HPV Vaccination: Its Cancer Prevention

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What is HPV?

- HPV – Human papillomavirus
- There are over 100 types of HPV
- HPV is the most common sexually transmitted infection
- HPV is a viral infection that can be spread from one to another person through anal, vaginal, or oral sex, or through close skin-to-skin touching during sexual activity.
What is HPV?

• A DNA tumor virus
• Can infect almost all human skin surfaces
  – All types of squamous epithelium
    • Can cause cancer in most sites it infects
    • Prevalence highest in women younger than 25
• Second peak of incidence after age 55
What is HPV?

• HPV types are divided into 2 groups based on their association with cancer
  – Low-risk types can cause genital warts and mild pap test abnormalities
  – High-risk types can cause moderate to severe pap test abnormalities, cervical dysplasia and cervical cancer, and other cancers.

• About 40 types of HPV can infect the oropharyngeal (back of throat) and genital areas (vulva, vagina, cervix, rectum, anus, penis, or scrotum).

• Most HPV infections are transient and have no symptoms.
What is HPV?

• Most HPV infections will go away in 8 to 13 months – some will not.
• HPV that does not go away can stay undetected for years.
• This makes it difficult to know
  – When people became infected
  – How long they have been infected
  – Who passed the infection to whom
How Many People Are Infected?

- Genital HPV infections are very common among sexually active individuals.
- 74% of new infections occur among young people age 15-24
How Does it Spread?

• Any kind of sexual activity involving skin to skin genital contact with an infected person – intercourse isn’t necessary.
• You can get HPV by having vaginal, anal, or oral sex with someone who has the virus.
• Anyone who is sexually active can get HPV, even if you had sex with only one person.
• You can develop symptoms years after you have sex with someone who is infected making it hard to know when you first became infected.
Avoiding HPV Infection

• Practice abstinence
• Have only one partner who has no other intimate partners
• Use condoms every time
• Get the HPV vaccine to lower your risk of HPV infection
Benefits of HPV Vaccination

• Virtually all cervical cancers are caused by HPV infections
  HPV vaccines protect against 70% of cervical and other HPV-related cancers
  – New nanovalent vaccine provides 90% protection

• Girls and boys ages 11-12 should be vaccinated
  – Also, catch up vaccines for women through age 26 and men through age 21

• HPV vaccination + pap testing can eliminate virtually all cervical cancer cases
Who Should Get HPV Vaccine?

• All girls and boys who are 11 or 12 years old should get the recommended series of HPV vaccine.

• Teen boys and girls who did not get the vaccine when they were younger should get it now.
  – Young women can get HPV vaccine through age 26
  – Young men can get vaccinated through age 21
Who Should Get HPV Vaccine

• The vaccine is also recommended for:
  – Gay and bisexual young men (or any young man who has sex with men) through age 26
  – Young men with weakened immune systems (including HIV) through age 26, if they did not get HPV vaccine when they were younger
Breaking News about the HPV Vaccination Series

• Children under 15 who start the vaccine series, only need 2 doses, the CDC decided Wednesday

• Teens and young adults who start the series later, at ages 15 through 26 years, will continue to need 3 doses of HPV vaccine to protect against cancer-causing HPV infection
Breaking News about the HPV Vaccination Series

• The previous recommendation was for a three-shot regimen, but studies showed 2 doses work just as well.
• Experts predict the simpler, more flexible timeline will result in higher rates of HPV vaccination, which has lagged among both girls and boys.
• The Advisory Committee on Immunization Practices, which counsels the CDC on the nation’s vaccine schedule, voted Wednesday for the change.
• Several hours later, CDC Director Tom Frieden accepted the panel's action.
Breaking News about the HPV Vaccination Series

• Under the new schedule, the first of 2 doses of the HPV vaccine should be administered at 11 or 12, although it could be given as early as 9, as under the previous guidance

• The second dose would be administered six to 12 months after the first dose
How Well Does HPV Vaccine Work?

