What is a Patient Centered Medical Home?

What is a Medical Home?

A **Medical Home** is not a place or somewhere you would go, it simply means an applied **team-based approach** by your primary healthcare provider, where integrated care can help maximize your overall healthcare outcome!

The Patient Centered Medical Home (PCMH) model practice emphasizes in care coordination and improved communication in order to provide **quality care**, **lower medical costs**, and provide an **excellent patient care experience**.

How does this affect you?

As part of our commitment to provide you with the highest standard of care, by practicing a team-based approach for better care and communication as well as using innovative and secured tools for improved health care access. We partner with you and collaborate with your other providers to achieve the best quality tailored care we can offer!

Did you know?

You can prolong your life and lower the cost of your healthcare, just by taking control of your health. Having an annual exam with your provider can help assess and improve your overall health and well-being.

Our role as your trusted HEALTHCARE TEAM

- Provide a safe and healthy healthcare environment.
- Partner with you in making your healthcare decisions.
- Coordinate with you, your authorized representatives, and other healthcare providers.
- Keep you informed and on-track by providing:
  - *Health Coaching*
  - *Self-Care Management Support*
  - *Health resources*
  - *Preventive care*
  - *Tailored care*

Your role as a PATIENT

- Communicate closely with us.
- Keep us up-to-date with your medications, immunizations, allergies, conditions, tests, consultations, and hospitalizations.
- Advise of any changes about you and your families' medical history.
- Inform and authorize your other providers to coordinate with us.
- Participate in decisions about your health.
- Follow treatment plans and self-care management directions.
- Speak up and ask questions!

To learn more about PCMH, please ask for Anna Siegel.

Meet Our Care Teams

At Middletown Family Care Assoc., we formed our care teams in order to provide tailored care for each of our patient needs. Every patient is assigned to a care team.

What is a Care Team?

A care team is group of health professionals and support staff working together with the patient to achieve a common purpose. As a patient, YOU are the team captain of your team!

Why Patient Care Teams?

Patient-centered care teams deliver care that is respectful of and responsive to their individual patient preferences, needs, and values.

CARE TEAM ROLES

Primary Care Provider (PCP)

Your PCP is the physician who knows you best and who is ultimately responsible for your overall medical care. He or She prescribes medications and orders any necessary screening and diagnostic studies, referrals to specialists, and any other medical treatment. Your PCP also discusses and reviews your care plan and goals with you.

Physician Assistant (PA)

Your PA is a specially trained professional who works collaboratively with your physician. He or she can diagnose and treat many of the same conditions as your PCP and can order tests and prescribe medications. They also work very closely with your PCP in reviewing your care plan and goals with you.

Medical Assistant (MA)

Your MA is the person that escorts you from the waiting room to the exam room, takes your vital signs and updates your clinical information in your medical record. They can also perform certain diagnostic tests like EKG, draw your blood, and administer injections.

Patient Service Coordinator (PSC)

Your PSC is the person who obtains your current demographic and insurance information. He or she also schedules your appointments, works with your insurance, and helps coordinate your care across settings by following up with you after you are seen by another provider or reminds you regarding studies that you need done.

OUR CARE TEAMS

TEAM A	TEAM B
Lax Dedhia, MD	Jill E. Mackey, MD
Haley Spark, PA-C	Adriana Carrasco
Anna Siegel, MA	Sarah Flamer
Megan Lowman, MA	Mini Mathew
Rebecca Moffett, MA	Ashley Tharp
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What is a Patient Centered Medical Home?

MIDDLETOWN FAMILY CARE ASSOC. is dedicated to providing our patients with the highest standard of care. We believe that our patients receive the best possible care when they participate in their medical treatment. A **Patient Centered Medical Home** is a partnership between an informed patient and authorized representatives and a physician-led care team.

As your medical home, we will:

- ✓ Allow you to select a personal clinician and care team who will know you
- ✓ Help improve your overall well-being including behavioral health by learning about you, your family, life situation, and health preferences
- ✓ Respect your privacy and keep your information confidential unless you give us written permission or it is required by law
- ✓ Inform you about your health condition in a way you can understand
- ✓ Take care of your short term illness, long term chronic disease, and preventive care
- ✓ Collaborate with your other health care providers to coordinate your care
- ✓ Notify you of your test results using our patient portal or by phone
- ✓ Keep you up to date on all your vaccines and preventive studies
- ✓ Remind you when tests are due to help prevent delays in your diagnosis and treatment
- ✓ Use current evidence-based guidelines and provide self-care management support
- ✓ Give the care that meets your needs and fits your goals and values
- ✓ Discuss and review your care plan and provide educational resources
- ✓ Give you information about classes, support groups, or other services that can help you learn more about your condition and stay healthy

Other important information:

- ✓ We have extended hours: Monday to Friday 8:00am-6:30pm and Saturday 9:00am-1:00pm.
- ✓ Our on-call physicians are available to speak with after-hours by calling our main office numbers
- ✓ We encourage you to use IQ Health, our secured patient portal to access your health information and communicate with us for non-urgent matters during and after office hours.

We trust you, our patient to:

- ✓ Participate as a full partner in your care
- ✓ Understand your health condition and let us know if there is something you do not understand
- ✓ Inform us about your health needs and concerns
- ✓ Take your medications as prescribed
- ✓ Come to each visit with any updates on medications, dietary supplements, or remedies you are using and let us know if you need a refill
- ✓ Keep us up-to-date with changes in your personal, family, medical and social history
- ✓ Inform us if you were seen by any other provider or at any facility and/or if you had any test ordered and/or medications prescribed by them
- ✓ Ask other providers to send us your reports
- ✓ Know what your insurance covers and let us know if a service is not covered; pay your share of any fees
- ✓ Keep your scheduled appointments and notify us at least 24 hours prior if you need to cancel
- ✓ Call us if you do not receive your test results within 2 weeks
- ✓ If possible, inform us if you are going to the Emergency room so that we can assist with your treatment
- ✓ Follow the care plan that you have agreed upon, or let us know why you cannot so we can try to help and change the plan
- ✓ Give us feedback on how we can improve our services

Either you or your doctor may end this partnership at any time. If you choose to end this partnership, please notify us and tell us why. Thank you for choosing us as your health partner! Please acknowledge below.

Patient Name: _____ DOB: _____

_____

Patient Signature Date

YOUR NAME _____ DATE OF BIRTH ____/____/____ TODAY'S DATE ____/____/____
month day year month day year

☑ Do I Need Any Vaccinations Today?

This questionnaire will help you and your healthcare provider determine if you need any vaccinations today. Please check the boxes that apply to you.

Influenza vaccination

- ☐ I haven't had my annual influenza vaccination yet this season – so I need it now.

Pneumococcal vaccination (PPSV23, PCV13)

- ☐ I am 65 or older. I either never received a pneumococcal shot or I don't remember receiving a shot.
- ☐ I am 65 or older and received 1 or 2 doses of pneumococcal vaccine when I was younger than 65. It has either been 5 years or more since my last shot or I don't remember how long it has been.
- ☐ I am younger than 65. I have not been vaccinated against pneumococcal disease, and I am in one of the following risk groups:
  - ☐ I smoke cigarettes.
  - ☐ I have heart, lung (including asthma), liver, kidney, or sickle cell disease; diabetes; or alcoholism.
  - ☐ I have a weakened immune system due to cancer, Hodgkin's disease, leukemia, lymphoma, multiple myeloma, kidney failure, HIV/AIDS; or I am receiving radiation therapy; or I am on medication that suppresses my immune system.
  - ☐ I had an organ or bone marrow transplant.
  - ☐ I had my spleen removed, had or will have a cochlear implant, or have leaking spinal fluid.
  - ☐ I live in a nursing home or other long-term care facility, and I have never had a pneumococcal shot.

Tetanus-, diphtheria-, and pertussis (whooping cough)-containing vaccination (e.g., DTP, DTaP, Tdap, or Td)

- ☐ I either never received a dose of Tdap vaccine or I don't remember if I have.
- ☐ I have not yet received at least 3 tetanus- and diphtheria- containing shots.
- ☐ I have received at least 3 tetanus- and diphtheria-containing shots in my lifetime, but I believe it's been 10 years or more since I received my last shot.
- ☐ I am in my late second or third trimester of my pregnancy and haven't had a dose of Tdap vaccine during this pregnancy.

Measles, mumps, rubella (MMR) vaccination

- ☐ I was born in 1957 or later and either never received an MMR shot or I don't remember receiving a shot.
- ☐ I am a woman thinking about a future pregnancy and do not know if I'm immune to rubella.
- ☐ I am a healthcare worker, and I have no laboratory evidence of immunity to measles, mumps, or rubella. I received 1 dose of MMR vaccine, but I don't remember receiving 2 doses.
- ☐ I was born in 1957 or later. I received only 1 MMR shot, and I am in one of the following groups:
  - ☐ I am entering college or a post-high school educational institution.
  - ☐ I am planning to travel internationally.

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immunization action coalition
IAC
immunize.org

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/p4036.pdf • Item #P4036 (8/14)

Human papillomavirus (HPV) vaccination

- ☐ I am a woman 26 or younger and haven't completed a 3-dose series of HPV shots.
- ☐ I am a man 21 or younger and haven't completed a 3-dose series of HPV shots.
- ☐ I am a man 22 through 26 years. I haven't completed a 3-dose series of HPV shots, and I am in one of the following groups:
  - I want to be protected from HPV.
  - I have a weakened immune system as a result of infection (including HIV), disease, or medications.
  - I have sex with men.
- ☐ I am older than 26 and although I started the HPV series when I was younger, I never completed it.

Hepatitis A vaccination

- ☐ I want to be vaccinated to avoid getting hepatitis A and spreading it to others.
- ☐ I was vaccinated with hepatitis A vaccine in the past. I either never received the second shot or don't remember if I received it.
- ☐ I might have been exposed to the hepatitis A virus in the past 2 weeks.
- ☐ I am in one of the following risk groups, and I haven't completed the 2-dose series of hepatitis A shots:
  - I travel or plan to travel in countries where hepatitis A is common.[1, 2]
  - I have (or will have) contact with an adopted child within the first 60 days of the child's arrival from a country where hepatitis A is common.[2]
  - I am a man who has sex with men.
  - I use street drugs.
  - I have chronic liver disease.
  - I have a clotting factor disorder.
  - I work with HAV-infected primates or with HAV in a research laboratory setting.

