



VACCINE ADMINISTRATION:

Making the Process More Efficient in Your Practice

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Appointing a vaccine champion and understanding the documentation rules are key steps toward improving your immunization process.

Vaccines are one of the great accomplishments of medicine and among the most cost-effective preventive services we can offer our patients. As new vaccines and combinations of vaccines are released, we have the opportunity to provide a wider range of immunizations, not only for our youngest patients but also for adolescents and adults (e.g., human papilloma virus, pertussis, meningococcus and herpes zoster vaccines). While patients can receive vaccinations from a variety of sources, offering them within the “medical home” leads to increased immunization rates.¹ This was the impetus for the 1994 federal Vaccines for Children program (VFC), which provides free vaccines to immunize children without health insurance, Medicaid recipients (usually up to age 18), American Indians and Native Alaskans in their doctors’ offices. This has decreased referrals to public health departments, increased continuity of care and increased immunization rates for children.

This article will explain how you can optimize the provision of immunizations in your practice.

Finding a champion

One of the keys to having an efficient immunization program in your office is to appoint a vaccine champion or ask for a volunteer. This individual can be a physician, midlevel provider or nurse who will help generate support and cooperation from co-workers. The vaccine champion should keep abreast of new vaccine recommendations using resources such as the Advisory Committee on Immunization Practices (<http://www.cdc.gov/nip/ACIP/default.htm>) and the American Academy of Pediatrics’ Red Book (<http://aapredbook.aappublications.org>).

Another responsibility of the vaccine champion is to recruit and train an immunization coordinator. The immunization coordinator can be a nurse or other staff member who has a desire to motivate others and the skills

to organize the immunization process. (In a small practice, the vaccine champion and immunization coordinator can be the physician and nurse, respectively.) The immunization coordinator decides where vaccines should be administered in the office and how the workflow will proceed. This person will also be responsible for receiving and storing vaccine shipments and maintaining the office’s inventory of vaccines, syringes and other supplies. Additionally, the immunization coordinator can train other staff members to help administer vaccines (intramuscularly and subcutaneously) and document vaccines properly, and he or she can monitor their performance in these areas. Helpful references for the immunization coordinator include materials from vaccine manufacturers, the VFC program (<http://www.cdc.gov/nip/vfc/>) and organizations such as the Immunization

Action Coalition (<http://www.immunize.org>) and the Group on Immunization Education of the Society of Teachers of Family Medicine (<http://www.immunizationed.org>).

Purchasing vaccines

The cost of purchasing and maintaining a vaccine inventory can consume a significant portion of your overhead, especially as more expensive vaccines are introduced. However, some Web sites, such as <http://www.vaccineshoppe.com>, offer less expensive options. Buyers’ cooperatives are also good options, as they allow small practices to band together to obtain group purchasing discounts. Some of the buyers’ cooperatives are part of practice management organizations (e.g., Kelson Pediatric Partners’ Vaccine Purchasing Program; <http://www.kelsoncorp.com/vaccine.html>) and others are not-for-profit cooperatives led by physicians (e.g., Children’s Practicing Pediatricians; <http://www.cpp-docs.org>). Although many buyers’ cooperatives were started by pediatricians, they are open to physicians of all specialties.

Another option for obtaining vaccines is to become a VFC provider. As a VFC provider, you can receive free vaccines for qualified individuals up to 18 years of age, and over 18 in some states. (For information on becoming a VFC provider, contact your state coordinator listed at http://www.cdc.gov/nip/vfc/contacts_vfc_coord.htm.)

One drawback to participating in the VFC program is that, once new vaccines receive governmental approval, it often takes several months before they are distributed to local VFC programs. Therefore, their availability lags

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About the Author

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■ An efficient vaccination process begins with appointing a vaccine champion and an immunization coordinator.

■ Because acquiring vaccines can be costly, consider joining a buyers' cooperative or participating in the Vaccines for Children program.

behind that of vaccines ordered through commercial sources. Making a callback list of VFC-eligible patients who did not get a vaccine at the time of their visit can help prevent a long-term gap in their vaccine coverage. When the vaccines arrive, you can simply call these patients to come in and get immunized.