• The HPV vaccine works extremely well
  – Clinical trials showed the vaccines provided close to 100% protection against pre-cancers
  – Since the vaccine was recommended in 2006, there has been a 56% reduction in vaccine type HPV infections among teen girls in the U.S., even with very low HPV vaccination rates
  – In countries like Australia where there is higher HPV vaccine coverage, HPV vaccine has reduced the number of cases of pre-cancers of the cervix in young women
Potential Side Effects

• The most common side effects are usually mild, and include:
  – Pain, redness, or swelling in the arm where the shot was given
  – Fever
  – Headache or feeling tired
  – Nausea
  – Muscle or joint pain
Potential Side Effects

• Brief fainting spells vaccination
  – Sitting or lying down for 15 minutes after vaccination can help prevent fainting and injuries caused by falls

• On very rare occasions, severe (anaphylactic) allergic reactions may occur after vaccination
  – People with severe allergy to any component of a vaccine should not receive that vaccine
President’s Cancer Panel Report

• In 2014, the President’s Cancer Panel released its report: “Accelerating HPV Vaccine Uptake: Urgency for Action”
• In 2013, only 57% of girls and 35% of boys have had 1+ doses of HPV vaccine
• Encourages coordinated efforts to increase HPV vaccination
• As part of this strategic initiative, NCI funded 18 state grants (including ours!)
Project Description

• 1 year grant from NCI
  – Hollings Cancer Center team: Anthony Alberg (PI), Jennifer Young-Pierce (Project Leader), Kathleen Cartmell (State Liaison), Catherine Staples (Project Coordinator)
  – Advisory group: Debbie Bryant, Marvella Ford, Chanita Hughes- Halbert, Cathy Melvin and Heather Brandt
  – Collaborators: Heather Brandt (USC) and Beth Sundstrom (College of Charleston)
Project Purpose

• To characterize barriers, facilitators and strategies for increasing HPV vaccination in SC
• To identify organizational linkages needed to improve HPV vaccination rates
Project Components

• Interviews with state leaders
• Regional town hall meetings
• Interviews with pediatric practices
• Social media content analysis
Some Key Findings
Public Awareness

• A media campaign is needed to promote HPV vaccine awareness
• Stakeholders report a total void of public awareness campaigns about HPV vaccination
Provider Education

• Providers aren’t universally recommending HPV vaccination
  – Competing clinical priorities
  – Kids don’t come for well child visits
  – Lack of clinical reminder systems
  – Concerns parents may not want to give the vaccine
  – Plus, the HPV vaccine isn’t mandatory for school

• Thus, HPV vaccination often falls through the cracks
HPV Vaccine Access-Insurers

• The HPV vaccine is recommended by ACIP as an “A” level recommendation, and so it is covered by all state insurers for younger adolescents

• However, some insurers don’t cover the vaccine for older adolescents/young adults because they are not the primary vaccination target group
HPV Vaccine Access-Public Health

• Federal Vaccines for Children Program covers the HPV vaccine
• Covers uninsured and Medicaid populations
  Only 2/3 of available doses are ordered
• State vaccine program that covers vaccine for the “underinsured” does NOT cover HPV vaccine
Provider-Based Vaccination

- Recent state grant through the SC Chapter of the American Academy of Pediatrics
- 8 practices participated
  - Each developed a quality improvement project Very effective
- Best practices
  - Simple, clear protocol
  - Normalize vaccine message
  - Each member of the practice is given a role in promoting adolescent vaccinations (including HPV)
Stakeholder Suggestions for the Approach

• Need to target providers AND parents and adolescents
  – Grassroots support can help overcome negative reactions to HPV vaccine
  – Promote vaccine as a cancer prevention vaccine-- NOT an STD vaccine
  – Leverage credibility of leading healthcare organizations to jointly encourage HPV vaccination (i.e. HCC, state cancer alliance, provider orgs, public health)
Cervical Cancer Free South Carolina

• SC is part of a national movement to prevent cervical cancer via cervical cancer screening and HPV vaccination

Facebook page: https://www.facebook.com/cervicalcancerfreesc/

Email: Jennifer Young-Pierce at youngjl@musc.edu
Next Steps Programmatically

• **Cervical Cancer Free SC Partners can:**
  – Carry out public awareness campaigns for HPV vaccination
  – Work with state provider organizations to educate their members about HPV vaccination
  – Make HPV vaccination the focus of quality improvement in the state
  – Pass the Cervical Cancer Free South Carolina legislation (DONE!)
  – Cover the HPV vaccine through the State Vaccine Program (DONE!)
Are There Any Questions?

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