 <p>LA ALIANZA • THE ALLIANCE CENTRAL CALIFORNIA ALLIANCE FOR HEALTH</p>	POLICIES AND PROCEDURES
Policy #: HS 2.62	Lead Department: Health Services
Title: Adult Preventive Care	
Original Date: February 1996	Last Revision Date: January 2010
Approved by: Andres Aguirre, Clinical Quality Improvement Committee	
Applies to: All Lines of Business	

I. Policy Objective:

To establish guidelines for Adult Preventive Care Screening.

To specify and define the Alliance guidelines for adult health screening and preventive services provided by primary care physicians. The Alliance relies on:


- The United States Preventive Services Task Force (USPSTF) for recommendations for adult preventive care guidelines,
- Centers for Disease Control (CDC), the American College of Obstetricians and Gynecologist (ACOG), the American Academy of Family Physicians (AAFP), the American College of Physicians (ACP), and the Advisory Committee on Immunization Practices (ACIP) for immunization and other recommendations; and
- The State of California Department of Health Care Services (DHCS) for requirements.

II. Definitions:

1. These guidelines address periodic health and behavioral risk screening and preventive services for asymptomatic adults.
2. Individuals identified as being at high risk for a given condition may require screening at intervals that are more frequent or performing additional screening tests specific to the condition. High-risk individuals are defined as those individuals whose risk behaviors: family history, socioeconomic status, ethnic background, or lifestyle are associated with a higher tendency towards a specific disease.
3. Any required interventions are considered to be an integral component of primary care, and consequently, the compliance of each PCP in performing these may be audited by the Alliance annually. These required **interventions are in bold** (see below). All other interventions are considered recommended and constitute good clinical care, but not required by the Alliance and are not considered an audit criteria.

III. Content of Screening Visits:

- A. PCPs must complete a comprehensive health assessment including a health history, health behavior risk assessment, and physical examination for each new member linked to their practice within 120 days of enrollment.
 1. The member’s health history must include information concerning: current and past medical conditions and medications; allergies; tobacco, alcohol, and street drug use; adult immunizations; past hospitalizations and family health history.
 2. The health behavior risk assessment must include at least those items contained within the age-specific recommendations of the USPSTF.
 3. The physical examination should be comprehensive and include determination of height, weight, blood pressure, dental screening, and other age and risk-specific interventions.

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4. The comprehensive health assessment should include documentation of WIC referral for all WIC eligible members (pregnant, breastfeeding, or postpartum women).

- B. If a member has not been seen for an initial health assessment visit or for periodic health screening visits, the PCP should either perform the indicated screening, behavioral risk assessment, and preventive interventions during episodic visits, or recommend that the member schedule a visit for the purpose of health screening.
- C. If a new member to a PCP's practice has received health-screening services from another provider within the past 3 years, medical records should be requested and transferred to the new PCP.
- D. If the member is an already established patient of a PCP before becoming a member AND has had a screening examination within the past 12 months, no initial health assessment is required.
- E. Immunizations must be provided according to the current schedule of ACIP, AAFP, ACOG and ACP as provided in "Recommended Adult Immunization Schedule," (Attachment 2).

When immunizations are provided at sites other than the PCP's office, the provider should notify the PCP's office of the immunization given and the date.

If this is not possible, the member or guardian of the member must be advised to provide this information to the PCP at the next visit.

The PCP office should be requesting previous medical record(s) to show a complete history.

IV. Documentation:

- A. Preventive services offered and/or performed as well as health education provided either verbally or in writing must be documented in the member's medical record. Optimally, this information should be entered on an age-specific summary sheet, so that completed and still needed services can be monitored efficiently.

V. Monitoring and Quality Improvement:

- A. As part of the ongoing audit of medical records and state and federally required quality improvement initiatives, documentation of adult preventive health services is periodically reviewed.

Review Date	Revised Date	Approved By
October 2003		Barbara Flynn, RN
	February 2006	Barbara Palla, MD
	February 2007	Julio Porro, MD
	April 2007	Quality Management Committee
	April 2008	Julio Porro, MD, CQIC
	April 2009	Andres Aguirre, CQIC
	January 2010	Andres Aguirre, CQIC

