

# 2016 Adult Immunization Schedule

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# Adult Immunization Working Group

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## Consultants

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# Background

- ❑ **ACIP updates adult immunization schedule each year**
  - Represents current ACIP policy and updates approved policy changes from ACIP meetings
  - Adult immunization working group meets monthly, ongoing consultation with vaccine subject matter experts
- ❑ **Updates in adult immunization schedule approved by**
  - American College of Physicians
  - American Academy of Family Physicians
  - American College of Obstetricians and Gynecologists
  - American College of Nurse Midwives
- ❑ **Adult immunization schedule published in**
  - *MMWR*
  - *Annals of Internal Medicine*

# 2016 Adult Immunization Schedule Updates

- **Use of 9-Valent Human Papillomavirus (HPV) Vaccine: Updated HPV Vaccination Recommendations of the Advisory Committee on Immunization Practices**
  - MMWR March 27, 2015 / 64(11);300-304
  - [www.cdc.gov/mmwr/preview/mmwrhtml/mm6411a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6411a3.htm)
- **Use of Serogroup B Meningococcal Vaccines in Persons Aged  $\geq 10$  Years at Increased Risk for Serogroup B Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices, 2015**
  - MMWR June 12, 2015 / 64(22);608-612
  - [www.cdc.gov/mmwr/preview/mmwrhtml/mm6422a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6422a3.htm)
- **Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP)**
  - MMWR September 4, 2015 / 64(34);944-947
  - [www.cdc.gov/mmwr/preview/mmwrhtml/mm6434a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6434a4.htm)

# Updates in HPV Vaccination

- ❑ Available HPV vaccines
  - 3 for females: 2vHPV, 4vHPV, 9vHPV
  - 2 for males: 4vHPV, 9vHPV
- ❑ For females aged 19–26 years, 3-dose series of 2vHPV, 4vHPV, or 9vHPV is recommended
- ❑ For males aged 19–21 years, 3-dose series of 4vHPV or 9vHPV is recommended
- ❑ For MSM and immunocompromised men (including those with HIV infection) through age 26 years, 3-dose series of 4vHPV or 9vHPV is recommended
- ❑ “HPV vaccination” replaces “HPV4 or HPV2”

# Updates in Pneumococcal Vaccination

## □ Intervals between PCV13 and PPSV23

- PCV13 →PPSV23 interval is at least 1 year for immunocompetent adults aged  $\geq 65$  years (for adults with immunocompromising conditions, asplenia, or CSF leak or cochlear implant, the interval is at least 8 weeks)

## □ Correction of errata

- “Adults aged  $\geq 19$  years with immunocompromising conditions” replaces “adults aged 19 through 64 years with immunocompromising conditions”
- “Adults aged 19 through 64 years who smoke cigarettes or reside in nursing home or long-term care facilities: Administer PPSV23” removed
  - “Adults aged 19 through 64 years who... reside in nursing home” removed from list of adults recommended for PPSV23
  - “Adults aged 19 through 64 years who smoke cigarettes” remains indication for PPSV23

# Updates in Meningococcal Vaccination

- ❑ **Listed separately in figures in schedule**
  - MenACWY/MPSV4
  - MenB
- ❑ **Recommendation for either 2-dose series MenB-4C (Bexsero) or 3-dose series MenB-FHbp (Trumenba)**
  - Asplenia or complement deficiencies, microbiologists, outbreak settings
  - MenB not recommended for travelers
  - No recommendation for MenB revaccination
- ❑ MenB for adults with asplenia and complement deficiencies is yellow (recommended for all), other groups are purple (recommended if risk factor)

## Updates in Meningococcal Vaccination (2)

- **“Young adults aged 16–23 years (preferred age 16–18 years) may be vaccinated to provide short-term protection against most strains of MenB disease”**
  - Working Group plans to evaluate best representation of Category B recommendation in adult immunization schedule
  - In interim, Category B recommendation for MenB is discussed in footnotes but not included in figures

# Updates in Meningococcal Vaccination (3)

## □ Additional notes

- HIV infection is not indication for routine vaccination with MenACWY or MenB vaccine.
- MenB-4C or MenB-FHbp vaccine may be administered concomitantly with MenACWY vaccine, but at a different anatomic site if feasible
- The two MenB vaccines are not interchangeable; the same vaccine product must be used for all doses

## □ MenB added to Contraindications and Precautions Table

- Contraindications: Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component
- Precautions: Moderate or severe acute illness with or without fever

# Draft 2016 Adult Immunization Schedule Figure 1

## Recommended Adult Immunization Schedule—United States - 2016

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 immunization schedule for adults aged 19 years or older, by vaccine and age group

