

Vaccination recommendations for children, adolescents, and adults

Updates

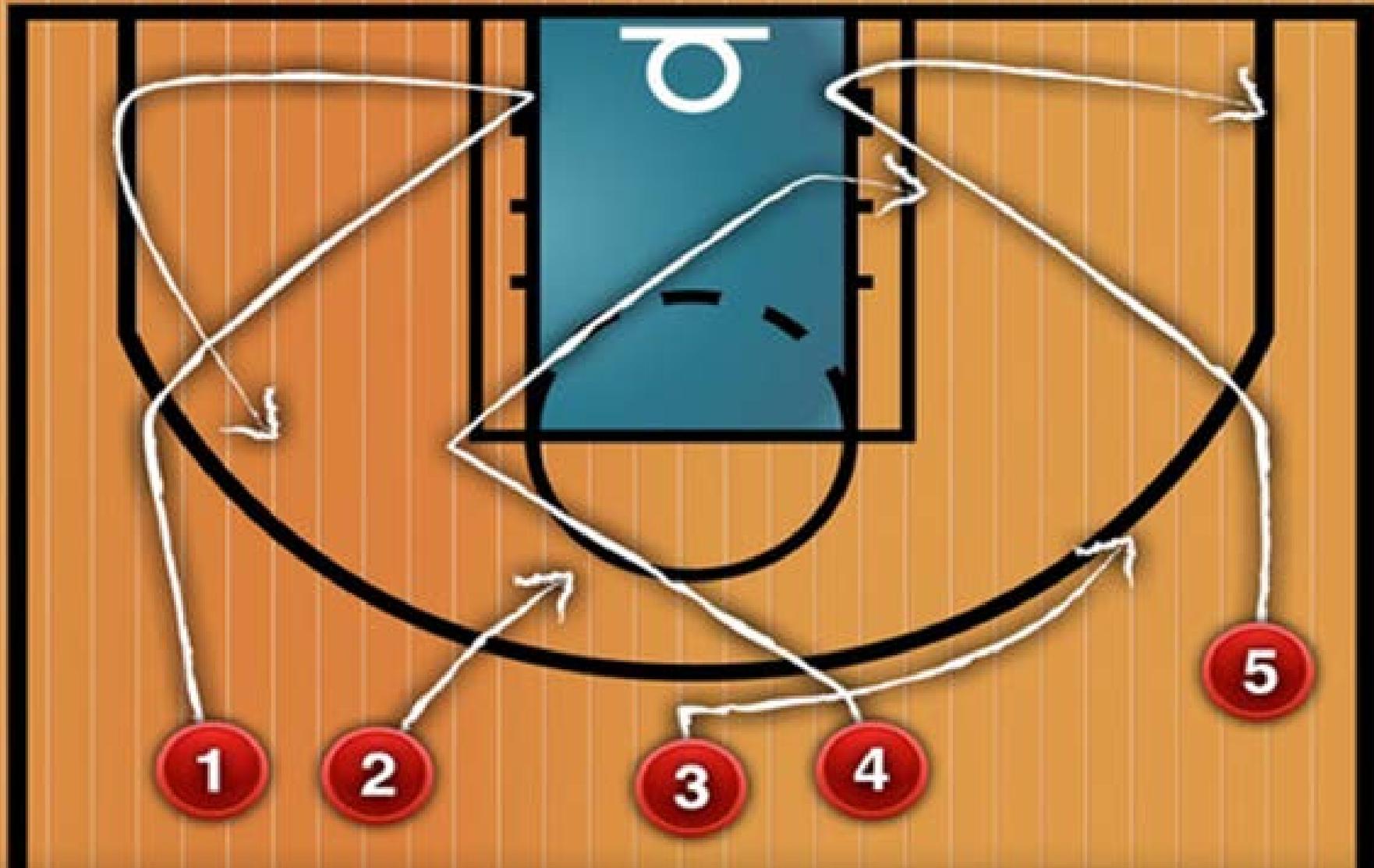
Immunization practice standards

Federal & State Immunization reporting requirements

PLAYBOOK

Stephanie Massay





Strategies to Increase Immunization Levels

- ▶ An important component of an immunization provider's practice is ensuring that vaccines reach all people who need them.
 - ▶ While attention to appropriate administration of vaccinations is essential, it cannot be assumed that these vaccinations are being given to every person at the recommended age.
 - ▶ Immunization levels in the United States are high for some ages and populations, but gaps still exist, and providers can do much to maintain or increase immunization rates among patients in their practice.
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Immunization Recommendations



General Recommendations on Immunization

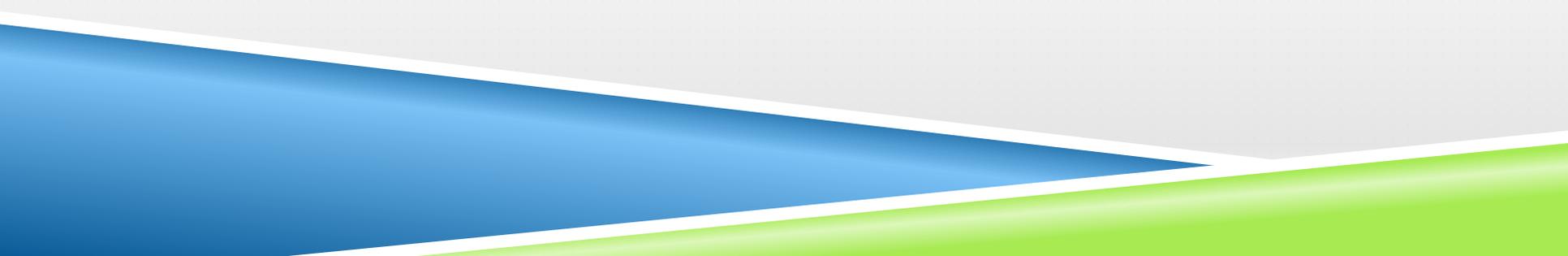
Recommendations of the Advisory Committee
on Immunization Practices (ACIP)



ACIP: a group of medical and public health experts that develops recommendations on how to use currently licensed vaccines to control diseases in the United States.

- ▶ The Centers for Disease Control and Prevention publishes the ACIP recommendations.

What does the ACIP consider in the vaccine recommendation process?

- ▶ The safety and effectiveness of the vaccine when given at specific ages.
 - ▶ The severity of the disease.
 - ▶ The number of people who get the disease if there is no vaccine.
 - ▶ How well a vaccine works for people of different ages.
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Recommended Immunization Schedules

- ▶ Each year, the Advisory Committee on Immunization Practices (ACIP) publishes immunizations schedules for persons age birth through 18 years and adults.
 - ▶ Summarize routine recommendations for vaccines including:
 - ▶ Age(s) when a vaccine should be given
 - ▶ Number of doses needed
 - ▶ Amount of time between doses
 - ▶ Precautions and contraindications
- ▶ Information made available from CDC and by the Alaska Immunization Program
 - ▶ Healthcare provider schedules
 - ▶ Detailed recommendations and further guidance on use of vaccines
 - ▶ Easy-to-read schedules
 - ▶ Format for all ages, including information on vaccine-preventable diseases and vaccines that prevent them.

Figure 1. Recommended immunization schedule for persons aged 0 through 18 years – United States, 2015.

(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 shaded.

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2–3 yrs	4–6 yrs	7–10 yrs	11–12 yrs	13–15 yrs	16–18 yrs
Hepatitis B ¹ (HepB)	1 st dose	← 2 nd dose →			← 3 rd dose →											
Rotavirus ² (RV) RV1 (2-dose series); RVS (3-dose series)			1 st dose	2 nd dose	See footnote 2											
Diphtheria, tetanus, & acellular pertussis ³ (DTaP; <7 yrs)			1 st dose	2 nd dose	3 rd dose			← 4 th dose →				5 th dose				
Tetanus, diphtheria, & acellular pertussis ³ (Tdap; ≥7 yrs)														(Tdap)		
Haemophilus influenzae type b ⁴ (Hib)			1 st dose	2 nd dose	See footnote 5			← 3 rd or 4 th dose → See footnote 5								
Pneumococcal conjugate ⁶ (PCV13)			1 st dose	2 nd dose	3 rd dose		← 4 th dose →									
Pneumococcal polysaccharide ⁶ (PPSV23)																
Inactivated poliovirus ⁷ (IPV; <18 yrs)			1 st dose	2 nd dose	← 3 rd dose →						4 th dose					
Influenza ⁸ (IV; LAIV) 2 doses for some: See footnote 8					Annual vaccination (IV only) 1 or 2 doses						Annual vaccination (LAIV or IV) 1 or 2 doses		Annual vaccination (LAIV or IV) 1 dose only			
Measles, mumps, rubella ⁹ (MMR)					See footnote 9		← 1 st dose →					2 nd dose				
Varicella ¹⁰ (VAR)							← 1 st dose →					2 nd dose				
Hepatitis A ¹¹ (HepA)							← 2-dose series, See footnote 11 →									
Human papillomavirus ¹² (HPV2: females only; HPV4: males and females)															(3-dose series)	
Meningococcal ¹³ (Hib-MenCY ≥ 6 weeks; MenACWY-D ≥ 9 mos; MenACWY-CRM ≥ 2 mos)			See footnote 13											1 st dose		Booster

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, 2015. 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.html>) or by telephone (800-CDC-INFO or 301-232-4636).