PREVENTIVE Health Screen Items	INTERVENTIONS/RECOMMENDATIONS	REFERENCE(S)
<p>Initial Health Assessment (IHA)</p>	<p>Initial entry into the health plan (Schedule health assessment within 120 days of enrollment for Medi-Cal members)</p> <p>An IHA is completed on all adult members within 120 days of the effective date of enrollment into the Plan, or documented within the past 12 months prior to member's enrollment. The IHA includes, but is not limited to:</p> <ul style="list-style-type: none"> • History of the present illness • Past medical history • Social history • Comprehensive physical and mental status examination • Individual Health Education Behavioral Assessment (IHEBA or Staying Healthy Assessment) • Preventive services • Diagnosis and Plan of Care <p>If an IHA is not present in the medical record, member's refusal, missed appointments or other reason must be documented.</p>	<p>DHCS</p>
<p>History and Physical, Dental Screening</p>	<p>Age 18-21: every year</p>	<p>American Academy of Pediatrics</p>
<p>Height/Weight</p>	<p>Recommended: Clinicians should screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults.</p> <p><u>Insufficient evidence to recommend for or against:</u> Use of moderate- or low-intensity counseling together with behavioral interventions to promote sustained weight loss in obese adults.</p> <p><u>Insufficient evidence to recommend for or against:</u> Use of counseling of any intensity and behavioral interventions to promote sustained weight loss in overweight adults.</p>	<p>USPSTF 2008</p>

Dental Screening	<p>Documentation of dental screening (and dental referral if indicated).</p> <p>Dental screening is a required component of the comprehensive exam and is reviewed with any subsequent IHEBA (Staying Healthy Assessment).</p>	DHCS
TB Testing	<p>Adults are screened for tuberculosis (TB) risk factors upon enrollment. The Mantoux skin test is administered to <i>all</i> asymptomatic persons at increased risk of developing TB irrespective of age or periodicity if they have not had a test in the previous year. The Mantoux is not administered if the individual has had a previously documented positive Mantoux skin test. When a positive skin test is noted, there is documentation of follow-up care (e.g. further medical evaluation, chest x-ray, diagnostic laboratory studies and/or referral to specialist).</p>	DHCS
Blood Pressure	<p><u>High Blood Pressure Screening</u></p> <p>Recommended: Screening for high blood pressure in adults aged 18 and older.</p>	USPSTF 2008
	<p>Initial Entry into Health Plan</p> <p>Routine Adult Patients – blood pressure should be measured every 1 to 2 years.</p> <p>A blood pressure result for a normotensive adult is documented at least every 2 years if the last diastolic reading was below 85 mm Hg and the systolic reading was below 140 mm Hg. Blood pressure is measured annually if the last diastolic reading was 85-89 or above.</p>	DHCS

	FEMALE PATIENTS	
Clinical Breast Exam	<p><u>Insufficient evidence to recommend for or against:</u> Routine clinical breast examination (CBE) alone to screen for breast cancer.</p> <p><u>Insufficient evidence to recommend for or against:</u> Teaching or performing routine breast self-examination</p>	USPSTF 2008
Breast Cancer Screening	Recommended: Mammography every 1-2 years for women 40 and older.	USPSTF 2008
Cervical Cancer Screening	First Screening: Within three years after first sexual activity or by age 21, whichever comes first. Repeat every one to three years. Human papillomavirus (HPV) testing should not be done in adolescents.	ACOG 2008
These guidelines are consistent with HEDIS and DHCS site review requirements	<p>Strongly Recommended: Screening for cervical cancer in women who have been sexually active and have a cervix.</p> <p>Recommended Against: Screening women older than age 65 for cervical cancer if they have had adequate recent screening with normal Pap smears and are not otherwise at high risk for cervical cancer.</p> <p>Recommended Against: Routine Pap smear screening in women who have had a total hysterectomy for benign disease.</p> <p><u>Insufficient to recommend for or against:</u> Routine use of new technologies to screen for cervical cancer.</p> <p><u>Insufficient to recommend for or against:</u> Routine use of human papillomavirus (HPV) testing as a primary screening test for cervical cancer.</p>	USPSTF 2008
Chlamydia Screening	<p>Recommended: Screening for chlamydial infection for all sexually active non-pregnant young women aged 24 and younger and for older nonpregnant women who are at increased risk.</p> <p>Recommended: Screening for chlamydial infection for all pregnant women aged 24 and younger and for older pregnant women who are at increased risk.</p>	USPSTF 2008

<p>Chlamydia Screening, cont'd</p>	<p>Recommended against: Routine screening for chlamydial infection for women aged 25 and older, whether or not they are pregnant, if they are not at increased risk.</p> <p><u>Insufficient evidence to assess the balance</u> of benefits and harms of screening for chlamydial infection for men.</p>	
<p>Osteoporosis Screening</p>	<p>Recommended: Women aged 65 and older should be screened routinely for osteoporosis.</p> <p>Recommended: Routine screening beginning at age 60 for women at increased risk for osteoporotic fractures</p> <p><u>No recommendation for or against:</u> routine osteoporosis screening in postmenopausal women who are younger than 60 or in women aged 60-64 who are not at increased risk for osteoporotic fractures.</p>	<p>USPSTF 2008</p>

