



## *Human Papillomavirus Immunization Model Policy*

### Rationale

Human papillomavirus (HPV) vaccine is important because it protects against cancers caused by human papillomavirus infection. HPV is a very common virus; nearly 80 million people – about one in four – are currently infected in the United States. About 14 million people, including teens, become infected with HPV each year. HPV can cause cervical and other cancers including cancer of the vulva, vagina, penis or anus. It can also cause cancer in the back of the throat, including the base of the tongue and tonsils (called oropharyngeal cancer). Every year, over 27,000 women and men are effected by a cancer caused by HPV – that's a new case every 20 minutes. Many of these cancers caused by HPV could be prevented with vaccination.<sup>1</sup>

All HPV vaccines protect against types 16 and 18, which cause the majority of invasive cervical cancers across racial/ethnic groups (67% of the invasive cervical cancers among whites, 68% among blacks and 64% among Hispanics).<sup>2</sup> Along with protecting against types 16 and 18, the 9-valent HPV vaccine protects against five additional HPV types that cause invasive cervical cancer and two HPV types that cause genital warts. The 9-valent HPV vaccine is designed to protect against seven HPV types that cause about 80% of invasive cervical cancer among all racial/ethnic groups in the United States.<sup>1</sup>

More than 7 percent of all cancers, 2,366 cases, diagnosed in South Dakota from 2001 to 2008 were in a primary site that may have been caused by HPV. Four percent of South Dakota's total cancer deaths in 2001–2008 were from HPV-associated cancers.<sup>3</sup>

Although the Healthy People 2020 goal for HPV vaccination coverage for adolescent females and males is 80 percent, South Dakota HPV vaccination coverage rates fall considerably short of these goals. In 2014, 33.1% of adolescent females, ages 13-17, completed the three-dose HPV vaccine series compared to 39.7% nationally. Additionally, 23.5% of adolescent males, ages 13-17, completed the three-dose HPV vaccine series compared to 21.6% nationally.<sup>4</sup>

The Centers for Disease Control and Prevention estimates that increasing HPV vaccination rates from current levels to 80 percent would prevent an additional 53,000 future cervical cancer cases in the United States among girls who now are 12 years old or younger over the course of their lifetimes. Thousands of cases of other HPV-associated cancers in the U.S. could also be prevented within the same timeframe.<sup>5</sup>

### Model Policy Guidelines

The Advisory Committee on Immunization Practices (ACIP) is a group of medical and public health experts that develops recommendations on how to use vaccines to control diseases in the United States. The recommendations stand as public health advice that will lead to a reduction in the incidence of vaccine-preventable diseases and an increase in the safe use of vaccines and related biological products.

The adoption of an HPV vaccination policy such as this, is the first step to promote prevention of diseases associated with HPV. This model policy can be used in its entirety or adapted to fit the needs of your healthcare facility. An HPV vaccination policy can include a few or all of the following guidelines:

1. [Healthcare facility] will promote the human papillomavirus (HPV) vaccine as a routinely recommended vaccine for adolescents by the ACIP.
2. [Healthcare facility] will offer the human papillomavirus (HPV) vaccine during the same visits that the provider recommends the tetanus, diphtheria and pertussis (Tdap) vaccine as well as the meningococcal conjugate (MCV4) vaccine.
3. [Healthcare facility] providers will treat the HPV vaccine the same as the Tdap and MCV4 vaccines when making recommendations for adolescent vaccinations.
4. [Healthcare facility] will educate parents to understand that all three of the routinely recommended vaccines should be given during the 11–12 years of age time frame.
5. [Healthcare facility] will educate parents during the initial visit regarding the vaccine schedule since the HPV vaccine is a three dose series. Appointments will be made at the time of the initial visit for the patient to receive the subsequent doses.
6. [Healthcare facility] will implement a reminder system such as phone calls, letters and/or text messages to alert the patient prior to the next appointment.
7. [Healthcare facility] will implement a system to determine anyone that is behind or due for vaccines i.e., electronic health records and immunization registries.
8. [Healthcare facility] will check the vaccination status of adolescents on every visit. Every opportunity to vaccinate will be pursued whenever a patient is in the office.
9. [Healthcare facility] will implement a system for routine examination of vaccination histories for all patients on every visit. Any vaccines that are due or past due will be recommended and offered during the visit.
10. [Healthcare facility] will recommend the HPV vaccine for both male and female adolescents.

## Implementation

There are a number of recommendations from the Advisory Committee on Immunization Practices, the Centers for Disease Control and Prevention and the Community Guide to assist healthcare facilities to increase their HPV vaccination rates. Listed below are a few of the implementation best practices, most of which are also evidence-based interventions.

### *Provider Feedback*

Informing immunization providers of their performance allows for an awareness that is necessary for behavior change. Providing feedback without judgment on a regular basis assists in motivation and accountability. Monthly data will help direct where additional education or resources need to be focused on.<sup>6</sup>

### *Incentives*

An incentive is defined as something that incites one to action or effort. They are extremely variable and the same incentive may not be as valuable to one provider as the other. It is important to recognize that not all providers may be motivated by the same incentive. Small tokens of appreciation along with recognition and additional resources are some ways to provide positive feedback and promote teamwork among vaccine providers.<sup>6</sup>

### *Recordkeeping*

One of the most important components for vaccination is recordkeeping. Maintaining these records is critical to providing optimal healthcare. Immunization records need to be accurate and up-to-date along with documentation of the vaccine and its administration. Patients may receive vaccines at more than one provider office and communication between these sites is essential in keeping accurate immunization records.<sup>6</sup>

