20 Years Later – the Final Issue of Vaccinate Adults

By Deborah L. Wexler, MD
Editor, Vaccinate Adults

This is your final issue of Vaccinate Adults, the Immunization Action Coalition’s (IAC) periodical for adult medicine specialists. Since 1997, I’ve been involved in every aspect of the 52 issues we’ve published, and I’d like to share with you some history of these 20 years – how Vaccinate Adults began, how it grew over the years, why we are saying goodbye, and what’s next. I would also like to thank some who have been deeply involved for many years in the work of Vaccinate Adults, making it such an inspired, successful, and long-lived publication for readers like you.

How we started…

Vaccinate Adults was preceded by IAC’s flagship periodical, Needle Tips, which made its first appearance in print in September 1994. The first issue of Vaccinate Adults was published in 1997, after it became apparent that Needle Tips wasn’t being utilized by adult medicine providers because of the preponderance of content related to childhood immunization. Our internal medicine colleagues recommended that IAC create a publication similar to Needle Tips, but containing only adult immunization material. The premiere issue of Vaccinate Adults was printed and mailed to approximately 100,000 healthcare professionals throughout the United States in November 1997.

Following this premier issue, and through 2008, Vaccinate Adults was printed and mailed twice per year to internal medicine and infectious disease practices, pulmonologists, cardiologists, state and local health departments, and many others, with a circulation of up to 200,000.

According to IAC surveys, the most popular feature of Vaccinate Adults has been its “Ask the Experts” column, where experts from the Centers for Disease Control and Prevention (CDC) provide answers to practical questions about hepatitis B and all other routinely recommended vaccines.

From 1997–2008, we added a bit of levity to the cover of each issue by showing a singular cartoon drawing provided by the New York Department of Health. The cartoon drawing provided by the New York Department of Health was printed and mailed to approximately 100,000 healthcare professionals throughout the United States in November 1997.

What’s New in the 2017–18 Influenza Season (a change in the A/H1N1 component); and

How to Administer Influenza Vaccine – Intramuscular, Intradermal, and Intranasal

Influenza vaccines

• Describes the vaccine composition for this season (a change in the A/H1N1 component);

• Discusses recent FDA licensure and labeling changes including approval of Afluria Quadrivalent (Seqirus) and Flublok Quadrivalent (Protein Sciences); and

• Recommends that live attenuated influenza vaccine (LAIV, FluMist; AstraZeneca) not be used during the 2017–18 season.
Why we are saying goodbye…

Our main website, www.immunize.org, and our weekly email news service, IAC Express, are better able to keep Vaccinate Adults readers up to date on IAC’s ever-expanding educational content and news. The gap of several months between Vaccinate Adults issues has rendered it too untimely to keep up with today’s fast-changing world of adult immunization.

Going forward…

Although Vaccinate Adults will be gone, IAC Express will carry on, bringing all Vaccinate Adults content to its readers on a weekly basis. News about recently updated ACIP recommendations, new vaccine licensures, Vaccine Information Statements, and CDC publications will be announced, along with articles about IAC’s free, downloadable CDC-reviewed educational materials for patients and clinic staff (e.g., standing orders templates and handouts for patients). At least five times per year, we will publish special editions of IAC Express that are exclusively “Ask the Experts” Q&As. If you’re not already an IAC Express subscriber, please visit www.immunize.org/subscribe.

Thank you!

Over these 20 years, I have been honored to work closely with so many wise, talented, and dedicated individuals to bring you every issue of Vaccinate Adults. Here are the names of those to whom I am most particularly indebted and about whom I have treasured memories that will never leave me.

CDC’s “Ask the Experts” Hall of Fame

Andrew Kroger, MD, MPH, medical officer at CDC’s National Center for Immunization and Respiratory Diseases (NCIRD), has served since 2012 as IAC’s key Vaccinate Adults contact for providing answers to all “Ask the Experts” questions. To do this, he works with NCIRD’s expert education team members who include medical officers Candice L. Robinson, MD, MPH, and Raymond A. Strikas, MD, MPH, FACP, FIDSA; and nurse educators Donna L. Weaver, RN, MN, and Debra A. Strodthoff, MD, Anser Mixed Regional Medical Center. Andrew Kroger, MD, MPH, medical officer at CDC’s National Center for Immunization and Respiratory Diseases (NCIRD), has served since 2012 as IAC’s key Vaccinate Adults contact for providing answers to all “Ask the Experts” questions. To do this, he works with NCIRD’s expert education team members who include medical officers Candice L. Robinson, MD, MPH, and Raymond A. Strikas, MD, MPH, FACP, FIDSA; and nurse educators Donna L. Weaver, RN, MN, and Debra A. Strodthoff, MD, Anser Mixed Regional Medical Center.

Margaret Vaillancourt, writer and community activist, who started IAC with me in 1991, devoted many years to Vaccinate Adults and IAC, providing lots of laughs and boundless energy. Margaret passed away in 2014.

Becky Payne, assistant to the director (me), served as editor, proofreader, finder of riddles, and devoted 14 years to IAC and to keeping watch over many aspects of Vaccinate Adults. We lost our dear Becky to a massive stroke in 2011.

Final issue…continued on page 1

Adults issues to four per year to increase its visibility and impact. Vaccinate Adults has always been available free of charge.

Though subscribership rose over the years to approximately 40,000, Vaccinate Adults no longer reached the larger audience it had with postal mailings.

FRILANS: Vaccinate Adults is available to all readers free of charge. Some of the information in this issue is supplied to us by the Centers for Disease Control and Prevention (CDC) for technical accuracy. This publication is supported in part by CDC Grant No. 6NH23IP922550. Content is solely the responsibility of IAC and does not necessarily represent the official views of CDC. ISSN 1526-1824.

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Subcribe to IAC Express, the Immunization Action Coalition’s e-news and information service at www.immunize.org/subscribe.

