-based reminder / recall for adolescents aged 11–18 years

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
Postcards in Spanish for Planned Reminder / Recall Activity in the District of Columbia

Image courtesy of Nancy E. Ejuma and the District of Columbia Department of Health
2013 and 2014 PPHF
HPV Immunization Awardee Activities
Specified in the Funding Opportunity Announcement (FOA)

- Developing a jurisdiction-wide joint initiative with immunization stakeholders
- Implementing a comprehensive communication campaign targeted to the public
- Implementing Immunization Information System (IIS)-based reminder / recall for adolescents aged 11–18 years
- Using assessment and feedback to evaluate and improve the performance of immunization providers in administering the 3-dose HPV vaccine series consistent with current ACIP recommendations

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
Overview of AFIX

AFIX is a quality improvement program used by awardees to raise immunization coverage levels, reduce missed opportunities to vaccinate, and improve standards of practices at the provider level. The acronym for this four-part dynamic strategy stands for:

1. **Assessment** of the healthcare provider's vaccination coverage levels and immunization practices.
2. **Feedback** of results to the provider along with recommended quality improvement strategies to improve processes, immunization practices, and coverage levels.
3. **Incentives** to recognize and reward improved performance.
4. **eXchange** of information with providers to follow up on their progress towards quality improvement in immunization services and improvement in immunization coverage levels.

Contacts

Find your city/state/territory AFIX contacts to consult regarding specific AFIX questions.

Quick Vaccine Information Links

- Vaccines & Immunizations
- Preteens and Teens Still Need

What's New!

- Weekly Conference Call Minutes
  - March 26, 2015
- AFIX Policies and Procedures Guide
- AFIX Site Visit Questionnaire
- AFIX Site Visit Answer Guide

Resources for Awardees

- AFIX Site Visit Answer Guide
- AFIX Logic Model (updated Nov 2013)
2013 and 2014 PPHF
HPV Immunization Awardee Activities
Specified in the Funding Opportunity Announcement (FOA)

• Developing a jurisdiction-wide joint initiative with immunization stakeholders
• Implementing a comprehensive communication campaign targeted to the public
• Implementing Immunization Information System (IIS)-based reminder / recall for adolescents aged 11–18 years
• Using assessment and feedback to evaluate and improve the performance of immunization providers in administering the 3-dose HPV vaccine series consistent with current ACIP recommendations
• Implementing strategies targeted to immunization providers to:
  ▪ Increase knowledge regarding: HPV-related diseases (including cancers), and HPV vaccination safety and effectiveness;
  ▪ Improve skills needed to deliver strong, effective HPV vaccination recommendations;
  ▪ Decrease missed opportunities for timely HPV vaccination and series completion;
  ▪ Increase administration of HPV vaccine doses consistent with current ACIP recommendations.

Abbreviations:
PPHF = Prevention and Public Health Fund;
HPV = Human papillomavirus
MDH activities

- HPV PPHF grant
  - Stakeholders
  - Reminder/recall
  - Public awareness
  - Provider education
  - Assess. & feedback
- Adolescent PPHF grant
  - Assess. reports
- Evaluation
- Lessons Learned

---

**Just Another Shot: Reframing the HPV Vaccine Conversation**

- Provider video on HPV vaccine recommendation
  - 3 humorous vignettes
  - 4 model encounters

www.wevaxteens.org

---

*Slide courtesy of Lara Hilliard and the Minnesota Department of Health; presented at PPHF HPV Immunization Reverse Site Visit, Atlanta, GA, 11/17/14.*
National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2014

Sarah Reagan-Steiner, MD1; David Yankey, MS1; Jenny Jeyarajah, MS1; Laurie D. Elam-Evans, PhD1; James A. Singleton, PhD1; C. Robinette Curtis, MD1; Jessica MacNeil, MPH2; Lauri E. Markowitz, MD3; Shannon Stokley, MPH1 (Author affiliations at end of text)

Routine immunization is recommended for adolescents aged 11–12 years by the Advisory Committee on Immunization Practices (ACIP) for protection against diseases including pertussis, meningococcal disease, and human papillomavirus (HPV)—associated cancers (1). To assess vaccination coverage among adolescents, CDC analyzed data collected regarding 20,827 adolescents through the 2014 National Immunization Survey–Teen (NIS-Teen).* From 2013 to 2014, coverage among adolescents aged 13–17 years increased for all routinely

Coverage differed by state and local area. Despite overall progress in vaccination coverage among adolescents, HPV vaccination coverage continues to lag behind Tdap and MenACWY coverage at state and national levels. Seven public health jurisdictions achieved significant increases in ≥1- or ≥3-dose HPV vaccination coverage among females in 2014, demonstrating that substantial improvement in HPV vaccination coverage is feasible.

NIS-Teen monitors vaccination coverage among adolescents aged 13–17 years in the 50 states, District of Columbia (DC),
States and Local Areas with Increases* in HPV Vaccination Coverage among Females Aged 13–17 Years, NIS-Teen, 2014

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MMWR 64(29);784–792.
Varied Combinations of Interventions Identified as Important by 6 of 7 Jurisdictions

Activities Specified in PPHF FOA:

• Joint initiatives with cancer prevention and immunization stakeholders
• Public communication campaigns
• IIS-based reminder/recall
• Assessment and feedback
  ▪ Conducting consistent with federal AFIX guidance
  ▪ Ensuring clinical practice decision makers participate
  ▪ Including clinician-to-clinician educational component
• Provider and practice-focused strategies aimed at improving HPV vaccination administration consistent with ACIP recommendations

Other Activities:

• Using all opportunities to educate parents and clinicians about importance of routine HPV vaccination at ages 11-12 years
• Incorporating HPV vaccination into cancer control plans

