



EPIC® Immunization 2022 Update

Improving HPV Vaccination Rates in Your Practice

Updated April 2022

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EPIC® is presented by:

Georgia Chapter - American Academy of Pediatrics

Ga. Dept. of Public Health/Immunization Program

In Cooperation with:

Georgia Academy of Family Physicians

Georgia Chapter - American College of Physicians

Georgia OB/Gyn Society

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Faculty Disclosure Information

- In accordance with ACCME* and ANCC-COA* Standards, all faculty members are required to disclose to the program audience any real or apparent conflict of interest to the content of their presentation.
- This presentation will include the most current ACIP recommendations for HPV vaccine, but is not a comprehensive review of all available vaccines.
- Detailed information regarding all ACIP Recommendations is available at www.cdc.gov/vaccines/acip/recs/index.html

*Accreditation Council for Continuing Medical Education *American Nurses Credentialing Center Commission on Accreditation

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Objectives

- Discuss HPV-related disease prevalence in the U.S.
- Summarize HPV vaccination rates, nationally and in Georgia
- Evaluate current vaccination rates in an individual practice
- Formulate strategies to avoid missed HPV vaccination opportunities
- Apply communication strategies between providers and parents that facilitate HPV vaccination

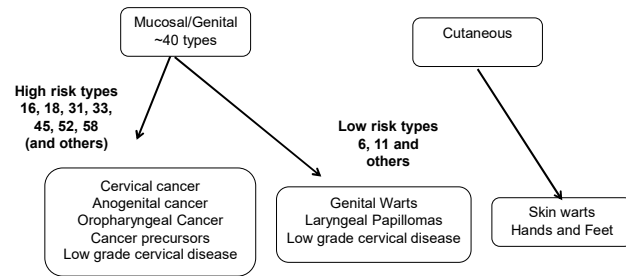
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Types of Human Papilloma Virus (HPV)*

(More Than 200 Types Identified)



*Epidemiology and Prevention of Vaccine Preventable Diseases 13th Edition, 2015

*Red Book – AAP 2018 Report of the Committee on Infectious Diseases

* MMWR, August 29, 2014, RR Vol. 63, No. 5

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HPV Vaccine*

Gardasil 9® (9vHPV) HPV types 6, 11, 16, 18, 31, 33, 45, 52, 58

ACIP recommends HPV vaccine starting at age 11 or 12 years for:

- All males and females through 26 years of age
- Catch-up vaccination for persons through age 26 who are not adequately vaccinated

Gardasil 9 is now also licensed for all persons 9 through 45 yrs. of age**

- Use the 3-dose schedule for persons 15-45 years of age
- Based on shared clinical decision making, the series may be given to persons ages 27-45.

*https://www.merck.com/product/usa/pi_circulars/g/gardasil_9/gardasil_9_pi.pdf

* MMWR, August 29, 2014, RR Vol. 63, No. 5

**MMWR, August 16, 2019, Vol 68, No. 32

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ACIP Recommendations and Schedule*

2 Dose Schedule:

HPV vaccine initiated between 9-14 years can be given in two doses: 0, 6-12 months.
(If the 2nd dose is administered at least 5 months after 1st dose, it can be counted).

3 Dose Schedule:

HPV vaccine initiated after the 15th birthday or certain immunocompromising conditions should be vaccinated with the 3 dose schedule: 0, 1-2, 6 months

(Dose 2 should be given at least 1 to 2 months after first dose (1 month minimum); Dose 3 should be given at least 6 months after the first dose (minimum of 3 months between dose 2 and 3))

*MMWR, December 16, 2016, Vol 65, No. 49

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Annual Estimates of HPV-related Diseases in the U.S.*

Oncogenic

- Each year in the United States, about 46,143 new cases of cancer are found in parts of the body where human papillomavirus (HPV) is often found. HPV causes about 36,500 of these cancers.
- In addition to 91% of cervical cancer, HPV is responsible for about 91% of anal cancers, 69% of vulvar cancers, 75% of vaginal cancers, 63% of penile cancers, and 70% of oropharyngeal cancers.