Obtaining vaccines that are in high demand and short supply, such as the influenza vaccine, requires extra vigilance on the part of the immunization coordinator. Learning who the potential suppliers are and their start dates and deadlines for accepting orders for the coming season will give you the best shot at getting the quantity you need within a reasonable time frame. (For an AAFP-com-piled list of influenza vaccine suppliers, visit <http://www.aafp.org/online/en/home/clinical/immunizationres/ordering.html>.) The best strategy is to order your flu vaccine supply for the fall early, say, in March or April. Joining a buying cooperative can also help increase the likelihood that your practice will receive its share of high-demand vaccines.

STORING VACCINES PROPERLY

Vaccines must be kept at their proper storage temperature at all times to maintain their effectiveness. Some vaccines require refrigeration, while others must be frozen. Promptly transfer the vaccines to their proper storage place immediately after receiving them, and follow these tips:

- Designate a refrigerator with a separate freezer compartment with its own outer door for vaccine storage.
- Do not keep any food in this refrigerator.
- Avoid small, dormitory-style refrigerators with freezer compartments. They are not reliable for storing vaccines that need to be frozen.
- If you have to transport vaccines, use an insulated container with a cold source and a thermometer.
- Monitor the temperatures in the freezer and refrigerator, and record these twice daily in a temperature log (see an example at <http://www.immunize.org/catg.d/p3039.pdf>).
- In the event of a power failure or a faulty refrigerator or freezer, mark the affected vaccines, record their current temperature and the estimated time out of storage temperature range, and move them to a working refrigerator as soon as possible. Contact the vaccine manufacturer for instructions on how to proceed, including whether you should discard the vaccines.

Vaccination opportunities

To remind patients that they are due for an immunization, you can use a variety of communication outlets. Electronic systems can generate reminder letters and phone calls to patients, but a simple postcard that the patient or parent completes at a previous visit for you to file and mail later can work as well. Reminders by mail or telephone are equally effective.²

To avoid missed opportunities to vaccinate, develop a culture where every visit – from a sports injury visit to a visit for minor respiratory illness – is seen as an opportunity to assess immunization status. This means empowering your office staff to evaluate vaccination history, eligibility and contraindications through standing orders (see examples at <http://www.immunize.org/standingorders/>).

Those on your staff who are involved with providing vaccinations should be familiar with current childhood, adolescent and adult vaccine and catch-up schedules, available at <http://www.cdc.gov/nip/menus/vaccines.htm#Schedules>. A helpful resource for your PDA is Shots 2007, developed by family physician Kent Willyard, MD. Shots 2007 is available for Palm OS and Pocket PC, and is updated by the Group on Immunization Education of the Society of Teachers of Family Medicine (<http://www.immunized.org>). These resources will tell you which patients need which vaccines and when. More information on local and statewide efforts to promote the delivery of vaccines is available at the Teaching Immunization Delivery and Evaluation Web site at <http://www.musc.edu/tide> and Ohio's Maximizing Office Based Immunization Web site at <http://www.ohioaap.org/MOBI.htm>.

Some patients might be wary of vaccinations and armed with misinformation that you will need to correct. Physician recommendation is the most important influence on patients' willingness to be vaccinated, so share the benefits with enthusiasm, stressing that vaccines prevent diseases and that there are serious risks to not vaccinating. At the same time, it is important to inform them of the possibility of minor or serious side effects from the vaccine. Review their previous vaccinations and their history for any true contraindications and precautions. Additionally, if patients are concerned about costs, tell them about the availability of free vaccines or third-party coverage for eligible patients.

IMMUNIZATION RESOURCES FOR PHYSICIANS

Advisory Committee on Immunization Practices	http://www.cdc.gov/nip/ACIP/default.htm
American Academy of Family Physicians	http://www.aafp.org/online/en/home/clinical/immunizationres.html
American Academy of Pediatrics' Red Book Online	http://aapredbook.aappublications.org
Centers for Disease Control and Prevention	http://www.cdc.gov
Group on Immunization Education of the Society of Teachers of Family Medicine	http://www.immunized.org
Immunization Action Coalition	http://www.immunize.org
National Immunization Program's vaccine information statements	http://www.cdc.gov/nip/publications/vis
National Immunization Program's vaccination schedule	http://www.cdc.gov/nip/menus/vaccines.htm#Schedules
Vaccine Adverse Event Reporting System	http://www.vaers.hhs.gov
Vaccines for Children	http://www.cdc.gov/nip/vfc

Be prepared for the rare serious reaction to immunizations. Have an oxygen supply and epinephrine by injection available. The Vaccine Adverse Event Reporting System (VAERS) serves as a national database of reported adverse events following immunization and helps the CDC and FDA to uncover patterns. You can report incidents to 800-822-7967 or at the VAERS Web site, <http://www.vaers.hhs.gov>.