VACCINE ▼	AGE GROUP ▶	19-21 years	22-26 years	27-59 years	60-64 years	≥ 65 years
Influenza* <sup>2</sup>		1 dose annually				
Tetanus, diphtheria, pertussis (Td/Tdap)* <sup>3</sup>		Substitute Tdap for Td once, then Td booster every 10 yrs				
Varicella* <sup>4</sup>		2 doses				
Human papillomavirus (HPV) Female* <sup>5</sup>		3 doses				
Human papillomavirus (HPV) Male* <sup>5</sup>		3 doses				
Zoster <sup>6</sup>		1 dose				
Measles, mumps, rubella (MMR)* <sup>7</sup>		1 or 2 doses depending on indication				
Pneumococcal 13-valent conjugate (PCV13)* <sup>8</sup>		1 dose				
Pneumococcal 23-valent polysaccharide (PPSV23) <sup>8</sup>		1 dose				
Hepatitis A* <sup>9</sup>		2 doses				
Hepatitis B* <sup>10</sup>		3 doses				
Meningococcal 4-valent conjugate (MenACWY) or polysaccharide (MPSV4)* <sup>11</sup>		1 or more doses depending on indication				
Meningococcal B (MenB) <sup>11</sup>		2 or 3 doses depending on indication				
Haemophilus influenzae type b (Hib) <sup>12</sup>		1 or 3 doses depending on indication				

Simplified from "Substitute 1-time dose of Tdap for Td booster"

Added "depending on indication" to provide rationale for 1 or 2 doses

Added "depending on indication" to provide rationale for 1 or 2 doses

Change MenACWY and MenB in separate rows; MenACWY dosing depends on indication, MenB dosing depends on vaccine

Added "depending on indication" to provide rationale for 1 or 3 doses

Both legends begin with "Recommended for..."

\*Covered by the Vaccine Injury Compensation Program

- Recommended for all persons who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection; zoster vaccine is recommended regardless of past episode of zoster
- Recommended for persons with a risk factor (medical, occupational, lifestyle, age, or other indication)
- No recommendation

Information on how to report postvaccination reactions to the Vaccine Adverse Event Reporting System (VAERS). Reporting forms and information on how to file a VAERS report are available at [www.vaers.hhs.gov](http://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](http://www.hrsa.gov/vaccinecompensation) or by telephone, 800-338-2382. To file a claim for vaccine injury, contact the Department of Health and Human Services, 717 Madison Place, N.W., Washington, D.C. 20005; telephone, 202-357-6400.

Additional information about the vaccines in this schedule, including available data, and contraindications for vaccination is also available at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines) or from the CDC-INFO Contact Center, 7700 Columbia Avenue, Rockville, MD 20852; telephone, 1-800-458-5231; TDD, 1-800-458-5232; or by email, [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov).

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).

# Draft 2016 Adult Immunization Schedule Figure 1

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**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 immunization schedule for adults aged 19 years or older, by vaccine and age group<sup>1</sup>**

VACCINE ▼	AGE GROUP ▶	19-21 years	22-26 years	27-49 years	50-59 years	60-64 years	≥ 65 years
Influenza <sup>*2</sup>		1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>*3</sup>		Substitute Tdap for Td once, then Td booster every 10 yrs					
Varicella <sup>*4</sup>		2 doses					
Human papillomavirus (HPV) Female <sup>*5</sup>		3 doses					
Human papillomavirus (HPV) Male <sup>*5</sup>		3 doses					
Zoster <sup>6</sup>						1 dose	
Measles, mumps, rubella (MMR) <sup>*7</sup>		1 or 2 doses depending on indication					
Pneumococcal 13-valent conjugate (PCV13) <sup>*8</sup>		1 dose					
Pneumococcal 23-valent polysaccharide (PPSV23) <sup>8</sup>		1 or 2 doses depending on indication					
						1 dose	
Hepatitis A <sup>*9</sup>		2 or 3 doses depending on vaccine					
Hepatitis B <sup>*10</sup>		3 doses					
Meningococcal 4-valent conjugate (MenACWY) or polysaccharide (MPSV4) <sup>*11</sup>		1 or more doses depending on indication					
Meningococcal B (MenB) <sup>11</sup>		2 or 3 doses depending on vaccine					
<i>Haemophilus influenzae</i> type b (Hib) <sup>*12</sup>		1 or 3 doses depending on indication					

\*Covered by the Vaccine Injury Compensation Program

 Recommended for all persons who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection; zoster vaccine is recommended regardless of past episode of zoster

 Recommended for persons with a risk factor (medical, occupational, lifestyle, age 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](http://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](http://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](http://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.

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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).