Hepatitis B vaccination

- ☐ I want to be vaccinated to avoid getting hepatitis B and spreading it to others.
- ☐ I am 18 or younger and haven't completed the series of hepatitis B shots.
- ☐ I was vaccinated with hepatitis B vaccine in the past. I either never completed the full series or don't remember if I completed the series.
- ☐ I am in one of the following risk groups. I either haven't completed the 3-dose series of hepatitis B shots or don't remember if I completed the series:
  - I am sexually active and am not in a long-term, mutually monogamous relationship.
  - I am a man who has sex with men.
  - I am an immigrant, or my parents are immigrants, from an area of the world where hepatitis B is common, so I need testing and may need vaccination.[3, 4]
  - I live with or am a sex partner of a person with hepatitis B.
  - I have been diagnosed with a sexually transmitted disease.
  - I have been diagnosed with HIV.
  - I inject street drugs.
  - I have chronic liver disease.
  - I am or will be on kidney dialysis.
  - I have diabetes and I am younger than 60 years and/or receiving assisted glucose monitoring.
  - I am a healthcare or public safety worker who is exposed to blood or other body fluids.
  - I provide direct services to people with developmental disabilities.
  - I travel or plan to travel outside the U.S.[1, 3]

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Chickenpox (varicella) vaccination

- ☐ I was born in 1980 or later. I neither had chickenpox nor received the vaccine, or I don't remember if I had the disease or received the vaccine.
- ☐ I was born before 1980. I am either a healthcare worker or foreign born, and I am not sure if I've had chickenpox or not.
- ☐ I received one dose of varicella vaccine in the past but never got a second shot.

Meningococcal vaccination

- ☐ I am 18 or younger and haven't received a meningococcal shot.
- ☐ I am 21 or younger. I haven't had a meningococcal shot since my 16th birthday, and I am (or will be) in college, living in a residence hall.
- ☐ I am traveling to an area of the world where meningococcal disease is common.[1]
- ☐ I have sickle cell disease, or my spleen isn't working or has been removed, or I have a persistent complement component deficiency.
- ☐ I am a microbiologist routinely exposed to isolates of *Neisseria meningitidis*.
- ☐ I was vaccinated 5 or more years ago and continue to be at risk for meningococcal disease because I am in one of the risk groups listed above. Note: this does not apply to students whose only risk factor is attending college.

Shingles (zoster) vaccination

- ☐ I am 60 or older and haven't had a shingles shot.

Haemophilus influenzae type b (Hib) vaccination

- ☐ My spleen has been removed, or I am scheduled for an elective splenectomy.
- ☐ I am a recipient of a stem cell transplant.

Note: Adults who travel may need additional vaccinations, such as polio or others. Talk to your healthcare provider.

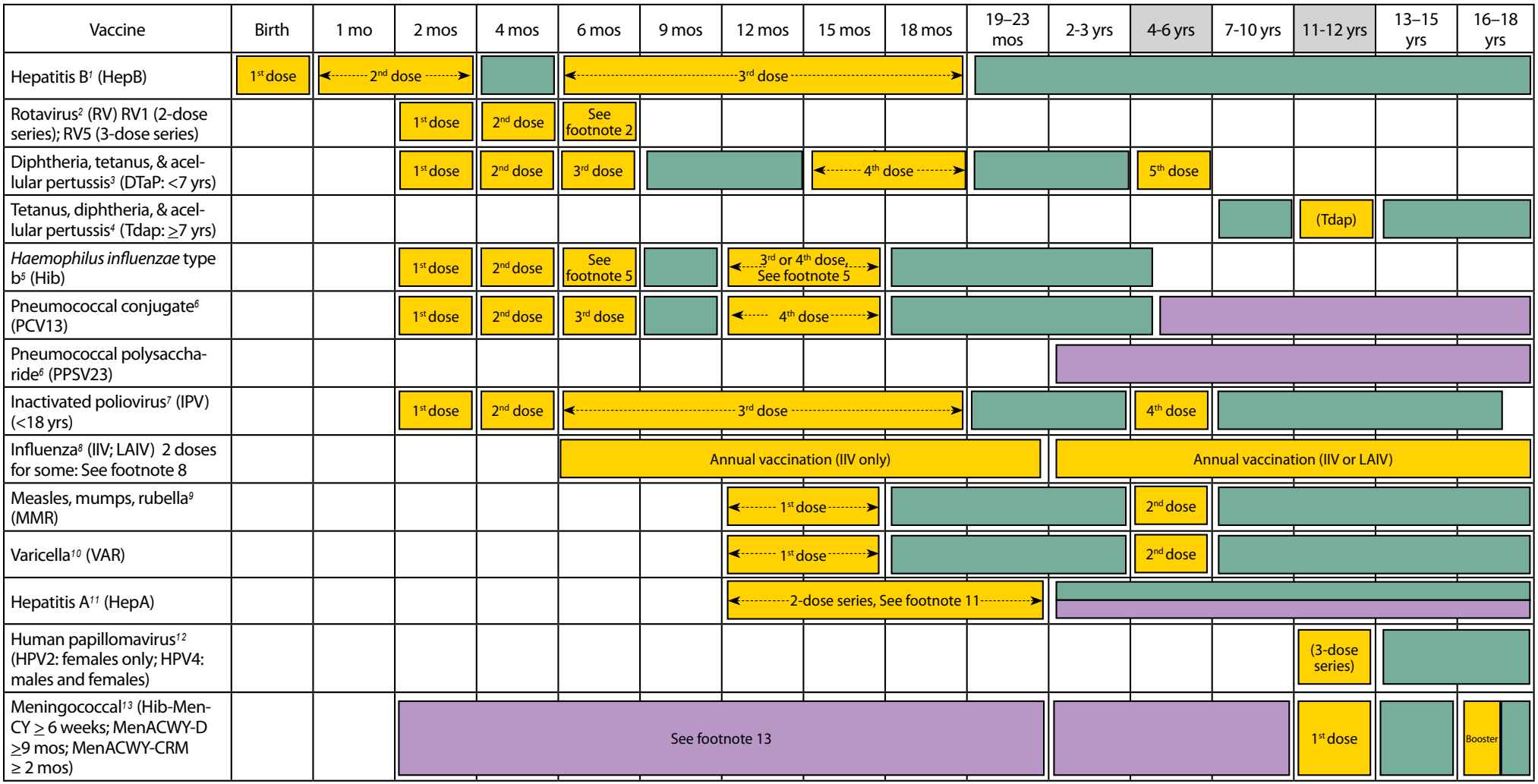
FOOTNOTES

1. Call your local travel clinic to find out if additional vaccines are recommended.
2. Countries where hepatitis A is common include all countries other than the U.S., Western Europe, Canada, Japan, Australia, and New Zealand.
3. Areas with high rates of hepatitis B include Africa, China, Korea, Southeast Asia including Indonesia and the Philippines, South and Western Pacific Islands, interior Amazon Basin, certain parts of the Caribbean (i.e., Haiti and the Dominican Republic), and the Middle East except Israel. Areas with moderate rates include South Central and Southwest Asia, Israel, Japan, Eastern and Southern Europe, Russia, and most of Central and South America.
4. Most adults from moderate- or high-risk areas of the world do not know their hepatitis B status. All patients from these areas need hepatitis B blood tests to determine if they have been previously infected. The first hepatitis B shot can be given during the same visit as the blood tests but only after the blood is drawn.

Figure 1. Recommended immunization schedule for persons aged 0 through 18 years – United States, 2014.

(FOR THOSE WHO FALL BEHIND OR START LATE, SEE THE CATCH-UP SCHEDULE [FIGURE 2]).

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). School entry and adolescent vaccine age groups are in bold.



Range of recommended ages for all children

Range of recommended ages for catch-up immunization

Range of recommended ages for certain high-risk groups

Range of recommended ages during which catch-up is encouraged and for certain high-risk groups

Not routinely recommended

This schedule includes recommendations in effect as of January 1, 2014. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the relevant Advisory Committee on Immunization Practices (ACIP) statement for detailed recommendations, available online at http://www.cdc.gov/vaccines/hcp/acip-recs/index.html. Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (http://www.vaers.hhs.gov) or by telephone (800-822-7967).Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for vaccination, is available from CDC online (http://www.cdc.gov/vaccines/recs/vac-admin/contraindications.htm) or by telephone (800-CDC-INFO [800-232-4636]).

This schedule is approved by the Advisory Committee on Immunization Practices (http//www.cdc.gov/vaccines/acip), the American Academy of Pediatrics (http://www.aap.org), the American Academy of Family Physicians (http://www.aafp.org), and the American College of Obstetricians and Gynecologists (http://www.acog.org).

NOTE: The above recommendations must be read along with the footnotes of this schedule.

Footnotes — Recommended immunization schedule for persons aged 0 through 18 years—United States, 2014

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.
For vaccine recommendations for persons 19 years of age and older, see the adult immunization schedule.

Additional information

- For contraindications and precautions to use of a vaccine and for additional information regarding that vaccine, vaccination providers should consult the relevant ACIP statement available online at http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For purposes of calculating intervals between doses, 4 weeks = 28 days. Intervals of 4 months or greater are determined by calendar months.
- Vaccine doses administered 4 days or less before the minimum interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum interval or minimum age should not be counted as valid doses and should be repeated as age-appropriate. The repeat dose should be spaced after the invalid dose by the recommended minimum interval. For further details, see *MMWR, General Recommendations on Immunization and Reports* / Vol. 60 / No. 2; Table 1. *Recommended and minimum ages and intervals between vaccine doses* available online at http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf.
- Information on travel vaccine requirements and recommendations is available at http://wwwnc.cdc.gov/travel/destinations/list.
- For vaccination of persons with primary and secondary immunodeficiencies, see Table 13, "*Vaccination of persons with primary and secondary immunodeficiencies*," in General Recommendations on Immunization (ACIP), available at http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf.; and American Academy of Pediatrics. Immunization in Special Clinical Circumstances, in Pickering LK, Baker CJ, Kimberlin DW, Long SS eds. *Red Book: 2012 report of the Committee on Infectious Diseases. 29th ed.* Elk Grove Village, IL: American Academy of Pediatrics.

1. Hepatitis B (HepB) vaccine. (Minimum age: birth)

Routine vaccination:

At birth:

- Administer monovalent HepB vaccine to all newborns before hospital discharge.
- For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after completion of the HepB series, at age 9 through 18 months (preferably at the next well-child visit).
- If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine regardless of birth weight. For infants weighing less than 2,000 grams, administer HBIG in addition to HepB vaccine within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if mother is HBsAg-positive, also administer HBIG for infants weighing 2,000 grams or more as soon as possible, but no later than age 7 days.

Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1 to 2 months, and 6 months starting as soon as feasible. See Figure 2.
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks), administer the third dose at least 8 weeks after the second dose AND at least 16 weeks after the **first** dose. The final (third or fourth) dose in the HepB vaccine series should be administered no earlier than age 24 weeks.
- Administration of a total of 4 doses of HepB vaccine is permitted when a combination vaccine containing HepB is administered after the birth dose.

Catch-up vaccination:

- Unvaccinated persons should complete a 3-dose series.
- A 2-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
- For other catch-up guidance, see Figure 2.

2. Rotavirus (RV) vaccines. (Minimum age: 6 weeks for both RV1 [Rotarix] and RV5 [RotaTeq])

Routine vaccination:

Administer a series of RV vaccine to all infants as follows:

1. If Rotarix is used, administer a 2-dose series at 2 and 4 months of age.
2. If RotaTeq is used, administer a 3-dose series at ages 2, 4, and 6 months.
3. If any dose in the series was RotaTeq or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be administered.

Catch-up vaccination:

- The maximum age for the first dose in the series is 14 weeks, 6 days; vaccination should not be initiated for infants aged 15 weeks, 0 days or older.
- The maximum age for the final dose in the series is 8 months, 0 days.
- For other catch-up guidance, see Figure 2.

3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. (Minimum age: 6 weeks. Exception: DTaP-IPV [Kinrix]: 4 years)

Routine vaccination:

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15 through 18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.

Catch-up vaccination:

- The fifth dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.
- For other catch-up guidance, see Figure 2.

4. Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 10 years for Boostrix, 11 years for Adacel)

Routine vaccination:

- Administer 1 dose of Tdap vaccine to all adolescents aged 11 through 12 years.
- Tdap may be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Administer 1 dose of Tdap vaccine to pregnant adolescents during each pregnancy (preferred during 27 through 36 weeks gestation) regardless of time since prior Td or Tdap vaccination.

Catch-up vaccination:

- Persons aged 7 years and older who are not fully immunized with DTaP vaccine should receive Tdap vaccine as 1 (preferably the first) dose in the catch-up series; if additional doses are needed, use Td vaccine. For children 7 through 10 years who receive a dose of Tdap as part of the catch-up series, an adolescent Tdap vaccine dose at age 11 through 12 years should NOT be administered. Td should be administered instead 10 years after the Tdap dose.
- Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter.
- Inadvertent doses of DTaP vaccine:
  - If administered inadvertently to a child aged 7 through 10 years may count as part of the catch-up series. This dose may count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11 through 12 years.
  - If administered inadvertently to an adolescent aged 11 through 18 years, the dose should be counted as the adolescent Tdap booster.
- For other catch-up guidance, see Figure 2.

5. *Haemophilus influenzae* type b (Hib) conjugate vaccine. (Minimum age: 6 weeks for PRP-T [ACTHIB, DTaP-IPV/Hib (Pentacel) and Hib-MenCY (MenHibrix)], PRP-OMP [PedvaxHIB or COMVAX], 12 months for PRP-T [Hiberix])

Routine vaccination:

- Administer a 2- or 3-dose Hib vaccine primary series and a booster dose (dose 3 or 4 depending on vaccine used in primary series) at age 12 through 15 months to complete a full Hib vaccine series.
- The primary series with ActHIB, MenHibrix, or Pentacel consists of 3 doses and should be administered at 2, 4, and 6 months of age. The primary series with PedvaxHib or COMVAX consists of 2 doses and should be administered at 2 and 4 months of age; a dose at age 6 months is not indicated.
- One booster dose (dose 3 or 4 depending on vaccine used in primary series) of any Hib vaccine should be administered at age 12 through 15 months. An exception is Hiberix vaccine. Hiberix should only be used for the booster (final) dose in children aged 12 months through 4 years who have received at least 1 prior dose of Hib-containing vaccine.

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.

5. ***Haemophilus influenzae*** **type b (Hib) conjugate vaccine (cont'd)**
   - For recommendations on the use of MenHibrix in patients at increased risk for meningococcal disease, please refer to the meningococcal vaccine footnotes and also to *MMWR* March 22, 2013; 62(RR02);1-22, available at http://www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

   Catch-up vaccination:
   - If dose 1 was administered at ages 12 through 14 months, administer a second (final) dose at least 8 weeks after dose 1, regardless of Hib vaccine used in the primary series.
   - If the first 2 doses were PRP-OMP (PedvaxHIB or COMVAX), and were administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
   - If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a third (and final) dose at age 12 through 15 months or 8 weeks after second dose, whichever is later, regardless of Hib vaccine used for first dose.
   - If first dose is administered at younger than 12 months of age and second dose is given between 12 through 14 months of age, a third (and final) dose should be given 8 weeks later.
   - For unvaccinated children aged 15 months or older, administer only 1 dose.
   - For other catch-up guidance, see Figure 2. For catch-up guidance related to MenHibrix, please see the meningococcal vaccine footnotes and also *MMWR* March 22, 2013; 62(RR02);1-22, available at http://www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

   Vaccination of persons with high-risk conditions:
   - Children aged 12 through 59 months who are at increased risk for Hib disease, including chemotherapy recipients and those with anatomic or functional asplenia (including sickle cell disease), human immunodeficiency virus (HIV) infection, immunoglobulin deficiency, or early component complement deficiency, who have received either no doses or only 1 dose of Hib vaccine before 12 months of age, should receive 2 additional doses of Hib vaccine 8 weeks apart; children who received 2 or more doses of Hib vaccine before 12 months of age should receive 1 additional dose.
   - For patients younger than 5 years of age undergoing chemotherapy or radiation treatment who received a Hib vaccine dose(s) within 14 days of starting therapy or during therapy, repeat the dose(s) at least 3 months following therapy completion.
   - Recipients of hematopoietic stem cell transplant (HSCT) should be revaccinated with a 3-dose regimen of Hib vaccine starting 6 to 12 months after successful transplant, regardless of vaccination history; doses should be administered at least 4 weeks apart.
   - A single dose of any Hib-containing vaccine should be administered to unimmunized* children and adolescents 15 months of age and older undergoing an elective splenectomy; if possible, vaccine should be administered at least 14 days before procedure.
   - Hib vaccine is not routinely recommended for patients 5 years or older. However, 1 dose of Hib vaccine should be administered to unimmunized* persons aged 5 years or older who have anatomic or functional asplenia (including sickle cell disease) and unvaccinated persons 5 through 18 years of age with human immunodeficiency virus (HIV) infection.

   ** Patients who have not received a primary series and booster dose or at least 1 dose of Hib vaccine after 14 months of age are considered unimmunized.*

6. **Pneumococcal vaccines. (Minimum age: 6 weeks for PCV13, 2 years for PPSV23)**

   Routine vaccination with PCV13:
   - Administer a 4-dose series of PCV13 vaccine at ages 2, 4, and 6 months and at age 12 through 15 months.
   - For children aged 14 through 59 months who have received an age-appropriate series of 7-valent PCV (PCV7), administer a single supplemental dose of 13-valent PCV (PCV13).

   Catch-up vaccination with PCV13:
   - Administer 1 dose of PCV13 to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
   - For other catch-up guidance, see Figure 2.

   Vaccination of persons with high-risk conditions with PCV13 and PPSV23:
   - All recommended PCV13 doses should be administered prior to PPSV23 vaccination if possible.
   - For children 2 through 5 years of age with any of the following conditions: chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure); chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy); diabetes mellitus; cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; solid organ transplantation; or congenital immunodeficiency:
     1. Administer 1 dose of PCV13 if 3 doses of PCV (PCV7 and/or PCV13) were received previously.
     2. Administer 2 doses of PCV13 at least 8 weeks apart if fewer than 3 doses of PCV (PCV7 and/or PCV13) were received previously.
     3. Administer 1 supplemental dose of PCV13 if 4 doses of PCV7 or other age-appropriate complete PCV7 series was received previously.
     4. The minimum interval between doses of PCV (PCV7 or PCV13) is 8 weeks.
     5. For children with no history of PPSV23 vaccination, administer PPSV23 at least 8 weeks after the most recent dose of PCV13.
   - For children aged 6 through 18 years who have cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; generalized malignancy; solid organ transplantation; or multiple myeloma:
     1. If neither PCV13 nor PPSV23 has been received previously, administer 1 dose of PCV13 now and 1 dose of PPSV23 at least 8 weeks later.
     2. If PCV13 has been received previously but PPSV23 has not, administer 1 dose of PPSV23 at least 8 weeks after the most recent dose of PCV13.
     3. If PPSV23 has been received but PCV13 has not, administer 1 dose of PCV13 at least 8 weeks after the most recent dose of PPSV23.
   - For children aged 6 through 18 years with chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure), chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy), diabetes mellitus, alcoholism, or chronic liver disease, who have not received PPSV23, administer 1 dose of PPSV23. If PCV13 has been received previously, then PPSV23 should be administered at least 8 weeks after any prior PCV13 dose.
   - A single revaccination with PPSV23 should be administered 5 years after the first dose to children with sickle cell disease or other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin disease; generalized malignancy; solid organ transplantation; or multiple myeloma.

7. **Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)**

   Routine vaccination:
   - Administer a 4-dose series of IPV at ages 2, 4, 6 through 18 months, and 4 through 6 years. The final dose in the series should be administered on or after the fourth birthday and at least 6 months after the previous dose.

   Catch-up vaccination:
   - In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
   - If 4 or more doses are administered before age 4 years, an additional dose should be administered at age 4 through 6 years and at least 6 months after the previous dose.
   - A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.
   - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age. IPV is not routinely recommended for U.S. residents aged 18 years or older.
   - For other catch-up guidance, see Figure 2.

8. **Influenza vaccines. (Minimum age: 6 months for inactivated influenza vaccine [IIV], 2 years for live, attenuated influenza vaccine [LAIV])**

   Routine vaccination:
   - Administer influenza vaccine annually to all children beginning at age 6 months. For most healthy, nonpregnant persons aged 2 through 49 years, either LAIV or IIV may be used. However, LAIV should NOT be administered to some persons, including 1) those with asthma, 2) children 2 through 4 years who had wheezing in the past 12 months, or 3) those who have any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV, see *MMWR* 2013; 62 (No. RR-7):1-43, available at http://www.cdc.gov/mmwr/pdf/rr/rr6207.pdf.