On average annual reported cases:

- Cervical---10,900 cervical cancers in women and
- Oropharyngeal--- 11,300 oropharyngeal cancers in men.

Non-oncogenic

- Genital warts---about 90% are caused by HPV strains
- Laryngeal papillomatosis

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Epidemiology and Prevention of Vaccine-preventable diseases, Pink Book, 14th edition, 2021

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Disease Prevalence in the U.S.

- HPV is the most common STI in the U.S.*
- Estimated 80 million persons are infected **
- 14 million new cases added each year in persons 15-59 years of age, half of those in persons 15-24 yrs. old.**
- Every year about 36,500 persons get cancer caused by HPV.**
- Genital warts in teenagers---approximately 2% affected

Disease Potential

- 80% of the population will become infected with HPV in their lifetime
- Each year nearly 30,000 cases of cancer could be prevented with HPV vaccination

*www.cancer.net *<https://my.clevelandclinic.org/health/diseases/11901-hpv-human-papilloma-virus>

*<https://www.kff.org/womens-health-policy/fact-sheet/the-hpv-vaccine-access-and-use-in-the-u-s/>

4/1/22 **<https://www.cdc.gov/cancer/hpv/statistics/> and
<https://www.cdc.gov/hpv/hcp/protecting-patients.html>

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GENITAL WARTS*



*You Are the Key: Best Practices for Cancer Prevention, Betty Lo-Blais, MD, LSU Health Sciences Center, National AHEC Organization, HPV Immunization Project

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HPV vaccination works!*

Infections with HPV types in sexually active 14 to 24-year-olds with ≥ 1 dose of vaccine.....



by 89%

VACCINE EFFECTIVENESS= 83%!

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* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5740482/>

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Disease Reduction*

There are no treatments for HPV infections.

Only HPV-associated lesions including genital warts, laryngeal papillomas, precancers, and cancers are treated.

About 99% of all cervical cancers are related to HPV.**

Cervical cancer is the ONLY type of HPV cancer for which there is a recommended screening test. Others may not be detected until they cause health problems.

Over 90% of HPV cancers are preventable through HPV vaccination.

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* <https://www.cdc.gov/hpv/hcp/more-than-screening/index.html>

**J Vaccines Vaccin. 2017 Jun. 8(3): 361

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Evidence of Reduction in HPV Prevalence

National Health and Nutrition Examination Survey (NHANES) Data*

Prevalence of HPV 6,11,16,18 in U.S. girls age 14-19**

2003-2006: **11.5%**

HPV Vaccine
Licensed in 2006



2011-2014: **3.3%*****

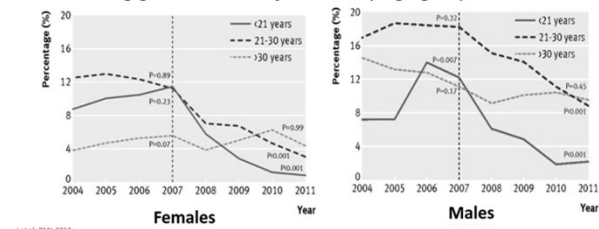
* Markowitz et al. J Infectious Dis. 2013; 208: 385, Ohio Chapter, American Academy of Pediatrics. TIES: Teen Education Immunization Sessions
Markowitz et al. MD. Division of Viral Diseases. ACIP, June, 23, 2016. * <https://www.ncbi.nlm.nih.gov/pubmed/28931217>

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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



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GA HPV Healthcare Leadership Forum, American Cancer Society—7/17/18

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HPV Vaccine Coverage in GA Compared to National Rates

The Healthy People 2020 goal is 80% for 13-17 year olds

2020 Up-to-Date HPV Vaccination age 13-17

U.S.*	Georgia**
58.6%	54.9%

School systems with a requirement for HPV vaccine at 6th grade and/or above***

Rhode Island—83% (UTD)	Hawaii—73.9% (UTD)	Virginia—54.9% (UTD)	District Of Columbia—72.3% (UTD)
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***Personal exemptions are allowed for HPV vaccine ONLY.