DISCLAIMER: Vaccinate Adults is available to all readers free of charge. Some of the information in this issue is supplied to us by the Centers for Disease Control and Prevention in Atlanta, Georgia, and some information is supplied by third-party sources. The Immunization Action Coalition (IAC) has used its best efforts to accurately publish all of this information, but IAC cannot guarantee that the original information as supplied by others is correct or complete, or that it has been accurately published. Some of the information in this issue is created or compiled by IAC. All of the information in this issue is of a time-critical nature, and we cannot guarantee that some of the information is not now outdated, inaccurate, or incomplete. IAC cannot guarantee that reliance on the information in this issue will cause no injury. Before you rely on the information in this issue, you should first independently verify its current accuracy and completeness. IAC is not licensed to practice medicine or pharmacology, and the providing of the information in this issue does not constitute such practice. Any claim against IAC must be submitted to binding arbitration under the auspices of the American Arbitration Association in Saint Paul, Minnesota.
Current IAC staff

Diane Peterson, IAC’s associate director for immunization projects, associate editor, and master organizer has been always ready with the preliminary plan for each issue of Vaccine Educators since she started working at IAC in 2002. Her Vaccine Educators assignments are completed early so she can move to everything else she works on. Diane’s motto is “Let’s git ‘er dun.”

William L. Atkinson, MD, MPH, in addition to being IAC’s associate director for immunization education, in recent years has joined Diane as associate editor of Vaccine Educators. He selects and develops “Ask the Experts” questions within days of our needing them, and sends them to Dr. Kroger at NCIRD. Bill completes his work with astonishing efficiency and accuracy. His home base is in Missouri, but we all hope that someday Bill will move to Minnesota.

Kathryn de Boer, IAC’s creative consultant for several years, works wonders at designing the most beautiful pages for displaying Vaccine Educators content. She makes my job easy and working with her is a joy.

Many more IACers work on Vaccine Educators, and have contributed in important ways. Thank you to Teresa Anderson, DDS, MPH; Marian Deegan, JD; Mike Franey, PhD; Sheila Franey, MA; Chrystal Mann; Jane Myers, EdM; Julie Murphy, MA; Casey Pauly; L.J. Tan, MS, PhD; Robin VanOss; Pat Vranesich, RN, BSN; and Laurel Wood, MPA.

And, of course, my family

Michael Mann, my dear husband of nearly 40 years, is so easy-going about my schedule and deadlines, and his presence is such a gift to me and our children.

Sarah Wexler-Mann, our first-born child, was IAC’s earliest illustrator featured in Vaccine Educators. Sarah is now an organic hops and flower-growing farmer, communications director, graphic designer, and mom residing outside of Houston, Minnesota.

Isaac Mann, our second-born and second Vaccine Educators illustrator, is now a painter and teacher of mas-

And, of course, our readers

Thank you for reading Vaccine Educators. Supporting you, the front lines of adult immunization in the United States, has been our priority. Your appreciative words over the years have enhanced our passion for our work. Thanks for writing to us. A sampling of your messages can be read online at www.immunize.org/aboutus/what_ntva.asp. We will miss hearing from you about Vaccine Educators, but look forward to receiving your messages about IAC Express. Please keep in touch.

Deborah L. Wexler, MD Executive Director, Immunization Action Coalition Deborah@immunize.org

Why did the man climb up the chandelier?

Because he was a light stepper.

Vaccinate Adults!

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Advisory Board
Who is recommended to be vaccinated against influenza? ACIP recommends annual vaccination for all people ages 6 months and older who do not have a contraindication to the vaccine.

When should influenza vaccine be given? You can begin administering vaccine as soon as it becomes available. Optimally, vaccination should occur before onset of influenza activity in the community. Healthcare providers should offer vaccination by the end of October, if possible, and vaccination activity should continue through the fall and winter months, as long as influenza virus is circulating in the community.

Who is recommended to be vaccinated against influenza? Because of their increased risk for influenza-related complications. An increased risk of severe influenza infection was also observed in postpartum women (those who delivered within the previous 2 weeks) during the 2009–10 H1N1 pandemic. Vaccination can occur in any trimester, including the first. Only inactivated vaccine should be given to pregnant women.

Please tell me about Fluad, the new influenza vaccine for people age 65 years and older. In November 2015, FDA licensed Fluad (Seqirus), a trivalent, MF59-adjuvanted inactivated influenza vaccine, for people age 65 years and older. Fluad is the first adjuvanted influenza vaccine marketed in the U.S. An adjuvant is a substance added to a vaccine to increase its immunogenicity. The MF59 adjuvant is based on squalene, an oil that occurs naturally in many plants and animals. Fluad has been used in Europe since 1997 and is approved in 38 other countries. In contrast to Fluzone High-Dose (Sanofi Pasteur), Fluad is a standard-dose vaccine, containing 15 mcg of hemagglutinin per dose.

A study published in 2014 found that the injectable vaccine Fluzone High-Dose protects people 65 years and older better than standard-dose Fluzone. Does ACIP preferentially recommend use of Fluzone High-Dose for all people age 65 years and older? Aging decreases the body's ability to develop a good immune response after getting influenza vaccine, which places older people at greater risk of severe illness from influenza. A higher dose of antigen in the vaccine should give older people a better immune response and therefore provide better protection against influenza. However, despite published evidence of better protection from Fluzone High-Dose when compared to standard-dose Fluzone (N Engl J Med 2014; 371:635–45), ACIP has not stated a preference for this vaccine for people age 65 years and older.

May Fluzone High-Dose or Fluad be administered to patients younger than age 65 years? No. Fluzone High-Dose and Fluad are licensed only for people age 65 years and older and are not recommended for younger people.

What is the latest ACIP guidance on influenza vaccination and egg allergy? ACIP revised its guidance on vaccination of people with egg allergy for the 2016–17 season. This guidance did not change for the 2017–18 season. ACIP recommends that people with a history of egg allergy who have experienced only hives after exposure to egg should receive any inactivated influenza vaccine without specific precautions (except a 15-minute observation period for syncope). People who report having had an anaphylactic reaction to egg (more severe than hives) may also receive any age-appropriate influenza vaccine. The vaccine for those individuals should be administered in a medical setting (such as a physician office or health department clinic). Vaccine administration should be supervised by a healthcare provider who is able to recognize and manage severe allergic conditions. Although not specifically recommended by ACIP, providers may prefer to administer an egg-free recombinant vaccine (Flublok; Protein Sciences) for people age 18 years and older with severe egg allergy.

A previous severe allergic reaction to influenza vaccine, regardless of the component suspected to be responsible for the reaction, is a contraindication to future receipt of the vaccine. For a complete list of vaccine components (i.e., excipients and culture media) used in the production of the vaccine, check the package insert (at www.immunize.org/package inserts) or go to www.cdc.gov/vaccines/pubs/pink book/downloads/appendices/B/excipient-table-2.pdf.