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.

FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind —United States, 2015.

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

Children age 4 months through 6 years					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B ¹	Birth	4 weeks	8 weeks and at least 16 weeks after first dose. Minimum age for the final dose is 24 weeks.		
Rotavirus ²	6 weeks	4 weeks	4 weeks ²		
Diphtheria, tetanus, and acellular pertussis ³	6 weeks	4 weeks	4 weeks	6 months	6 months ²
Neisseria meningitidis type 13 ⁴	6 weeks	4 weeks if first dose was administered before the 1 st birthday. 8 weeks (as final dose) if first dose was administered at age 12 through 14 months. No further doses needed if first dose was administered at age 15 months or older.	4 weeks ² if current age is younger than 12 months and first dose was administered at younger than age 7 months, and at least 1 previous dose was PRP-T (Act-SB, Pentacel) or unknown. 8 weeks and age 12 through 59 months (as final dose) ⁵ - if current age is younger than 12 months and first dose was administered at age 7 through 11 months; OR - if current age is 12 through 59 months and first dose was administered before the 1 st birthday, and second dose administered at younger than 15 months; OR - if both doses were PRP-OM ⁶ (Preload 6B; Comvax) and were administered before the 1 st birthday. No further doses needed if previous dose was administered at age 15 months or older.	8 weeks (as final dose) This dose only necessary for children age 12 through 59 months who received 2 doses before the 1 st birthday.	
Pneumococcal ⁴	6 weeks	4 weeks if first dose administered before the 1 st birthday. 8 weeks (as final dose for healthy children) if first dose was administered at the 1 st birthday or after. No further doses needed for healthy children if first dose administered at age 24 months or older.	4 weeks if current age is younger than 12 months and previous dose given at <7 months old. 8 weeks (as final dose for healthy children) if previous dose given between 7-11 months (wait until at least 12 months old); OR if current age is 12 months or older and at least 1 dose was given before age 12 months. No further doses needed for healthy children if previous dose administered at age 24 months or older.	8 weeks (as final dose) This dose only necessary for children aged 12 through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age.	
Inactivated poliovirus ⁷	6 weeks	4 weeks ⁷	4 weeks ⁷	6 months ⁷ (minimum age 4 years for final dose).	
Meningococcal ⁸	6 weeks	8 weeks ¹¹	See footnote 13	See footnote 13	
Mumps, measles, rubella ⁹	12 months	4 weeks			
Varicella ¹⁰	12 months	3 months			
Hepatitis A ¹	12 months	6 months			
Children and adolescents age 7 through 18 years					
Tetanus, diphtheria, tetanus, diphtheria, and acellular pertussis ³	7 years ⁴	4 weeks	4 weeks if first dose of DTaP/DT was administered before the 1 st birthday. 6 months (as final dose) if first dose of DTaP/DT was administered at or after the 1 st birthday.	6 months if first dose of DTaP/DT was administered before the 1 st birthday.	
Human papillomavirus ¹²	9 years		Routine dosing intervals are recommended. ¹²		
Hepatitis A ¹	Not applicable (N/A)	6 months			
Hepatitis B ¹	N/A	4 weeks	8 weeks and at least 16 weeks after first dose.		
Inactivated poliovirus ⁷	N/A	4 weeks	4 weeks ⁷	6 months ⁷	
Meningococcal ⁸	N/A	8 weeks ¹¹			
Mumps, measles, rubella ⁹	N/A	4 weeks			
Varicella ¹⁰	N/A	3 months if younger than age 13 years. 4 weeks if age 13 years or older.			

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

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 group¹

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						
<i>Haemophilus influenzae</i> 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 indications¹

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}		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
				< 200 cells/μL	≥ 200 cells/μL							
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							
<i>Haemophilus influenzae</i> 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



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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.

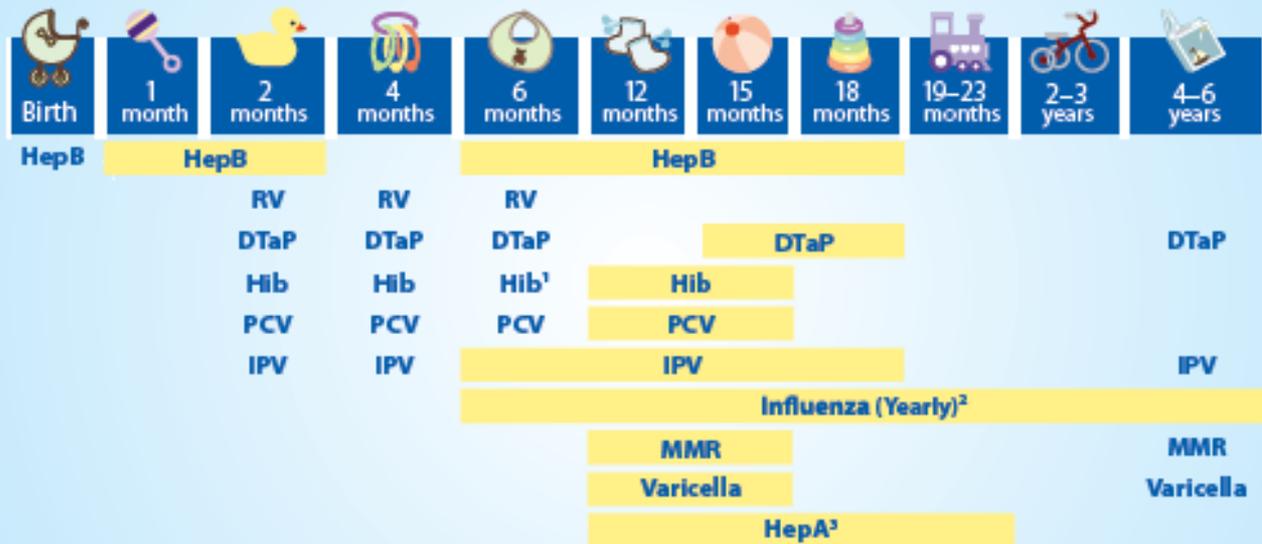
2015 Recommended Immunizations for Children from Birth Through 6 Years Old

Notes:

- If your child misses a shot, you don't need to start over. Just go back to the doctor for the next shot.
- Talk with your child's doctor if you have questions about the vaccines.
- If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines they may need.
- Is your family growing? To protect your new baby and yourself against whooping cough, get a Tdap vaccine towards the end of each pregnancy. Talk to your doctor for more details.

For more information visit www.cdc.gov/vaccines

Shaded boxes indicate the vaccine can be given during shown age range.



Footnotes:

- 1 The State of Alaska distributes PedvaxHib vaccine to enrolled health care providers who provide immunization services to prevent Hib disease. It is 3 dose series recommended at 2 months, 4 months, and 12 months.
- 2 Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting a flu vaccine for the first time and for some other children in this age group.
- 3 Two doses of HepA are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against HepA. Children and adolescents who did not receive the HepA vaccine and are at a high risk should be vaccinated against HepA.



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AMERICAN ACADEMY OF
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Questions? Contact the Alaska
Immunization Helpline at
immune@alaska.gov
or 1-888-430-4321



2015 Recommended Immunizations for Children from 7 Through 18 Years Old



These shaded boxes indicate when the vaccine is recommended for all children unless your doctor tells you that your child cannot safely receive the vaccine.

