



Cancer Prevention Through HPV Vaccination in Your **Practice:** An Action Guide for Physicians, Physician Assistants, and Nurse Practitioners



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You have the power to make a lasting impact on human papillomavirus (HPV) vaccination and help reduce the HPV cancer burden in your community.

HPV cancer prevention starts with you.

Your recommendation is the number one reason parents decide to vaccinate.

The Problem

With the HPV vaccine, you have the power to prevent cancer, yet HPV vaccination rates lag behind those of other preteen vaccines. HPV causes about 34,800 cases of cancer in men and women each year in the U.S.ⁱ Nearly all cases of cervical cancer are caused by HPV, and the virus also causes many cancers of the vagina, vulva, penis, anus, and oropharynx.ⁱⁱ

HPV is linked with:

91%	63%	70%
of cervical and anal cancers	of penile cancers	of oropharynx cancers ⁱⁱⁱ

The HPV vaccine prevents infection by virus types that cause the vast majority of these cancers and genital warts. In fact, HPV vaccination may help to eliminate cervical cancer, which takes the lives of over 4,000 women in the U.S. each year.^{iv}

Missed opportunities for vaccination contribute to low HPV vaccination rates. A high-quality recommendation from a clinician is a powerful motivator of HPV vaccine acceptance, but many clinicians deliver the HPV vaccine recommendation hesitantly, late, or not at all.^v

The Solution

The HPV vaccine is cancer prevention. Boys and girls should complete the HPV vaccine series at age 11 or 12. The vaccine can be given starting as early as age 9. The HPV vaccine is more effective when given before age 13 to achieve the best immune response, and it provides long-lasting protection.^{vi}

HPV vaccination works. Infections with the HPV types that cause the most HPV cancers and genital warts have dropped 71% among teen girls since children first started getting the vaccine in 2006.^{vii} [Get more facts.²](#)

71% 

drop in HPV infections among teen girls since 2006

Make it your goal to identify and vaccinate every age-eligible child in your care. Every member of a practice plays a critical role in understanding and advocating for HPV vaccination as cancer prevention and should work together to reduce missed opportunities for vaccination.

The biggest predictor of HPV vaccination uptake is an effective recommendation from a clinician. Recent studies show that a patient who receives a provider recommendation is 4–5 times more likely to receive the HPV vaccine.^{viii} The pages that follow have actions you can take to begin increasing HPV vaccination within your practice **today**.





Actions At-A-Glance

Visit the action associated with each item below for detailed guidance.

Evidence-based interventions:

Presumptive recommendations	Action 1
Electronic health record alerts	Action 3
Provider prompts	Action 3
Reminder and recall systems	Action 3
Immunization information systems	Action 3, Action 5
Standing orders	Action 4

Other strategies you can use:

Answer parents' questions	Action 2
Engage the entire clinic team	Action 4
Know your vaccination rates and monitor your success	Action 5
Create a pro-immunization environment	Patient Education Tools

If you are reading a printed version of this guide, please see the Appendix for full links to hyperlinked words, as indicated by superscript numbers (e.g., Get more facts²).

ACTIONS YOU CAN TAKE TO INCREASE HPV VACCINATION

■ Action 1 Make a presumptive recommendation for cancer prevention

Your recommendation is powerful. Clinician recommendation is the number one reason parents choose to vaccinate their children.

- Studies show that **presumptive statements**³—which are brief statements that assume parents are ready to vaccinate—are more effective in improving HPV vaccination coverage than conversing with parents in an open-ended discussion.^{ix,x,xi}
- CDC encourages that you also use a **bundled approach**⁴ by recommending the HPV vaccine in the same way and on the same day that you recommend other adolescent vaccines. For example,
“Now that your son/daughter is 11, he/she is due for vaccinations to help protect against meningitis, HPV cancers, pertussis, and flu. We’ll give those shots during today’s visit.”
- Research shows that parents place just as much value on the HPV vaccine as on other adolescent vaccines. They give the HPV vaccine a value of 9+ out of 10—the same value they give to vaccines that protect against meningitis, hepatitis, pertussis, and influenza.^{xii}