For more details about giving influenza vaccine to people with a history of egg allergy, see www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6602.pdf, pages 10–12. You also may find the IAC handout “Influenza Vaccination of People with a History of Egg Allergy” helpful (see www.immunize.org/catg.d/p3094.pdf).

Should staff at drive-through influenza vaccination clinics encourage drivers to park and wait for 15 minutes after vaccination to make sure they don’t have a syncope (fainting) episode? Yes. Syncope has been reported following vaccination. It is prudent for all persons to be observed for syncope for at least 15 minutes after vaccination.

Immunization questions?

Email nipinfo@cdc.gov
Call your state health department (phone numbers at www.immunize.org/ coordinators)
Two different types of influenza B virus are likely for use over trivalent vaccines? Additional strain, why isn’t it preferred if quadrivalent vaccine includes one type (that is, quadrivalent over trivalent) for those for whom more than one type of vaccine is indicated and available.

Some of my patients refuse influenza vaccination because they insist they “got the flu” after receiving the injectable vaccine. What can I tell them? There are several reasons why this misconception persists:

- Less than 1% of people who are vaccinated with the injectable vaccine develop flu-like symptoms, such as mild fever and muscle aches, after vaccination. These side effects are not the same as having influenza, but people confuse the symptoms.

- Protective immunity doesn’t develop until 1–2 weeks after vaccination. Some people who get vaccinated later in the season (December or later) may be infected with influenza virus shortly afterward. These late vaccinees develop influenza because they were exposed to someone with the virus before they became immune. It is not the result of the vaccination.

- For many people, “the flu” is any illness with fever and cold symptoms or gastrointestinal symptoms. If they get any viral illness, they may blame it on flu vaccine or think they got “the flu” despite being vaccinated. Influenza vaccine only protects against certain influenza viruses, not all viruses.

- Influenza vaccine is not 100% effective, especially in older persons.

For more information on this topic, go to: www.cdc.gov/flu/professionals/vaccination/effectivenessqa.htm.

Does ACIP recommend one influenza product over another for pregnant women? Pregnant women can receive any inactivated or recombinant influenza vaccine. They should not be given LAIV (FluMist).

If quadrivalent vaccine includes one additional strain, why isn’t it preferred for use over trivalent vaccines? Two different types of influenza B virus are likely to cause disease during an influenza season, but trivalent influenza vaccines contain only one type of influenza B virus. The quadrivalent vaccine includes both types of B virus. While quadrivalent vaccines may eventually replace trivalent vaccines, during the current season, the quantity of quadrivalent vaccine available may be limited. Consequently, ACIP does not express a preference for use of one type of influenza vaccine over another type (that is, quadrivalent over trivalent) for those who have received the standard-dose influenza vaccine hear about the high-dose (Fluzone High-Dose) or adjuvanted vaccine (Fluad) and want to receive that, too. Is this okay to administer? No, ACIP does not recommend that any adult receive more than one dose of influenza vaccine in a season.

The pneumococcal conjugate vaccine (PCV13) package insert says that in adults, antibody responses to PCV13 were diminished when given with inactivated influenza vaccine. Does this mean we should not give PCV13 and influenza vaccine at the same visit? The available data have been interpreted that any changes in antibody response to either of the vaccines’ components were clinically insignificant. The antibody response was only lowered for three components, and only in patients younger than 65 years of age. In this age group, if PCV13 is recommended, it means there is a high risk of invasive pneumococcal disease for those unvaccinated. If PCV13 and influenza vaccine are both indicated and recommended, they should be administered at the same visit. See the PCV13 ACIP recommendations at www.cdc.gov/mmwr/pdf/ wk/mm6337.pdf, page 824.

Some of our patients believe that they have had reactions to influenza vaccine in the past and request the dose to be split into 2 doses administered on different days. Is this an acceptable practice? This is definitely not an acceptable practice. Doses of influenza vaccine (or any other vaccine) should never be split into “half doses.” If a “half dose” is administered, it should not be accepted as a valid dose and should be repeated as soon as possible with a full age-appropriate dose.

Is it acceptable to draw up vaccine into syringes at the beginning of the day? If it isn’t, how much in advance can this be done? CDC discourages the practice of prefilling vaccine into syringes for several reasons, including:

- The increased possibility of administration and dosing errors,

- The increased risk of inappropriate storage,

- The probability of bacterial contamination since the syringe will not contain a bacteriostatic agent, and

- The probability of reducing the vaccine’s potency over time because of its interaction with the plastic syringe components.

Prefilling vaccine into syringes also violates basic medication administration guidelines, which state that an individual should administer only those medications he or she has prepared and drawn up. Although pre-drawing vaccine is discouraged, a limited amount of vaccine may be pre-drawn in a mass-immunization clinic setting under the following conditions:

- Only a single type of vaccine (for example, influenza) is administered at the mass-immunization clinic setting,

- Vaccine is not drawn up in advance of its arrival at the mass-vaccination clinic site,

- These pre-drawn syringes are stored at temperatures appropriate for the vaccine they hold,

- No more than 1 vial or 10 doses (whichever is greater) is drawn into syringes, and

- Clinic staff monitor patient flow carefully and avoid drawing up unnecessary doses or delaying administration of pre-drawn doses.

At the end of the clinic day, any remaining vaccine in syringes prefilled by staff should be discarded.
These influenza educational materials will help protect your patients as well as staff

1. Influenza: Questions and Answers
   - Information about the disease and vaccine
   - What causes influenza?
   - What are the symptoms of influenza?
   - When should someone get vaccinated?
   - How do you spread influenza?
   - Is an annual influenza vaccination recommended?
   - Is influenza vaccine safe for pregnant women?
   - Is vaccination against influenza a good idea for children?
   - How do you react to influenza vaccination?

2. Don’t take chances with your family’s health – make sure you all get vaccinated against influenza every year!
   - How can influenza make you, your child, or your parents sick?
   - Influenza usually comes on suddenly. Symptoms can include high fever, shaking chills, coughing, runny nose, sore throat, muscle pain, headaches, and fatigue. It can lead to more serious illness such as pneumonia.

