Influenza results in up to 710,000 hospitalizations and up to 56,000 deaths per year in the United States. \(^1\) Although the effectiveness of flu vaccines varies, vaccination is still the best way to reduce flu-related illnesses and deaths. In addition to protecting individuals, a high vaccination rate within a population also offers “herd immunity,” which reduces the chance of a flu outbreak and helps protect the most vulnerable, such as infants and others unable to receive the vaccine. Since 2010, the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC) has recommended flu vaccination for patients six months and older who do not have contraindications. \(^1\) Because of the impact on quality and cost, Medicare and other payers are increasingly incorporating flu vaccination rates as an individual quality measure in value-based payment models. So improvements can affect not only your patients’ health but also your bottom line.

Unfortunately, the flu vaccine rate remains low. Only 59.3 percent of children and 41.7 percent of adults received an influenza vaccination during the 2015 – 2016 flu season. \(^2\)
Our family medicine practice has 48 faculty members and providers in downtown Philadelphia serving 35,000 patients through more than 80,000 visits per year. More than half of our patients are racial or ethnic minorities, and many of our patients come from underserved communities. To meet the needs of such a large and diverse patient population, our practice leaders must navigate many competing quality priorities.

After becoming part of the Delaware Valley Accountable Care Organization (ACO) in 2015, we were charged with improving our flu vaccination rate of 66 percent, which was below our goal. We considered several system- and provider-level strategies and were able to improve our 2016 – 2017 flu vaccination rate to 82 percent using five key tactics. (See “Key tactics for improving flu vaccination rates.”)

1. **Find a champion**

Identify a physician or other health professional in your office to lead the flu vaccination campaign. The champion should be both familiar with current vaccination guidelines and enthusiastic about improving flu vaccine rates. He or she should communicate regularly with office providers and staff to share current vaccination information and bolster enthusiasm and commitment to flu vaccination. In some offices, a champion also recruits an immunization coordinator from among the providers or staff to oversee logistics of vaccine purchasing, storage, administration to patients, and billing.³

In our practice, we benefited from having multiple champions from our practice quality team, including our medical director, assistant medical director, and several embedded team nurses. The leaders of our institution and ACO supported our efforts in a number of ways, including our implementation of standing orders.

2. **Use standing orders**

Because physicians must accomplish many tasks in an office visit, consider using protocols to empower other team members to assess immunization status and administer vaccinations without an examination or a direct order from the physician. The Community Preventive Services Task Force and the ACIP recommend the use of standing orders based on strong evidence of their effectiveness.⁴⁵

The American Academy of Family Physicians recently supported *Take a Stand: Use Standing Orders to Improve Adult Immunization Rates*, a campaign led by the Immunization Action Coalition (IAC) to promote the use of vaccination standing orders.⁴ The IAC website contains many resources to help practices get started, including standing order requirements and templates to aid in the development of a comprehensive protocol. (See “Elements of a standing order for vaccines,” page 32.) Since state laws vary, consult your state immunization program or licensing boards to determine who can sign a standing order in your state and which health professionals are permitted to administer vaccinations.⁵ You should also obtain necessary legal approvals from your organization. It will also be necessary to thoroughly train clinicians and staff on the standing order protocol. The training should also emphasize the importance of providing CDC Vaccine Information Statements (see https://www.cdc.gov/vaccines/hcp/vis/index.html), properly documenting the vaccine lot number, and entering other key information in the medical record.

Our compliance officers approved the use of standing orders so that medical assistants could administer flu vaccines. As part of the patient visit, the medical assistant informs the patient that “The doctor would like you to have the flu shot” and administers the shot unless the patient refuses. Using encouraging, opt-out language — rather than asking if the patient would like the flu shot — increases the likelihood that a patient will accept

---

**About the Authors**

Amy Cunningham is a postdoctoral research fellow in the Department of Family and Community Medicine at the Sidney Kimmel Medical College of Thomas Jefferson University in Philadelphia. Dr. Stoeckle is a clinical instructor and population health fellow in the Department of Family and Community Medicine. Dr. Diaz is an assistant professor in the Department of Family and Community Medicine and assistant medical director and quality improvement director for Jefferson Family Medicine Associates in Philadelphia. Dr. Valko is a professor in the Department of Family and Community Medicine and medical director of Jefferson Family Medicine Associates. Dr. Arenson is an alumni professor and chairwoman of the Department of Family and Community Medicine. Author disclosures: no relevant financial affiliations disclosed.
To increase flu vaccination rates, practices need to identify key health professionals who will lead the effort.

Standing orders allow nonphysicians to assess immunization status and administer vaccinations, which frees physicians for higher level work.

the vaccine. Some may argue that an opt-out policy reduces patient autonomy, but we feel the greater good that results from vaccination, such as herd immunity, makes this the right approach. The fact that the medical assistant delivers the message rather than the physician reduces the power differential somewhat, and we do still find that patients are comfortable refusing the vaccine.