AFIX=Assessment, Feedback, Incentives, and eXchange
MMWR 64(29);784–792.
Partnership Cooperative Agreements Focused on Increasing HPV Vaccination

- Initially funded in late 2014
- Funding time horizons vary
- Multiple national partners:
  - American Academy of Pediatrics (AAP)
  - American Cancer Society (ACS)
  - Academic Pediatric Association (APA)
  - National Area Health Education Center Organization (NAO)
  - National Association of County and City Health Officials (NACCHO)
Moving Forward:
Challenges and Opportunities

• Evolving recommendations and related issues
  • Can make programmatic planning/execution difficult
  • Might decrease interventions’ impacts
• Evaluating impacts challenging
  • Increases in jurisdiction-level immunization coverage hard to achieve in short time horizons
  • Other process / outcome measures possibly difficult to interpret
  • Impact of interventions promoting adherence to routine recommendations at age 11-12 years not measurable by 2014 NIS-Teen
• Dealing with issues/competing demands:
  • Public health responses
  • Staffing challenges – turnover; recruitment; contract delays
  • Infrastructure and capacity challenges
• Leveraging other cooperative agreements
• Collaborating across CDC, within HHS, and with other partners
Moving Forward: Challenges and Opportunities

Generalizable, promising practices to increase HPV vaccination coverage include:

• Leveraging opportunities for partnership engagement and collaboration
• Conducting AFIX visits consistent with federal guidance and, when feasible, enhanced by clinician-to-clinician education
• Incorporating HPV vaccination into cancer control plans
• Using all opportunities to educate parents and clinicians about importance of routine HPV vaccination at ages 11-12 years
Acknowledgments

- State of Alaska Department of Health and Social Services
- Arizona Department of Health Services
- Chicago Department of Public Health
- District of Columbia Department of Health
- Illinois Department of Public Health
- Iowa Department of Public Health
- Georgia Department of Public Health
- Kansas Department of Health and Environment
- Kentucky Department for Public Health
- Massachusetts Department of Public Health
- Michigan Department of Health & Human Services
- Minnesota Department of Health
- Montana Department of Public Health and Human Services
- Nevada Division of Public and Behavioral Health
- The New York City Department of Health and Mental Hygiene
- New York State Department of Health
- North Carolina Department of Health and Human Services
- North Dakota Department of Health
- Ohio Department of Health
- Philadelphia Department of Public Health
- Rhode Island Department of Health
- Utah Department of Health
- Washington State Department of Health
- Wisconsin Department of Health Services
Acknowledgments

• Partnership Organizations, including:
  – American Academy of Pediatrics (AAP)
  – American Cancer Society (ACS)
  – Academic Pediatric Association (APA)
  – National Area Health Education Center Organization (NAO)
  – National Association of County and City Health Officials (NACCHO)
  – National Cancer Institute (NCI)

• CDC
  – Office of the Director
  – Office of Infectious Diseases
    • National Center for Emerging and Zoonotic Infectious Diseases
    • National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
    • National Center for Immunization and Respiratory Diseases
  – Office of Noncommunicable Diseases, Injury, and Environmental Health
    • National Center for Chronic Disease Prevention and Health Promotion
Thank You!
Email: rcurtis@cdc.gov

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: http://www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Team Brainstorming
Showcase of Partner Resources

George Washington Cancer Institute
• Resource Book + Environmental Scan (To be updated and re-released in Sept. 2016):

• State HPV Profiles (To be updated and re-released in Sept. 2016):

• HPV Vaccine Social Media Toolkit (Targets clinicians)

• Archived webinar (Dec. 2015) “HPV Vaccine Myth Busting: Using Social Media to Reach Health Care Providers”


• Cervical Cancer Awareness Month Social Media Toolkit
  (Updated annually and released in November)
HPV Vaccination Partnership Map:
https://public.tableau.com/profile/mjcoursera1#!/vizhome/DraftBook_Edits/Dashboard
HPV VACs

HPV VACs External Partner Website: 
www.mysocietysource.org/sites/HPV

Patient Education Tools
Provider Education Tools
Collaborative Action Plan
Templates
VACs Partner Newsletters
Webinars & CMEs
Slide Sets/Presentations

ACS VACs: ACS.HPV.VACs@cancer.org
Showcase of Partner Resources

National Cancer Institute


• Research-tested Intervention Programs (http://rtips.cancer.gov/rtips/index.do)

Showcase of Partner Resources

Centers for Disease Control and Prevention
• HPV Portal [www.cdc.gov/HPV](www.cdc.gov/HPV)
  – Information for Parents (HPV Cancer, HPV Vaccine, HPV Vaccine Safety)
  – Resources and Tools for Clinicians (CE, Tip Sheets, PPTs, Handouts)
  – HPV Toolkit for Partners and Programs coming soon!

• Preteen Vaccines [www.cdc.gov/vaccines/teens](www.cdc.gov/vaccines/teens)
  – Posters and Factsheets

• CDC’s Partner Site [https://partner.cdc.gov](https://partner.cdc.gov)
  – Images, Ads, and Creative not available on above websites

• #PreteenVaxNews and #PreteenVaxScene
  – Newsletters and Webinars

• Dedicated email box
  – preteenvaccines@cdc.gov
Showcase of Partner Resources

National Association of County and City Health Officials
NACCHO Resources


- Stories about local health department HPV prevention efforts:

LUNCH
A Look at Successful HPV Efforts: Focus on Partnerships

Deanna Kepka, UTAH
Krystal Morwood and Eric Taber, COLORADO
Deanna Kepka, PhD, MPH
Cancer Control and Population Sciences, Huntsman Cancer Institute
College of Nursing, University of Utah