These shaded boxes indicate the vaccine should be given if a child is catching-up on missed vaccines.

These shaded boxes indicate the vaccine is recommended for children with certain health conditions that put them at high risk for serious diseases. Note that healthy children can get the HepA series*. See vaccine-specific recommendations at www.cdc.gov/vaccines/pubs/ACIP-1st.htm.

FOOTNOTES

¹ Tdap vaccine is recommended at age 11 or 12 to protect against tetanus, diphtheria and pertussis. If your child has not received any or all of the DTaP vaccine series, or if you don't know if your child has received these shots, your child needs a single dose of Tdap when they are 7-10 years old. Talk to your child's health care provider to find out if they need additional catch-up vaccines.

² All 11 or 12 year olds – both girls and boys – should receive 3 doses of HPV vaccine to protect against HPV-related disease. The full HPV vaccine series should be given as recommended for best protection.

³ Meningococcal conjugate vaccine (MCV) is recommended at age 11 or 12. A booster shot is recommended at age 16. Teens who received MCV for the first time at age 13 through 15 years will need a one-time booster dose between the ages of 16 and 18 years. If your teenager missed getting the vaccine altogether, ask their health care provider about getting it now, especially if your teenager is about to move into a college dorm or military barracks.

⁴ Everyone 6 months of age and older—including preteens and teens—should get a flu vaccine every year. Children under the age of 9 years may require more than one dose. Talk to your child's health care provider to find out if they need more than one dose.

⁵ Pneumococcal Conjugate Vaccine (PCV13) and Pneumococcal Polysaccharide Vaccine (PPSV23) are recommended for some children 6 through 18 years old with certain medical conditions that place them at high risk. Talk to your health care provider about pneumococcal vaccines and what factors may place your child at high risk for pneumococcal disease.

⁶ Hepatitis A vaccination is recommended for older children with certain medical conditions that place them at high risk. HepA vaccine is licensed, safe, and effective for all children of all ages. Even if your child is not at high risk, you may decide you want your child protected against HepA. Talk to your health care provider about HepA vaccine and what factors may place your child at high risk for HepA.

For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit <http://www.cdc.gov/vaccines/teens>



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2015 Recommended Immunizations for Adults: By Age

If you are this age, talk to your healthcare professional about these vaccines →

If you are this age	Flu Influenza	Td/Tdap Tetanus, diphtheria, pertussis	Shingles Zoster	Pneumococcal		Meningococcal	MMR Measles, mumps, rubella	HPV Human papillomavirus		Chickenpox Varicella	Hepatitis A	Hepatitis B	Hib Haemophilus influenzae type b
				PCV13	PPSV23			for women	for men				
19 - 21 years									3 doses				
22 - 26 years							1 or 2 doses	3 doses	3 doses				
27 - 49 years		1 dose of Tdap*		1 dose	1 or 2 doses	1 or more doses							
50 - 59 years	Flu vaccine every year	Td booster every 10 years								2 doses	2 doses	3 doses	1 or 3 doses
60 - 64 years			1 dose										
65+ year				1 dose	1 dose								

More Information:

There are several flu vaccines available. Talk to your healthcare professional about which flu vaccine is right for you.

* If you are pregnant, you should get a Tdap vaccine during the 3rd trimester of every pregnancy to help protect your babies from pertussis (whooping cough).

You should get zoster vaccine even if you've had shingles before.

There are two different types of pneumococcal vaccine: PCV13 (conjugate) and PPSV23 (polysaccharide). Talk with your healthcare professional to find out if one or both pneumococcal vaccines are recommended for you.

Your healthcare professional will let you know how many doses you need.

If you were born in 1957 or after, and don't have a record of being vaccinated or having had measles, mumps and rubella, talk to your healthcare professional about how many doses you may need.

Recommended for you if you did not get it when you were a child.

There are two HPV vaccines but only one HPV vaccine (Gardasil[®]) should be given to men.

If you are a male 22 through 26 years old and have sex with men you should complete the HPV vaccine series if you have not already done so.

Your healthcare professional will let you know how many doses you need.

Recommended For You: This vaccine is recommended for you unless your healthcare professional tells you that you cannot safely receive it or that you do not need it.

May Be Recommended For You: This vaccine is recommended for you if you have certain risk factors due to your health, job, or lifestyle that are not listed here. Talk to your healthcare professional to see if you need this vaccine.

If you are traveling outside the United States, you may need additional vaccines.

Ask your healthcare professional about which vaccines you may need at least 6 weeks prior to your travel.

For more information, call 1-800-CDC-INFO (1-800-232-4636) or visit www.cdc.gov/vaccines



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2015 Recommended Immunizations for Adults: By Health Condition

If you have this health condition, talk to your healthcare professional about these vaccines

	Flu influenza	Td/Tdap Tetanus, diphtheria, pertussis	Shingles Zoster	Pneumococcal		Meningococcal	MMR Measles, mumps, rubella	HPV Human papillomavirus		Chickenpox Varicella	Hepatitis A	Hepatitis B	Hib Haemophilus influenzae type b
				PCV13	PPSV23			for women	for men				
Pregnancy		*see below			1-2 doses								
Weakened Immune System			SHOULD NOT GET VACCINE				SHOULD NOT GET VACCINE		3 doses through age 26 years	SHOULD NOT GET VACCINE		3 doses	post-RECT* rectal only
HIV: CD4 count less than 200						1 or more doses							
HIV: CD4 count 200 or greater		1 dose of Tdap		1 dose							2 doses	3 doses	1 or 3 doses
Kidney disease or poor kidney function	Flu vaccine every year	followed by Td booster every 10 years			1-2 doses			3 doses through age 26 years	3 doses through age 21 years	2 doses			
Asplenia (if you do not have a spleen or if it does not work well)			1 dose for those 60 years or older			1 or more doses	1 or 2 doses					3 doses	1 or 3 doses
Heart disease Chronic lung disease Chronic alcoholism				1 dose									1 or 3 doses
Diabetes (Type 1 or Type 2)						1 or more doses						3 doses	
Chronic Liver Disease											2 doses		

More Information:

There are several flu vaccines available. Talk to your healthcare professional about which flu vaccine is right for you.

* If you are pregnant, you should get a Tdap vaccine during the 3rd trimester of every pregnancy to help protect your babies from pertussis (whooping cough).

You should get zoster vaccine even if you've had shingles before.

There are two different types of pneumococcal vaccine: PCV13 (conjugate) and PPSV23 (polysaccharide). Talk with your healthcare professional to find out if one or both pneumococcal vaccines are recommended for you.

Your healthcare professional will let you know how many doses you need.

If you were born in 1957 or after, and don't have a record of being vaccinated or having had measles, mumps and rubella, talk to your healthcare professional about how many doses you may need.

Recommended for you if you did not get it when you were a child.

There are two HPV vaccines but only one HPV vaccine (Gardasil*) should be given to men.

If you are a male 22 through 26 years old and have sex with men you should complete the HPV vaccine series if you have not already done so.

Your healthcare professional will let you know how many doses you need.

*Hematopoietic stem cell transplant

Recommended For You: This vaccine is recommended for you unless your healthcare professional tells you that you cannot safely receive it or that you do not need it.

May Be Recommended For You: This vaccine is recommended for you if you have certain other risk factors due to your age, health, job, or lifestyle that are not listed here. Talk to your healthcare professional to see if you need this vaccine.

YOU SHOULD NOT GET THIS VACCINE

If you are traveling outside the United States, you may need additional vaccines.

Ask your healthcare professional about which vaccines you may need at least 6 weeks prior to your travel.