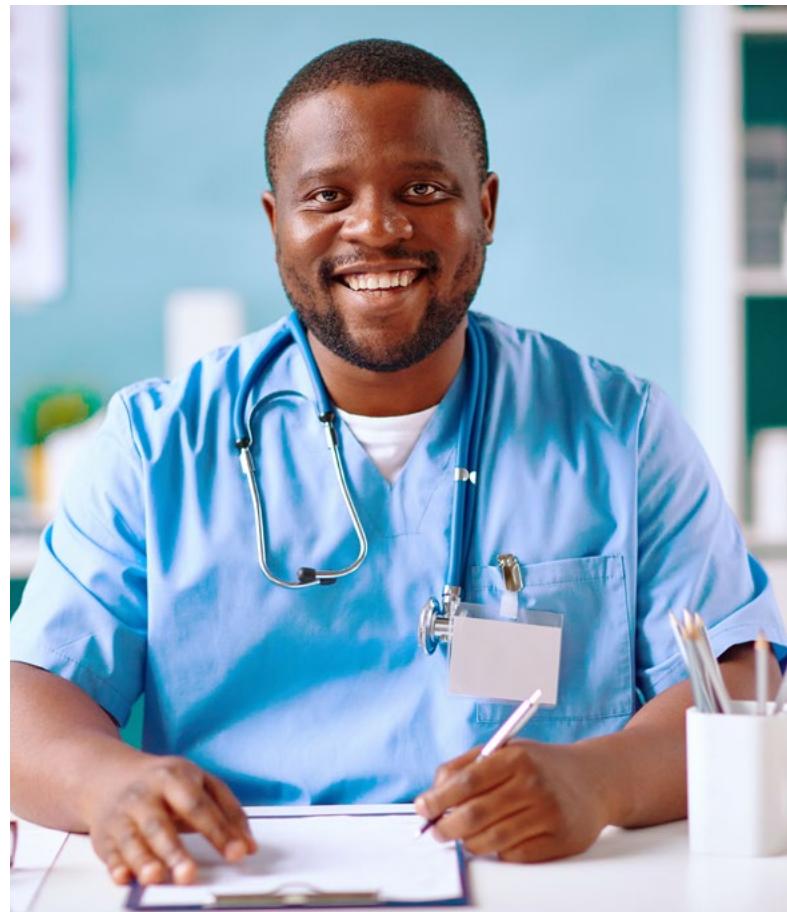
■ Action 2 Answer parents’ questions

Parents look to you when it comes to their child’s health. Answering parents’ questions effectively is an important step in building trust. After you make a presumptive recommendation, be prepared to answer parents’ questions. Inform your patients and their parents about the importance of getting the HPV vaccine and let them know that the **HPV vaccine is cancer prevention.**

- Emphasize that the vaccine is **safe, effective, and prevents cancer.**⁵
- Provide parents with **fact sheets**⁶ about the vaccine as needed.

- When counseling, be prepared to answer **frequently asked questions**⁷ from parents. For example:

- If parents question the **need** for the vaccine, you can say,
“The HPV vaccine is important because it prevents infections that can cause cancer. That’s why we need to start the shot series today.”
- If parents ask about the **safety** of the vaccine, you can say,
“HPV vaccination is very safe. Like any medication, vaccines can cause side effects, including pain, swelling, or redness where the shot was given. That’s normal for the HPV vaccine too and should go away in a day or two. Sometimes kids faint after they get shots and they could be injured if they fall from fainting. We’ll protect your child by having them stay seated after the shot.”



- Other techniques:
 - Emphasize that adolescents in the targeted age range of 11-12 years have the most robust immune response when vaccinated.
 - Establish an **opt-out policy**⁸ rather than opt-in to normalize HPV vaccination.
Use personal examples if possible, for example,
"I vaccinated my child at 11 to protect him/her against HPV cancers."
- Tips, scripts, and training resources for talking with parents about the HPV vaccine:
 - CDC: **#HowIRecommend** YouTube Series⁹
 - National HPV Vaccination Roundtable:
[Elearning module: Increasing Adolescent Immunization Coverage](#)^{10, 11}
 - AAP.org: [Disease- and Population-Specific Immunizations: Human Papillomavirus Vaccine \(HPV\)](#)¹²

■ Action 3 Minimize missed opportunities

One of the most important ways to increase vaccination in your practice is by **using every opportunity to provide vaccination** and keep patients up to date on all immunizations.