Brynn Fowler, MPH & Echo Warner, MPH
Cancer Control and Population Sciences, Huntsman Cancer Institute
Intermountain West HPV Vaccination Coalition

- **Goal:**
  - To enhance and accelerate HPV vaccination among girls and boys ages 11-12 in the Intermountain West

- **Objective:**
  - To generate a coordinated plan and propose innovative strategies to address barriers to HPV vaccination

- **Vision:**
  - To develop and enrich connections with existing immunization programs, cancer control coalitions, pediatric and primary care organizations, and relevant stakeholder communities
Intermountain West HPV Vaccination Coalition

**History:**
- Passionate investigator, supportive cancer center director, and a talented team
- Funding from the National Cancer Institute, Huntsman Cancer Foundation, and University of Utah Office of Health Equity

**Strategy for Growth:**
- Strategic invitations and the snowball effect
Who we are:

- Approximately 200 members
- Coalition members include:
  - Parents
  - Healthcare providers
  - State and local health departments
  - Community organizations
  - Cancer survivors
What we do:

- Support Human Papillomavirus (HPV) vaccination by striving to reach the Healthy People 2020 goal of **80% vaccination coverage** among boys and girls in the Intermountain West.

**Activities:**
- Monthly teleconference calls
- Quarterly in-person meetings (Salt Lake City, Southern Utah, Boise, Las Vegas)
Coalition Achievements

- Community outreach and networking
- Development of educational materials in English and Spanish
- Multiple quality improvement projects
- Compiled a private website of shared resources
- Updates on regional events, media, and HPV vaccination projects
- Development of state cancer plans
Online Coalition Member Survey (N=89)
Purpose: Explore stakeholder capacity and develop coordinated clinical delivery, research and policy priorities for HPV vaccination

Percentage of States Represented (N= 59)
- Utah: 52%
- Nevada: 20%
- Washington: 9%
- Wyoming: 5%
- Arizona: 5%
- Colorado: 3%
- Idaho: 3%

Percentage by Organization Type (N=95)
- Cancer Society: 5%
- Other: 12%
- University: 14%
- Hospital/Clinic: 18%
- Church/Non-profit: 24%
- Health Department: 37%
Coalition Survey (N=89)

Suggested improvement strategies:
- Education/ public health campaigns
- Physician encouragement
- Normalizing the vaccine’s importance
- Administer vaccines at schools
- Better materials for parents
- Reminder cards
- Dispelling myths
254 participants to date

- Pediatricians
- Family medicine physicians
- Nurses

Significant key findings related to providers’ HPV-related knowledge:

- Location of providers’ office
- Provider specialty
- Practice type
- Number of patients seen per day
Core Themes:
• Provide feedback to providers about the vaccination coverage in their office (e.g. missed opportunities)
• Messages should emphasize cancer prevention, positive disease prevention benefits, reduced risks and plights of cancer
• Messages should not have intimidating language and emphasize that vaccine does not encourage sex, protect against pregnancy, STDS, or other types of cancer

Provider Quotes
“Make HPV vaccination as simple, routine, and as commonplace as all of the other vaccines”
Utah HPV Vaccination Provider Survey

Core Themes:
- Educate health/ P.E teachers about the vaccine
- Teach about it in Junior High
- Involve religious leaders as promoters of the vaccine
Utah HPV Vaccination Provider Survey

Core Themes:
- Strong recommendations (‘presumptive’ language)
- Normalize/routinize HPV vaccine with others
- Address information needs
- Clarify misconceptions
- Help parents understand the benefits of prevention
- Counter fear with validation, care, and address needs
- Keep talking about it

Provider Quote:
“Prevent today because your children are worth it”
Cultures & Mindsets
Schools & Communities
Clinics & Providers
Individual

Core Themes:
- Inconvenience of returning for all three doses
- Misconception that HPV vaccine is for females
- Too early to think about children having sex
- Well child visits drop off as kids get older
- Vaccine = sex

Parent Quote:
“The time of exposure; the guilt in the concept of sex”
HPV Vaccination Focus Groups with Diverse Parents (CFU) (N=92)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent age</td>
<td>44</td>
<td>11.0</td>
</tr>
<tr>
<td>Demographics</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Parent gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>66</td>
<td>71</td>
</tr>
<tr>
<td>Male</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>Parent race/ethn.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African refugee</td>
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<td>29.0</td>
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<tr>
<td>Hisp./Latino</td>
<td>18</td>
<td>19.4</td>
</tr>
<tr>
<td>Native American</td>
<td>10</td>
<td>10.8</td>
</tr>
<tr>
<td>African American</td>
<td>11</td>
<td>11.8</td>
</tr>
<tr>
<td>Native Hawaiian/Pac.</td>
<td>23</td>
<td>24.7</td>
</tr>
<tr>
<td>Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (incl. multirac.)</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/cohab.</td>
<td>70</td>
<td>75.3</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>23.7</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>

Focus Group Questions
1. Knowledge about vaccines
2. Cervical cancer, HPV, and HPV vaccine knowledge
3. Attitudes towards HPV vaccine
4. Sources of health information
5. Barriers and Facilitators
6. Ideas for culturally tailored interventions
# HPV Vaccination Focus Groups with Diverse Parents (CFU)