### *Reminder and Recall Messages*

Patient reminders and recall messages are effective in bringing patients into the clinic who may be due soon or overdue for an immunization. Several options are available for reminders/recalls such as computer-generated telephone calls, letters, use of EHR and clinic phone calls.<sup>6</sup>

### *Reminder and Recall Messages to Providers*

Reminder and recall messages for providers keep them informed of which patients are due soon or overdue for an immunization. Several options are available for reminders/recalls such as a computer-generated list of the patients who are scheduled to be seen and are overdue or an electronic reminder which appears when providers access the electronic health record. These reminders will also encourage staff to continually check the immunization status of their patients.<sup>6</sup>

### *Reduction of Missed Opportunities*

Missed opportunities occur when a patient is seen by a provider, but immunizations are not updated. There are a multitude of reasons why this may occur, including patients not being seen at a well-child visit, avoidance of simultaneous administration of multiple vaccines, or myths regarding decreased immune response based on number of immunizations administered. Vaccination coverage could increase by 20 percent if missed opportunities are eliminated. Strategies designed to prevent missed opportunities are discussed below.

- Standing orders – protocols available for non-physician immunization staff to administer vaccine without direct physician involvement.
- Provider education – a provider education program can provide knowledge about the principles of vaccination, vaccination scheduling, and patient education.
- Removing physical barriers – providing immunization clinics outside of normal working hours or providing outreach to rural areas.<sup>6</sup>

### *Recommendation by the Healthcare Provider*

A provider's recommendation is very powerful and motivating for a patient or child to receive the vaccine. The majority of parents assume their child's immunization record is up-to-date and rely on provider's recommendations when they are not.

- Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. It should be offered the same way, same day.<sup>6</sup>

### *Take Time to Listen*

Parents may be interested in vaccinating, but still have questions. Take the time to listen to parents' questions and reply with an effective response.

- The "HPV vaccine is cancer prevention" message resonates strongly with parents.
- Explain to parents and patients what the vaccine actually does prevent, such as "HPV can cause cancers of the cervix, vagina and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men."<sup>6</sup>

## Compliance

The human papillomavirus (HPV) vaccine is a routinely recommended vaccine for adolescents by the Advisory Committee on Immunization Practices. The above policy language is a *guide* for your clinic or hospital. Implementing a policy that will fit your facility and benefit your patients is the overall goal and policy compliance should be considered for this purpose. Your quality improvement committee may be the perfect group to ensure this policy will remain a priority.

There are a few performance measures that monitor the progress of HPV vaccination. The first is the National Quality Forum measure 1959: Human Papillomavirus Vaccine for Female Adolescents. This performance measure looks at the percentage of female adolescents 13 years of age who had three doses of the HPV vaccine by their 13<sup>th</sup> birthday.<sup>7</sup> Another performance measure is the Healthcare Effectiveness Data and Information Set (HEDIS), which was developed by the National Committee for Quality Assurance (NCQA) to evaluate consumer health care and is used by more than 90 percent of America's health plans. The HEDIS measure for HPV vaccination also looks at the percentage of female adolescents 13 years of age who had three doses of the human papillomavirus vaccine by their 13<sup>th</sup> birthday. Lastly, the South Dakota Immunization Program promotes entry of all vaccines in the South Dakota Immunization Information System.

## Final Statement

By implementing this model policy in its entirety or choosing to tailor this policy to your facility's needs, you are taking a great first step in improving HPV vaccination rates for your patients.

## Definition of Terms

**Human Papillomavirus (HPV):** HPV is a group of more than 150 related viruses. Each HPV virus in this group is given a number, which is called its HPV type. HPV is named for the warts (papillomas) some HPV types can cause. Some other HPV types can lead to cancer.

**Vaccine:** A product that stimulates a person's immune system to produce immunity to a specific disease, protecting the person from that disease. Vaccines are usually administered through needle injections, but can also be administered by mouth or sprayed into the nose.

**Vaccination:** The act of introducing a vaccine into the body to produce immunity to a specific disease.

**Tdap:** The tetanus, diphtheria and pertussis (Tdap) vaccine is a booster shot that helps protect your preteen or teen from the same diseases that DTaP shots protect little kids from.

**Meningococcal:** Meningococcal vaccines help protect against all three serogroups of meningococcal disease that are most commonly seen in the United States (serogroups B, C and Y).

## Resources

Advisory Committee on Immunization Practices

<http://www.cdc.gov/vaccines/acip/>

Centers for Disease Control and Prevention

<http://www.cdc.gov/hpv/>

South Dakota Cancer Registry

<http://www.getscreened.sd.gov/registry/data/>

South Dakota Department of Health HPV and Cancer monograph

<http://getscreened.sd.gov/documents/HPV-Cancer-2011.pdf>

South Dakota Immunization Program

<http://doh.sd.gov/family/childhood/immunization/>

Steps for Increasing HPV Vaccination in Practice

<https://www.mysocietysource.org/sites/HPV/ResourcesandEducation/Lists/Clearinghouse/Attachments/217/Steps%20for%20Increasing%20HPV%20Vaccination%20in%20Practice.pdf>

## References

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5. 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. Bethesda, MD: National Cancer Institute; 2014.
6. Epidemiology and Prevention of Vaccine-Preventable Diseases, 13<sup>th</sup> Edition, US Department of Health and Human Services.
7. The National Quality Forum measures. Available at <http://www.qualityforum.org/QPS/QPSTool.aspx>