*MMWR/Sept. 3, 2021/Vol.70/No.35 **National Immunization Survey-Teen, U.S., 2019 and 2020

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Why do we miss opportunities to immunize?

- Physician or patient unaware of the need
- Visits for mild illness, injury, or follow-up
- Need for multiple vaccines
- Invalid contraindications
- Inappropriate clinic policies
- Reimbursement deficiencies



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Strategies to Avoid Missed Opportunities*

- Provider Prompts
 - Automatic pop-up alerts through your EHR system
 - These can sometimes be pre-installed and then customized in your office
- Family-friendly office hours
 - Occasional evening or Saturday hours
 - "No-appointment-required" if needing immunizations only
- Immunization Champion in your practice
 - Manage vaccine supply and schedule periodic updates
 - Any member of the staff could fill this role
- Include all recommended vaccines at each visit
- Schedule periodic team meetings with all personnel to:
 - Improve patient flow
 - Improve quality of care
 - Discuss problems within the framework of the practice

*<https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/Practice-Management/Pages/office-strategies.aspx> 17

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Reasons to Immunize Against HPV at age 11-12 Years*

- Higher antibody level attained when given to pre-teens rather than to older adolescents or women
- At this age, more likely to be administered before onset of sexual activity
- HPV can be transmitted by other skin-to-skin contact, not just sexual intercourse
- There is no link between vaccine and riskier sexual behavior
- Even those who abstain from sex until marriage can be infected by their marital partner
- Individuals need to complete the series for full protection
- This is an anti-cancer vaccine, and.....

Over 90% of HPV cancers are preventable through HPV vaccination.

Bottom line: NOT receiving a healthcare provider's recommendation for HPV vaccine was one of the main reasons parents reported for not vaccinating their adolescent children.**

*Presented by Anne Schuchat, MD, RADM US Public Health Service, Asst. Surgeon General, Director NCIRD at Immunize Georgia Conference, Atlanta, GA, 9-11-14
Increasing HPV Vaccination Rates Among Adolescents: Challenges and Opportunities. PolicyLab: The Children's Hospital of Philadelphia, 2016.

**http://www.immunize.org/askexperts/experts_hpv.asp

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Interventions*

- Generate vaccine rate awareness
 - Know your data
 - Increase parental knowledge
- Strengthen provider recommendations and use consistent messaging
- Use a team approach, including ALL staff members
 - Periodically review and make systems changes as needed
 - Implement evidence-based interventions
- Utilize EHR and/or GRITS to evaluate progress and process improvement as needed

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*GA HPV Healthcare Leadership Forum, American Cancer Society--7/17/18

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Key Steps for Primary Care Providers*

- Make sure HPV vaccination is universally accepted within your practice
 - Don't assume all clinicians in the practice fully support HPV vaccination
 - Confidentially assess attitudes and beliefs to guide educational and policy discussions
- Institute an evidence-based announcement approach
 - Treat HPV as you would other vaccines
 - Make parents aware that Hepatitis B is also sexually transmitted and has been routinely administered for over 20 years.
- Use standing orders for vaccination (available at www.immunize.org)
- Measure what you are doing

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* GA HPV Healthcare Leadership Forum, American Cancer Society--7/17/18

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Reminder/Recall Is Evidence Based*

- The Community Preventative Services Task Force recommended reminder recall in May 2015, based on strong evidence of effectiveness in improving vaccination rates.
- The Community Guide recommends reminder/recall across different levels of scale (from individual practices to entire communities), using a range of intervention characteristics, as part of individual or multi-component intervention.
- The included studies saw a median vaccination rate increase of 11 percentage points.