Documentation details

Federal requirements mandate that you document five things when you administer a vaccine:

1. The name of the vaccine and the manufacturer;
2. The lot number and expiration date of the vaccine;
3. The date of administration;
4. The name, address, title and signature (electronic is acceptable) of the person administering the vaccine;
5. The edition date of the Vaccine Information Statement (VIS) and date the patient or parent receives the VIS.

The VIS is a CDC-approved description of the vaccine, its benefits and adverse effects, and it includes information about the disease the vaccine protects against. This is written at a level most patients can understand, and it is available in languages other than English.

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Current statements are available at <http://www.cdc.gov/nip/publications/vis/> and at <http://www.immunize.org/>.

It is not necessary to have the VIS signed by the patient or parent; simply provide a copy of the VIS for each vaccine received. It's possible that a VIS may not yet be available for a newly released vaccine. The list of available statements is updated periodically, so the immunization coordinator should check for updates every few months.

Your practice must document the five required components in a permanent record or log. In our practice, the federally required information is documented in our electronic health record via an immunization

template. We can then print the information in a format that serves as the official vaccination record. Without any additional copying or handwriting, we can give patients or parents the information they need to meet day care, school or job requirements for vaccination.

Another option is to use wallet-size cards for patients to carry their own immunization records. You can order immunization cards through the Immunization Action Coalition (<http://www.immunize.org>; 651-647-9009).

In addition, if your state has an immunization registry, be sure you enter your patients' vaccination information to prevent unnecessary

■ For a better chance of receiving your influenza vaccine supply on time, order the vaccines in March or April.

■ Encourage your staff to view every patient visit as an opportunity to provide appropriate immunizations.

■ Providing your patients with a Vaccine Information Statement is a federal requirement.

BASIC IMMUNIZATION ADMINISTRATION CODES

Code	When to report
90471	Immunization administration (includes percutaneous, intradermal, subcutaneous, or intramuscular injections); one vaccine (single or combination vaccine/toxoid). Do not report in conjunction with 90473.
90472	Each additional injection. List separately in addition to the code for primary procedure. Use in conjunction with 90471 or 90473, depending on whether the primary vaccine was an injection or intranasal/oral.
90473	Immunization administration by intranasal or oral route; one vaccine. Do not report in conjunction with 90471.
90474	Each additional intranasal or oral vaccine. Use in conjunction with 90471 or 90473, depending on whether the primary vaccine was an injection or intranasal/oral.

Record your patients' vaccination information in your state's immunization registry.

Advocate for adequate immunization reimbursement from payers.

When coding vaccinations, report a CPT code for the vaccine itself and a CPT code for the administration, and link both to the appropriate ICD-9 code.

vaccination duplication. The value of an effective immunization registry was recently demonstrated when physicians were able to access the computerized immunization records for Louisiana families displaced by Hurricane Katrina.

Coding, billing and reimbursement

It has been found that there is a positive relationship between reimbursement rates for immunizations and immunization rates.³ Yet the high cost of vaccines and inadequate reimbursement can limit the ability of some practices to offer them. The HPV vaccine, for example, runs \$120 per dose of vaccine, with three doses required over six months. It is important to track your expenses and reimbursements to determine whether offering immunizations is viable for your practice.

Physicians and their membership organizations should continue to encourage payers to increase reimbursement for vaccines and their administration and eliminate the financial barriers that dissuade us from offering these services within the "medical home." The American Academy of Pediatrics and the AMA addressed these concerns earlier this month during an immunization congress sponsored by the two organizations. At least one payer is responding to advocacy efforts: As of Jan. 15, CIGNA increased its national reimbursement fee schedule for vaccines.