	MALE PATIENTS	
<p>PSA</p>	<p>Recommended against: Screening for prostate cancer in men age 75 years or older.</p> <p>Insufficient evidence to assess the balance of benefits and harms of prostate cancer screening in men younger than age 75 years.</p>	<p>USPSTF 2008</p>
<p>Abdominal Aortic Aneurysm (AAA)</p>	<p>Recommended: One-time screening for abdominal aortic aneurysm (AAA) by ultrasonography in men aged 65 to 75 who have ever smoked.</p> <p>Recommended against: Routine screening for AAA in women.</p> <p><u>No recommendation for or against:</u> Screening for AAA in men aged 65 to 75 who have never smoked.</p>	<p>USPSTF 2008</p>

ALL PATIENTS		
Cholesterol	<p><u>Screening Men:</u></p> <p>Strongly recommended: Screening men aged 35 and older for lipid disorders.</p> <p>Recommended: Screening men aged 20 to 35 for lipid disorders if they are at increased risk for coronary heart disease.</p>	USPSTF 2008
Cholesterol (cont'd.)	<p><u>Screening Young Men and All Women Not at Increased Risk</u></p> <p><u>No recommendation for or against:</u> Routine screening for lipid disorders in men aged 20 to 35, or in women aged 20 and older who are not at increased risk for coronary heart disease.</p> <p><u>Screening Women at Increased Risk</u></p> <p>Strongly recommended: Screening women aged 45 and older for lipid disorders if they are at increased risk for coronary heart disease.</p> <p>Recommended: Screening women aged 20 to 45 for lipid disorders if they are at increased risk for coronary heart disease.</p>	USPSTF 2008
Screening for Colorectal Cancer	<p>Strongly recommended: Clinicians should screen men and women 50 years of age or older for colorectal cancer.-</p>	USPSTF 2008
Depression	<p>Recommended: Screening adults for depression in clinical practices that have systems in place to assure accurate diagnosis, effective treatment, and follow-up.-</p>	USPSTF 2008
Diabetes Mellitus, Type II	<p>Recommended: Screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg.</p> <p>Insufficient evidence to assess the balance of benefits and harms of screening for type 2 diabetes in asymptomatic adults with blood pressure of 135/80 mm Hg or lower.</p>	USPSTF 2008

Additional Recommendations from USPSTF, 2008

Recommendation	Men	Women
Alcohol Misuse Screening and Behavioral Counseling Interventions	✓	✓
Aspirin for the Primary Prevention of Cardiovascular Events	Adults at increased risk for coronary heart disease.	Adults at increased risk for coronary heart disease.
Breast Cancer, Chemoprevention		Discuss with women at high risk for breast cancer and at low risk for adverse effects of chemoprevention.
Breast and Ovarian Cancer Susceptibility, Genetic Risk Assessment and BRCA Mutation Testing		Refer women whose family history is associated with an increased risk for deleterious mutations in <i>BRCA1</i> and <i>BRCA2</i> genes for genetic counseling and evaluation for <i>BRCA</i> testing.
Breastfeeding, Behavioral Interventions to Promote		Structured education and behavioral counseling programs.
Diet, Behavioral Counseling in Primary Care to Promote a Healthy Diet	Adults with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease.	Adults with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease
Gonorrhea Screening		Sexually active women, including pregnant women 25 and younger, or at increased risk for infection.
HIV Screening	All adolescents and adults at increased risk for HIV infection.	All adolescents and adults at increased risk for HIV infection and all pregnant women.
Syphilis Infection, Screening	Persons at increased risk.	Persons at increased risk and all pregnant women.
Tobacco Use and Tobacco-Caused Disease, Counseling	Tobacco cessation interventions for those who use tobacco.	Tobacco cessation interventions for those who use tobacco. Augmented pregnancy-tailored counseling to pregnant women who smoke.

Recommended Adult Immunization Schedule UNITED STATES - 2010

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

VACCINE ▼	AGE GROUP ▶	19–26 years	27–49 years	50–59 years	60–64 years	≥65 years
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}		Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs				Td booster every 10 yrs
Human papillomavirus (HPV) ^{2,*}		3 doses (females)				
Varicella ^{3,*}		2 doses				
Zoster ⁴					1 dose	
Measles, mumps, rubella (MMR) ^{5,*}		1 or 2 doses		1 dose		
Influenza ^{6,*}		1 dose annually				
Pneumococcal (polysaccharide) ^{7,8}		1 or 2 doses				1 dose
Hepatitis A ^{9,*}		2 doses				
Hepatitis B ^{10,*}		3 doses				
Meningococcal ^{11,*}		1 or more doses				

*Covered by the Vaccine Injury Compensation Program.

For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)

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

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, 24 hours a day, 7 days a week.