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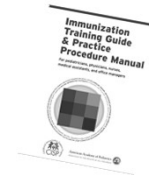
* <https://www.thecommunityguide.org/findings/vaccination-programs-client-reminder-and-recall-systems>

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AAP Training Guide*

Topics covered include:

- 1 Financing, Ordering, and Maintaining Supply
- 2 Storage and Handling of Vaccines
- 3 Communicating With Parents About Vaccines
- 4 Vaccine Administration
- 5 Immunization Information Systems or Registries
- 6 Provider Prompts and Patient Reminder and Recall Systems
- 7 Standards for Child and Adolescent Immunization Practices
- 8 Tracking Adverse Events Post-licensure: Vaccine Adverse Event Reporting System and Vaccine Safety Datalink
- 9 Vaccine Information Statements



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*https://www.aap.org/en-us/Documents/immunizations_training_guide.pdf

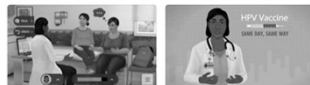
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HPV Vaccine: Same Way, Same Day App



- Brief, interactive role-play simulation
- Designed to enhance healthcare professionals' ability to introduce HPV vaccine and address hesitant parents' concerns
- Developed by Academic Pediatric Association, American Academy of Pediatrics, and Kognito
- Free
- Available for mobile devices:
 - From the Google Play Store
https://play.google.com/store/apps/details?id=com.kognito.hpv_immunization
 - From the Apple iTunes Store
<https://itunes.apple.com/us/app/hpv-vaccine-same-way-same-day/id1356847181?mt=8>

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Addressing Safety Issues*

Concerns about unique risks for adolescent girls

Q: "I have concerns about vaccine safety---I keep reading things online that say it isn't safe."**
A: There may be common mild side effects like headache or fever. There can be pain, redness, and/or swelling where the shot was given, but no other safety issues. No deaths have been attributed to HPV vaccine doses.

Q: "Could HPV vaccine cause my child to have infertility problems later?"
A: There is no data to suggest this. But women who develop cervical cancer could require treatment that would limit their ability to have children.**

Q: "I'm worried that getting this vaccine will give my child a green light to become sexually active, thinking he/she is protected from STDs."
A: Numerous studies have shown that this vaccine does not make kids more likely to be sexually active or start having sex at a younger age.*

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* "Science Behind HPV Vaccine Communications: Creating an Evidence-based Campaign," presentation by Jill Roark, MPH, NCIRD
** <https://www.cancer.org/cancer/cancer-causes/infectious-agents/hpv/hpv-vaccine-facts-and-fears.html>

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Post-licensure Safety Data*

- From June 2006 to March 2014, 96 reports of death after receiving HPV4 vaccine were submitted to VAERS. Detailed CDC and FDA review following HPV4 vaccine alone or in combination with other vaccines identified no pattern of occurrence of death that would suggest a causal association with HPV4.
- Similarly, studies in Denmark and Sweden showed no consistent evidence supporting causal associations between HPV4 and autoimmune, neurologic conditions, and venous thromboembolism.
- A study in France showed no increased risk for autoimmune diseases, Multiple Sclerosis, G-B Syndrome, lupus, rheumatoid arthritis, or type I diabetes.

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*MMWR, Recommendations & Reports/Vol. 63/No. 5, Human Papillomavirus Vaccination

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If a Parent Doesn't Say Yes Right Away*.....

ASK:

- Give parents a chance to ask questions and voice concerns
- Clarify and restate their concerns to make sure you understand

ACKNOWLEDGE:

- Emphasize it is the parent's 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:

- Allow time to discuss the pros and cons of the vaccine
- Be willing to discuss parents' ideas
- Offer written resources for parents

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* aap.org/hpvt toolkit

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A MESSAGE FOR EVERYONE*

- Identify HPV Vaccination Champions from every sector
- Engage employers, funders, foundations, and other stakeholders
- Engage in state-based and regional collaboration

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* GA HPV Healthcare Leadership Forum, American Cancer Society---7/17/18

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Summary*

- HPV is a very common virus---over 200 types
- HPV can persist for decades in persons
- HPV represents a broad threat for cancer in ALL mucosal tissues.
- HPV is a key contributor to oral cancer as well as cervical cancer.
- Over 270 million doses have been distributed worldwide and data continues to show the vaccine safe and effective.

