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Human Papilloma Virus (HPV) Vaccination Reminder

Summary

Every year in the United States, about 36,000 people are estimated to be diagnosed with a cancer caused by HPV infection. Although cervical cancer is the most well-known of the cancers caused by HPV, there are other types of cancer caused by HPV. HPV vaccination could **prevent more than 90% of cancers caused by HPV** from ever developing. This is an estimated 33,000 cases in the United States every year.¹

The Advisory Committee on Immunization Practices (ACIP) recommendations for the HPV two-dose vaccination series were published in an MMWR in December 2016.² DHEC is reminding providers that the **HPV two-dose series can be initiated at age 9 years.**

Starting the HPV vaccine series at age 9 improves parental acceptance of the vaccine, provides more opportunities to complete the series, and may provide better protection than a 3 dose HPV series completed later in adolescents.

Catch up HPV vaccination is recommended for all persons through age 26 years. Based on individual risk factors and shared clinical decision making, adults age 27 to 45 years may receive the HPV vaccine.

ACIP Recommended number of doses for HPV vaccine, by age at series initiation and medical conditions — United States, 2016

Age	Doses	Schedule
9-14 Years	2	0, 6-12 months
9-14 immunocompromised / HIV	3	0, 1-2, and 6 months
15 - 45 Years ³		

Background

HPV infection is the most sexually transmitted infection worldwide and most sexually active individuals will get the infection at some point in their life.⁴ In general, HPV is thought to be responsible for more

than 90% of anal and cervical cancers, about 70% of vaginal and vulvar cancers, and more than 60% of penile cancers. Oropharyngeal cancers traditionally have been caused by tobacco and alcohol, but recent studies show that about 70% of cancers of the oropharynx may be linked to HPV.⁵

In 2018, in the United States, 12,733 new cases of cervical cancer were reported among women, and 4,138 women died of this cancer. For every 100,000 women, 8 new cervical cancer cases were reported, and 2 women died of this cancer in the US. The cervical cancer rates in South Carolina reflect this national rate. In 2018, there were approximately 7.7 new cases of cervical cancer per every 100,000 women in South Carolina.⁶ However, rates of cervical cancer and death differ between races. In South Carolina, on average there are 20% more cases of cervical cancer among black women than among white women (9.0 vs. 7.5 new cases per 100,000 women in 2013-2017, respectively). In addition, black women in South Carolina are nearly twice as likely to die from cervical cancer as white women.⁷

Overall, the number of cases and deaths from cervical cancer have been decreasing over the past 40 years, in large part due to women getting regular Pap tests. However, since 2006, a HPV vaccine has been available to prevent cancers caused by HPV.

Although more than 90% of HPV-associated cancers are vaccine preventable, the national adolescent completion rates of the series are below national targets. Healthy People 2020 and 2030 both aim for 80% of male and female adolescents (aged 13 through 15 years) to complete their HPV series. In 2018, the national adolescent completion rate was 48%⁸ and increased to 55% in 2020. The completion rate in SC in 2020, in contrast, was 44%.⁹

HPV vaccines are highly immunogenic and effective. More than 98% of HPV vaccine recipients develop an antibody response to the HPV types included in the respective vaccine 1 month after completion of the vaccination series. **All HPV vaccines have high efficacy of nearly 100% for prevention of HPV vaccine type-related persistent infection, cervical intraepithelial neoplasia (CIN) 2/3, and adenocarcinoma in situ (AIS) in clinical trials** in analyses limited to persons without evidence of infection with the vaccine types at the time of vaccination.¹⁰

Immunogenicity studies have shown that two doses of HPV vaccine given to 9–14-year-olds at least 6 months apart provided as good or better protection than three doses given to older adolescents or young adults. While some providers have traditionally started HPV vaccination at age 11, it may be given starting at age 9. Both the American Academy of Pediatrics and the American Cancer Society **recommend starting HPV vaccination at age 9** in order to improve completion and protection rates.^{11,12}

Those who have not completed their primary series in adolescents are eligible to complete a catch-up series until age 26. ACIP does not recommend catch-up vaccination for all adults aged 27 through 45 years, but it recognizes that some persons who are not adequately vaccinated might be at risk for new HPV infection and might benefit from vaccination in this age range. Therefore, ACIP recommends shared clinical decision-making regarding potential HPV vaccination for these persons.

Recommendations:

- DHEC recommends healthcare providers consider **initiating HPV vaccine for all children at age 9**. This offers the greatest chance to achieve full and effective protection against HPV-related cancers.
- Two doses of HPV vaccine are required if the first dose is given before age 15.
- Teenagers and young adults who start the series after age 15, need three doses of HPV vaccine.
- Children aged 9 through 14 years who received two doses of HPV vaccine less than 5 months apart will need a third dose.

- Catch up vaccination should be offered to those who are not adequately vaccinated, up to 26 years old.¹³
- ACIP recommends shared clinical decision-making regarding potential HPV vaccination for adults aged 27 through 45 years who are not adequately vaccinated and might be at risk for new HPV infection.