For more information, call 1-800-CDC-INFO (1-800-232-4636) or visit www.cdc.gov/vaccines



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Vaccine Information for Parents, Patients, and Health Care Providers

Recommended Immunization Schedules

For Everyone

- » Vaccine Information Statements
- » Vaccines Used in United States
- » School & Child care Compliance
- » Travel Immunizations
- » 2015 Alaska Easy-to-read Childhood Schedule
- » Preteens and Teens
- » Adults

For Health Care Professionals

- » Persons Age 0-18 Years
- » Persons 19 Years and Over
- » Catch-Up
- » Vaccinations for Adults Based on Medical and Other Indications
- » Adult Contraindications and Precautions
- » Advisory Committee on Immunization Practices (ACIP) - General Recommendations on Immunizations
- » VAC-FACT Sheets
- » Vaccine Adverse Event Reporting (VAERS)

Updates



Seasonal Influenza Vaccine

ACIP Recommendations for 2015-16 Season



- ▶ Routine annual vaccination recommended for all persons aged ≥ 6 months who do not have contraindications
- ▶ 11 different vaccines available for the 2015-16 influenza season
 - ▶ Inactivated, live-attenuated, and recombinant formulations
- ▶ Flu vaccine composition for 2015-16 Season
 - ▶ Trivalent: contains hemagglutinin (HA) derived from an A/California/7/2009 (H1N1)-like virus, an A/Switzerland/9715293/2013 (H3N2)-like virus, and a B/Phuket/3073/2013-like (Yamagata lineage) virus
 - ▶ Quadrivalent: contains HA as trivalent and a B/Brisbane/60/2008-like (Victoria lineage) virus, which is the same Victoria lineage virus recommended for quadrivalent formulations in 2013–14 and 2014–15



Department of Health and Social Services
Valerie J. Davidson, Commissioner

3601 C Street, Suite 540
Anchorage, Alaska 99503

<http://www.epi.alaska.gov>

Division of Public Health
Jay C. Butler, MD, Chief Medical Officer
and Director
Local (907) 269-8000
24 Hour Emergency (800) 478-0084

Editors:
Joe McLaughlin, MD, MPH
Louisa Castrodale, DVM, MPH

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Table. Alaska State-supplied Influenza Vaccines for the 2015–16 Influenza Season^{1,2}

Vaccine	Trade Name	Manufacturer	Presentation	Age-Group	Mercury content µg /0.5 mL dose	Ovalbumin content* µg /0.5 mL dose	# of Doses [†]	Route
IV4 [‡]	Fluzone® Quadrivalent	Sanofi Pasteur	0.25 mL prefilled syringe	6 through 35 months	0	**	1 or 2	IM ^{††}
IV4 [‡]	Fluzone® Quadrivalent	Sanofi Pasteur	5 mL multidose vial	≥6 months	25	**	1 or 2	IM ^{††}
IV3 [‡]	Fluzone® High-Dose Trivalent	Sanofi Pasteur	0.5 mL prefilled syringe	≥65 years	0	**	1	IM ^{††}
IV4 [‡]	Fluarix® Quadrivalent	GlaxoSmithKline	0.5 mL prefilled syringe	≥36 months	0	≤0.05 (per 0.5 mL)	1 or 2	IM ^{††}
LAIV4 [‡]	FluMist® Quadrivalent ^{‡‡}	MedImmune	0.2 mL intranasal sprayer	2 through 49 years	0	<0.24 (per 0.2mL)	1 or 2	IN

1. CDC. Prevention and control of influenza with vaccines: recommendations of the ACIP, United States, 2015–16. MMWR 2015;64(30):818-25.
2. Alaska Section of Epidemiology Bulletin, “Influenza Vaccines Available during the 2015-16 Season”. No. 21

Seasonal Influenza Vaccine

Considerations for the Use of Live Attenuated Influenza Vaccine and Inactivated Influenza Vaccine When Either is Available

For 2015–16, ACIP recommends the following:

1. All persons aged ≥ 6 months should receive influenza vaccine annually. Influenza vaccination should not be delayed to procure a specific vaccine preparation if an appropriate one is already available.
2. For healthy children aged 2 through 8 years who have no contraindications or precautions, either LAIV or IIV is an appropriate option. No preference is expressed for LAIV or IIV for any person aged 2 through 49 years for whom either vaccine is appropriate. An age-appropriate formulation of vaccine should be used.

Seasonal Influenza Vaccine

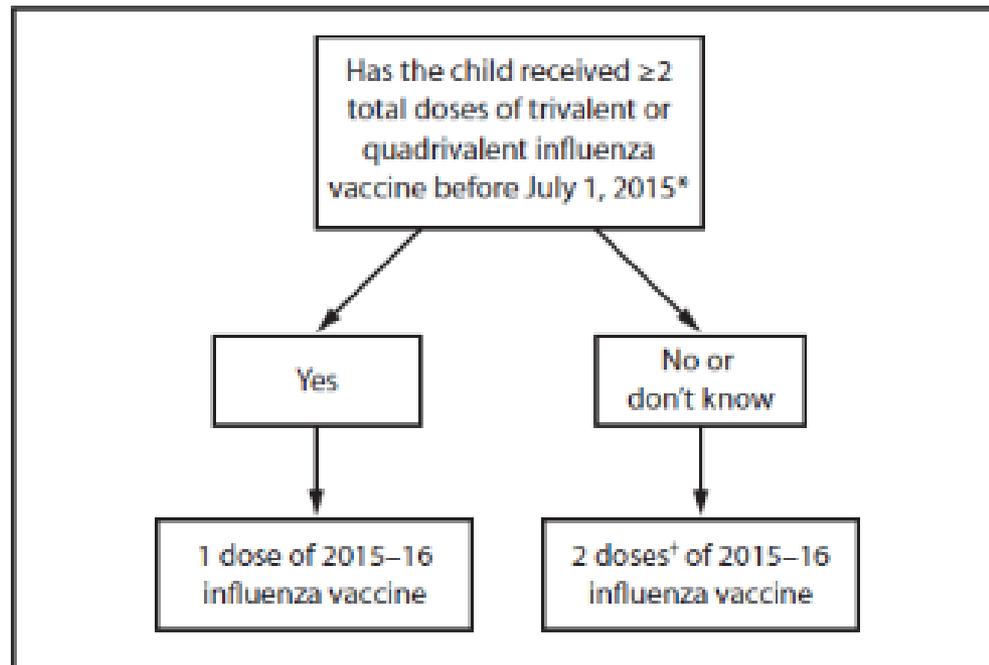
LAIV should not be used in the following populations:

- Persons aged <2 years or >49 years;
- Persons with contraindications listed in the package insert:◦Children aged 2 through 17 years who are receiving aspirin or aspirin-containing products;
- Persons who have experienced severe allergic reactions to the vaccine or any of its components, or to a previous dose of any influenza vaccine;
- Pregnant women;
- Immunocompromised persons (see also "Vaccine Selection and Timing of Vaccination for Immunocompromised Persons");
- Persons with a history of egg allergy;
- Children aged 2 through 4 years who have asthma or who have had a wheezing episode noted in the medical record within the past 12 months, or for whom parents report that a health care provider stated that they had wheezing or asthma within the last 12 months (Table, footnote). For persons aged ≥ 5 years with asthma, recommendations are described in item 4 of this list;
- Persons who have taken influenza antiviral medications within the previous 48 hours.

Persons who care for severely immunosuppressed persons who require a protective environment should not receive LAIV, or should avoid contact with such persons for 7 days after receipt, given the theoretical risk for transmission of the live attenuated vaccine virus to close contacts.

Seasonal Influenza Vaccine

Vaccine Dose Considerations for Children Aged 6 Months Through 8 Years



* The two doses need not have been received during the same season or consecutive seasons.

† Doses should be administered ≥4 weeks apart.

Vaccines for Pregnant Women

ACIP Recommendations

▶ Flu Vaccine

- ▶ It is safe for pregnant women to receive the inactivated flu vaccine.
- ▶ A pregnant woman who gets the flu is at risk for serious complications and hospitalization.

▶ Tdap Vaccine

- ▶ With each pregnancy, in the third trimester ideally between 27-36 weeks of pregnancy.
 - Several studies provide evidence of trans-placental transfer of pertussis antibodies, half-life is approximately 6 weeks.

Pregnancy is also a good time to learn about childhood vaccines.

Did you know that a mother's immunity is passed along to her baby during pregnancy? This will protect the baby from some diseases during the first few months of life until the baby can get vaccinated.



MMWR 2011; 60(41):1424-1426.

Gall et al. Am J Obstetrics & Gynecology 2011; 204:334.e1-5.

MMWR 2014; 62(32); 691-697.