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*How HPV Causes Cancer & Why It Still Matters : AHEC webinar---viewed 2/15/18 www.cdc.gov/hpv

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Resources for Factual & Responsible Vaccine Information



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Online Resources*

Current Childhood and Adult Immunization Schedules –
www.cdc.gov/vaccines/schedules/index.html

Parent's Guide to Childhood Immunizations –
www.cdc.gov/vaccines/parents/tools/parents-guide/index.html

Order Information for Free CDC Immunization Materials for Providers and Patients – wwwn.cdc.gov/pubs/CDCInfoOnDemand.aspx

Vaccine Labels to Organize a Storage Unit –
www.cdc.gov/vaccines/hcp/admin/storage/guide/vaccine-storage-labels.pdf

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*Course Resource—Epidemiology & Prevention of Vaccine-Preventable Diseases—C296544-E

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Vaccine Information Statements (VISs) –
www.cdc.gov/vaccines/hcp/vis/current-vis.html

Refusal to Vaccinate Form –
https://www.aap.org/en-us/documents/immunization_refusaltovaccinate.pdf

Standing Orders (Explanation and Templates) –
www.immunize.org/standing-orders/

Ask the Experts – www.immunize.org/askexperts/

General Best Practice Guidelines for Immunization –
<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

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*Course Resource—Epidemiology & Prevention of Vaccine-Preventable Diseases—C296544-E

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Questions?

Contacts for more immunization information and resources!

National Center for Immunization and Respiratory Diseases, CDC

E-mail ► NIPInfo@cdc.gov

Hotline 800.CDC.INFO

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

Georgia Immunization Program

E-mail DPH-Immunization@dph.ga.gov

Hotline 404-657-3158

Website <http://dph.georgia.gov/immunization-section>

Immunization Action Coalition

E-mail admin@immunize.org

Phone 651.647.9009

Website www.immunize.org

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THE STRONGEST PREDICTOR OF HPV VACCINE RECEIPT IS....



PROVIDER
RECOMMENDATION!*



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*https://www.Medscape.com/viewarticle/882522_print

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QUESTIONS?

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Do You Know.....

Q. 1 ---What is the approximate percentage of HPV cancers that could be prevented by HPV vaccination?

A.---90%

Q. 2 ---Give 3 examples of missed opportunities to vaccinate.

A.---Physician or patient unaware of the need

Visits for mild illness, injury, or follow-up

Need for multiple vaccines

Invalid contraindications

Inappropriate clinic policies

Reimbursement deficiencies

Q. 3 ---What are the 3 "A's" that can be used to guide a discussion between the provider and vaccine-reluctant parents?

A.---Ask, Acknowledge, and Advise.

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HPV Case Study

A 12-year-old accompanied by her mother has an appointment scheduled because of complaints of a sore throat that has persisted for a couple of days. Review of her history reveals the need for Tdap and MCV4 as recommended by ACIP and required by the State for entry into the 7th grade. Further, it is found that the recommended HPV vaccine has not been given.

A quick assessment is made. All vital signs are normal except a slight oral temperature of 100°F. An in office strep test is negative.

Can the required/recommended immunizations be given during this visit?

How would you communicate the need for these immunizations?

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HPV Case Study (cont'd)

The mother agrees to the required vaccines, but is hesitant about the HPV vaccination. She feels her daughter is too young to get a vaccine associated with sexual contact.

What would you say to facilitate the 12-year-old getting this vaccine?

The mother agrees to allow her daughter to receive all three vaccines.

When should the second HPV vaccination be given and how will you facilitate receipt of that vaccination?

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