3. **Optimize your documentation**

Providers and support staff may need some brief training about how to appropriately document their flu vaccine discussions with patients. For instance, if a patient reports having received the vaccine elsewhere, that information needs to be captured in the chart. For the influenza vaccination measure contained in Medicare’s new Quality Payment Program, providers can report a performance exclusion if the patient already received the shot, has a relevant allergy, declined the shot, or could not receive the shot due to a health system reason such as a vaccine shortage.

Enhanced documentation will improve your performance on flu vaccination quality measures. Furthermore, documenting vaccines received elsewhere and patient refusal helps ensure that you are targeting your vaccination efforts to the appropriate patients. Of course, documenting patient refusal should only be done after a careful provider-patient conversation, because patients may change their mind regarding vaccination. (For more on this topic, see “How to Talk to Reluctant Patients About the Flu Shot,” *FPM*, Sept/Oct 2017, [http://www.aafp.org/fpm/2017/0900/p6.html](http://www.aafp.org/fpm/2017/0900/p6.html).)

4. **Provide regular reminders**

Reminding providers regularly about the flu vaccine – including guidelines, availability, tips for patient discussions, and procedures for documentation and billing – can also improve vaccination rates. Our office issued practice-wide email reminders and made vaccination-related announcements at physician and staff meetings.

Point-of-care reminders can also boost vaccine administration. Some electronic health records (EHRs) can be programmed to issue a best practice alert notifying the provider if the patient being seen has received the flu vaccine that season and, if not, the reason it was not received. These alerts can substantially increase documented flu vaccine discussions and vaccination rates.

If your practice cannot implement EHR alerts, other reminder methods can be effective. One practice created a brightly colored flu vaccine form that clinic staff attached to the front of each patient’s chart. The form encouraged providers to discuss flu vaccination with patients and record if the patient received the vaccine at the visit or the reason why not. From this simple intervention alone, the practice’s flu vaccination rate increased by 12 percent.

Reminders regarding flu vaccination can also be sent to patients through EHR portal messages, emails, phone calls, or postcards. Text message reminders are an increasingly popular method of distributing flu vaccine reminders because they reach a large population quickly and inexpensively.

5. **Give ongoing feedback**

Regularly evaluating the practice’s performance and providing feedback is a proven path to improvement. In our practice, we receive weekly and monthly updates of practice-level vaccination rates from our institutional leaders and ACO. The feedback is given on a practice-level report card that displays vaccination rates from other primary

---

**ELEMENTS OF A STANDING ORDER FOR VACCINES**

- Which populations should receive the vaccine.
- Who should not receive the vaccine based on indications, contraindications, or precautions.
- How to administer the vaccine (including vaccine name, dosage, and route of administration).
- What information is required by federal law (e.g., the Vaccine Information Statement).
- How to document the vaccination in the medical record.
- What medical emergencies may occur during vaccine administration and how to manage them.
- How to report adverse events that occur after vaccine administration.

From this simple intervention alone, the practice’s flu vaccination rate increased by 12 percent.

care institutions in our network and highlights whether each practice is above, at, or below goal.
Our practice also established a database of provider-level vaccination rates, which allows our quality leaders to provide feedback and coaching to providers with low rates. High performers should also receive positive, reinforcing feedback and be recognized by practice leadership. You can also consider displaying team- or provider-level rates in a common area, which can generate healthy competition. In one randomized trial, physicians had their individual vaccination rates displayed on a poster in the practice; 66 percent of these physicians’ patients received the flu vaccine, compared with 50 percent in the control group.9

Getting results
As stated earlier, our practice saw a significant increase in vaccination rates after implementing these strategies. It is difficult to tie this increase to improved patient outcomes because we do not have practice data regarding flu cases or admissions, and these numbers will change from year to year depending on how well the vaccine matches the current flu strain. But it stands to reason that such efforts have a major impact on the health of our patients, families, and communities.

It should be noted that these strategies do not typically require major investments of time or resources. Our practice did not have any direct costs for its vaccination efforts beyond the time used to promote vaccination, provide training, and incorporate it into the medical assistants’ workflow. We calculated our vaccination rates from our EHR as part of our organization’s ongoing quality and billing reporting efforts. Practices that do not already receive these types of reports may need to hire a consultant or allocate staff time to develop them.

Payers do reimburse for vaccinations, often above overhead costs, which can aid profitability, so be sure to code correctly and completely, including an immunization administration code as well as a code for the vaccine. (Two items in this issue’s Coding & Documentation department provide pertinent advice; see page 34.)

Ultimately, juggling flu vaccination with competing practice priorities is challenging, but a number of effective strategies exist that will lead to a healthier future for your patients.


Send comments to fpmedit@aafp.org, or add your comments to the article at http://www.aafp.org/fpm/2017/1100/p30.html.