- When patients come in, check to see if they are due for vaccinations. In most cases, patients can get the HPV vaccine during routine well-child, sick-child, or chronic care visits. Have your team plan ahead by running reports for patients who are due or overdue.
- Provide an opportunity for vaccination-only visits or offer weekend clinic hours for vaccination.
- Promote a practice culture that is supportive of immunizations in order to protect every patient.
- Collaborate with your health information technology (IT) colleagues, office manager, and fellow clinicians to establish effective strategies, such as:
 - Create **provider prompts**.¹³
 - Establish electronic health record (EHR) alerts for all age-eligible patients and set reminders in your EHR system for the second dose. See examples [here](#)¹⁴ and [here](#).¹⁵
 - Link to your state's **immunization information system (IIS)**¹⁶ to **pull down/upload**¹⁷ current vaccination records.
 - Review patient **reminder and recall systems**¹⁸ and consider how to optimize via text messaging, mail, email, and/or phone calls.



For older patients who were not vaccinated on time (i.e., at ages 11-12), vaccination may be given up to age 26 for females and males. Consult the Immunization Action Coalition's [**Ask the Experts**](#)¹⁹ HPV forum for guidance.

■ Action 4 Take the team approach

Empower every member of your team to become an HPV vaccine champion. A team-based approach is crucial for making effective and lasting system changes.

- If your practice endorses **standing orders**,²⁰ make sure they are being used. In some cases, patients can receive the vaccination before you even enter the room.
- If standing orders are not in place, the non-physician members of your team can still make a difference. Arm colleagues with the right language to speak professionally and confidently about the vaccine, from the front desk to the exam room.
- Provide **in-service training**²¹ (see Chapter 3: Communicating With Parents About Vaccines) for the entire practice on HPV vaccination and establish consistent messaging to parents.
- Implement daily pre-clinic team meetings or **huddles**²² to improve flow and quality of care. Ensure that pre-visit planning or huddle discussions include a review of vaccination status. Be sure to assess vaccination status of drop-ins or walk-ins, too.
- Practice **motivational interviewing**²³ techniques to prepare for encounters with vaccine-hesitant patients or parents.

- Additional resources to help your team understand the vaccine:

- CDC: You Are the Key slides for clinician audiences
 - [Presentation²⁴](#)
 - CDC: **HPV Vaccine Information Statement**²⁵
- Inspire your team with stories of HPV cancer survivors:
- National HPV Vaccination Roundtable: [Survivor videos](#)²⁶
 - MD Anderson Cancer Center: [Blog post—From tonsil cancer survivor to HPV vaccine advocate](#)²⁷
 - Iowa Department of Health: [HPV Cancer Survivor Stories Video](#)²⁸

Find **companion guides**²⁹ tailored to office teams, dental providers, nurses and medical assistants, and large and small health systems in the National HPV Vaccination Roundtable's [Resource Library](#).³⁰



■ Action 5 Evaluate and sustain success

Establishing systematic ways to **regularly evaluate the success of your efforts** can help inform and maintain successful vaccination strategies.