Pneumococcal Vaccine for Adults

Protect Older Adults

Two pneumococcal vaccines now recommended for 65+



Morbidity and Mortality Weekly Report

Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Adults Aged ≥ 65 Years: Recommendations of the Advisory Committee on Immunization Practices (ACIP)

Sara Tomczyk, MSc^{1,2}, Nancy M. Bennett, MD^{3,4}, Charles Stoecker, PhD⁵, Ryan Gierke, MPH², Matthew R. Moore, MD², Cynthia G. Whitney, MD², Stephen Hadler, MD², Tamara Pilishvili, MPH² (Author affiliations at end of text)

MMWR 2014; 63(37)

Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)

Miwako Kobayashi, MD^{1,2}; Nancy M Bennett, MD^{3,4}; Ryan Gierke, MPH¹; Olivia Almendares, MSPH¹; Matthew R Moore, MD¹; Cynthia G. Whitney, MD¹; Tamara Pilishvili, MPH¹

MMWR 2015; 64(34)

Pneumococcal Vaccine for Adults

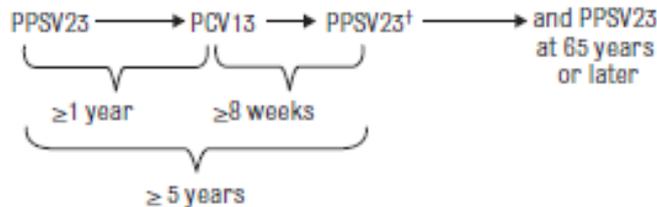
The charts below provide details on timing of PCV13 and PPSV23 doses for all others.

Figure 1: PCV13 and PPSV23 timing for US adults age 19 to 64 years with immunocompromising conditions, functional asplenia, CSF leaks, or cochlear implants*

Pneumococcal vaccine-naïve persons



Persons previously vaccinated with PPSV23

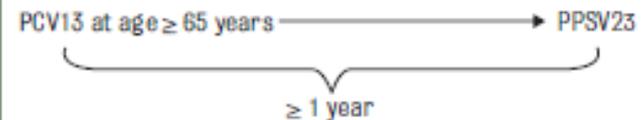


* See Table on page 1 for details on which adults age 19 to 64 years need pneumococcal vaccination

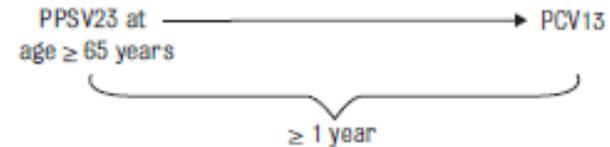
† This dose not indicated for adults with CSF leaks or cochlear implants

Figure 2: PCV13 and PPSV23 timing for US adults age 65 years and older

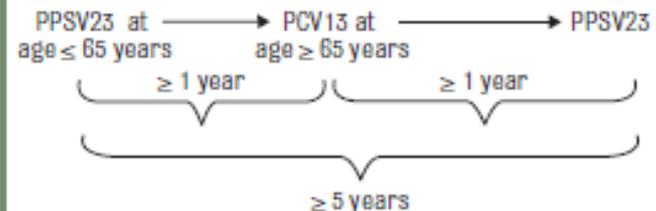
Pneumococcal vaccine-naïve persons



Persons who previously received PPSV23 at age ≥ 65 years



Persons who previously received PPSV23 before age 65 years because they have a risk factor



Pneumococcal vaccines given at intervals < 1 year do not need to be repeated.

Note: Medicare will reimburse for two pneumococcal vaccines as long as they are given at least 11 months apart.

Meningococcal Vaccine

ACIP recommends meningococcal vaccination for the following groups:

- Routine vaccination of adolescents aged 11 through 18 years (a single dose of vaccine should be administered at age 11 or 12 years, with a booster dose at age 16 years for persons who receive the first dose before age 16 years) (1,5–7).
- Routine vaccination of persons aged ≥ 2 months at increased risk for meningococcal disease, including (7–11):
 - Persons aged ≥ 2 months with certain medical conditions such as anatomical or functional asplenia or complement component deficiency (dosing schedule and interval for booster dose varies by age at time of previous vaccination).
- Special populations such as unvaccinated or incompletely vaccinated first-year college students living in residence halls, military recruits, or microbiologists with occupational exposure (indication for booster dose 5 years after prior dose if at continued risk).
- Persons aged ≥ 9 months who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic, particularly if contact with the local population will be prolonged.
- Vaccination of persons in at-risk groups (see Appendix B) to control outbreaks.

Meningococcal B Vaccine

Two serogroup B meningococcal (MenB) vaccines were recently licensed by the Food and Drug Administration and approved for use in persons aged 10–25 years.

What are the new recommendations?

Certain persons aged ≥ 10 years at increased risk for meningococcal disease should receive MenB vaccine. These persons include:

- ▶ Persons with persistent complement component deficiencies
- ▶ Persons with anatomic or functional asplenia.
- ▶ Microbiologists routinely exposed to isolates of *Neisseria meningitidis*.
- ▶ Persons identified as at increased risk because of a serogroup B meningococcal disease outbreak

The vaccine is not currently recommended for routine use in first-year , or college students living in residence halls, military recruits, or all adolescents. Recommendations for broader use of MenB vaccines will be considered separately by the ACIP.

Meningococcal B Vaccines

- ▶ Bexsero® (Novartis/GSK)
 - ▶ 2-dose vaccine, administered 1 month apart
- ▶ Trumenba® (Pfizer)
 - ▶ 3-dose vaccine, administered on a 0, 2, and 6-month schedule

9-valent HPV Vaccine

9-valent human papillomavirus (9vHPV) vaccine (Gardasil 9, Merck & Co., Inc) was licensed for use in females and males in the United States in December 2014

ACIP recommends 9vHPV vaccine as one of 3 HPV vaccines that can be used for routine vaccination of females and one of 2 HPV vaccines for routine vaccination of males

HPV Disease Burden

Most females and males will be infected with at least one type of mucosal HPV at some point in their lives.

- Estimated 79 million Americans currently infected
- Estimated 14 million new infections/year in the U.S.
- Approximately half of new infections occur among persons aged 15–24 years.¹
- Most will never know that they have been infected.
- Of the 13 HPV types designated as human carcinogens, types 16 and 18 account for a large majority of the cancers caused by HPV.²
- Among non-carcinogenic types, types 6 and 11 are responsible for 90% of genital warts.²
 - About 360,000 people in the United States get genital warts each year.³

HPV Infection Can Cause Cancer

Every year in the U.S., 27,000 people get cancer caused by HPV.



That's 1 person every 20 minutes of every day, all year long.

Cancers Caused by HPV, U.S.

Cancer site	Average number of cancers per year probably caused by HPV†			Percentage per year
	Male	Female	Both Sexes	
Anus	1,400	2,600	4,000	91%
Cervix	0	10,400	10,400	91%
Oropharynx	7,200	1,800	9,000	72%
Penis	700	0	700	63%
Vagina	0	600	600	75%
Vulva	0	2,200	2,200	69%
TOTAL	9,300	17,600	26,900	



HPV Vaccines Licensed for Use in the United States

Characteristic	Bivalent (2vHPV)*	Quadrivalent (4vHPV) [†]	9-valent (9vHPV) [§]
Brand name	Cervarix	Gardasil	Gardasil 9
VLPs	16, 18	6, 11, 16, 18	6, 11, 16, 18, 31, 33, 45, 52, 58
Manufacturer	GlaxoSmithKline	Merck and Co., Inc.	Merck and Co., Inc.
Manufacturing	<i>Trichoplusia ni</i> insect cell line infected with L1 encoding recombinant baculovirus	<i>Saccharomyces cerevisiae</i> (Baker's yeast), expressing L1	<i>Saccharomyces cerevisiae</i> (Baker's yeast), expressing L1
Adjuvant	500 µg aluminum hydroxide, 50 µg 3-O-desacyl-4' monophosphoryl lipid A	225 µg amorphous aluminum hydroxyphosphate sulfate	500 µg amorphous aluminum hydroxyphosphate sulfate
Volume per dose	0.5 ml	0.5 ml	0.5 ml
Administration	Intramuscular	Intramuscular	Intramuscular

Abbreviation: L1 = the HPV major capsid protein; VLPs = virus-like particles.