3. Seek emergency medical care if you or a family member shows the signs below – a life could be at risk!
   - If someone has any of these signs, seek medical care immediately:
     - Sudden high or very low body temperature
     - Difficulty breathing or chest pain
     - Very rapid breathing (more than 60 breaths per minute)
     - Very shallow breathing
     - Very fast heartbeat
     - Very drowsy or hard to wake
     - Very confused
     - Very weak
     - Very cold, clammy skin
     - Very pale
     - Trouble swallowing
     - Another serious illness that requires medical care

4. Protect yourself from influenza… Get vaccinated!
   - Declination of Influenza Vaccination
   - Your child’s close contacts include anyone who lives in your household or is in close contact with your child’s household. If you have anyone in your household who is at increased risk for serious complications of influenza, talk to your healthcare provider about whether your child should get vaccinated.

5. Keep your kids safe – get them vaccinated every fall or winter!
   - Vaccination is important if your child is younger than 5 or if he or she has a chronic health condition.
   - Vaccines prevent the disease and prevent complications!

6. Influenza is a serious disease… Make sure your child is protected!
   - Influenza can make your child very sick. It is recommended for everyone 6 months and older.
   - Get vaccinated every year, and make sure your children and your parents are vaccinated, too.

7. For 8½ x 11" copies of the pieces above, visit IAC’s website: www.immunize.org/handouts/influenza-vaccines.asp

8. Influenza Vaccination of People with a History of Egg Allergy
   - Vaccination is recommended each year.
   - People with egg allergy can be vaccinated, but they should receive the influenza vaccine that contains killed, inactivated influenza virus particles.
   - Avoid live viral vaccines during the influenza season.
   - Avoid influenza vaccination if you have a history of severe egg allergy (anaphylaxis) or a history of severe egg allergy that is not well controlled with medications.

9. Guide for Determining the Number of Doses of Influenza Vaccine to Give to Children Age 6 Months Through 8 Years During the 2015–2016 Influenza Season
   - Did the child receive at least 2 doses of seasonal or quadrivalent influenza vaccine before July 1, 2015?
   - No / Don’t know
   - Yes
   - Give 1 dose of 2015–2016 influenza vaccine this season or at least 4 weeks apart.
   - Give 2 doses of 2015–2016 influenza vaccine this season if at least 8 weeks apart.
## Influenza Vaccine Products for the 2017–2018 Influenza Season

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Trade Name (vaccine abbreviation)</th>
<th>How Supplied</th>
<th>Mercury Content (mcg Hg/0.5mL)</th>
<th>Age Group</th>
<th>Vaccine Product Billing Code2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AstraZeneca</td>
<td>FluMist4 (LAIV4)</td>
<td>0.2 mL (single-use nasal spray)</td>
<td>0</td>
<td>2 through 49 years</td>
<td>90672/90672</td>
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<tr>
<td>GlaxoSmithKline</td>
<td>Fluarix (IIV4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>3 years &amp; older</td>
<td>90686/90686</td>
</tr>
<tr>
<td>ID Biomedical Corp. of Quebec, a subsidiary of GlaxoSmithKline</td>
<td>FluLaval (IIV4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>6 months &amp; older</td>
<td>90686/90686</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL (multi-dose vial)</td>
<td>≤25</td>
<td>6 months &amp; older</td>
<td>90688/90688</td>
</tr>
<tr>
<td>Protein Sciences Corp.</td>
<td>Flublok (RIV3)</td>
<td>0.5 mL (single-dose vial)</td>
<td>0</td>
<td>18 years &amp; older</td>
<td>90673/90673</td>
</tr>
<tr>
<td></td>
<td>Flublok (RIV4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>18 years &amp; older</td>
<td>90682/90682</td>
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<tr>
<td>Sanofi Pasteur, Inc.</td>
<td>Fluzone (IIV4)</td>
<td>0.25 mL (single-dose syringe)</td>
<td>0</td>
<td>6 through 35 months</td>
<td>90685/90685</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>3 years &amp; older</td>
<td>90686/90686</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL (single-dose vial)</td>
<td>0</td>
<td>3 years &amp; older</td>
<td>90686/90686</td>
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<tr>
<td></td>
<td></td>
<td>5.0 mL (multi-dose vial)</td>
<td>25</td>
<td>6 through 35 months</td>
<td>90687/90687</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL (multi-dose vial)</td>
<td>25</td>
<td>3 years &amp; older</td>
<td>90688/90688</td>
</tr>
<tr>
<td></td>
<td>Fluzone High-Dose (IIV3-HD)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>65 years &amp; older</td>
<td>90662/90662</td>
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<td></td>
<td>Fluzone Intradermal (IIV4-ID)</td>
<td>0.1 mL (single-dose microinjection system)</td>
<td>0</td>
<td>18 through 64 years</td>
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<tr>
<td>Seqirus</td>
<td>Afluria (IIV3)</td>
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<td>5 years &amp; older4</td>
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<td>5.0 mL (multi-dose vial)</td>
<td>24.5</td>
<td>5 years &amp; older4</td>
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<td>Afluria (IIV4)</td>
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</tr>
<tr>
<td></td>
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<td>5.0 mL (multi-dose vial)</td>
<td>24.5</td>
<td>5 years &amp; older4</td>
<td>90688/90688</td>
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<tr>
<td></td>
<td>Fluad (alIIV3)</td>
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<td>0</td>
<td>65 years &amp; older</td>
<td>90653/90653</td>
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<tr>
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<td>Fluvirin (IIV3)</td>
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<td>90656/90656</td>
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<td></td>
<td>Flucelvax (ccIIV4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0</td>
<td>4 years &amp; older</td>
<td>90749/907565/907566</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL (multi-dose vial)</td>
<td>25</td>
<td>4 years &amp; older</td>
<td>90749/907565Q2039/907566</td>
</tr>
</tbody>
</table>