- Implement quality improvement (QI) strategies for increasing immunization coverage rates:
 - ACS: [Steps for Increasing HPV Vaccination in Your Practice³¹](#)
 - AAP: [HPV Champion Toolkit: Making a Change in Your Office³²](#)
 - CDC: [Quality Improvement and Evidence Based Interventions³³](#)
 - Merck Vaccines: [Health Care Provider-Generated Ideas for Process Improvement³⁴](#)
 - HPV IQ: [Immunization Quality Improvement Tools³⁵](#)
 - NIPA: [Improving HPV Immunization Rates in Practice-Based Settings Virtual Toolkit³⁶](#)
- Know your rates of vaccination and how they compare against your practice's goals.
- Deputize team members to assist you with knowing your actual vaccination rates and learning more about why some patients are behind on their vaccines.
- **Measure the number of HPV doses ordered and administered³⁷** in comparison with other adolescent vaccines. Ideally, providers should be ordering and administering two doses of the HPV vaccine for every one dose of Tdap.
- Engage with your colleagues who are responsible for monitoring quality metrics to determine current practice rates in comparison with state and national rates.
- Conduct [Plan-Do-Study-Act³⁸](#) cycles.
- Utilize [IIS³⁹](#) to inform vaccination coverage assessments, missed vaccination opportunities, invalid dose administration, and vaccination coverage disparities. IIS can also facilitate inventory management and accountability.

If your practice implements changes and sees positive results in your HPV vaccination rates, let us know! Please send your story to HPV.Vaccination.Roundtable@cancer.org.



Resource Citations:

- i <https://www.cdc.gov/cancer/hpv/statistics/cases.htm>
- ii Ibid.
- iii Ibid.
- iv <https://www.cdc.gov/cancer/cervical/statistics/index.htm>
- v <http://pediatrics.aappublications.org/content/early/2016/12/01/peds.2016-1764.full>
- vi <http://pediatrics.aappublications.org/content/140/6/e20163947>
- vii <https://www.cdc.gov/mmwr/volumes/66/wr/mm6633a2.htm>
- viii http://www.immunize.org/letter/recommend_hpv_vaccination.pdf
- ix <http://pediatrics.aappublications.org/content/early/2016/12/01/peds.2016-1764.full>
- x <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3838535/>
- xii [http://www.jahonline.org/article/S1054-139X\(17\)30072-1/pdf](http://www.jahonline.org/article/S1054-139X(17)30072-1/pdf)

xii Adapted from Healy et al. Vaccine. 2014; 32:579-584.

Work with your office team to create a pro-immunization environment by displaying and disseminating posters, brochures, flyers, and handouts. Disseminate pro-immunization messaging via your online channels, including patient portals, office website, and social media outlets.

Materials you can use:

- Fact sheet: Diseases and the Vaccines that Prevent Them: HPV⁴⁰
- Flyers and posters: CDC's Flyers and Posters for Preteens and Teens⁴¹



- Industry handout: 4 Things a Parent Needs to Know About Human Papillomavirus (HPV)⁴²
- Sample flyer: HPV Vaccine: Cancer Prevention for Boys and Girls⁴³
- Social media messages: HPV Vaccine Myth Busting for Health Care Providers Social Media Toolkit⁴⁴

Follow the National HPV Vaccination Roundtable:



<https://twitter.com/HPVRoundtable>
<https://www.facebook.com/groups/HPVCancerFreeFamily>

Are you also the HPV vaccination practice lead?

Check out the [companion guides⁴⁵](#) for small private practices and large health systems for actions on topics like evaluation, ordering, and implementing effective QI strategies in your clinic.

National HPV Vaccination Roundtable Resources:

- Elearning module: [Increasing Adolescent Immunization Coverage^{46, 47}](#)
- HPV survivor videos⁴⁸
- Middle School Health Parent Toolkit⁴⁹
- HPV Resource Library⁵⁰
- Short video: [Protecting Your Patients from HPV-Associated Cancer: What Providers Need to Know about Oropharyngeal Cancer⁵¹](#)
- [Evidence Summary on Clinical Communications⁵⁸](#)
- [Evidence Summary on Improving Clinical Systems⁵⁹](#)

HPV Roundtable Member Resources:

- ACS: [Just the Facts⁵²](#)
- ACS: [Steps for Increasing HPV Vaccination in Your Practice⁵³](#)
- AAFP: [Immunizations website⁵⁴](#)
- AAP: [HPV Champion Toolkit⁵⁵](#)
- ACOG: [HPV Vaccination Toolkit⁵⁶](#)
- CDC: [Clinician Fact Sheets and Guidance⁵⁷](#)
- NCI: [NCI-designated Cancer Centers Urge HPV Vaccination for the Prevention of Cancer: Consensus Statement⁵⁸](#)