## Themes in CFU HPV focus groups

<table>
<thead>
<tr>
<th>Inadequate exposure to information</th>
<th>“I don’t know anything. I have never heard about someone having that kind of cancer in my country” – African Immigrant mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lack of in-depth information</td>
<td></td>
</tr>
<tr>
<td>• Information at the right time</td>
<td></td>
</tr>
<tr>
<td>and place</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes toward vaccinations</th>
<th>“I’m a little bit worried about some of the newer shots that are coming out and side effects and then just hearing about in the news and how the flu shot – it caused other problems for people or somebody passed away or things like that.” – American Indian mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Negative media coverage</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mistrust of the health care system and pharmaceutical companies</th>
<th>“A lot of people are saying that a lot of vaccines that we’re getting aren’t necessary, and that you shouldn’t be exposing your children to these; it’s just a way for pharmaceutical companies to make money.” – African American father</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Seeking alternative information</td>
<td></td>
</tr>
<tr>
<td>• Not trusting the source</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inconsistent support or clear recommendation from health care providers</th>
<th>”Guess I would say that my doctor never said that my boys should be vaccinated, so I never thought that boys had to do it.” – Pacific Islander mother</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Perceived socio-cultural acceptability of HPV vaccination</th>
<th>“And so then they don’t think that’s how you get HPV is through sexual activity, then yeah, my kids won’t need it because they’re not going to do anything until they’re married, blind as that sounds.” – Pacific Islander mother</th>
</tr>
</thead>
</table>
Next Steps

- Focus Groups with IMW HPV Vaccine Coalition Members
- Dental student survey (HPV head and neck cancers)
- Assess missed opportunities for boys in USIIS
- Expand provider survey to other IMW states
- Test HPV immunization interventions in clinical settings and communities of the IMW states
- To identify and engage at-risk communities to improve HPV vaccination among the most underserved in the Intermountain West
Challenges

- Communication
- Working groups
- Multi-state approach (a strength & a challenge)
- Sustainable funding
- Building partnerships
- Strategic planning
Thank You and Questions

We appreciate greatly your time.

We are always looking for new Intermountain West HPV Vaccination Coalition Members.

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HPV Work Group

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Grant Manager
Prevention Services Division

Krystal D. Morwood, MS
Cancer Unit Manager
Prevention Services Division
Overview

Gap Identification and Prioritization

Connect with Internal HPV Partners

Project Plan/Implementation

Connect with External HPV Partners

Future of the Work Group
Gap Identification & Prioritization

• Review cancer work for gaps and opportunities

• HPV (among others) identified

• Added as a funding opportunity in CDPHE’s tobacco tax program

• Added in to comprehensive cancer work plan
Connect with Internal HPV Partners

- Initiated conversations with relevant programs
  - Immunization Branch
  - Breast and Cervical Cancer Screening Program
  - Oral Health Unit
  - School-Based Health Centers Program
  - Family Planning Program
  - Clinic Quality Improvement Team
  - Cancer, CVD & Pulmonary Disease Grants Program
  - Colorado Central Cancer Registry

- Led to formation of the work group
Connect with Internal HPV Partners

• Purpose of HPV Work Group
  o Learning: share program information
  o Consistent and reliable way to share information (value-add according to members of group)
  o Provide necessary expertise for the Colorado Cancer Plan
  o Align work: create synergies, prevent duplication
  o Project development
2016 - 2020
COLORADO CANCER PLAN
The Roadmap to Reducing the Burden of Cancer in Colorado

COLORADO Department of Public Health & Environment
GOAL 3: INCREASED UPTAKE OF CLINICAL INTERVENTIONS TO PREVENT CANCER

OBJECTIVE 3.2:
Increase HPV and Hepatitis B vaccine uptake.

STRATEGIES:

1. Promote vaccination programs and requirements in schools and hospitals.
2. Educate parents about the Hepatitis B and HPV vaccine as a cancer prevention method.
3. Implement vaccine reminder and recall systems targeted at providers and clients in pediatric and primary care provider offices.
4. Participate in the Colorado Immunization Information System to track vaccine uptake within clinics.
5. Implement provider assessment and feedback quality improvement processes.
6. Implement provider reminder systems to discuss vaccines with parents/guardians.
7. Implement standing provider orders for Hepatitis B and HPV vaccination.

MEASURES:

- Females ages 13-17 who have received at least one dose of the HPV vaccine
  Baseline: 62.5% (2014 NIS-Teen)
  2020 Target: 80%

- Males ages 13-17 who have received at least one dose of the HPV vaccine
  Baseline: 40.7% (2014 NIS-Teen)
  2020 Target: 80%

- Females ages 13-17 who have received three or more doses of the HPV vaccine
  Baseline: 42.1% (2014 NIS-Teen)
  2020 Target: 80%

- Males ages 13-17 who have received three or more doses of the HPV vaccine
  Baseline: 21.9% (2014 NIS-Teen)
  2020 Target: 80%
Project Plan/Implementation

- Common issue identified
  - Capacity among partners to implement effective strategies to increase HPV vaccinations
    - Surveyed local public health agencies and HPV grantees doing HPV work on training needs
    - Provider recommendation strategies ranked as highest need
    - Developed Training: Improving HPV Immunization through Strong Provider Recommendation
      - Partnered with the Rocky Mountain Public Health Training Center to produce and distribute training
Training Structure

• Three modules
  o Overview of HPV - disease burden and vaccination coverage
  o Health Care Provider Engagement - the importance of a strong recommendation, framing the conversation, addressing concerns and questions
    ▪ Facilitated discussion with pediatric physician
  o Moving Forward with Practice Interventions - HPV Champion Toolkit, Quality Improvement Protocol, generating coverage rates from the registry
    ▪ Facilitated discussion with HPV intervention program coordinator
## Training Structure