Resources

1. Centers for Disease Control and Prevention. Cancers Caused by HPV Are Preventable. <https://www.cdc.gov/hpv/hcp/protecting-patients.html>. Accessed 12/15/2021
2. Meites E, Kempe A, Markowitz LE. Use of a 2-Dose Schedule for Human Papillomavirus Vaccination — Updated Recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2016;65(49):1405-8.
3. Meites E, Szilagyi PG, Chesson HW, Unger ER, Romero JR, Markowitz LE. Human Papillomavirus Vaccination for Adults: Updated Recommendations of the Advisory Committee on Immunization Practices. *MMWR* 2019;68:698–702.
4. Center for Disease Control and Prevention. Genital HPV Infection – Fact Sheet. <https://www.cdc.gov/std/hpv/stdfact-hpv.htm>. Accessed 12/15/2021.
5. Centers for Disease Control and Prevention. HPV-Associated Cancer Statistics. <https://www.cdc.gov/cancer/hpv/statistics/index.htm>. Accessed 12/15/2021
6. Centers for Disease Control and Prevention. Cancer Statistics at a Glance. <https://gis.cdc.gov/Cancer/USCS/#/AtAGlance/>. Accessed 12/17/2021.
7. South Carolina Department of Health and Environmental Control. Cervical Cancer in South Carolina. <https://scdhec.gov/health/diseases-conditions/cancer/cervical-cancer>. Accessed 12/17/2021.
8. Healthy People 2030. Increase the proportion of adolescents who get recommended doses of the HPV vaccine — IID-08. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/vaccination/increase-proportion-adolescents-who-get-recommended-doses-hpv-vaccine-iid-08>. Accessed 12/15/2021.
9. Centers for Disease Control and Prevention. TeenVaxView: Vaccination Coverage among Adolescents (13 – 17 Years). <https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/data-reports/index.html>. Accessed 12/17/2021.
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11. O’Leary, S, Nyquist, A-C. Why AAP recommends initiating HPV vaccination as early as age 9. *AAP News*. October 4, 2019.
12. Saslow, D, Andrews, KS, Manassaram-Baptiste, D, Smith, RA, Fontham, ETH; the American Cancer Society Guideline Development Group. Human papillomavirus vaccination 2020 guideline update: American Cancer Society guideline adaptation. *CA Cancer J Clin*. 2020; 70: 274- 273. <https://doi.org/10.3322/caac.21616>
13. Centers for Disease Control and Prevention. Administering HPV Vaccine. <https://www.cdc.gov/vaccines/vpd/hpv/hcp/administration.html>. Accessed 12/17/2021.

DHEC contact information for reportable diseases and reporting requirements

Reporting of **cancers, including HPV-related cancers**, to the South Carolina Central Cancer Registry (SCCCR) is consistent with South Carolina Law (Central Cancer Registry Act, SC Law 44-35 and Public Law 102-515). Electronic reporting is available by contacting cancer.registry@dhec.sc.gov.

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2022			
Mail or call reports to the Epidemiology Office in each Public Health Region			
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<u>Lowcountry</u> 4050 Bridge View Drive, Suite 600 N. Charleston, SC 29405 Fax: (843) 953-0051	<u>Midlands</u> 2000 Hampton Street Columbia, SC 29204 Fax: (803) 576-2993	<u>Pee Dee</u> 1931 Industrial Park Road Conway, SC 29526 Fax: (843) 915-6506	<u>Upstate</u> 200 University Ridge Greenville, SC 29602 Fax: (864) 282-4373
CALL TO:			
<u>Lowcountry</u> Allendale, Bamberg, Beaufort, Berkeley, Calhoun, Charleston, Colleton, Dorchester, Hampton, Jasper, Orangeburg Office: (843) 441-1091 Nights/Weekends: (843) 441-1091	<u>Midlands</u> Aiken, Barnwell, Chester, Edgefield, Fairfield, Kershaw, Lancaster, Lexington, Newberry, Richland, Saluda, York Office: (888) 801-1046 Nights/Weekends: (888) 801-1046	<u>Pee Dee</u> Clarendon, Chesterfield, Darlington, Dillon, Florence, Georgetown, Horry, Lee, Marion, Marlboro, Sumter, Williamsburg Office: (843) 915-8886 Nights/Weekends: (843) 915-8845	<u>Upstate</u> Abbeville, Anderson, Cherokee, Greenville, Greenwood, Laurens, McCormick, Oconee, Pickens, Spartanburg, Union Office: (864) 372-3133 Nights/Weekends: (864) 423-6648
For information on reportable conditions, see https://www.scdhec.gov/ReportableConditions		<u>DHEC Bureau of Communicable Disease Prevention & Control</u> Division of Acute Disease Epidemiology 2100 Bull St • Columbia, SC 29201 Phone: (803) 898-0861 • Fax: (803) 898-0897 Nights / Weekends: 1-888-847-0902	

Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
Health Update	Provides updated information regarding an incident or situation; unlikely to require immediate action.
Info Service	Provides general information that is not necessarily considered to be of an emergent nature.