### Footnotes
1. IIV3/IIV4 = egg-based trivalent/quadrivalent inactivated influenza vaccine (injectable); where necessary to refer to cell culture-based vaccine, the prefix “cc” is used (e.g., ccIIV3/ccIIV4); RIV3/RIV4 = trivalent/quadrivalent recombinant hemagglutinin influenza vaccine (injectable); alIIV3 = adjuvanted trivalent inactivated influenza vaccine.
2. An administration code should always be reported in addition to the vaccine product code. Note: Third party payers may have specific policies and guidelines that might require providing additional information on their claim forms.
3. Live attenuated influenza vaccine (LAIV4; FluMist) is not recommended by CDC’s Advisory Committee on Immunization Practices for use in the U.S. for the 2017–18 influenza season.
4. Afluria is approved by the Food and Drug Administration for intramuscular administration with the Pharmajet Stratis Needle-Free Injection System for persons age 18 through 64 years.
5. CPT code 90756 was released on July 1, 2017 for implementation on January 1, 2018. Payers may implement the code based on beneficiaries’ needs any time after the code’s release. The CPT Editorial Panel allotted a 6-month period to allow payers adequate time to prepare their systems; however, processing periods for individual payers may accommodate a more abbreviated timeframe.
Screening Checklist for Contraindications to Inactivated Injectable Influenza Vaccination

For patients (both children and adults) to be vaccinated: The following questions will help us determine if there is any reason we should not give you or your child inactivated injectable influenza vaccination today. If you answer “yes” to any question, it does not necessarily mean you (or your child) should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

1. Is the person to be vaccinated sick today? □ yes □ no □ don’t know
2. Does the person to be vaccinated have an allergy to a component of the vaccine? □ yes □ no □ don’t know
3. Has the person to be vaccinated ever had a serious reaction to influenza vaccine in the past? □ yes □ no □ don’t know
4. Has the person a Guillain-Barré syndrome? □ yes □ no □ don’t know

Information for Healthcare Professionals about the Screening Checklist for Contraindications to Inactivated Injectable Influenza Vaccination (IIV or RIV)

Are you interested in knowing why we included a certain question on the screening checklist? If so, read the information below. If you want to find out even more, consult the sources listed at the bottom of this page.

1. Is the person to be vaccinated sick today?
   There is no evidence that acute illness reduces vaccine efficacy or increases vaccine adverse events. People with a moderate or severe illness usually should not be vaccinated until their symptoms have improved. Minor illnesses with or without fever do not contraindicate use of influenza vaccine. Do not withhold vaccination if a person is taking antibiotics.

2. Does the person to be vaccinated have an allergy to a component of the vaccine?
   All vaccines, including influenza vaccines, contain various components that might cause allergic and anaphylactic reactions. Not all such reactions are related to egg proteins. However, the possibility of a reaction to influenza vaccines in egg-allergic people might be of concern to both the person and vaccine providers.

   An egg-free recombinant vaccine (RIV) is available for people age 18 years and older. ACIP does not state a preference for the use of RIV for egg-allergic people although some providers may choose to administer RIV to their severely egg-allergic patients.

   Review of studies of IIV and LAIV indicate that severe allergic reactions to egg-based influenza vaccines in persons with egg allergy are unlikely. For the 2017–18 influenza season, ACIP recommends that persons with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine. Any licensed age-appropriate influenza vaccine (IIV or RIV) may be used. Providers should consider observing all patients for 15 minutes after vaccination to decrease the risk for injury should they experience syncope.

   Persons who report having had reactions to egg involving symptoms other than hives, such as angioedema, respiratory distress, lightheadedness, or recurrent vomiting, or who required appropriate or another emergency medical intervention, may also receive any age-appropriate influenza vaccine (IIV or RIV). The vaccine should be administered in a medical setting (e.g., a health department or physician office). Vaccine administration should be supervised by a healthcare provider who is able to recognize and manage severe allergic conditions.

   Some inactivated influenza vaccines contain thimerosal as a preservative. Most people who had sensitivity to thimerosal when it was used in contact lens solution do not have reactions to thimerosal when it is used in vaccines. Check the package insert at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf. Check the package inserts at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf.

   Some vaccines also contain latex in the prefilled syringe cap which may cause allergic reactions in latex-sensitive people. Check the package inserts at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf.

3. Has the person to be vaccinated ever had a serious reaction to influenza vaccine in the past?
   Patients reporting a serious reaction to a previous dose of inactivated influenza vaccine should be asked to describe their symptoms. Immediate – presumably allergic – reactions are usually a contraindication to further vaccination against influenza.

   Fever, malaise, or muscle aches often affect people to moderate local vaccination. Also vaccination with most likely a cold. These people can evaluation.

4. Has the person a Guillain-Barré syndrome?
   It is prudent to a risk for severe inf are known to had usdn 66 weeks at As an alternative, it is a good idea to check the majority of pop at high risk for severe reactions if you receive any influenza vaccine (IIV or RIV). The vaccine should be administered in a medical setting (e.g., a health department or physician office). Vaccine administration should be supervised by a healthcare provider who is able to recognize and manage severe allergic conditions.

   Some inactivated influenza vaccines contain thimerosal as a preservative. Most people who had sensitivity to thimerosal when it was used in contact lens solution do not have reactions to thimerosal when it is used in vaccines. Check the package insert at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf. Check the package inserts at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf.

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   Some vaccines also contain latex in the prefilled syringe cap which may cause allergic reactions in latex-sensitive people. Check the package inserts at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf.

   Some vaccines also contain latex in the prefilled syringe cap which may cause allergic reactions in latex-sensitive people. Check the package inserts at www.immunize.org/packageinserts for information on which vaccines are affected, or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/thimerosal.pdf.
Use This Standing Orders Template for Administering Influenza Vaccine in Your Healthcare Setting

Download this standing orders template and use “as is,” or modify it to suit your work setting.

STANDING ORDERS FOR Administering Influenza Vaccine to Adults

Purpose
To reduce morbidity and mortality from influenza by vaccinating all adults who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy
Where allowed by state law, standing orders enable eligible nurses and other healthcare professionals (e.g., pharmacists) to assess the need for vaccination and to vaccinate adults who meet any of the criteria below.

NOTE: Live attenuated influenza vaccine (LAIV; Flumist), is not recommended by CDC's Advisory Committee on Immunization Practices for use in the U.S. during the 2017–18 influenza season. Because LAIV is still a licensed vaccine that might be available and that some providers might elect to use, for informational purposes, reference is made to previous recommendations for its use.

Procedure
1. Assess Adults for Need of Vaccination against influenza
   • All adults are recommended to receive influenza vaccine each year.
   • Pregnant women are recommended to receive influenza vaccination each year. Administer any recommended, age-appropriate inactivated influenza vaccine (IIV) to pregnant women in any trimester.
   • People who do not recall whether they received influenza vaccine this year should be vaccinated.