<table>
<thead>
<tr>
<th>Learning Objective</th>
<th>Module</th>
<th>Type of Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Define the role of HPV in cervical, oropharyngeal, and anogenital cancers.</td>
<td>1</td>
<td>Self-directed</td>
</tr>
<tr>
<td>2. Recall HPV-related cancer burden.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Recall HPV immunization coverage rates for Colorado by gender and compare to national rates.</td>
<td>2</td>
<td>Self-directed followed by Live Meeting</td>
</tr>
<tr>
<td>4. Explain the importance of a strong provider recommendation for increasing HPV immunization rates.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Describe how providers should frame the conversation with parents and adolescents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Describe how providers can respond to common questions and concerns from patients.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Train practices and providers targeted within their grants to offer a strong recommendation for HPV immunization.</td>
<td>3</td>
<td>Self-directed followed by Live Meeting</td>
</tr>
<tr>
<td>8. Discuss different methods to generate provider staff buy-in to improve the provider recommendation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Generate HPV vaccination coverage reports using the Colorado Immunization Information System (CIIS).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Connect with External HPV Partners

- Colorado Children’s Immunization Coalition
- Colorado Cancer Coalition
  - HPV prioritized as a task force
- Local Public Health Agencies with HPV funding
- State-funded grantees
Challenges

• Starting the conversation with internal partners
• Ensuring connection to a common goal (cancer plan can help)
• Ensuring connections across state-wide programs
Questions, comments?

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Public Health Associate
Eric Taber
303-692-6372
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Team Brainstorming
“Just the Facts”

Molly Black, ACS
HPV VACs
Vaccinate Adolescents against Cancers

Just the Facts

Molly Black
Associate Director, HPV Vaccination
American Cancer Society
BUST MYTHS WITH FACTS

SEX

Death

too early

Not my child...

Parents don’t want their child vaccinated

Autism

Awkward Conversation
TOOLS:

Just the Facts
Provider Audience

TOOLS:
Addressing Parent’s Top Questions about HPV VACCINE
Provider Audience
TOOLS:

You Are The Key Presentation Slide Deck

Provider Audience

http://www.cdc.gov/hpv/hcp/speaking-colleagues.html
TOOLS:
Expert in Your Back Pocket

I expert in your state that you have in your back pocket
Myth you have heard

Where

Who
INSTRUCTIONS:

1) Group similar myth/purple cards, where/blue cards and who/green cards
2) Order them from most common to least common
BUST MYTHS WITH FACTS

Death
Not my child...
Parents don’t want their child vaccinated
Sex
Awkward Conversation
1 The HPV vaccine is safe.

Over 200 million doses of HPV vaccine have been distributed worldwide, with over 80 million doses in the US. The safety is continually monitored in 80 countries. No serious safety concern has been identified.
HPV Vaccination Is Safe, Effective, and Provides Lasting Protection

- **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

The HPV vaccine does not cause serious side effects.

The vaccine was tested in numerous clinical trials and proved to be safe; it continues to be monitored for safety. No deaths have be causally linked to HPV vaccination.
“no evidence of any serious short-term or long-term safety issues”

An Overview of Quadrivalent Human Papillomavirus Vaccine Safety - 2006 to 2015
– Vichnin, et al
– Pediatric Infectious Disease Journal
Using VSD data that are updated each week, the rates of adverse events that occur in people who have received a particular vaccine are compared to the rate of adverse events that occurs in a similar group of people who have not received that vaccine. If the rate of adverse events among vaccinated people is higher than among the comparison group, the vaccine may be associated with an adverse event. There have been a number of studies using RCA addressing the safety of HPV vaccines.

With regards to general safety:

- A study was conducted through CDC’s Vaccine Safety Datalink in which near real time monitoring was conducted looking at 8 pre-specified conditions, as listed on this slide.
- Reports of these conditions among those who received HPV vaccination and compared to those who were unvaccinated or who received other vaccines
- Data were analyzed after 600,558 doses of HPV4 had been administered to females.
- No statistically significant associations were found
Ongoing HPV Safety Activities at CDC

- Review of reports to VAERS to search for unusual adverse events or changing patterns of adverse events
- VSD addressing HPV vaccine safety in special populations:
  - Safety of 4vHPV among males
  - Inadvertent 4vHPV vaccination during pregnancy
- VSD addressing HPV vaccine safety concerns that may arise from case reports and/or the media

Key Findings – CDC and Non-CDC

- Venous thromboembolism (VTE)¹
  - Study evaluating the risk of VTE in vaccinated persons age 9-26 years
  - Found no increased risk of VTE following 4vHPV
- Autoimmune and neurologic conditions²
  - Study addressing concerns about autoimmune and neurologic disease following 4vHPV vaccination.
  - Found no association between 4vHPV vaccination and 16 autoimmune conditions
- Injection site reactions and syncope³
  - 4vHPV vaccination 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
  - No major safety concerns found

Non-CDC HPV Vaccine Safety Activities

- Post-licensure commitments from manufacturers
  - Vaccine in pregnancy registries
  - Long term follow-up in Nordic countries
- Official reviews
  - WHO’s Global Advisory Committee on Vaccine Safety ¹
  - Institute of Medicine’s report on adverse effects and vaccines, 2011²

IOM Review: Syncope & Anaphylaxis

- IOM reviewed possible associations between 8 vaccines and adverse health events. Key findings:
  - Evidence “favors acceptance” of a causal relationship between HPV vaccine and anaphylaxis (rare)
  - Evidence “convincingly supports” a causal relationship between the injection of a vaccine and syncope

Inadequate evidence was found for causal relationships between HPV vaccination and 12 other specific health events studied

¹Gos et al., Vaccine 2011
The HPV vaccine causes NO fertility issues.

There are no data to suggest that getting the HPV vaccine will have a negative effect on future fertility. In fact, getting vaccinated and protecting against cervical cancer can help **protect a women’s ability to get pregnant and have healthy babies**.
Treatment of precancerous lesions can lead to increased risk of preterm delivery.

- 330,000 women undergo cone/LEEP procedures every year
- LEEP/HPV infection associated with obstetric morbidity
  - Preterm delivery
  - Preterm rupture of membranes
  - Low birth weight
  - Long term developmental outcomes, neonatal intensive care costs
The HPV vaccine contains NO harmful ingredients.