   For children aged 6 months through 8 years:
   - For the 2013–14 season, administer 2 doses (separated by at least 4 weeks) to children who are receiving influenza vaccine for the first time. Some children in this age group who have been vaccinated previously will also need 2 doses. For additional guidance, follow dosing guidelines in the 2013-14 ACIP influenza vaccine recommendations, *MMWR* 2013; 62 (No. RR-7):1-43, available at http://www.cdc.gov/mmwr/pdf/rr/rr6207.pdf.
   - For the 2014–15 season, follow dosing guidelines in the 2014 ACIP influenza vaccine recommendations.

   For persons aged 9 years and older:
   - Administer 1 dose.

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.

9. Measles, mumps, and rubella (MMR) vaccine. (Minimum age: 12 months for routine vaccination)

Routine vaccination:

- Administer a 2-dose series of MMR vaccine at ages12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
- Administer 1 dose of MMR vaccine to infants aged 6 through 11 months before departure from the United States for international travel. These children should be revaccinated with 2 doses of MMR vaccine, the first at age 12 through 15 months (12 months if the child remains in an area where disease risk is high), and the second dose at least 4 weeks later.
- Administer 2 doses of MMR vaccine to children aged 12 months and older before departure from the United States for international travel. The first dose should be administered on or after age 12 months and the second dose at least 4 weeks later.

Catch-up vaccination:

- Ensure that all school-aged children and adolescents have had 2 doses of MMR vaccine; the minimum interval between the 2 doses is 4 weeks.

10. Varicella (VAR) vaccine. (Minimum age: 12 months)

Routine vaccination:

- Administer a 2-dose series of VAR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose. If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

Catch-up vaccination:

- Ensure that all persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007; 56 [No. RR-4], available at http://www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) have 2 doses of varicella vaccine. For children aged 7 through 12 years, the recommended minimum interval between doses is 3 months (if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid); for persons aged 13 years and older, the minimum interval between doses is 4 weeks.

11. Hepatitis A (HepA) vaccine. (Minimum age: 12 months)

Routine vaccination:

- Initiate the 2-dose HepA vaccine series at 12 through 23 months; separate the 2 doses by 6 to 18 months.
- Children who have received 1 dose of HepA vaccine before age 24 months should receive a second dose 6 to 18 months after the first dose.
- For any person aged 2 years and older who has not already received the HepA vaccine series, 2 doses of HepA vaccine separated by 6 to 18 months may be administered if immunity against hepatitis A virus infection is desired.

Catch-up vaccination:

- The minimum interval between the two doses is 6 months.

Special populations:

- Administer 2 doses of HepA vaccine at least 6 months apart to previously unvaccinated persons who live in areas where vaccination programs target older children, or who are at increased risk for infection. This includes persons traveling to or working in countries that have high or intermediate endemicity of infection; men having sex with men; users of injection and non-injection illicit drugs; persons who work with HAV-infected primates or with HAV in a research laboratory; persons with clotting-factor disorders; persons with chronic liver disease; and persons who anticipate close, personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity. The first dose should be administered as soon as the adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

12. Human papillomavirus (HPV) vaccines. (Minimum age: 9 years for HPV2 [Cervarix] and HPV4 [Gardisil])

Routine vaccination:

- Administer a 3-dose series of HPV vaccine on a schedule of 0, 1-2, and 6 months to all adolescents aged 11 through 12 years. Either HPV4 or HPV2 may be used for females, and only HPV4 may be used for males.
- The vaccine series may be started at age 9 years.
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks), administer the third dose 24 weeks after the first dose and 16 weeks after the second dose (minimum interval of 12 weeks).

Catch-up vaccination:

- Administer the vaccine series to females (either HPV2 or HPV4) and males (HPV4) at age 13 through 18 years if not previously vaccinated.
- Use recommended routine dosing intervals (see above) for vaccine series catch-up.

13. Meningococcal conjugate vaccines. (Minimum age: 6 weeks for Hib-MenCY [MenHibrix], 9 months for MenACWY-D [Menactra], 2 months for MenACWY-CRM [Menveo])

Routine vaccination:

- Administer a single dose of Menactra or Menveo vaccine at age 11 through 12 years, with a booster dose at age 16 years.
- Adolescents aged 11 through 18 years with human immunodeficiency virus (HIV) infection should receive a 2-dose primary series of Menactra or Menveo with at least 8 weeks between doses.
- For children aged 2 months through 18 years with high-risk conditions, see below.

Catch-up vaccination:

- Administer Menactra or Menveo vaccine at age 13 through 18 years if not previously vaccinated.
- If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years with a minimum interval of at least 8 weeks between doses.
- If the first dose is administered at age 16 years or older, a booster dose is not needed.
- For other catch-up guidance, see Figure 2.

Vaccination of persons with high-risk conditions and other persons at increased risk of disease:

- Children with anatomic or functional asplenia (including sickle cell disease):
  1. For children younger than 19 months of age, administer a 4-dose infant series of MenHibrix or Menveo at 2, 4, 6, and 12 through 15 months of age.
  2. For children aged 19 through 23 months who have not completed a series of MenHibrix or Menveo, administer 2 primary doses of Menveo at least 3 months apart.
  3. For children aged 24 months and older who have not received a complete series of MenHibrix or Menveo or Menactra, administer 2 primary doses of either Menactra or Menveo at least 2 months apart. If Menactra is administered to a child with asplenia (including sickle cell disease), do not administer Menactra until 2 years of age and at least 4 weeks after the completion of all PCV13 doses.
- Children with persistent complement component deficiency:
  1. For children younger than 19 months of age, administer a 4-dose infant series of either MenHibrix or Menveo at 2, 4, 6, and 12 through 15 months of age.
  2. For children 7 through 23 months who have not initiated vaccination, two options exist depending on age and vaccine brand:
     a. For children who initiate vaccination with Menveo at 7 months through 23 months of age, a 2-dose series should be administered with the second dose after 12 months of age and at least 3 months after the first dose.
     b. For children who initiate vaccination with Menactra at 9 months through 23 months of age, a 2-dose series of Menactra should be administered at least 3 months apart.
     c. For children aged 24 months and older who have not received a complete series of MenHibrix, Menveo, or Menactra, administer 2 primary doses of either Menactra or Menveo at least 2 months apart.
- For children who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic, including countries in the African meningitis belt or the Hajj, administer an age-appropriate formulation and series of Menactra or Menveo for protection against serogroups A and W meningococcal disease. Prior receipt of MenHibrix is not sufficient for children traveling to the meningitis belt or the Hajj because it does not contain serogroups A or W.
- For children at risk during a community outbreak attributable to a vaccine serogroup, administer or complete an age- and formulation-appropriate series of MenHibrix, Menactra, or Menveo.
- For booster doses among persons with high-risk conditions, refer to *MMWR* 2013; 62(RR02);1-22, available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm.

Catch-up recommendations for persons with high-risk conditions:

1. If MenHibrix is administered to achieve protection against meningococcal disease, a complete age-appropriate series of MenHibrix should be administered.
2. If the first dose of MenHibrix is given at or after 12 months of age, a total of 2 doses should be given at least 8 weeks apart to ensure protection against serogroups C and Y meningococcal disease.
3. For children who initiate vaccination with Menveo at 7 months through 9 months of age, a 2-dose series should be administered with the second dose after 12 months of age and at least 3 months after the first dose.
4. For other catch-up recommendations for these persons, refer to *MMWR* 2013; 62(RR02);1-22, available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm.

For complete information on use of meningococcal vaccines, including guidance related to vaccination of persons at increased risk of infection, see *MMWR* March 22, 2013; 62(RR02);1-22, available at http://www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

Recommended Adult Immunization Schedule—United States - 2014

Note: These recommendations must be read with the footnotes that follow containing number of doses, intervals between doses, and other important information.

Figure 1. Recommended adult immunization schedule, by vaccine and age group[1]

VACCINE ▼ / AGE GROUP ►	19-21 years	22-26 years	27-49 years	50-59 years	60-64 years	≥ 65 years
Influenza [2,*]	1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap) [3,*]	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs					
Varicella [4,*]	2 doses					
Human papillomavirus (HPV) Female [5,*]	3 doses					
Human papillomavirus (HPV) Male [5,*]	3 doses					
Zoster [6]					1 dose	
Measles, mumps, rubella (MMR) [7,*]	1 or 2 doses					
Pneumococcal 13-valent conjugate (PCV13) [8,*]	1 dose					
Pneumococcal polysaccharide (PPSV23) [9,10]	1 or 2 doses					1 dose
Meningococcal [11,*]	1 or more doses					
Hepatitis A [12,*]	2 doses					
Hepatitis B [13,*]	3 doses					
Haemophilus influenzae type b (Hib) [14,*]	1 or 3 doses					

*Covered by the Vaccine Injury Compensation Program

For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster

Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indication)

No recommendation

Report all clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and instructions on filing a VAERS report are available at www.vaers.hhs.gov or by telephone, 800-822-7967.

Information on how to file a Vaccine Injury Compensation Program claim is available at www.hrsa.gov/vaccinecompensation or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the U.S. Court of Federal Claims, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, extent of available data, and contraindications for vaccination is also available at www.cdc.gov/vaccines or from the CDC-INFO Contact Center at 800-CDC-INFO (800-232-4636) in English and Spanish, 8:00 a.m. - 8:00 p.m. Eastern Time, Monday - Friday, excluding holidays.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

The recommendations in this schedule were approved by the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians (AAFP), the American College of Physicians (ACP), American College of Obstetricians and Gynecologists (ACOG) and American College of Nurse-Midwives (ACNM).