2. Screen for Contraindications and Precautions
   Contraindications for use of all influenza vaccines
   - Do not give vaccine to a person who has experienced a serious systemic or anaphylactic reaction to a prior dose of the vaccine or to any of its components. For a list of vaccine components, refer to the manufacturer's package insert (www.immunize.org/packageinserts) or go to www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/advisory-committee-recommendations-for-vaccination/2016-contraindications-and-precautions-for-vaccine.pdf.
   - If a person has immunosuppression (including that caused by medications or HIV) in age 50 years or older
   - if a person is pregnant
   - if a person has immunosuppression (including that caused by medications or HIV) within the previous 48 hours
   - if a person is a close contact of or who provides care for a severely immunosuppressed person who requires a protective environment
   - if a person is allergic to a vaccine component
   - If a person has a history of severe allergic reaction to egg involving any symptom other than hives
   - If a person has received influenza antivirals (e.g., amantadine, rimantadine, zanamivir, or oseltamivir) within the previous 7 days
   - If a person has immunosuppression (including that caused by medications or HIV) while they are seated or lying down and consider observing them for 15 minutes after receipt of the vaccine.

   Precautions for use of all influenza vaccines
   - Moderate or severe acute illnesses with or without fever
   - History of Guillain-Barré syndrome within 6 weeks of a previous influenza vaccination
   - Other chronic medical conditions that might predispose the person to complications of influenza infection (e.g., other chronic pulmonary, cardiovascular [excluding isolated hypertension], renal, hepatic, neurologic, hematologic, or metabolic disorders [including diabetes mellitus])

   NOTE REGARDING PATIENTS WITH EGGS ALLERGIES: People with egg allergy of any severity can receive any licensed influenza vaccine (i.e., any IIV or RSV) that is otherwise appropriate for the patient's age and health status. For people with a history of severe allergic reaction to egg involving any symptom other than hives (e.g., angioedema, respiratory distress, lightheadedness, or recurrent nausea), or who require prophylaxis or another emergency medical intervention, the selected vaccine should be administered in a medical setting (e.g., health department or physician office). Vaccine administration should be supervised by a healthcare provider who is familiar with the patient and is prepared to manage a medical emergency.

3. Provide Vaccine Information Statements
   Provide patients with a copy of the most current Federal Vaccine Information Statement (VIS). Provide non-English speaking patients with a copy of the VIS in their native language, if available and obtained. These can be found at www.immunize.org/vis. For information about how to document that the VIS was given, see section 1C ("Document Visitation") in the 2016-21 VIS.

4. Prepare to Administer Vaccine
   For vaccine that is to be administered intramuscularly, choose the needle gauge, needle length, and injection site according to the following chart.

<table>
<thead>
<tr>
<th>Age/Condition</th>
<th>Vaccine Type</th>
<th>Dose</th>
<th>Route</th>
<th>Site</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 years and older</td>
<td>Live attenuated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td></td>
<td>Inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td>18 years and older</td>
<td>Live attenuated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Inclined deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td></td>
<td>Inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td>65 years and older</td>
<td>Inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td>18 years and older</td>
<td>Inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td>65 years and older</td>
<td>Adjuvanted inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
<tr>
<td>18 years and older</td>
<td>Adjuvanted inactivated</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
<td>0.5 mL</td>
</tr>
</tbody>
</table>

   For vaccine that is to be administered intradermally, prepare the vaccine according to instructions in the package insert.

5. Administer Influenza Vaccine according to the criteria and guidance in the table below.

<table>
<thead>
<tr>
<th>Vaccine Type</th>
<th>Age/Condition</th>
<th>Dose</th>
<th>Route</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live attenuated</td>
<td>65 years and older</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
</tr>
<tr>
<td>Inactivated</td>
<td>65 years and older</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
</tr>
<tr>
<td>Adjuvanted inactivated</td>
<td>65 years and older</td>
<td>0.5 mL</td>
<td>Intramuscular (IM)</td>
<td>Deltoid muscle of arm</td>
</tr>
</tbody>
</table>

6. Document Vaccination
   Document each patient's vaccine administration information and follow-up in the following places.

   - Medical record: Document the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. You must also document, in the patient's medical record or other log, the publication date of VIS and the date it was given to the patient. Note that medical records Must be updated and retained in accordance with applicable state laws and regulations. If vaccine was not administered, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). Offer the vaccine to the patient at the next visit.

   - Immunization Information System (IIS) or "registry": Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. You must also document, in the patient's medical record or other log, the publication date of VIS and the date it was given to the patient. Note that medical records Must be updated and retained in accordance with applicable state laws and regulations. If vaccine was not administered, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). Offer the vaccine to the patient at the next visit.

   - Personal Immunization record: Record the date of vaccination and the location of the administration clinic.

   - Immunization Information System (IIS) or "registry": Document the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and title of the person administering the vaccine. You must also document, in the patient's medical record or other log, the publication date of VIS and the date it was given to the patient. Note that medical records Must be updated and retained in accordance with applicable state laws and regulations. If vaccine was not administered, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal). Offer the vaccine to the patient at the next visit.

7. Be Prepared to Manage Medical Emergencies
   Be prepared to manage a medical emergency related to the administration of vaccine by having a written protocol available, and a written list of patients who received the vaccine, and the name and contact information of the healthcare provider who administered the vaccine. Be prepared to monitor patients for signs of anaphylaxis or other severe allergic reaction while they are seated or lying down and consider observing them for 15 minutes after receipt of the vaccine.

8. Report All Adverse Events to VAERS
   Report all adverse events related to the administration of influenza vaccine to the federal Vaccine Adverse Event Reporting System (VAERS). To submit a VAERS report online (preferred) or to download a writeable PDF form, go to https://vaers.hhs.gov/reportevent.html. Further assistance is available at (800) 822-7967.

Standing Orders for Administering Influenza Vaccine to Adults
Additional standing orders templates for all routinely recommended vaccines are available at www.immunize.org/standing-orders

Vaccinate Adults! • November 2017 • Immunization Action Coalition • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org
How to Administer Intramuscular, Intradermal, and Intranasal Influenza Vaccines

Intramuscular injection (IM)
Inactivated Influenza Vaccines (IIV), including recombinant hemagglutinin influenza vaccine (RIV), cell culture-based vaccine (ccIIV), and adjuvanted influenza vaccine (aIIV)

1. Use a needle long enough to reach deep into the muscle. Infants age 6 through 11 mos: 1”; 1 through 10 yrs: 1–1¼”, and children and adults 11 years and older: 1–1½”.
2. With your left hand*, bunch up the muscle.
3. With your right hand*, insert the needle at a 90° angle to the skin with a quick thrust.
4. Push down on the plunger and inject the entire contents of the syringe. There is no need to aspirate.
5. Remove the needle and simultaneously apply pressure to the injection site with a dry cotton ball or gauze. Hold in place for several seconds.
6. If there is any bleeding, cover the injection site with a bandage.
7. Put the used syringe in a sharps container.