HPV vaccines contain ingredients that have proven to be safe. The vaccine does not contain thimerosal and aluminum in quantities less that breast milk, infant formula, antacids and even fruits and vegetables.
The HPV vaccine is necessary, regardless of sexual activity.

Age of onset of sexual activity, incidence of STDs, and rates of pregnancy have all been shown to be similar in vaccinated girls compared to unvaccinated girls. The HPV vaccine produces a higher immune response in preteens than it does in older teens.
HPV Vaccine is Best at Ages 11 or 12 Years

While there is very little risk of exposure to HPV before age 13, the risk of exposure increase thereafter.
The HPV vaccine is for males and females. HPV vaccination is strongly recommended for males and females because it protects against more than just cervical cancer. Vaccination helps protect boys from getting infected with the most common types of HPV that can cause cancers of the throat, penis and anus.
## Cancers Caused by HPV, U.S.

<table>
<thead>
<tr>
<th>Cancer site</th>
<th>Average number of cancers per year probably caused by HPV†</th>
<th>Percentage per year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td><strong>Anus</strong></td>
<td>1,400</td>
<td>2,600</td>
</tr>
<tr>
<td><strong>Cervix</strong></td>
<td>0</td>
<td>10,400</td>
</tr>
<tr>
<td><strong>Oropharynx</strong></td>
<td>7,200</td>
<td>1,800</td>
</tr>
<tr>
<td><strong>Penis</strong></td>
<td>700</td>
<td>0</td>
</tr>
<tr>
<td><strong>Vagina</strong></td>
<td>0</td>
<td>600</td>
</tr>
<tr>
<td><strong>Vulva</strong></td>
<td>0</td>
<td>2,200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>9,300</td>
<td>17,600</td>
</tr>
</tbody>
</table>

CDC, United States Cancer Statistics (USCS), 2006-2010
Every year in the United States 27,000 people are diagnosed with a cancer caused by HPV. That’s 1 case every 20 minutes.
New Cancers Caused by HPV per Year
United States 2006-2010

- Women (n = 17,600)
  - Vagina: n=600 (3%)
  - Anus: n=2,600 (15%)
  - Oropharynx: n=1,800 (10%)
  - Cervix: n=10,400 (59%)
- Men (n = 9,300)
  - Penis: n=700 (8%)
  - Anus: n=1,400 (15%)
  - Oropharynx: n=7,200 (77%)

CDC, United States Cancer Statistics (USCS), 2006-2010

HPV Types Differ in their Disease Associations

- ~40 Types
  - Mucosal sites of infection
  - Cutaneous sites of infection
- ~80 Types
  - High risk (oncogenic) HPV 16, 18 most common
  - Low risk (non-oncogenic) HPV 6, 11 most common
  - Cervical Cancer
  - Anogenital Cancers
  - Oropharyngeal Cancer
  - Precursors
  - Low Grade Cervical Disease
  - Genital Warts
  - Laryngeal Papillomas
  - “Common” Hand and Foot Warts

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


Annual Report to the Nation on the Status of Cancer: HPV-Associated Cancers

- From 2000 to 2009, oral cancer rates increased
  - 4.9% for Native American men
  - 3.9% for white men
  - 1.7% for white women
  - 1% for Asian men
- Anal cancer rates doubled from 1975 to 2009
- Vulvar cancer rates rose for white and African-American women
- Penile cancer rates increased among Asian men

The HPV vaccine is effective and prevents cancer. The vaccine has been proven, through numerous studies, to prevent the cell changes and infections that correspond with multiple HPV-associated cancers. In addition, population studies in the US and other countries that have introduced the HPV vaccine have shown a significant reduction in abnormal Pap test results and genital warts.
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
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
Impact of HPV vaccination in Australia

Proportion of Australian born females and males diagnosed as having genital warts at first visit, by age group, 2004-11

Challenges in Monitoring HPV Vaccine Impact on Cervical Lesions
- Detected through cervical cancer screening
- Changing screening recommendations
- Lack of cervical cancer screening registries in some countries
- Incomplete linkages with vaccination registries

Systematic Review and Meta-Analysis: Population-Level Impact of HPV Vaccination
- Review of 20 studies in 9 high income countries
- In countries with >50% coverage, among 13-19 yr olds
  - HPV 16/18 prevalence decreased at least 68%
  - Anogenital warts decreased by ~61%
- Evidence of herd effects
- Some evidence of cross protection against other types

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

Drolet et al. Lancet Infect Dis 2015
Many people do not know about the HPV vaccine.

Studies have shown many parents (37%) have no prior knowledge about the vaccine before their child’s provider educates them about it. An effective provider recommendation is the single best predictor of vaccination.
Parents want their preteen to have the HPV vaccine.

Parents value the HPV vaccine at the same level as Meningitis, Hepatitis, Pertussis, and HPV.
Providers underestimate the value parents place on HPV vaccine

Effectively recommending the HPV vaccine takes less than a minute.

Recommending the HPV vaccine the **same day** and the **same way** as Tdap and Meningococcal vaccines is effective and takes minimal time.
“Molly needs three vaccines today to protect against whooping cough, HPV cancers and meningitis. She will get those at the end of the visit.”
Addressing all concerns in 45 seconds

Provider: Meghan and Mark are due for their HPV vaccine.

Parent: Why do they need an HPV vaccine?

Provider: The HPV vaccine will help protect them from cancer caused by HPV infection. We know that HPV infection is dangerous—27,000 people in the US get cancer from HPV every year. And we know that the HPV vaccine is safe—over 187 million doses have been given worldwide and there haven’t been any serious side effects.

Parent: I don’t think they need that yet...