Figure 2. Vaccines that might be indicated for adults based on medical and other indications[1]

VACCINE ▼ / INDICATION ►	Pregnancy	Immuno-compromising conditions (excluding human immunodeficiency virus [HIV])[4,6,7,8,15]	HIV infection CD4+ T lymphocyte count [4,6,7,8,15]: < 200 cells/μL	HIV infection CD4+ T lymphocyte count [4,6,7,8,15]: ≥ 200 cells/μL	Men who have sex with men (MSM)	Kidney failure, end-stage renal disease, receipt of hemodialysis	Heart disease, chronic lung disease, chronic alcoholism	Asplenia (including elective splenectomy and persistent complement component deficiencies) [8,14]	Chronic liver disease	Diabetes	Healthcare personnel
Influenza [2,*]	1 dose IIV annually				1 dose IIV or LAIV annually	1 dose IIV annually					1 dose IIV or LAIV annually
Tetanus, diphtheria, pertussis (Td/Tdap) [3,*]	1 dose Tdap each pregnancy	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs									
Varicella [4,*]	Contraindicated			2 doses							
Human papillomavirus (HPV) Female [5,*]		3 doses through age 26 yrs				3 doses through age 26 yrs					
Human papillomavirus (HPV) Male [5,*]		3 doses through age 26 yrs				3 doses through age 21 yrs					
Zoster [6]	Contraindicated				1 dose						
Measles, mumps, rubella (MMR) [7,*]	Contraindicated			1 or 2 doses							
Pneumococcal 13-valent conjugate (PCV13) [8,*]		1 dose									
Pneumococcal polysaccharide (PPSV23) [9,10]		1 or 2 doses									
Meningococcal [11,*]	1 or more doses										
Hepatitis A [12,*]	2 doses										
Hepatitis B [13,*]	3 doses										
Haemophilus influenzae type b (Hib) [14,*]		post-HSCT recipients only		1 or 3 doses							

*Covered by the Vaccine Injury Compensation Program

For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster

Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

No recommendation

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of February 1, 2014. For all vaccines being recommended on the Adult Immunization Schedule: a vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Licensed combination vaccines may be used whenever any components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements from the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/hcp/acip-recs/index.html). Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

Footnotes
Recommended Immunization Schedule for Adults Aged 19 Years or Older: United States, 2014

1. **Additional information**
   - Additional guidance for the use of the vaccines described in this supplement is available at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
   - Information on vaccination recommendations when vaccination status is unknown and other general immunization information can be found in the General Recommendations on Immunization at www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm.
   - Information on travel vaccine requirements and recommendations (e.g., for hepatitis A and B, meningococcal, and other vaccines) is available at http://wwwnc.cdc.gov/travel/destinations/list.
   - Additional information and resources regarding vaccination of pregnant women can be found at http://www.cdc.gov/vaccines/adults/rec-vac/pregnant.html.
2. **Influenza vaccination**
   - Annual vaccination against influenza is recommended for all persons aged 6 months or older.
   - Persons aged 6 months or older, including pregnant women and persons with hives-only allergy to eggs, can receive the inactivated influenza vaccine (IIV). An age-appropriate IIV formulation should be used.
   - Adults aged 18 to 49 years can receive the recombinant influenza vaccine (RIV) (FluBlok). RIV does not contain any egg protein.
   - Healthy, nonpregnant persons aged 2 to 49 years without high-risk medical conditions can receive either intranasally administered live, attenuated influenza vaccine (LAIV) (FluMist), or IIV. Health care personnel who care for severely immunocompromised persons (i.e., those who require care in a protected environment) should receive IIV or RIV rather than LAIV.
   - The intramuscularly or intradermally administered IIV are options for adults aged 18 to 64 years.
   - Adults aged 65 years or older can receive the standard-dose IIV or the high-dose IIV (Fluzone High-Dose).
3. **Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination**
   - Administer 1 dose of Tdap vaccine to pregnant women during each pregnancy (preferred during 27 to 36 weeks' gestation) regardless of interval since prior Td or Tdap vaccination.
   - Persons aged 11 years or older who have not received Tdap vaccine or for whom vaccine status is unknown should receive a dose of Tdap followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter. Tdap can be administered regardless of interval since the most recent tetanus or diphtheria-toxoid containing vaccine.
   - Adults with an unknown or incomplete history of completing a 3-dose primary vaccination series with Td-containing vaccines should begin or complete a primary vaccination series including a Tdap dose.
   - For unvaccinated adults, administer the first 2 doses at least 4 weeks apart and the third dose 6 to 12 months after the second.
   - For incompletely vaccinated (i.e., less than 3 doses) adults, administer remaining doses.
   - Refer to the ACIP statement for recommendations for administering Td/Tdap as prophylaxis in wound management (see footnote 1).
4. **Varicella vaccination**
   - All adults without evidence of immunity to varicella (as defined below) should receive 2 doses of single-antigen varicella vaccine or a second dose if they have received only 1 dose.
   - Vaccination should be emphasized for those who have close contact with persons at high risk for severe disease (e.g., health care personnel and family contacts of persons with immunocompromising conditions) or are at high risk for exposure or transmission (e.g., teachers; child care employees; residents and staff members of institutional settings, including correctional institutions; college students; military personnel; adolescents and adults living in households with children; nonpregnant women of childbearing age; and international travelers).
   - Pregnant women should be assessed for evidence of varicella immunity. Women who do not have evidence of immunity should receive the first dose of varicella vaccine upon completion or termination of pregnancy and before discharge from the health care facility. The second dose should be administered 4 to 8 weeks after the first dose.
   - Evidence of immunity to varicella in adults includes any of the following:
     — documentation of 2 doses of varicella vaccine at least 4 weeks apart;
     —U.S.-born before 1980, except health care personnel and pregnant women;
     — history of varicella based on diagnosis or verification of varicella disease by a health care provider;
     — history of herpes zoster based on diagnosis or verification of herpes zoster disease by a health care provider; or
     — laboratory evidence of immunity or laboratory confirmation of disease.
5. **Human papillomavirus (HPV) vaccination**
   - Two vaccines are licensed for use in females, bivalent HPV vaccine (HPV2) and quadrivalent HPV vaccine (HPV4), and one HPV vaccine for use in males (HPV4).
   - For females, either HPV4 or HPV2 is recommended in a 3-dose series for routine vaccination at age 11 or 12 years and for those aged 13 through 26 years, if not previously vaccinated.
   - For males, HPV4 is recommended in a 3-dose series for routine vaccination at age 11 or 12 years and for those aged 13 through 21 years, if not previously vaccinated. Males aged 22 through 26 years may be vaccinated.
5. **Human papillomavirus (HPV) vaccination (cont'd)**
   - HPV4 is recommended for men who have sex with men through age 26 years for those who did not get any or all doses when they were younger.
   - Vaccination is recommended for immunocompromised persons (including those with HIV infection) through age 26 years for those who did not get any or all doses when they were younger.
   - A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be administered 4 to 8 weeks (minimum interval of 4 weeks) after the first dose; the third dose should be administered 24 weeks after the first dose and 16 weeks after the second dose (minimum interval of at least 12 weeks).
   - HPV vaccines are not recommended for use in pregnant women. However, pregnancy testing is not needed before vaccination. If a woman is found to be pregnant after initiating the vaccination series, no intervention is needed; the remainder of the 3-dose series should be delayed until completion of pregnancy.
6. **Zoster vaccination**
   - A single dose of zoster vaccine is recommended for adults aged 60 years or older regardless of whether they report a prior episode of herpes zoster. Although the vaccine is licensed by the U.S. Food and Drug Administration for use among and can be administered to persons aged 50 years or older, ACIP recommends that vaccination begin at age 60 years.
   - Persons aged 60 years or older with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication, such as pregnancy or severe immunodeficiency.
7. **Measles, mumps, rubella (MMR) vaccination**
   - Adults born before 1957 are generally considered immune to measles and mumps. All adults born in 1957 or later should have documentation of 1 or more doses of MMR vaccine unless they have a medical contraindication to the vaccine or laboratory evidence of immunity to each of the three diseases. Documentation of provider-diagnosed disease is not considered acceptable evidence of immunity for measles, mumps, or rubella.

   Measles component:
   - A routine second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who:
     — are students in postsecondary educational institutions;
     — work in a health care facility; or
     — plan to travel internationally.
   - Persons who received inactivated (killed) measles vaccine or measles vaccine of unknown type during 1963–1967 should be revaccinated with 2 doses of MMR vaccine.

   Mumps component:
   - A routine second dose of MMR vaccine, administered a minimum of 28 days after the first dose, is recommended for adults who:
     — are students in a postsecondary educational institution;
     — work in a health care facility; or
     — plan to travel internationally.
   - Persons vaccinated before 1979 with either killed mumps vaccine or mumps vaccine of unknown type who are at high risk for mumps infection (e.g., persons who are working in a health care facility) should be considered for revaccination with 2 doses of MMR vaccine.

   Rubella component:
   - For women of childbearing age, regardless of birth year, rubella immunity should be determined. If there is no evidence of immunity, women who are not pregnant should be vaccinated. Pregnant women who do not have evidence of immunity should receive MMR vaccine upon completion or termination of pregnancy and before discharge from the health care facility.

   Health care personnel born before 1957:
   - For unvaccinated health care personnel born before 1957 who lack laboratory evidence of measles, mumps, and/or rubella immunity or laboratory confirmation of disease, health care facilities should consider vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval for measles and mumps or 1 dose of MMR vaccine for rubella.
8. **Pneumococcal conjugate (PCV13) vaccination**
   - Adults aged 19 years or older with immunocompromising conditions (including chronic renal failure and nephrotic syndrome), functional or anatomic asplenia, cerebrospinal fluid leaks, or cochlear implants who have not previously received PCV13 or PPSV23 should receive a single dose of PCV13 followed by a dose of PPSV23 at least 8 weeks later.
   - Adults aged 19 years or older with the aforementioned conditions who have previously received 1 or more doses of PPSV23 should receive a dose of PCV13 one or more years after the last PPSV23 dose was received. For adults who require additional doses of PPSV23, the first such dose should be given no sooner than 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.
   - When indicated, PCV13 should be administered to patients who are uncertain of their vaccination status history and have no record of previous vaccination.
   - Although PCV13 is licensed by the U.S. Food and Drug Administration for use among and can be administered to persons aged 50 years or older, ACIP recommends PCV13 for adults aged 19 years or older with the specific medical conditions noted above.

9. Pneumococcal polysaccharide (PPSV23) vaccination

- When PCV13 is also indicated, PCV13 should be given first (see footnote 8).
- Vaccinate all persons with the following indications:
  - all adults aged 65 years or older;
  - adults younger than 65 years with chronic lung disease (including chronic obstructive pulmonary disease, emphysema, and asthma), chronic cardiovascular diseases, diabetes mellitus, chronic renal failure, nephrotic syndrome, chronic liver disease (including cirrhosis), alcoholism, cochlear implants, cerebrospinal fluid leaks, immunocompromising conditions, and functional or anatomic asplenia (e.g., sickle cell disease and other hemoglobinopathies, congenital or acquired asplenia, splenic dysfunction, or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]);
  - residents of nursing homes or long-term care facilities; and
  - adults who smoke cigarettes.
- Persons with immunocompromising conditions and other selected conditions are recommended to receive PCV13 and PPSV23 vaccines. See footnote 8 for information on timing of PCV13 and PPSV23 vaccinations.
- Persons with asymptomatic or symptomatic HIV infection should be vaccinated as soon as possible after their diagnosis.
- When cancer chemotherapy or other immunosuppressive therapy is being considered, the interval between vaccination and initiation of immunosuppressive therapy should be at least 2 weeks. Vaccination during chemotherapy or radiation therapy should be avoided.
- Routine use of PPSV23 vaccine is not recommended for American Indians/Alaska Natives or other persons younger than 65 years unless they have underlying medical conditions that are PPSV23 indications. However, public health authorities may consider recommending PPSV23 for American Indians/Alaska Natives who are living in areas where the risk for invasive pneumococcal disease is increased.
- When indicated, PPSV23 vaccine should be administered to patients who are uncertain of their vaccination status and have no record of vaccination.