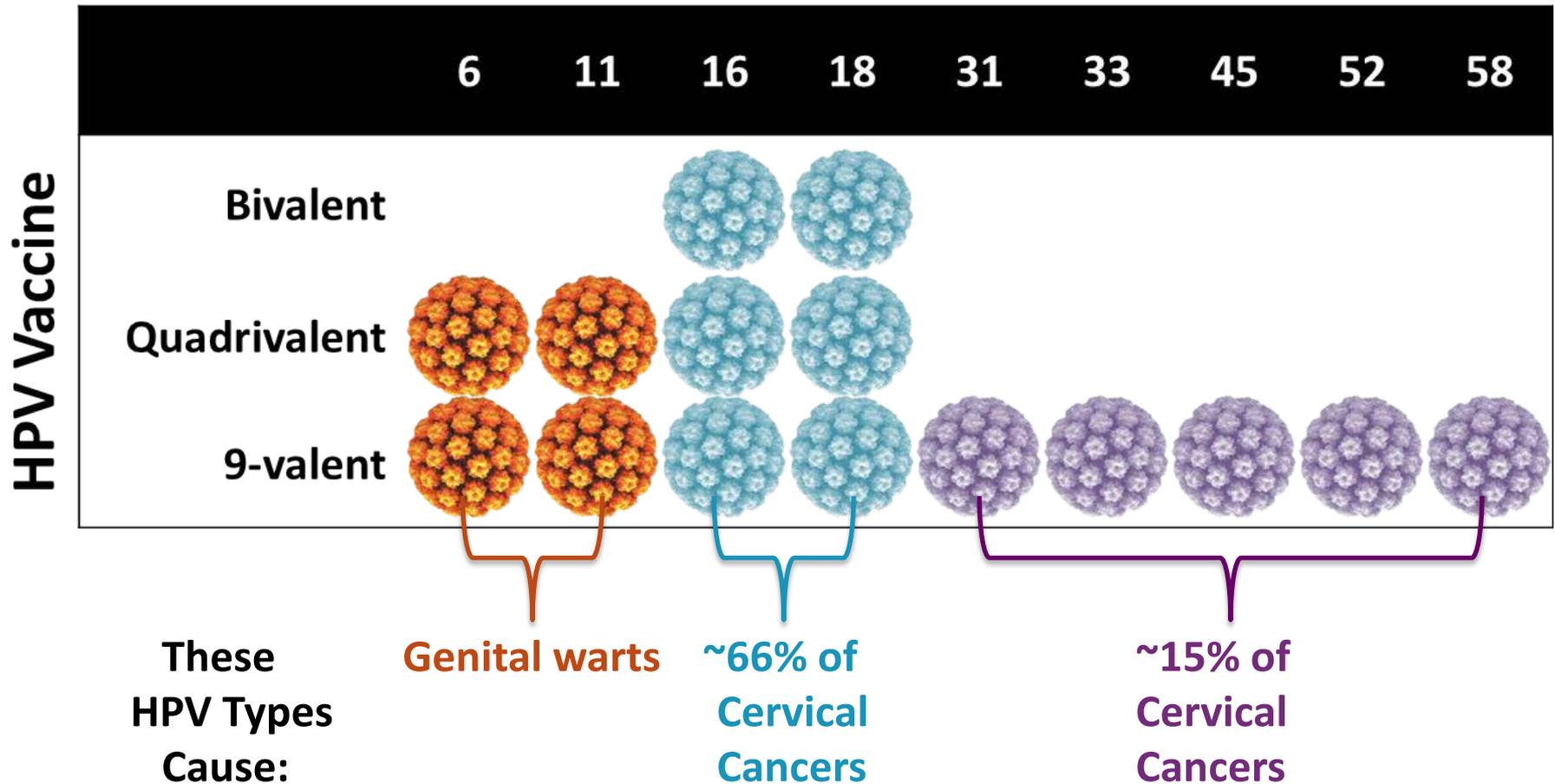
* Only licensed for use in females in the United States. Package insert available at <http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM186981.pdf>  .

[†] Package insert available at <http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM111263.pdf>  .

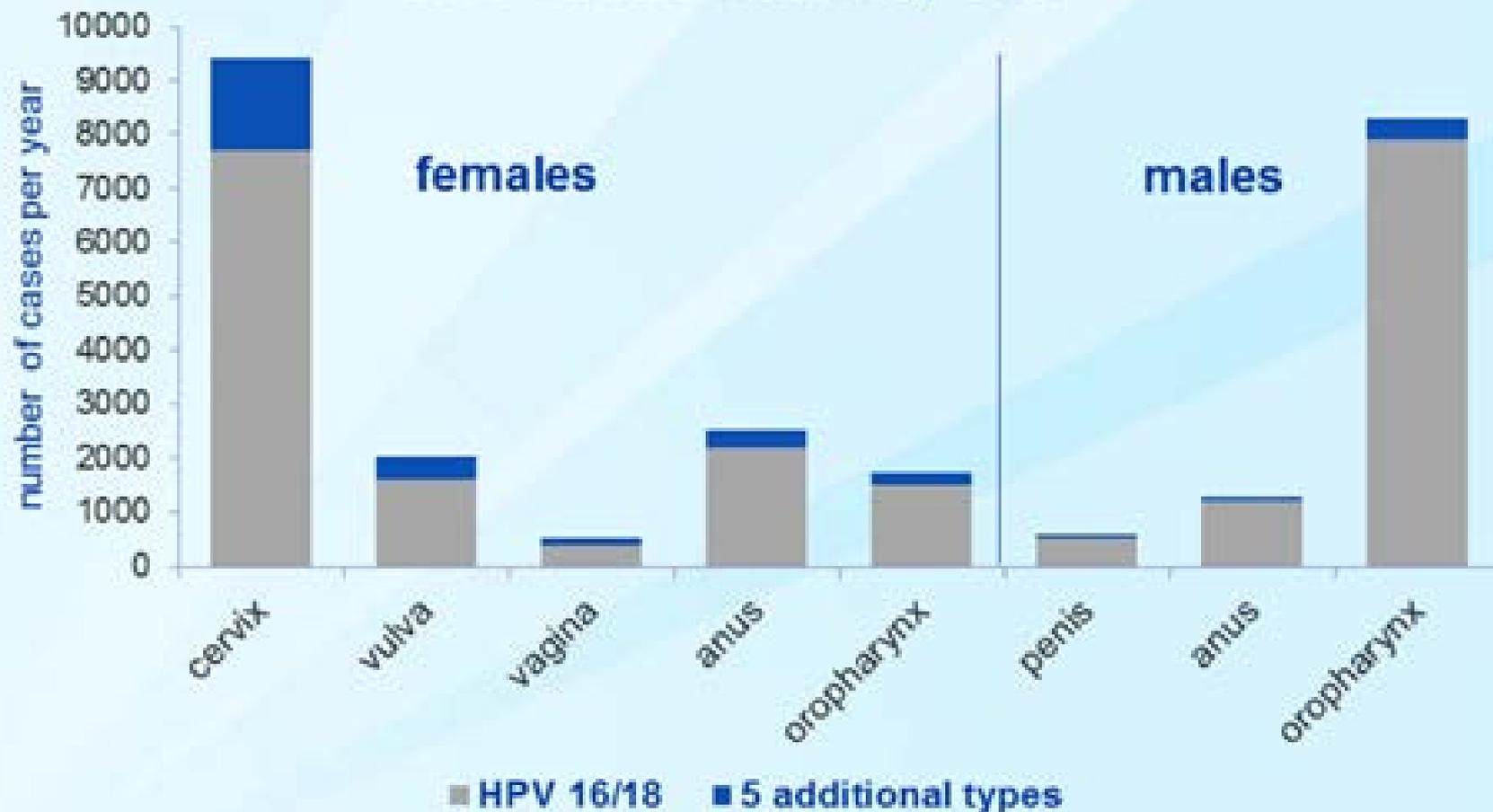
[§] Package insert available at <http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM426457.pdf>  .