Provider: Vaccines only work if they’re given before exposure—we never wait until a child is at risk to give any recommended vaccines. HPV vaccine is also given as early as possible because it produces a better immune response in younger adolescents. That’s why it is so important to start the shots now and finish all 3 of them in the next 6 months.

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 vaccine. A strong recommendation from you is the main reason parents decide to vaccinate.
- You can say “your problem needs three vaccines that provide protection against meningococcal, HPV cancer, 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 went 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.

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.

If a parent were hesitant...

<table>
<thead>
<tr>
<th>Ask</th>
<th>Clarify &amp; restate their concerns to make sure you understand</th>
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</thead>
</table>
| Acknowledge | • Emphasize it is the parents’ decision.  
• Acknowledge risks and conflicting information sources.  
• Applaud them for wanting what is best for their child.  
• Be clear that you are concerned for the health of their child, not just public health safety. |
| Advise | • Clarify their concerns to make sure you understand and are answering the question they actually care about.  
• Allow time to discuss the pros and cons of vaccines.  
• Be willing to discuss parents’ ideas.  
• Offer written resources for parents.  
• Tailor your advice using this sheet or CDC’s Tips & Time Savers. |
| Remember | • Declination is not final. The conversation can be revisited.  
• 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 |
Tips:

• Use experts who are trusted by the community.
• Emphasize personal belief in the importance of HPV vaccine.
• Use the tools. These messages have been researched.
• Give a short simple response and only go into more detail if there are questions.
• State the truth: frame conversation around facts instead of myths.
A Look at Successful HPV Efforts: Working with Large Health Systems

Lexi Haux and Tracy Bieber, SOUTH DAKOTA
Eldrina Easterly and Treg Long, ARKANSAS
Implementing Evidence-based Strategies to Increase HPV Immunization Rates in SD: A Partnership between Sanford Health and the SD Department of Health

Background
- Project Overview
- Sanford Health Overview

Project Implementation
- Project Structure
- Client Reminders
  - Why this intervention was chosen
  - Challenges/Lessons Learned
  - Progress and Results
- Provider Assessment and Feedback
  - Why this intervention was chosen
  - Challenges/Lessons Learned
  - Progress and Results
- Community Intervention
  - Why this intervention was chosen
  - Challenges/Lessons Learned
  - Progress and Results
Increasing HPV Rates by Working with Large Health Care Systems

Arkansas Primary Care
Mid-South Division
Increasing HPV vaccinations in Community Health Centers

- Arkansas was one of the Mid-South Division states chosen for a $10,000 Capacity Building pilot and an Education & Technical Assistance only pilot

- ARcare was chosen for the $10,000 Capacity Building Project and the Community Clinic was chosen for the Education and Technical Assistance
ARcare Implemented

- Client Reminder Systems—reminder system in place to send reminders to patients via text and phone call
- Provider Assessment & Feedback—goals set with clinicians and progress towards those goals are being tracked
- Provider Reminder & Recall System—an Alert was placed in the EHR system for HPV vaccinations
- One on one education using Small Media—dissemination of CDC/ACS HPV vaccination education materials to clinicians and patients and/or parents
- Educated 40+ Clinicians at a series of Lunch-n-Learns
Community Clinic Implemented

- Provider Assessment and Feedback—goals set with clinicians and tracking of those goals on a quarterly basis
- Provider Reminder and Recall System—an Alert was set up in their EHR for HPV vaccinations
- One on One Education using Small Media—dissemination of CDC/ACS HPV vaccination education materials to clinicians and patients and/or parents
- Educated 80+ clinicians at a series of Lunch-n-Learns
Partnership Next Steps

- We hope this partnership will continue to grow in the future.
- We will be offering an Education Forum for Parents and Community with ARcare prior to the pilot project ending in June.
- Final reporting and results of the pilots will take place in July 2016
- (The projects started in July of 2015)
Break
## Team Action Planning

**Day 1 / May 3, 2016**  **3:45 – 5:00**

<table>
<thead>
<tr>
<th>STATE TEAM</th>
<th>TEAM BREAKOUT ROOM</th>
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<tbody>
<tr>
<td>Arkansas</td>
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Adjourn Day 1
Day 2

Welcome Back and Today’s Agenda

Citseko Staples, ACS CAN
Evaluating HPV Vaccination Policy and System Changes

Kristi Fultz-Butts, CDC
EXAMPLES OF MONITORING PROGRESS AND IMPACT: A BRIEF OVERVIEW OF WAYS TO EVALUATE HPV-SPECIFIC POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGE EFFORTS

KRISTI R. FULTZ-BUTTS, MPH
CENTERS FOR DISEASE CONTROL AND PREVENTION
COMPREHENSIVE CANCER CONTROL BRANCH

National Center for Chronic Disease Prevention and Health Promotion
Division of Cancer Prevention and Control
Framework for Program Evaluation in Public Health
Measurement Determination

Operationalize

Observe

Measure

Stakeholder Agreement
EVALUATION STRATEGIES: WHAT GETS MEASURED GETS DONE...