10. Revaccination with PPSV23

- One-time revaccination 5 years after the first dose of PPSV23 is recommended for persons aged 19 through 64 years with chronic renal failure or nephrotic syndrome, functional or anatomic asplenia (e.g., sickle cell disease or splenectomy), or immunocompromising conditions.
- Persons who received 1 or 2 doses of PPSV23 before age 65 years for any indication should receive another dose of the vaccine at age 65 years or later if at least 5 years have passed since their previous dose.
- No further doses of PPSV23 are needed for persons vaccinated with PPSV23 at or after age 65 years.

11. Meningococcal vaccination

- Administer 2 doses of quadrivalent meningococcal conjugate vaccine (MenACWY [Menactra, Menveo]) at least 2 months apart to adults of all ages with functional asplenia or persistent complement component deficiencies. HIV infection is not an indication for routine vaccination with MenACWY. If an HIV-infected person of any age is vaccinated, 2 doses of MenACWY should be administered at least 2 months apart.
- Administer a single dose of meningococcal vaccine to microbiologists routinely exposed to isolates of *Neisseria meningitidis*, military recruits, persons at risk during an outbreak attributable to a vaccine serogroup, and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic.
- First-year college students up through age 21 years who are living in residence halls should be vaccinated if they have not received a dose on or after their 16th birthday.
- MenACWY is preferred for adults with any of the preceding indications who are aged 55 years or younger as well as for adults aged 56 years or older who a) were vaccinated previously with MenACWY and are recommended for revaccination, or b) for whom multiple doses are anticipated. Meningococcal polysaccharide vaccine (MPSV4 [Menomune]) is preferred for adults aged 56 years or older who have not received MenACWY previously and who require a single dose only (e.g., travelers).
- Revaccination with MenACWY every 5 years is recommended for adults previously vaccinated with MenACWY or MPSV4 who remain at increased risk for infection (e.g., adults with anatomic or functional asplenia, persistent complement component deficiencies, or microbiologists).

12. Hepatitis A vaccination

- Vaccinate any person seeking protection from hepatitis A virus (HAV) infection and persons with any of the following indications:
  - men who have sex with men and persons who use injection or non-injection illicit drugs;
  - persons working with HAV-infected primates or with HAV in a research laboratory setting;
  - persons with chronic liver disease and persons who receive clotting factor concentrates;
  - persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A; and

12. Hepatitis A vaccination (cont'd)

  - unvaccinated persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity. (See footnote 1 for more information on travel recommendations.) The first dose of the 2-dose hepatitis A vaccine series should be administered as soon as adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.
- Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6 to 12 months (Havrix), or 0 and 6 to 18 months (Vaqta). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule may be used, administered on days 0, 7, and 21 to 30 followed by a booster dose at month 12.

13. Hepatitis B vaccination

- Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection:
  - sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than 1 sex partner during the previous 6 months); persons seeking evaluation or treatment for a sexually transmitted disease (STD); current or recent injection drug users; and men who have sex with men;
  - health care personnel and public safety workers who are potentially exposed to blood or other infectious body fluids;
  - persons with diabetes who are younger than age 60 years as soon as feasible after diagnosis; persons with diabetes who are age 60 years or older at the discretion of the treating clinician based on the likelihood of acquiring HBV infection, including the risk posed by an increased need for assisted blood glucose monitoring in long-term care facilities, the likelihood of experiencing chronic sequelae if infected with HBV, and the likelihood of immune response to vaccination;
  - persons with end-stage renal disease, including patients receiving hemodialysis, persons with HIV infection, and persons with chronic liver disease;
  - household contacts and sex partners of hepatitis B surface antigen–positive persons, clients and staff members of institutions for persons with developmental disabilities, and international travelers to countries with high or intermediate prevalence of chronic HBV infection; and
  - all adults in the following settings: STD treatment facilities, HIV testing and treatment facilities, facilities providing drug abuse treatment and prevention services, health care settings targeting services to injection drug users or men who have sex with men, correctional facilities, end-stage renal disease programs and facilities for chronic hemodialysis patients, and institutions and nonresidential day care facilities for persons with developmental disabilities.
- Administer missing doses to complete a 3-dose series of hepatitis B vaccine to those persons not vaccinated or not completely vaccinated. The second dose should be administered 1 month after the first dose; the third dose should be given at least 2 months after the second dose (and at least 4 months after the first dose). If the combined hepatitis A and hepatitis B vaccine (Twinrix) is used, give 3 doses at 0, 1, and 6 months; alternatively, a 4-dose Twinrix schedule, administered on days 0, 7, and 21 to 30 followed by a booster dose at month 12 may be used.
- Adult patients receiving hemodialysis or with other immunocompromising conditions should receive 1 dose of 40 mcg/mL (Recombivax HB) administered on a 3-dose schedule at 0, 1, and 6 months or 2 doses of 20 mcg/mL (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2, and 6 months.

14. *Haemophilus influenzae type b* (Hib) vaccination

- One dose of Hib vaccine should be administered to persons who have functional or anatomic asplenia or sickle cell disease or are undergoing elective splenectomy if they have not previously received Hib vaccine. Hib vaccination 14 or more days before splenectomy is suggested.
- Recipients of a hematopoietic stem cell transplant should be vaccinated with a 3-dose regimen 6 to 12 months after a successful transplant, regardless of vaccination history; at least 4 weeks should separate doses.
- Hib vaccine is not recommended for adults with HIV infection since their risk for Hib infection is low.

15. Immunocompromising conditions

- Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, and inactivated influenza vaccine) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.

Asthma Action Plan

For: _____ Doctor: _____ Date: _____

Doctor's Phone Number _____ Hospital/Emergency Department Phone Number _____

GREEN ZONE

Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

And, if a peak flow meter is used,

Peak flow: more than _____
(80 percent or more of my best peak flow)

My best peak flow is: _____

Take these long-term control medicines each day (include an anti-inflammatory).

Medicine	How much to take	When to take it
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Before exercise	❒ _____	❒ 2 or ❒ 4 puffs _____	5 minutes before exercise

YELLOW ZONE

Asthma Is Getting Worse

- Cough, wheeze, chest tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities

-Or-

Peak flow: _____ to _____
(50 to 79 percent of my best peak flow)

First

Add: quick-relief medicine—and keep taking your GREEN ZONE medicine.

_____ (short-acting beta$_2$-agonist)

❒ 2 or ❒ 4 puffs, every 20 minutes for up to 1 hour
❒ Nebulizer, once

Second

If your symptoms (and peak flow, if used) return to GREEN ZONE after 1 hour of above treatment:
❒ Continue monitoring to be sure you stay in the green zone.

-Or-

If your symptoms (and peak flow, if used) do not return to GREEN ZONE after 1 hour of above treatment:
❒ Take: _____ (short-acting beta$_2$-agonist) ❒ 2 or ❒ 4 puffs or ❒ Nebulizer
❒ Add: _____ (oral steroid) mg per day For _____(3–10) days
❒ Call the doctor ❒ before/ ❒ within _____ hours after taking the oral steroid.

RED ZONE

Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are same or get worse after 24 hours in Yellow Zone

-Or-

Peak flow: less than _____
(50 percent of my best peak flow)

Take this medicine:

❒ _____ (short-acting beta$_2$-agonist) ❒ 4 or ❒ 6 puffs or ❒ Nebulizer

❒ _____ (oral steroid) mg

Then call your doctor NOW. Go to the hospital or call an ambulance if:
- You are still in the red zone after 15 minutes AND
- You have not reached your doctor.

DANGER SIGNS

- **Trouble walking and talking due to shortness of breath**
- **Lips or fingernails are blue**

- **Take ❒ 4 or ❒ 6 puffs of your quick-relief medicine AND**
- **Go to the hospital or call for an ambulance _____ (phone) NOW!**

See the reverse side for things you can do to avoid your asthma triggers.

How To Control Things That Make Your Asthma Worse

This guide suggests things you can do to avoid your asthma triggers. Put a check next to the triggers that you know make your asthma worse and ask your doctor to help you find out if you have other triggers as well. Then decide with your doctor what steps you will take.

Allergens

❒ Animal Dander

Some people are allergic to the flakes of skin or dried saliva from animals with fur or feathers.

The best thing to do:

- Keep furred or feathered pets out of your home.

If you can't keep the pet outdoors, then:

- Keep the pet out of your bedroom and other sleeping areas at all times, and keep the door closed.
- Remove carpets and furniture covered with cloth from your home. If that is not possible, keep the pet away from fabric-covered furniture and carpets.

❒ Dust Mites

Many people with asthma are allergic to dust mites. Dust mites are tiny bugs that are found in every home—in mattresses, pillows, carpets, upholstered furniture, bedcovers, clothes, stuffed toys, and fabric or other fabric-covered items.

Things that can help:

- Encase your mattress in a special dust-proof cover.
- Encase your pillow in a special dust-proof cover or wash the pillow each week in hot water. Water must be hotter than 130° F to kill the mites. Cold or warm water used with detergent and bleach can also be effective.
- Wash the sheets and blankets on your bed each week in hot water.
- Reduce indoor humidity to below 60 percent (ideally between 30—50 percent). Dehumidifiers or central air conditioners can do this.
- Try not to sleep or lie on cloth-covered cushions.
- Remove carpets from your bedroom and those laid on concrete, if you can.
- Keep stuffed toys out of the bed or wash the toys weekly in hot water or cooler water with detergent and bleach.

❒ Cockroaches

Many people with asthma are allergic to the dried droppings and remains of cockroaches.

The best thing to do:

- Keep food and garbage in closed containers. Never leave food out.
- Use poison baits, powders, gels, or paste (for example, boric acid). You can also use traps.
- If a spray is used to kill roaches, stay out of the room until the odor goes away.