HPV Vaccine Comparison

HPV Types Included in Vaccine



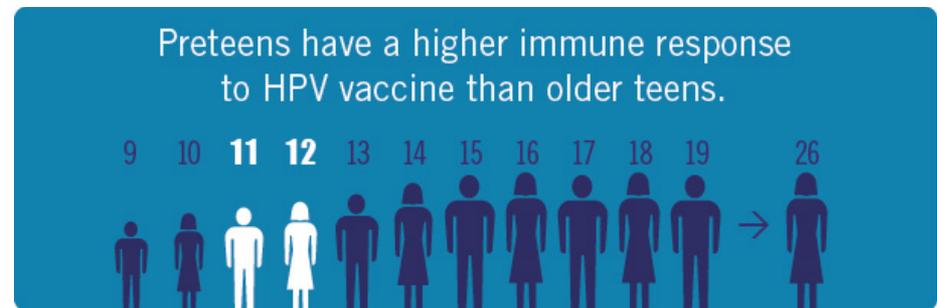
Estimated numbers of HPV-associated cancers attributable to HPV 16/18 and 5 additional types in 9-valent vaccine, U.S.*



*Based on years 2006-2010 <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a11.htm> and data from Saraiya, presented at AIN Conference, March 2015

Updated ACIP Recommendations

- Routine vaccination recommended for both males and females at age 11-12 years
- Catch up those previously unvaccinated or missing doses:
 - Females 13 through 26 years of age.
 - Males 13 through 21 years*.
 - High-risk males 21 through 26 years*.
 - Men who have sex with men and immunocompromised men (including HIV-infected)



*ACIP off-label recommendation.
CDC. MMWR March 27, 2015/ 64 (11):300-304

HPV Vaccination

➤ Use:

- 2vHPV, 4vHPV, or 9vHPV for females
- 4vHPV or 9vHPV for males

➤ ACIP Recommended Schedule is 0, 1-2*, 6 months

Following the recommended schedule is preferred

➤ Minimum intervals

- 1 month between doses 1 and 2
- 3 months between doses 2 and 3
- 6 months between doses 1 and 3

➤ Administer IM

HPV Vaccine Should be Given with the Other Preteen Vaccines

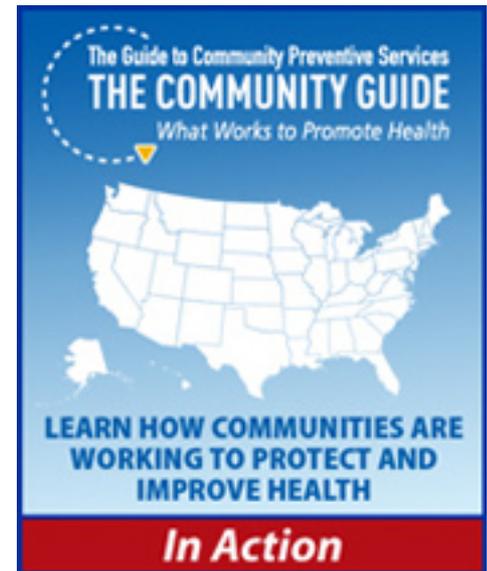
Preteens need three vaccines at 11 or 12. They protect against whooping cough, cancers caused by HPV, and meningitis.



Components of Successful Vaccination Programs

Strategies shown to improve vaccine uptake in healthcare settings:

- Provider recommendation and reinforcement
- Use of standing orders
- Use of immunization information system
- Use of reminder-recall systems to patients
- Use of reminder-recall to providers
- Reduce missed opportunities
- Reduce barriers to immunization
- Provider and practice assessment of vaccination and feedback (AFIX)



Immunization Practice Standards

Recommendations developed by National Vaccine Advisory Committee (NVAC)

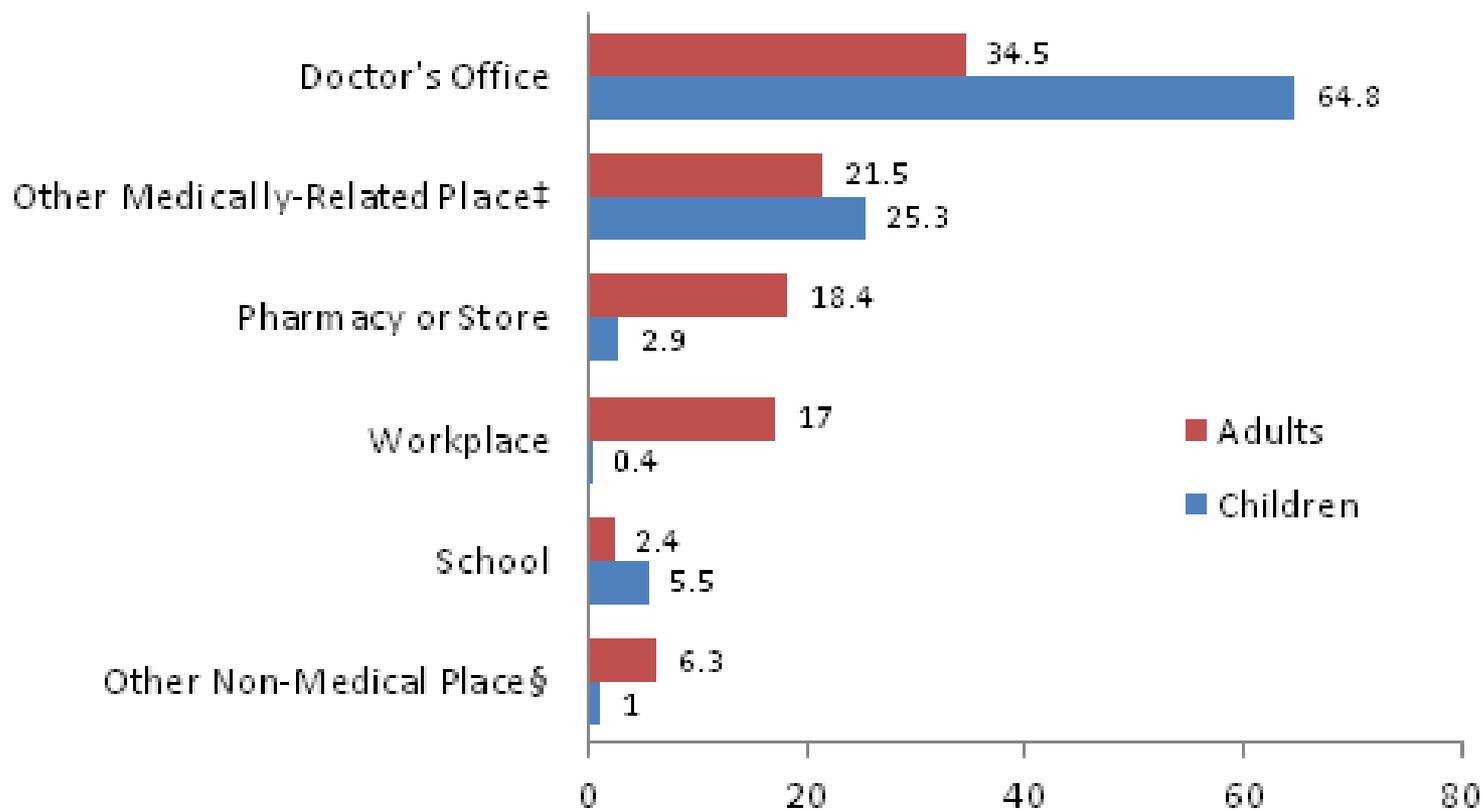
- Child and adolescent
- Adult

NEW Immunization Practice Standards

- ▶ Stresses that all providers, including those that don't provide vaccine services, have a role in ensuring patients are up-to-date on vaccines
- ▶ Acknowledges that:
 - ▶ Patients may see many different healthcare providers, some of whom do not stock some or all vaccines
 - ▶ Patients may get vaccinated in a medical home, at school, work, or retail setting
- ▶ Aim is to avoid missed opportunities and keep patients protected from vaccine-preventable diseases

Place of Vaccination by age group, November 2012 NIS and NIFS*

Figure 2. Place of vaccination for children and adults, early 2012-13 flu season, National Immunization Survey and National Internet Flu Survey



*October 4 – November 17, 2012 National Immunization Survey (NIS) data for children 6 months through 17 years of age
 November 2-15, 2012 National Internet Flu Survey (NIFS) data for adults ≥ 18 years of age

Immunization Practice Standards



Calls to action for healthcare professionals

- ▶ **Assess** immunization status of all patients in every clinical encounter.
- ▶ Strongly **Recommend** vaccines that patients need.
- ▶ **Administer** needed vaccines or **Refer** to a provider who can immunize.
- ▶ **Document** vaccines received by patients, including entering immunizations into immunization registries.