- **Two strategies**
  - Compare vaccination rates pre- and post- implementation
  - Set a goal prior to implementing strategy and track vaccination rates over time (benchmarking), for example:
    - 80% of girls and 35% of boys will receive HPV1
Increasing HPV Rates by Working with Large Health Care Systems

Arkansas Primary Care
Mid-South Division

Intervention

- ARcare - $10,000 Capacity Building Project
- The Community Clinic - Education and Technical Assistance
**PATIENT REMINDER/RECALL**

- **Vary content**
- **Methods**
  - Telephone (i.e. autodialer)
  - Letter or postcard
  - Text messages
  - Patient portals
  - Immunization registries
- **Strong evidence from over 60 studies with a median increase in coverage from 11-16 percentage points.**
**Evaluation Planning**

- Create evaluation plans during action planning
- Utility-focused
- Process Evaluation - from program start through completion
- Summative Evaluation - after project ceases

Diagram:
- Effectiveness
- Accountability
- Appropriateness
- Economic Value
- Fidelity
- Leverage Program/Policy
**Action Steps: Client Reminder Systems for ArCare**

- **Program Planning with Evaluation Strategy**
  - Determine strategy (i.e. call, text messages)
  - Designate project lead
  - Develop simple script/messaging
  - Collect baseline data pre-reminders
  - Determine reminders mechanism (i.e. contractor)
  - Opt-in clients (if possible or required)
  - Initiate & track

- **Evaluation Considerations**
  - Fidelity (i.e. Strategy implemented as planned?)
  - % reached? Ease of reach? Vaccination rate increase?

- **Action from Evaluation Findings**
  - Adjust the script, timing of reminder, or contact info sources
  - Re-evaluate and determine next steps
<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategy</th>
<th>Partners</th>
<th>Evaluation Questions</th>
<th>How measured?</th>
<th>Process indicator</th>
<th>Outcome indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase HPV vaccine uptake in Large HC Systems</td>
<td>Client Reminder Systems for ArCare, CCC, EHR/Registry, Clinicians</td>
<td>Health System Leaders, Imm Dept</td>
<td>To what extent are client reminders effective for reaching populations with lowest uptake? Are text msgs or calls more effective? Is partnership appropriate?</td>
<td>Vaccination report data, Reminder fee compared to % Vaccination increase, Focus Group Survey, Membership Contribution Analysis</td>
<td>3 &amp; 6 month vaccination rates by race, gender, geography, 3 &amp; 6 month vaccination rates by reminder type Partner Inputs</td>
<td>Annual % change in HPV vaccination rates by reminder type, race, and gender, Reminder type effectiveness Partnership Pros/Cons</td>
</tr>
</tbody>
</table>
Impact of Text Reminders to Parents on Receipt of HPV2 and HPV3, 2009

Kharbanda. Vaccine 2011;29:2537

* p = .001
** p = .003
Recall for HPV, TdaP and MCV Vaccines 2009-2010
(n = 4,115 adolescents ages 11-17 years in 37 practices)

<table>
<thead>
<tr>
<th>Method</th>
<th>Percent Increase</th>
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<tbody>
<tr>
<td>Mail</td>
<td>21%*</td>
</tr>
<tr>
<td>Telephone</td>
<td>17%*</td>
</tr>
<tr>
<td>Control</td>
<td>13%</td>
</tr>
</tbody>
</table>

The proportion of adolescents with preventive visits also increased significantly.

*p<0.05
Another Coordinated Approach to Increasing HPV Vaccination Coverage
• Development of statewide joint initiative with partners and stakeholders

• Implementation of media campaign targeting parents

• *Training and supporting a subset of providers to pilot the MIIS (MA immunization registry) to use immunization coverage and reminder/recall reports*

• Educating healthcare providers about burden of HPV disease, HPV vaccine schedule, evidence-based strategies
MA Immunization Information System (MIIS)

- Pilot of 10 CHCs & 10 pediatric practices for TA & training to:
  - Run practice-based adolescent vaccination coverage reports
  - Generate reminder/recall materials for adolescents due & overdue for the HPV vaccine series (& other adolescent vaccines)
### Sample Evaluation Framework: MA Immunization Information System (MIIS)

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<td>Increase HPV vaccine uptake in CHCs</td>
<td>Training &amp; TA to build capacity to run adolescent vaccination reports</td>
<td>Imm Dept, EHRs, Cancer Registry, ACS, AAP</td>
<td>To what extent are Trainings effective for building capacity to run reports?</td>
<td>% participation in TA opps</td>
<td>% participation in TA opps</td>
<td>% change in HPV vaccination rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>To what extent is content appropriate?</td>
<td>% participation in trainings</td>
<td>% participation in trainings</td>
<td>Frequency of report generation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Are partnership appropriate?</td>
<td>% participation in trainings Pre- &amp; Post-test of Knowledge Focus Group</td>
<td>% Knowledge increase Content appropriateness</td>
<td>Dedicated staff for report generation/analysis</td>
</tr>
</tbody>
</table>
**Reporting Evaluation Results**

- Brief stakeholder throughout
- Create dissemination Plan
- Determine format
- Help stakeholders understand data
Resources

- **CDC CCC Branch Evaluation Toolkit:**
  

- **NACCHO:** Healthy Communities, Healthy Behaviors: Using Policy, Systems, and Environmental Change to Combat Chronic Disease
  

- **MCAAP:** You Are the Key to HPV Prevention (Provider Information)
  

- **CDC:** Information for Parents
  
  [http://www.cdc.gov/hpv/parents/vaccine.html](http://www.cdc.gov/hpv/parents/vaccine.html)
QUESTIONS
Kristi R. Fultz-Butts, MPH
Public Health Advisor
Comprehensive Cancer Control Branch
Division of Cancer Prevention and Control
National Center of Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
www.cdc.gov

Email: KFultzButts@CDC.GOV
Phone: (770) 488-4202
Break
Roundtables

• Advocating for policy changes
• Making system changes to support vaccination
• Working with physicians and other providers
• Increasing vaccination of boys
• Countering anti-vaccine press and reframing the vaccine message
• Linkages to immunization programs
# Team Action Planning

Day 2 / May 4, 2016  10:45 – 12:00

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Poster Session
Team Sharing Evaluation

Cindy Vinson, NCI
Citseko Staples, ACS CAN
Closing

Lisa Richardson, CDC
Adjourn… Safe Travels!