❒ Indoor Mold

- Fix leaky faucets, pipes, or other sources of water that have mold around them.
- Clean moldy surfaces with a cleaner that has bleach in it.

❒ Pollen and Outdoor Mold

What to do during your allergy season (when pollen or mold spore counts are high):

- Try to keep your windows closed.
- Stay indoors with windows closed from late morning to afternoon, if you can. Pollen and some mold spore counts are highest at that time.
- Ask your doctor whether you need to take or increase anti-inflammatory medicine before your allergy season starts.

Irritants

❒ Tobacco Smoke

- If you smoke, ask your doctor for ways to help you quit. Ask family members to quit smoking, too.
- Do not allow smoking in your home or car.

❒ Smoke, Strong Odors, and Sprays

- If possible, do not use a wood-burning stove, kerosene heater, or fireplace.
- Try to stay away from strong odors and sprays, such as perfume, talcum powder, hair spray, and paints.

Other things that bring on asthma symptoms in some people include:

❒ Vacuum Cleaning

- Try to get someone else to vacuum for you once or twice a week, if you can. Stay out of rooms while they are being vacuumed and for a short while afterward.
- If you vacuum, use a dust mask (from a hardware store), a double-layered or microfilter vacuum cleaner bag, or a vacuum cleaner with a HEPA filter.

❒ Other Things That Can Make Asthma Worse

- Sulfites in foods and beverages: Do not drink beer or wine or eat dried fruit, processed potatoes, or shrimp if they cause asthma symptoms.
- Cold air: Cover your nose and mouth with a scarf on cold or windy days.
- Other medicines: Tell your doctor about all the medicines you take. Include cold medicines, aspirin, vitamins and other supplements, and nonselective beta-blockers (including those in eye drops).

U.S. Department of Health and Human Services
National Institutes of Health

National Heart Lung and Blood Institute

For More Information, go to: www.nhlbi.nih.gov

NIH Publication No. 07-5251
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Blood Glucose Tracker

Please use this form to record your blood glucose

Patient Name: ____ **Date of Birth**: ______/______/______

Week of:	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
______/______/______	before	after	before	after	before	after	before	after	before	after	before	after	before	after
Breakfast														
Lunch														
Dinner														
Bedtime														

Week of:	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
______/______/______	before	after	before	after	before	after	before	after	before	after	before	after	before	after
Breakfast														
Lunch														
Dinner														
Bedtime														

Week of:	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
______/______/______	before	after	before	after	before	after	before	after	before	after	before	after	before	after
Breakfast														
Lunch														
Dinner														
Bedtime														

Week of:	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
______/______/______	before	after	before	after	before	after	before	after	before	after	before	after	before	after
Breakfast														
Lunch														
Dinner														
Bedtime														

Blood Pressure Tracker

Please use this form to record your blood pressure.

Patient Name: _____ **Date of Birth**: _____/ _____/_____

Date	Time	Systolic / Diastolic	Pulse	Notes
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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

NIH National Institute on Aging

Advance Care Planning
Tips from the National Institute on Aging

Advance care planning is not just about old age. At any age, a medical crisis could leave someone too ill to make his or her own healthcare decisions. Even if you are not sick now, making healthcare plans for the future is an important step toward making sure you get the medical care you would want, even when doctors and family members are making the decisions for you.

More than one out of four older Americans face questions about medical treatment near the end of life but are not capable of making those decisions. This tip sheet will discuss some questions you can think about now and describe ways to share your wishes with others. Write them down or at least talk about them with someone who would make the decisions for you. Knowing how you would decide might take some of the burden off family and friends.

What Is Advance Care Planning?

Advance care planning involves learning about the types of decisions that might need to be made, considering those decisions ahead of time, and then letting others know about your preferences, often by putting them into an *advance directive*. An advance directive is a legal document that goes into effect **only** if you are incapacitated and unable to speak for yourself. This could be the result of disease or severe injury—no matter how old you are. It helps others know what type of medical care you want.

Medical Research and Advance Care Planning

Medical research plays an important role in the health of Americans of all ages. Because of advances in medicine and in public health, Americans are living longer and staying healthier as they grow older. The National Institute on Aging (NIA) supports much of the research around the country that looks at how people age and how to improve their health in their later years. NIA is part of the National Institutes of Health (NIH), the nation's medical research agency.

Some NIA-supported research focuses on advance care planning, including examining why people might complete advance directives and the effect of these directives on end-of-life care. In one study, for example, scientists funded by NIA found that advance directives can make a difference and that people who document their preferences in this way are more likely to get the care they prefer at the end of life than people who do not.

It also allows you to express your values and desires related to end-of-life care. You might think of an advance directive as a living document—one that you can adjust as your situation changes because of new information or a change in your health.

Decisions That Could Come Up Near Death

Sometimes when doctors believe a cure is no longer possible and you are dying, decisions must be made about the use of emergency treatments to keep you alive. Doctors can use several artificial or mechanical ways to try to do this. Decisions that might come up at this time relate to:

- CPR (cardiopulmonary resuscitation)
- ventilator use
- artificial nutrition (tube feeding) or artificial hydration (intravenous fluids)
- comfort care

CPR. CPR (cardiopulmonary resuscitation) might restore your heartbeat if your heart stops or is in a life-threatening abnormal rhythm. The heart of a young, otherwise healthy person might resume beating normally after CPR. An otherwise healthy older person, whose heart is beating erratically or not beating at all, might also be helped by CPR. CPR is less likely to work for an older person who is ill, can't be successfully treated, and is already close to death. It involves repeatedly pushing on the chest with force, while putting air into the lungs. This force has to be quite strong, and sometimes ribs are broken or a lung collapses. Electric shocks known as defibrillation and medicines might also be used as part of the process.

Ventilator use. Ventilators are machines that help you breathe. A tube connected to the ventilator is put through the throat into the trachea (windpipe) so the machine can force air into the lungs. Putting the tube down the throat is called intubation. Because the tube is uncomfortable, medicines are used to keep you sedated (unconscious) while on a ventilator. If you can't breathe on your own after a few days, a doctor may perform a tracheotomy or "trach" (rhymes with "make"). During this bedside surgery, the tube is inserted directly into the trachea through a hole in the neck. For long-term help with breathing, a trach is more comfortable, and sedation is not needed. People using such a breathing tube aren't able to speak without special help because exhaled air goes out of the trach rather than past their vocal cords.

Artificial nutrition or artificial hydration. A feeding tube and/or intravenous (IV) liquids are sometimes used to provide nutrition when a person is not able to eat or drink. These measures can be helpful if you are recovering from an illness. However, if you are near death, these could actually make you more uncomfortable. For example, IV liquids, which are given through a plastic tube put into a vein, can increase the burden on failing kidneys. Or if the body is shutting down near death, it is not able to digest food properly, even when provided through a feeding tube. At first, the feeding tube is threaded through the nose down to the stomach. In time, if tube feeding is still needed, the tube is surgically inserted into the stomach.

Comfort care. Comfort care is anything that can be done to soothe you and relieve suffering while staying in line with your

wishes. Comfort care includes managing shortness of breath; offering ice chips for dry mouth; limiting medical testing; providing spiritual and emotional counseling; and giving medication for pain, anxiety, nausea, or constipation. Often this is done through hospice, which may be offered in the home, in a hospice facility, in a skilled nursing facility, or in a hospital. With hospice, a team of healthcare providers works together to provide the best possible quality of life in a patient's final days, weeks, or months. After death, the hospice team continues to offer support to the family.

What Is Hospice Care? What Is Palliative Care?

Hospice care is intended to provide comfort to you and your family during a life-threatening illness, rather than provide treatments to cure the illness. Palliative care is similar to comfort care in hospice, but it is offered along with any medical treatments you might be receiving for a life-threatening illness, such as chemotherapy for cancer or dialysis for kidney failure. The main goal of both hospice and palliative care is to keep you comfortable. In addition, you can always choose to move from hospice to palliative care if you want to pursue treatments to cure your illness.

Getting Started

Start by thinking about what kind of treatment you do or do not want in a medical emergency. It might help to talk with your doctor about how your present health conditions might influence your health in the future. For example, what decisions would you or your family face if your high blood pressure leads to a stroke?

If you don't have any medical issues now, your family medical history might be a clue to thinking about the future. Talk to your doctor about decisions that might come up if you develop health problems similar to those of other family members.

In considering treatment decisions, your personal values are key. Is your main desire to have the most days of life, or to have the most life in your days? What if an illness leaves you paralyzed or in a permanent coma and you need to be on a ventilator? Would you want that?

What makes life meaningful to you? You might want doctors to try CPR if your heart stops or to try using a ventilator for a short time if you've had trouble breathing, if that means that, in the future, you could be well enough to spend time with your family. Even if the emergency leaves you simply able to spend your days listening to books on tape or gazing out the window watching the birds and squirrels compete for seeds in the bird feeder, you might be content with that.

But, there are many other scenarios. Here are a few. What would you decide?

- If a stroke leaves you paralyzed and then your heart stops, would you want CPR? What if you were also mentally impaired by a stroke—does your decision change?
- What if you develop dementia, don't recognize family and friends, and, in time, cannot feed yourself? Would you want a feeding tube used to give you nutrition?

- What if you are permanently unconscious and then develop pneumonia? Would you want antibiotics and a ventilator used?

For some people, staying alive as long as medically possible is the most important thing. An advance directive can help make sure that happens.

Your decisions about how to handle any of these situations could be different at age 40 than at age 85. Or they could be different if you have an incurable condition as opposed to being generally healthy. An advance directive allows you to provide instructions for these types of situations and then to change the instructions as you get older or if your viewpoint changes.

Making Your Wishes Known

There are two elements in an advance directive—a living will and a durable power of attorney for health care. There are also other documents that can supplement your advance directive or stand alone. You can choose which documents to create, depending on how you want decisions to be made. These documents include:

- living will
- durable power of attorney for health care
- other documents discussing DNR (do not resuscitate) orders, organ and tissue donation, dialysis, and blood transfusions

Living will. A living will is a written document that helps you tell doctors how you want to be treated if you are dying or permanently unconscious and cannot make decisions about emergency treatment. In a living will, you can say which of the procedures described on page 2 you would want, which ones you wouldn't want, and under which conditions each of your choices applies.