While physicians cannot control payer

fee schedules, we can be sure that our coding and billing practices garner the payment we've earned. For each vaccine you administer, report a CPT code for the vaccine itself (assuming you did not receive the vaccine for free from sources such as the VFC), a CPT code for the vaccine administration, and the corresponding ICD-9 code. (For a list of administration codes, see the tables above and on the opposite page). For example, for the varicella virus vaccine, you would report CPT code 90716 for the vaccine and CPT code 90465 for a primary injection administration to a patient younger than 8 years old. Then

you would link both codes to ICD-9 code V05.4 for "immunization, varicella."

To ensure that you receive accurate reimbursement from payers, report all of the appropriate codes. Forgetting to bill for the vaccine administration,

for example, means missing out on money you are due. For code 90471, the primary immunization code for injections given to patients 8 years and older, our Medicare carrier reimburses \$17.69, and CIGNA reimburses \$22.75.

If you provide an immunization during a visit at which you provide another service, bill for both services; add modifier -25 to the evaluation and management (E/M) code to indicate that the service was significant and separately identifiable.

Sometimes patients receive immunizations from a nurse without having contact with a physician. If your medical assistant or nurse

Develop a culture where every visit is seen as an opportunity to assess immunization status.

provides a significant, separate E/M service in addition to the immunization administration (e.g., patient has a slight cough or diarrhea and must be cleared to receive the vaccine after receiving advice on managing the minor health problem), you can report code 99211 with modifier -25 attached in addition to the immunization codes. In this situation, you do not need to have face-to-face contact with the patient. This is considered an incident-to service if you are available in the office to supervise and the service is medically necessary.

Of course, some payers will not reimburse for two services provided at the same visit or they may have special rules for these situations, so check to see what is required. More detailed information on coding and billing for immunizations is available elsewhere.^{4,5} Some vaccine manufacturers provide coding and billing assistance as well (see examples at <http://www.vaccinesupportservices.com> and <http://rrc.gsk.com/otherPrograms.htm>).

It is important that your billing staff learn the coverage policies of the third-party payers with which you contract. Some payers may require prior authorization to cover vaccine services. Others might delay their coverage of newly licensed vaccines or might not cover vaccines at all or for patients beyond a certain age range. Medicare will pay for pneumococcal and influenza vaccines for all beneficiaries and for hepatitis B vaccine for those with a medium to high risk of developing the disease.

To ensure you get paid for what you administer, consider collecting up-front payment for expensive vaccines if the patient does not have insurance coverage or has only

limited coverage for a vaccine. For uninsured patients, investigate whether vaccine manufacturers offer patient assistance programs. Examples of companies that offer patient assistance programs include Merck (<http://www.merck.com/merckhelps/vaccines/home.html>) and Sanofi Pasteur, through the National Organization of Rare Disorders (<http://www.rarediseases.org/programs/medication>).

For the good of your patients

Although providing vaccinations is often a break-even venture, it is one of the most important contributions we can make to the health of our patients and communities. By devoting some time and energy to develop a more efficient immunization process, your practice will be better equipped to provide this valuable service to those who need it. **FPM**

Send comments to fpm@afp.org.

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■ Make sure your billing staff is familiar with your payers' vaccination coverage policies.

■ Requesting payment up front for expensive vaccines can help you get paid for what you administer.

■ Some vaccine manufacturers offer assistance programs to help patients without insurance receive the immunizations they need.

PEDIATRIC-SPECIFIC IMMUNIZATION ADMINISTRATION CODES

Code	When to report
90465	Immunization administration to patient younger than 8 (includes percutaneous, intradermal, subcutaneous, or intramuscular injections) when the physician counsels the patient/family; first injection (single or combination vaccine/toxoid), per day. Do not report in conjunction with 90467.
90466	Each additional injection. List separately in addition to the code for primary procedure. Use in conjunction with 90465 or 90467, depending on whether the primary vaccine was an injection or intranasal/oral.
90467	Immunization administration to patient younger than 8 (includes intranasal or oral routes of administration), per day; do not report in conjunction with 90465.
90468	Each additional intranasal or oral administration. Use in conjunction with 90465 or 90467, depending on the whether the primary vaccine was an injection or intranasal/oral.