*Use the opposite hand if you are left-handed.

Intradermal administration (ID)
Inactivated Influenza Vaccine (IIV)

1. Gently shake the microinjection system before administering the vaccine.
2. Hold the system by placing the thumb and middle finger on the finger pads; the index finger should remain free.
3. Insert the needle perpendicular to the skin, in the region of the deltoid, in a short, quick movement.
4. Once the needle has been inserted, maintain light pressure on the surface of the skin and inject using the index finger to push on the plunger. Do not aspirate.
5. Remove the needle from the skin. With the needle directed away from you and others, push very firmly with the thumb on the plunger to activate the needle shield. You will hear a click when the shield extends to cover the needle.
6. Dispose of the applicator in a sharps container.

Intranasal administration (NAS)
Live Attenuated Influenza Vaccine (LAIV)

1. FluMist (LAIV) is for intranasal administration only. Do not inject FluMist.
2. Remove rubber tip protector. Do not remove dose-divider clip at the other end of the sprayer.
3. With the patient in an upright position, place the tip just inside the nostril to ensure LAIV is delivered into the nose. The patient should breathe normally.
4. With a single motion, depress plunger as rapidly as possible until the dose-divider clip prevents you from going further.
5. Pinch and remove the dose-divider clip from the plunger.
6. Place the tip just inside the other nostril, and with a single motion, depress plunger as rapidly as possible to deliver the remaining vaccine.
7. Dispose of the applicator in a sharps container.

NOTE: Live attenuated influenza vaccine (LAIV4; FluMist), is not recommended by CDC’s Advisory Committee on Immunization Practices for use in the U.S. during the 2017–18 influenza season. Because LAIV4 is still a licensed vaccine that might be available and that some providers might elect to use, for informational purposes, reference is made to previous recommendations for its use.
Vaccine Information Statements Are Available in Many Languages!

For all Vaccine Information Statements published in the United States and translations in more than 35 languages, visit www.immunize.org/vis.
Now available in the 7 languages listed below!

- **Spanish**  www.immunize.org/catg.d/p4030-01.pdf
- **Arabic**  www.immunize.org/catg.d/p4030-20.pdf
- **Chinese (simplified)**  www.immunize.org/catg.d/p4030-08.pdf
- **French**  www.immunize.org/catg.d/p4030-10.pdf
- **Korean**  www.immunize.org/catg.d/p4030-09.pdf
- **Vietnamese**  www.immunize.org/catg.d/p4030-05.pdf

**Technical content reviewed by the Centers for Disease Control and Prevention**

Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

www.immunize.org/catg.d/p4030.pdf • Item #P4030  (6/17)

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**Vaccinations for Adults**

You’re never too old to get vaccinated!

Getting vaccinated is a lifelong, life-protecting job. Don’t leave your healthcare provider’s office without making sure you’ve had all the vaccinations you need.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Do you need it?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hepatitis A</strong> <em>(HepA)</em></td>
<td>Maybe. You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6–12 months apart.</td>
</tr>
<tr>
<td><strong>Hepatitis B</strong> <em>(HepB)</em></td>
<td>Maybe. You need this vaccine if you have a specific risk factor for hepatitis B virus infection* or simply want to be protected from this disease. The vaccine is given in 3 doses, usually over 6 months.</td>
</tr>
<tr>
<td><strong>Hib</strong> <em>(Haemophilus influenzae type b)</em></td>
<td>Maybe. Some adults with certain high-risk conditions, for example, lack of a functioning spleen, need vaccination with Hib. Talk to your healthcare provider to find out if you need this vaccine.</td>
</tr>
<tr>
<td><strong>Human papillomavirus</strong> <em>(HPV)</em></td>
<td>Maybe. You need this vaccine if you are a woman age 26 or younger or a man age 21 or younger. Men age 22 through 26 with a risk condition* also need vaccination. Any man age 22 through 26 who wants to be protected from HPV may receive it, too. The vaccine is usually given in 3 doses over a 6-month period.</td>
</tr>
<tr>
<td><strong>Influenza</strong></td>
<td>Yes! You need a dose every fall (or winter) for your protection and for the protection of others around you.</td>
</tr>
<tr>
<td><strong>Measles, mumps, rubella</strong> <em>(MMR)</em></td>
<td>Maybe. You need at least 1 dose of MMR vaccine if you were born in 1957 or later. You may also need a second dose.*</td>
</tr>
<tr>
<td><strong>Meningococcal ACWY</strong> <em>(MenACWY, MCV4)</em></td>
<td>Maybe. You may need MenACWY vaccine if you have one of several health conditions,* for example, if you don’t have a functioning spleen. You need MenACWY if you are age 21 or younger and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16.</td>
</tr>
<tr>
<td><strong>Meningococcal B</strong> <em>(MenB)</em></td>
<td>Maybe. You should consider MenB vaccine if you are age 23 or younger (even if you don’t have a high-risk medical condition). You may need MenB if you have one of several health conditions,* for example, if you do not have a functioning spleen.</td>
</tr>
<tr>
<td><strong>Pneumococcal</strong> <em>(Pneumovax, PPsv, Prevnar, PCV)</em></td>
<td>Maybe. If you are age 65 (or older), you need both pneumococcal vaccines, Prevnar (if you haven’t had it before) and Pneumovax. Get Prevnar first and then get Pneumovax 1 year later. If you are younger than age 65 and have a certain high-risk condition (for example, asthma, heart, lung, or kidney disease, immunosuppression, or lack of a functioning spleen, or are a smoker),* you need 1 or both vaccines. Talk to your healthcare provider to find out when you need them.*</td>
</tr>
<tr>
<td><strong>Tetanus, diphtheria, whooping cough</strong> <em>(pertussis)</em> <em>(Tdap, Td)</em></td>
<td>Yes! Adults who have not received a dose of Tdap during their lifetime need to get Tdap (the adult whooping cough vaccine). And, all women need to get a dose during each pregnancy. After that, you need a Td booster dose every 10 years. Consult your healthcare provider if you haven’t had at least 3 tetanus and diphtheria toxoid-containing shots sometime in your life or if you have a deep or dirty wound.</td>
</tr>
<tr>
<td><strong>Varicella</strong> <em>(Chickenpox)</em></td>
<td>Maybe.* If you’ve never had chickenpox, never were vaccinated, or were vaccinated but received only 1 dose, talk to your healthcare provider to find out if you need this vaccine.*</td>
</tr>
<tr>
<td><strong>Zoster</strong> <em>(shingles)</em></td>
<td>Maybe.* If you are age 60 or older, you should get a 1-time dose of this vaccine now.</td>
</tr>
</tbody>
</table>

* Consult your healthcare provider to determine your level of risk for infection and your need for this vaccine.