Durable power of attorney for health care. A durable power of attorney for health care is a legal document naming a healthcare proxy, someone to make medical decisions for you at times when you might not be able to do so. Your proxy, also known as a surrogate or agent, should be familiar with your values and wishes. This means that he or she will be able to decide as you would when treatment decisions need to be made. A proxy can be chosen in addition to or instead of a living will. Having a healthcare proxy helps you plan for situations that cannot be foreseen, like a serious auto accident.

A durable power of attorney for health care enables you to be more specific about your medical treatment than a living will.

Some people are reluctant to put specific health decisions in writing. For them, naming a healthcare agent might be a good approach, especially if there is someone they feel comfortable talking with about their values and preferences.

Other advance care planning documents. You might also want to prepare separate documents to express your wishes about a single medical issue or something not already covered in your advance directive. A living will usually covers only the specific life-sustaining treatments discussed earlier. You might want to give your healthcare proxy specific instructions about other issues, such as blood transfusion or kidney dialysis. This is especially important if your doctor suggests that, given your health condition, such treatments might be needed in the future.

Two medical issues that might arise at the end of life are DNR orders and organ and tissue donation.

A *DNR (do not resuscitate) order* tells medical staff in a hospital or nursing facility that you do not want them to try to return your heart to a normal rhythm if it stops or is beating unevenly. Even though a living will might say CPR is not wanted, it is helpful to have a DNR order as part of your medical file if you go to a hospital. Posting a DNR next to your bed might avoid confusion in an emergency situation. Without a DNR order, medical staff will make every effort to restore the normal rhythm of your heart. A *non-hospital DNR* will alert emergency medical personnel to your wishes regarding CPR and other measures to restore your heartbeat if you are not in the hospital. A similar document that is less familiar is called a *DNI (do not intubate) order*. A DNI tells medical staff in a hospital or nursing facility that you do not want to be put on a breathing machine.

Organ and tissue donation allows organs or body parts from a generally healthy person who has died to be transplanted into people who need them. Commonly, the heart, lungs, pancreas, kidneys, corneas, liver, and skin are donated. There is no age limit for organ and tissue donation. You can carry a donation card in your wallet. Some states allow you to add this decision to your driver's license. Some people also include organ donation in their advance care planning documents. At the time of death, family may be asked about organ donation. If those close to you, especially your proxy, know how you feel about organ donation, they will be ready to respond. See *For More Information* for resources about organ and tissue donation.

What About Pacemakers and ICDs?

Some people have pacemakers to help their hearts beat regularly. If you have one and are near death, it may not necessarily keep you alive. But, you might have an ICD (implantable cardioverter-defibrillator) placed under your skin to shock your heart back into regular beatings if the rhythm becomes irregular. If other life-sustaining measures are not used, the ICD may also be turned off. You need to state in your advance directive what you want done if the doctor suggests it is time to turn it off.

Selecting Your Healthcare Proxy

If you decide to choose a proxy, think about people you know who share your views and values about life and medical decisions. Your proxy might be a family member, a friend, your lawyer, or someone with whom you worship. It's a good idea to also name an alternate proxy. It is especially important to have a detailed living will if you choose not to name a proxy.

You can decide how much authority your proxy has over your medical care—whether he or she is entitled to make a wide range of decisions or only a few specific ones. Try not to include guidelines that make it impossible for the proxy to fulfill his or her duties. For example, it's probably not unusual for someone to say in conversation, "I don't want to go to a nursing home," but think carefully about whether you want a restriction like that in your advance directive. Sometimes, for financial or medical reasons, that may be the best choice for you.

Of course, check with those you choose as your healthcare proxy and alternate before you name them officially. Make sure they are comfortable with this responsibility.

Making It Official

Once you have talked with your doctor and have an idea of the types of decisions that could come up in the future and whom you would like as a proxy, if you want one at all, the next step is to fill out the legal forms detailing your wishes. A lawyer can help but is not required. If you decide to use a lawyer, don't depend on him or her to help you understand different medical treatments. That's why you should start the planning process by talking with your doctor.

Many states have their own advance directive forms. Your local Area Agency on Aging can help you locate the right forms. You can find your area agency phone number by calling the Eldercare Locator toll-free at 1-800-677-1116 or going online at *www.eldercare.gov*.

Some states want your advance directive to be witnessed; some want your signature notarized. A notary is a person licensed by the state to witness signatures. You might find a notary at your bank, post office, or local library, or call your insurance agent. Some notaries charge a fee.

Some people spend a lot of time in more than one state—for example, visiting children and grandchildren. If that's your situation also, you might consider preparing an advance directive using forms for each state—and keep a copy in each place, too.

Future Directions

A number of states are developing or starting to use an advance care planning form known as POLST (Physician Orders for Life-Sustaining Treatment) or MOLST (Medical Orders for Life-Sustaining Treatment). These forms serve in addition to your advance directive. They make it possible for you to provide more detailed guidance about your medical care preferences. Your doctor will talk with you and/or your family for guidance, but the form is filled out by the doctor or, sometimes, a nurse practitioner or physician's assistant. Once signed by your doctor, this form has the force of any other medical order. These forms are often printed on brightly colored paper so they are easily found in a medical or hospital file. Check with your state department of health to find out if this form is available where you live.

After You Set Up Your Advance Directive

There are key people who should be told that you have an advance directive. Give copies to your healthcare proxy and alternate proxy. Give your doctor a copy for your medical records. Tell key family members and friends where you keep a copy. If you have to go to the hospital, give staff there a copy to include in your records. Because you might change your advance directive in the future, it's a good idea to keep track of who receives a copy.

Review your advance care planning decisions from time to time—for example, every 10 years, if not more often. You might

want to revise your preferences for care if your situation or your health changes. Or, you might want to make adjustments if you receive a serious diagnosis; if you get married, separated, or divorced; if your spouse dies; or if something happens to your proxy or alternate. If your preferences change, you will want to make sure your doctor, proxy, and family know about them.

Still Not Sure?

What happens if you have no advance directive or have made no plans and you become unable to speak for yourself? In such cases, the state where you live will assign someone to make medical decisions on your behalf. This will probably be your spouse, your parents if they are available, or your children if they are adults. If you have no family members, the state will choose someone to represent your best interests.

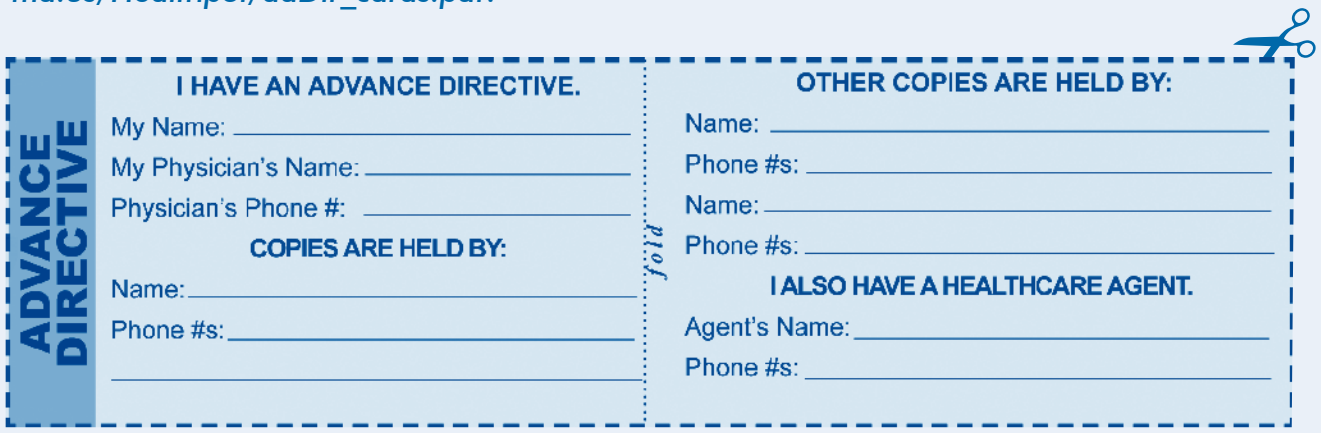
Always remember, an advance directive is only used if you are in danger of dying and need certain emergency or special measures to keep you alive but are not able to make those decisions on your own. An advance directive allows you to continue to make your wishes about medical treatment known.

Looking Toward the Future

Nobody can predict the future. You may never face a medical situation where you are unable to speak for yourself and make your wishes known. But having an advance directive may give you and those close to you some peace of mind.

Advance Directive Wallet Card

You might want to make a card to carry in your wallet indicating that you have an advance directive and where it is kept. Here is a slightly revised example of the wallet card offered by the Office of the Attorney General in Maryland. It uses the phrase "healthcare agent" instead of "healthcare proxy." You might want to make a copy or cut this one out to fill out and carry with you. It can also be found online at *www.oag.state.md.us/Healthpol/adDir_cards.pdf*.



For More Information

Other federal and non-federal resources with information about advance directives include:

Caring Connections
National Hospice and Palliative Care Organization
1-800-658-8898 (toll-free)
1-877-658-8896 (toll-free/multilingual)
www.caringinfo.org

Caring Conversations
Center for Practical Bioethics
Harzfeld Building
1111 Main Street, Suite 500
Kansas City, MO 64105-2116
1-800-344-3829 (toll-free)
www.practicalbioethics.org

American Bar Association
321 North Clark Street
Chicago, IL 60654
1-800-285-2221
www.americanbar.org
(search for "Consumer's Tool Kit for Health Care Advance Planning")

Donate Life America
701 East Byrd Street, 16th floor
Richmond, VA 23219
1-804-377-3580
www.donatelife.net

National Legal Resource Center
www.nlrc.aoa.gov

OrganDonor.gov
Health Resources and Services Administration
1-888-275-4772 (toll-free)
www.organdonor.gov

POLST (Physician Orders for Life-Sustaining Treatment)
www.polst.org

Put It In Writing
American Hospital Association
155 North Wacker Drive
Chicago, IL 60606
1-800-424-4301 (toll-free)
www.putitinwriting.org

The Living Bank
P.O. Box 6725
Houston, TX 77265
1-800-528-2971 (toll-free)
www.livingbank.org

For more information about health and aging, contact:

National Institute on Aging Information Center
P.O. Box 8057 • Gaithersburg, MD 20898-8057
1-800-222-2225 (toll-free) • 1-800-222-4225 (TTY/toll-free)
www.nia.nih.gov • www.nia.nih.gov/espanol

To order free publications (in English or Spanish) or sign up for email alerts, go to:
www.nia.nih.gov/health

*Visit **www.nihseniorhealth.gov**, a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has health and wellness information for older adults. Special features make it simple to use. For example, you can click on a button to make the type larger.*

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