# Draft 2016 Adult Immunization Schedule Figure 2

Figure 2. Vaccines that might be recommended on medical and other indications<sup>1</sup>

VACCINE ▼	INDICATION ►	Pregnancy	Immuno-compromising conditions (excluding HIV infection) <sup>4,6,7,8,13</sup>	HIV infection CD4+ count (cells/μL) <sup>4,6,7,8,14</sup>		Men who have sex with men (MSM)	Kidney failure, hemodialysis	Heart disease, chronic lung disease	Asplenia and persistent complement component deficiencies <sup>15,16</sup>	Chronic liver disease	Diabetes	Healthcare personnel
				< 200	≥ 200							
Influenza <sup>*2</sup>												
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>*3</sup>		1 dose Tdap each pregnancy										
Varicella <sup>*4</sup>			Contraindicated									
Human papillomavirus (HPV) Female <sup>*5</sup>												
Human papillomavirus (HPV) Male <sup>*5</sup>												
Zoster <sup>6</sup>			Contraindicated									
Measles, mumps, rubella (MMR) <sup>*7</sup>			Contraindicated									
Pneumococcal 13-valent conjugate (PCV13) <sup>*8</sup>												
Pneumococcal polysaccharide (PPSV23) <sup>9</sup>												
Hepatitis A <sup>*9</sup>												
Hepatitis B <sup>*10</sup>												
Meningococcal 4-valent conjugate (MenM) or polysaccharide (MPSV4) <sup>*11</sup>												
Meningococcal B (MenB) <sup>11</sup>												
Haemophilus influenzae type b (Hib) <sup>*12</sup>												

Condensed and simplified yellow bar segments

Added maximum of 3 doses PPSV23

Straddles yellow (asplenia, complement deficiencies) and purple (other indications)

No recommendation  
Clarified only post-HSCT recipients get 3 doses

Other indications are for 1 dose

Added in legend

<sup>\*</sup>Covered by the Vaccine Injury Compensation Program

Recommended for all persons who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection; zoster vaccine is recommended regardless of past episode of zoster

Recommended for persons with a risk factor (medical, occupational, lifestyle, or other indication)

No recommendation

Contraindicated



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 recommended for adults ages 19 years and older, as of February 4, 2016. 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](http://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.

# Draft 2016 Adult Immunization Schedule Figure 2

Figure 2. Vaccines that might be indicated for adults based on medical and other indications<sup>1</sup>

VACCINE ▼	INDICATION ►	Pregnancy	Immuno-compromising conditions (excluding HIV infection) <sup>4,6,7,8,13</sup>	HIV infection CD4+ count (cells/ $\mu$ L) <sup>4,6,7,8,14</sup>		Men who have sex with men (MSM)	Kidney failure, end-stage renal disease, on hemodialysis	Heart disease, chronic lung disease, chronic alcoholism	Asplenia and persistent complement deficiencies <sup>8,9,12</sup>	Chronic liver disease	Diabetes	Healthcare personnel	
				< 200	$\geq$ 200								
Influenza <sup>*2</sup>													1 dose annually
Tetanus, diphtheria, pertussis (Td/Tdap) <sup>*3</sup>		1 dose Tdap each pregnancy											Substitute Tdap for Td once, then Td booster every 10 yrs
Varicella <sup>*4</sup>			Contraindicated										2 doses
Human papillomavirus (HPV) Female <sup>*5</sup>													3 doses through age 26 yrs
Human papillomavirus (HPV) Male <sup>*5</sup>													3 doses through age 21 yrs
Zoster <sup>6</sup>			Contraindicated										1 dose
Measles, mumps, rubella (MMR) <sup>*7</sup>			Contraindicated										1 or 2 doses depending on indication
Pneumococcal 13-valent conjugate (PCV13) <sup>*8</sup>													1 dose
Pneumococcal polysaccharide (PPSV23) <sup>8</sup>													1, 2, or 3 doses depending on indication and age <sup>*</sup>
Hepatitis A <sup>*9</sup>													2 or 3 doses depending on vaccine
Hepatitis B <sup>*10</sup>													3 doses
Meningococcal 4-valent conjugate (MenACWY) or polysaccharide (MPSV4) <sup>*11</sup>													1 or more doses depending on indication
Meningococcal B (MenB) <sup>11</sup>													2 or 3 doses depending on vaccine
<i>Haemophilus influenzae</i> type b (Hib) <sup>*12</sup>													3 doses post-HSCT recipients only
													1 dose

\*Covered by the Vaccine Injury Compensation Program

Recommended for all persons who meet the age requirement, lack documentation of vaccination, or lack evidence of past infection; zoster vaccine is recommended regardless of past episode of zoster

Recommended for persons with a risk factor (medical, occupational, lifestyle, or other indication)

No recommendation

Contraindicated



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## Next Steps

- ❑ Revise adult immunization schedule based on ACIP discussion and recommendations
- ❑ Review again by SMEs
- ❑ Obtain concurrence by ACP, AAFP, ACOG, ACNM
- ❑ Submit revised adult immunization schedule (figures and footnotes) for CDC clearance
- ❑ Submit to *MMWR* and *Annals of Internal Medicine* (pending confirmation) for publication in February 2016
- ❑ Coordinate plans to publish non-influenza vaccination coverage in same week as adult immunization schedule release