

HPV Vaccination: Improving Health Systems to Boost HPV Vaccination

What's known

Health systems manage networks of hospitals and clinics, and thus can influence the provision of care for large numbers of patients.

In pediatrics and family medicine, health systems increasingly dominate the market, making them important partners in efforts to increase the uptake of HPV vaccination. To date, research findings suggest that systems-level interventions can help HPV vaccination uptake, with effects dependent on implementation. Several methods have been researched:

- **Reminder/recall interventions** use text, email, phone, or mail to let parents or guardians know their child is due for HPV vaccination. Almost all evaluations find that reminder/recall interventions increase HPV vaccination rates.¹⁻⁶ For example, a systematic review and meta-analysis of 34 studies found that client reminders increased odds of HPV vaccination uptake by 41% (OR, 1.41; $P < .001$).¹ These interventions should be strategically implemented to maximize their cost-benefit ratio.⁵
- **Provider prompts**, such as alerts in electronic health records, remind providers to recommend HPV vaccination during a patient visit.^{1,5,7} Provider prompts have been shown to increase HPV vaccination rates. For example, one systematic review reported that provider reminders increased odds of HPV vaccination uptake by 39% (OR, 1.39; $P = .005$). Prompts that include recommended language to promote HPV vaccination are the most effective.⁷
- **Educational interventions** either provide education on HPV vaccination to providers or patients and can be effective in helping to increase HPV vaccination uptake.⁸ A study that implemented a multi-faceted approach to HPV vaccination education that included providing tailored educational materials to patients, a decision aid, and provider-focused communication training resulted in a 9.5 percentage point increase in HPV vaccine series initiation in intervention clinics compared to control clinics.⁸
- **Assessment and feedback interventions** give providers data on their immunization rates to help them identify missed opportunities and develop strategies to meet vaccination coverage goals.^{9,10}
- **Multi-level interventions** may be especially effective particularly when they combine clinical system interventions with provider communication training.¹¹
- **Standing orders** allow properly trained medical staff, including nurses, pharmacists, or other health care providers to administer vaccines. This can help facilitate efficient HPV vaccine administration to patients and reduce workload demands on physicians.¹²
- **Immunization information systems (IIS)** are private digital databases that capture all vaccinations administered in a specified geographical area. Clinics that choose to participate in an IIS can access consolidated immunization records and receive program support to help focus and improve vaccination efforts through timely delivery of immunizations to eligible patients. When implemented effectively with quality data, IIS can even help remind families about when an immunization is due or missed.¹³

What's new

Recent studies have focused on increasing the reach and impact of systems interventions.

Results have shown the following:

- Results of a study showed that higher rates of on-time HPV vaccination series completion was observed when initiated at age 9 or 10 years than when bundled with Tdap vaccination recommendations (starting at age 11 or 12 years).¹⁴
- Posters displaying immunization schedules have been reported as important resources for clinics. Placing posters in clinics that strongly recommend starting HPV vaccination at age 9 may help increase HPV vaccination initiation rates.¹⁵
- Quality improvement leaders in health care systems can be useful partners in addressing barriers and streamlining approaches to HPV vaccine delivery.¹⁶
- Engaging clinical champions within systems is a promising approach for maximizing provider participation in HPV vaccination improvement efforts.¹⁷

What's next

Achieving system-level intervention success may be improved with approaches aimed at educating providers at all levels. Some methods that may be helpful include:

- Provider-targeted empowerment approaches aimed at improving knowledge and communication skills of health care teams can help improve HPV vaccination uptake.¹⁸
- Systems should have access to reliable resources, such as educational materials for staff and patients.
- It can be useful to examine and refine policies and procedures to include HPV vaccination as part of a bundled recommendation or to institute a daily review of patients with incomplete vaccinations.

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The American Cancer Society National HPV Vaccination Roundtable convenes, communicates with, and catalyzes member organizations to increase HPV vaccination rates and prevent HPV cancers.

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