Are you planning to travel outside the United States? Visit the Centers for Disease Control and Prevention’s (CDC) website at wwwnc.cdc.gov/travel/destinations/list for travel information, or consult a travel clinic.

Here’s the link: www.immunize.org/catg.d/p4030.pdf
# IAC and ACOG’s

## Immunization Schedule for Pregnant Women – Now in 7 Languages!

Here’s the link: [www.immunize.org/catg.d/p4040.pdf](http://www.immunize.org/catg.d/p4040.pdf)

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**Vaccinations for Pregnant Women**

The table below shows which vaccinations you may or may not need during your pregnancy.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Do you need it during your pregnancy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>Yes! You need a flu shot every fall (or even as late as winter or spring) for your protection and for the protection of your baby and others around you. It’s safe to get the vaccine at any time during your pregnancy.</td>
</tr>
<tr>
<td>Tetanus, diphtheria, whooping cough (pertussis) (Tdap, Td)</td>
<td>Yes! Women who are pregnant need a dose of Tdap vaccine (the adult whooping cough vaccine) during each pregnancy, preferably in the early part of the third trimester. It’s safe to be given during pregnancy and will help protect your baby against whooping cough in the early months of life when he or she is most vulnerable. After Tdap, you need a Td booster every 10 years. Consult your healthcare provider if you haven’t had at least 3 tetanus and diphtheria toxoid-containing shots sometime in your life or if you have a deep or dirty wound.</td>
</tr>
<tr>
<td>Human papillomavirus (HPV)</td>
<td>No. This vaccine is not recommended to be given during pregnancy, but if you inadvertently receive it, this is not a cause for concern. HPV vaccine is recommended for all women age 26 or younger, so if you are in this age group, make sure you are vaccinated before or after your pregnancy. The vaccine is given in 2 or 3 doses (depending on the age at which the first dose is given) over a 6-month period.</td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>No. MMR vaccine is not recommended to be given during pregnancy, but if you somehow do receive it, this is not a cause for concern. At least 1 dose of MMR is recommended for you if you were born in 1957 or later. (And you may need a second dose.*) During your prenatal care, your healthcare provider will test your blood to assess your need for MMR following your delivery. It’s best for you (and any future baby) to receive the protection vaccination provides before trying to become pregnant.</td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
<td>No. Varicella vaccine is not recommended to be given during pregnancy, but if you inadvertently receive it, this is not a cause for concern. At least 1 dose of varicella vaccine is recommended for you if you were born in 1957 or later. (And you may need a second dose.*)</td>
</tr>
<tr>
<td>Hepatitis A (HepA)</td>
<td>Maybe. You need this vaccine if you have a specific risk factor for hepatitis A virus infection* or simply want to be protected from this disease. The vaccine is usually given in 2 doses, 6–12 months apart. If you need to get or continue the HepA vaccine series, it’s safe to do so during pregnancy.</td>
</tr>
<tr>
<td>Hepatitis B (HepB)</td>
<td>Maybe. You need this vaccine if you have a specific risk factor for hepatitis B virus infection* or simply want to be protected from this disease. The vaccine is given in 3 doses, usually over 6 months. If you need to get or continue the HepB vaccine series, it’s safe to do so during pregnancy. It’s important, too, that your newborn baby gets started on his or her hepatitis B vaccination series before leaving the hospital.</td>
</tr>
<tr>
<td>Hib (Haemophilus influenza type b)</td>
<td>Maybe. Some adults with certain high-risk conditions, for example, lack of a functioning spleen, need vaccination with Hib. If you need to get Hib vaccine, it’s safe to receive it at any time during your pregnancy.</td>
</tr>
<tr>
<td>Meningococcal ACWY (MenACWY, MCV4)</td>
<td>Maybe. You may need MenACWY vaccine if you have one of several health conditions,* for example, if you don’t have a functioning spleen. You need MenACWY if you are age 21 or younger and a first-year college student living in a residence hall and you either have never been vaccinated or were vaccinated before age 16. During pregnancy, if you need MenACWY, it is safe to receive it.</td>
</tr>
<tr>
<td>Meningococcal B (MenB)</td>
<td>Maybe. You should consider MenB vaccine if you are age 23 or younger (even if you don’t have a high-risk medical condition). You may need MenB if you have one of several health conditions,* for example, if you do not have a functioning spleen. Because no studies have been conducted on MenB vaccine in pregnant women, your healthcare provider will need to determine if the benefits of vaccination are considered to outweigh the potential risks.</td>
</tr>
<tr>
<td>Pneumococcal (Pneumovax, PPsv, Prevart, PCV)</td>
<td>Maybe. You need 1 or both of these vaccines if you have a certain risk factor* for pneumococcal disease, for example, diabetes (but not gestational diabetes). If you’re unsure of your risk, talk to your healthcare provider to find out if you need either of these vaccines. If you are a candidate for either pneumococcal vaccine, it’s safe to get it during pregnancy.</td>
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- **Spanish**  
  [www.immunize.org/catg.d/p4040-01.pdf](http://www.immunize.org/catg.d/p4040-01.pdf)
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Technical content reviewed by the Centers for Disease Control and Prevention  
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[Image 258x133 to 401x178]
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*The CV Code is the Credit Verification Code, the additional 3- or 4-digit number on your credit card.

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<th>home address)</th>
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**The Vaccine Handbook: A Practical Guide for Clinicians ("The Purple Book") by Gary Marshall, MD**

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