APPENDIX: MDs, NPs, & PAs

1. Suite of guides: <http://hpvroundtable.org/task-groups/action-guides/>
2. Get more facts: <https://www.cancer.org/content/dam/cancer-org/online-documents/en/pdf/flyers/hpv-vacs-just-the-facts-for-providers.pdf>
3. Presumptive statements: <http://pediatrics.aappublications.org/content/early/2016/12/01/peds.2016-1764.full>
4. Bundled approach: <https://www.aafp.org/patient-care/public-health/immunizations/disease-population/hpv.html>
5. Safe, effective, and prevents cancer: <http://pediatrics.aappublications.org/content/early/2017/02/02/peds.2016-4187#xref-ref-14-1>
6. Fact sheets: <https://www.cdc.gov/hpv/hcp/provide-parents.html>
7. Frequently asked questions: https://www.cdc.gov/hpv/hcp_for-hcp-tipsheet-hpv.html
8. Opt-out policy: <http://www.immunize.org/catg.d/p4059.pdf>
9. #HowIRecommend YouTube Series: https://www.youtube.com/results?search_query=%23howirecommend
10. As of 2019, this CME is no longer available. Please see <http://hpvroundtable.org/resource-library/#filter=cme> for CME options.
11. Non-credit version: <https://www.youtube.com/watch?v=pS-SZa3LY9k&feature=youtu.be#01>
12. Disease- and Population-Specific Immunizations: Human Papillomavirus Vaccine (HPV): [AAFP.org](#); Disease- and Population-Specific Immunizations: Human Papillomavirus Vaccine (HPV)
13. Provider prompts: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4762366/>
14. Here: <http://hpvroundtable.org/wp-content/uploads/2017/11/ACS-HPV-NextGen-user-guide.pdf>
15. Here: <https://www.merckvaccines.com/Professional-Resources/EHRRelatedTools>
16. Immunization information system (IIS): <https://www.cdc.gov/vaccines/programs/iis/contacts-locate-records.html>
17. Pull down/upload: https://www.aap.org/en-us/Documents/healthInitiatives_hpvtoolkit_cleaning_iis_data_2015.pdf
18. Reminder and recall systems: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/Practice-Management/Pages/reminder-recall-systems.aspx>
19. Ask the Experts: http://www.immunize.org/askexperts/experts_hpv.asp
20. Standing orders: <http://www.immunize.org/catg.d/p3067.pdf>
21. In-service training: https://www.aap.org/en-us/Documents/immunizations_training_guide.pdf
22. Huddles: https://www.aap.org/en-us/Documents/hpvtoolkit_teamhuddle_hpv_2015_may.pdf
23. Motivational interviewing: <http://www.unity4teenvax.org/unity-projects/>
24. Presentations: <https://www.cdc.gov/vaccines/ed/hpv/index.html>
25. HPV Vaccine Information Statement: <https://www.cdc.gov/vaccines/hcp/vis/vis-statements/hpv.html>
26. Survivor videos: https://www.youtube.com/play-list?list=PLRuOuHzo7TdJzR83_C2ACChJlcFw-AbTc
27. Blog post--From tonsil cancer survivor to HPV vaccine advocate: <https://www.mdanderson.org/publications/cancerwise/2017/04/from-tonsil-cancer-survivor-to-hpv-vaccine-advocate.html>
28. HPV Cancer Survivor Stories Video: <https://www.youtube.com/watch?v=lwUPu4vS8O&feature=youtu.be>
29. Companion guides: <http://hpvroundtable.org/task-groups/action-guides/>
30. Resource Library: <http://hpvroundtable.org/resource-library/>
31. Steps for Increasing HPV Vaccination in Your Practice: <https://www.cancer.org/content/dam/cancer-org/online-documents/en/pdf/flyers/steps-for-increasing-hpv-vaccination-in-practice.pdf>
32. HPV Champion Toolkit: Making a Change in Your Office: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/HPV-Champion-Toolkit/Pages/Making-a-Change-in-Your-Office.aspx>
33. Quality Improvement and Evidence Based Interventions: <https://www.cdc.gov/hpv/partners/outreach-hcp/quality-improvement.html>
34. Health Care Provider-Generated Ideas for Process Improvement: <https://www.merckvaccines.com/Professional-Resources/HCPGeneratedIdeas>
35. Immunization Quality Improvement Tools: <https://www.hpviq.org/>
36. NIPA: Improving HPV Immunization Rates in Practice-Based Settings Virtual Toolkit. <http://www.academicpeds.org/nipa/index.cfm?page=quality-improvement>
37. Measure the number of HPV doses ordered and administered: https://www.aap.org/en-us/Documents/hpvtoolkit_strongrecommendation_hpv_psda_2015_may.pdf
38. Plan-Do-Study-Act: <http://www.ihi.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx>
39. IIS: <https://www.cdc.gov/hpv/partners/outreach-hcp/iis.html>
40. Diseases and the Vaccines that Prevent Them: HPV: https://www.cdc.gov/vaccines/parents/diseases/hpv.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fvaccines%2Fparents%2Fdiseases%2Fteen%2Fhpv.html
41. CDC's Flyers and Posters for Preteens and Teens: <https://www.cdc.gov/vaccines/partners/teens/posters.html>
42. 4 Things a Parent Needs to Know About Human Papilloma-