Even if you don't vaccinate, you still need to recommend vaccines to your patients

Immunization Practice Standards

Formally supported by healthcare organizations:

- ▶ American Academy of Pediatrics (AAP)
- ▶ American Academy of Physician Assistants (AAPA)
- ▶ American Academy of Family Physicians (AAFP)
- ▶ American College of Obstetricians and Gynecologists (ACOG)
- ▶ American College of Physicians (ACP)
- ▶ American Pharmacists Association (APhA)
- ▶ Association of Immunization Managers (AIM)
- ▶ Association of State & Territorial Health Officials (ASTHO)
- ▶ Centers for Disease Control and Prevention (CDC)
- ▶ Immunization Action Coalition (IAC)
- ▶ Infectious Diseases Society of America (IDSA)
- ▶ National Association of County & City Health Officials (NACCHO)
- ▶ National Foundation for Infectious Diseases (NFID)

Practice Standards Implementation

1. **ASSESS** immunization status of all your patients at every clinical encounter.

There are many missed opportunities for vaccination because many healthcare professionals are not routinely assessing vaccination status.

- **Stay informed.** Get the latest [CDC recommendations](#) for immunization of adults.
- **Implement protocols and policies.** Ensure that patients' vaccine needs are routinely reviewed and patients get reminders about vaccines they need.

2. Strongly **RECOMMEND** vaccines that patients need.

Recommendation from a healthcare professional is the strongest predictor of whether patients get vaccinated.

- Share tailored reasons why vaccination is right for the patient.
- Highlight positive experiences with vaccination.
- Address patient questions and concerns.
- Remind patients that vaccines protect them and their loved ones against a number of common and serious diseases.
- Explain the potential costs of getting sick.

Practice Standards Implementation

3. **ADMINISTER** needed vaccines or **REFER** your patients to a vaccination provider.
 - **Offer the vaccines** you stock.
 - **Refer patients** to providers in the area that offer vaccines that you don't stock.
4. **DOCUMENT** vaccines received by your patients.
 - **Participate in VacTrAK, Alaska's immunization information system.** Help your office, your patients, and your patients' other providers know which vaccines your patients have had.
 - **Follow up.** Confirm that patients received recommended vaccines that you referred them to get from other immunization providers.

For Providers That Need to Refer Patients for Vaccinations

<http://vaccine.healthmap.org>

An online resource for providers and patients to search for locations that offer immunizations

The screenshot displays the HealthMap Vaccine Finder web application. At the top, the header reads "HealthMap Vaccine Finder" with "About" and social media icons for Facebook and Twitter. The main content area is split into two panels. The left panel shows a Google Map of Fairbanks, Alaska, with six red location markers numbered 1 through 6. The right panel, titled "What Vaccines Do I Need?", contains a "Location" dropdown menu set to "Fairbanks, AK, USA" with a search input field containing "Fairbanks, AK". Below this is a "Vaccines" dropdown menu with a list of vaccine options, each with a checkbox:

- Flu
- Hepatitis A
- Hepatitis B
- HPV
- MMR
- Shingles
- Tdap
- Td
- Meningococcal
- Pneumococcal
- Varicella



Spotlight

1 - 2 - 3 PROTECT ALASKA'S KIDS

HPV CANCER PREVENTION

[Click for more information](#)

Public notice on proposed State regulations changes related to immunizations

- » [Division of Insurance: Determination of Final Payment for Covered Vaccine](#)
- » [7 AAC 27.Preventive Medical Services](#)
- » [Transcript of the Oral Hearing 2015-05-20](#)



» [Directory of Providers Enrolled to Receive State-supplied Vaccine](#)

- Find out more about Alaska's New Vaccine Assessment Program at www.AKvaccine.org
- » [AVAP Information for Providers](#)
- » [AVAP Provider Summary](#)
- » [Vaccine Assessment Account FAQ](#)
- » [Vaccine Assessment Program Flow Diagram](#)
- [AVAP Informational Workshop on Proposed Regulations](#)
 - » [Presentation Slides](#)
 - » [Presentation Audio](#)

Immunization Reporting Requirements

- ▶ Federal

- ▶ 42 CFR § 300aa–25. Recording and reporting of information

- ▶ State

- ▶ Alaska Administrative Code 7 AAC 27.650 -- Health care provider disclosure to the immunization information system, VacTrAK

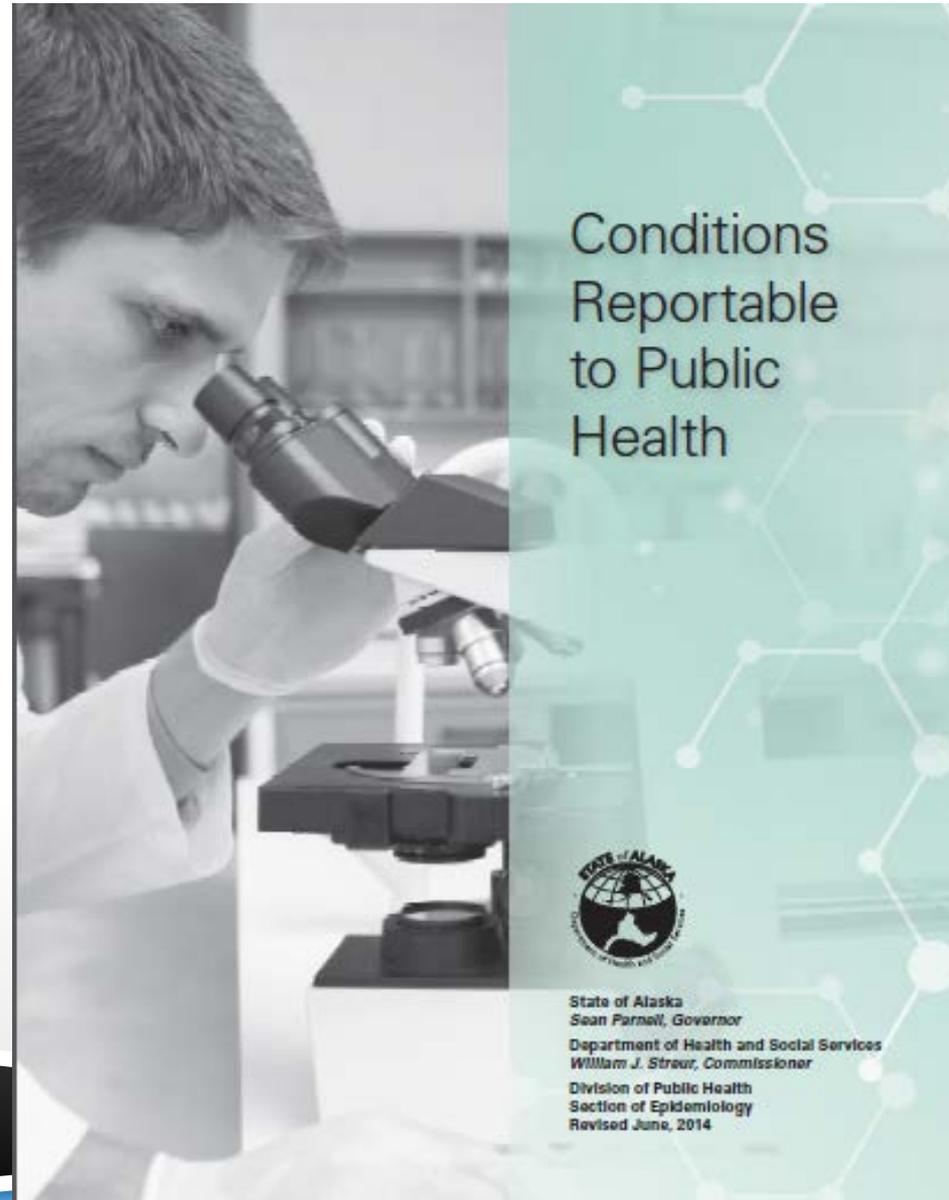
VAC TRAK

- ▶ Established in 2008
- ▶ A secure, web-based immunization information system used by health care providers to maintain consolidated immunization records for Alaskan of all ages.
 - ▶ Produce immunization records for patient use
 - ▶ Can be used for quality assurance to track vaccination coverage rates

Conditions Reportable

All health care providers are required to report administered immunizations to VacTrAK within 14 days of administration. This reporting requirement is applicable for any vaccine administered, including state supplied and privately purchased vaccine.

7 AAC 27.650, Effective 12/29/2013



Regulation Change for Pharmacists in Alaska

Senate Bill 71, AS 08.80.030(b) signed into law by Governor Bill Walker, effective 8/9/15

- This bill authorizes trained and certified pharmacists to immunize Alaskans without having to contract with a doctor or nurse practitioner to oversee the immunization program
- The Alaska Immunization Program is evaluating its state-supplied vaccine and yellow fever authorization process policies in light of this new law