- virus (HPV): https://www.hpv.com/static/pdf/MKHPV_FACT_SHEET.pdf
43. HPV Vaccine: Cancer Prevention for Boys and Girls: <https://www.mdanderson.org/content/dam/mdanderson/documents/about-md-anderson/Community%20Services/HP-Vaccine.pdf>
44. HPV Vaccine Myth Busting for Health Care Providers Social Media Toolkit: <https://smhs.gwu.edu/cancercontroltap/sites/cancercontroltap/files/HPV%20Vaccine%20Social%20Media%20Toolkit%20FINAL.pdf>
45. Companion guides: <http://hpvroundtable.org/task-groups/action-guides/>
46. As of 2019, this CME is no longer available. Please see <http://hpvroundtable.org/resource-library/#filter=cme> for CME options.
47. Non-credit version: <https://www.youtube.com/watch?v=pS-SZa3LY9k&feature=youtu.be#01>
48. HPV survivor videos: https://www.youtube.com/playlist?list=PLRuOuHzo7TdJzR83_C2ACChJlcFw-AbTc
49. Middle School Health Parent Toolkit: <https://www.nasn.org/nasn/programs/educational-initiatives/middle-school-health/middle-school-health-parents>
50. HPV Resource Library: <http://hpvroundtable.org/resource-library/>
51. Protecting Your Patients from HPV-Associated Cancer: What Providers Need to Know about Oropharyngeal Cancer: https://www.youtube.com/watch?v=qnwb2-y_yPU&list=PLRuOuHzo7TdKdq1TstwyNbSnOKMI8L4--&index=13
52. Just the Facts: <https://www.cancer.org/content/dam/cancer-org/online-documents/en/pdf/flyers/hpv-vacs-just-the-facts-for-providers.pdf>
53. Steps for Increasing HPV Vaccination in Your Practice: <https://www.cancer.org/content/dam/cancer-org/online-documents/en/pdf/flyers/steps-for-increasing-hpv-vaccination-in-practice.pdf>
54. Immunizations website: <http://www.aafp.org/patient-care/public-health/immunizations.html>
55. HPV Champion Toolkit: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/immunizations/HPV-Champion-Toolkit/Pages/HPV-Champion-Toolkit.aspx>
56. HPV Vaccination Toolkit: <http://immunizationforwomen.org/toolkit/hpv>
57. Clinician Fact Sheets and Guidance: <https://www.cdc.gov/hpv/hcp/clinician-factsheet.html>
58. NCI-designated Cancer Centers Urge HPV Vaccination for the Prevention of Cancer: Consensus Statement: https://healthcaredelivery.cancer.gov/hpvuptake/nci_hpv_consensus_statement_012716.pdf