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.

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

INDICATION ▶	Pregnancy	Immuno-compromising conditions (excluding human immunodeficiency virus (HIV)) ^{3-5,13}	HIV infection ^{8-5,12,13} CD4+ T lymphocyte count	Diabetes, heart disease, chronic lung disease, chronic alcoholism	Asplenia ¹² (including elective splenectomy and persistent complement component deficiencies)	Chronic liver disease	Kidney failure, end-stage renal disease, receipt of hemodialysis	Health-care personnel	
VACCINE ▼			<200 cells/μL ≥200 cells/μL						
Tetanus, diphtheria, pertussis (Td/Tdap) ^{1,*}	Td	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs							
Human papillomavirus (HPV) ^{2,*}		3 doses for females through age 26 yrs							
Varicella ^{3,*}	Contraindicated	2 doses							
Zoster ⁴	Contraindicated	1 dose							
Measles, mumps, rubella (MMR) ^{5,*}	Contraindicated	1 or 2 doses							
Influenza ^{6,*}		1 dose TIV annually							1 dose TIV or LAIV annually
Pneumococcal (polysaccharide) ^{7,8}		1 or 2 doses							
Hepatitis A ^{9,*}		2 doses							
Hepatitis B ^{10,*}		3 doses							
Meningococcal ^{11,*}		1 or more doses							

*Covered by the Vaccine Injury Compensation Program.

For all persons in this category who meet the age requirements and who lack evidence of immunity (e.g., lack documentation of vaccination or have no evidence of prior infection)

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

No recommendation

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 January 1, 2010. 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/pubs/acip-list.htm).

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 Obstetricians and Gynecologists (ACOG), and the American College of Physicians (ACP).



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



Footnotes

Recommended Adult Immunization Schedule—UNITED STATES - 2010

For complete statements by the Advisory Committee on Immunization Practices (ACIP), visit www.cdc.gov/vaccines/pubs/ACIP-list.htm.

1. Tetanus, diphtheria, and acellular pertussis (Td/Tdap) vaccination

Tdap should replace a single dose of Td for adults aged 19 through 64 years who have not received a dose of Tdap previously.

Adults with uncertain or incomplete history of primary vaccination series with tetanus and diphtheria toxoid-containing vaccines should begin or complete a primary vaccination series. A primary series for adults is 3 doses of tetanus and diphtheria toxoid-containing vaccines; administer the first 2 doses at least 4 weeks apart and the third dose 6–12 months after the second; Tdap can substitute for any one of the doses of Td in the 3-dose primary series. The booster dose of tetanus and diphtheria toxoid-containing vaccine should be administered to adults who have completed a primary series and if the last vaccination was received ≥ 10 years previously. Tdap or Td vaccine may be used, as indicated.

If a woman is pregnant and received the last Td vaccination ≥ 10 years previously, administer Td during the second or third trimester. If the woman received the last Td vaccination < 10 years previously, administer Tdap during the immediate postpartum period. A dose of Tdap is recommended for postpartum women, close contacts of infants aged < 12 months, and all health-care personnel with direct patient contact if they have not previously received Tdap. An interval as short as 2 years from the last Td is suggested; shorter intervals can be used. Td may be deferred during pregnancy and Tdap substituted in the immediate postpartum period, or Tdap can be administered instead of Td to a pregnant woman.

Consult the ACIP statement for recommendations for giving Td as prophylaxis in wound management.

2. Human papillomavirus (HPV) vaccination

HPV vaccination is recommended at age 11 or 12 years with catch-up vaccination at ages 13 through 26 years.

Ideally, vaccine should be administered before potential exposure to HPV through sexual activity; however, females who are sexually active should still be vaccinated consistent with age-based recommendations. Sexually active females who have not been infected with any of the four HPV vaccine types (types 6, 11, 16, 18 all of which HPV4 prevents) or any of the two HPV vaccine types (types 16 and 18 both of which HPV2 prevents) receive the full benefit of the vaccination. Vaccination is less beneficial for females who have already been infected with one or more of the HPV vaccine types. HPV4 or HPV2 can be administered to persons with a history of genital warts, abnormal Papanicolaou test, or positive HPV DNA test, because these conditions are not evidence of prior infection with all vaccine HPV types.

HPV4 may be administered to males aged 9 through 26 years to reduce their likelihood of acquiring genital warts. HPV4 would be most effective when administered before exposure to HPV through sexual contact.

A complete series for either HPV4 or HPV2 consists of 3 doses. The second dose should be administered 1–2 months after the first dose; the third dose should be administered 6 months after the first dose.

Although HPV vaccination is not specifically recommended for persons with the medical indications described in Figure 2, “Vaccines that might be indicated for adults based on medical and other indications,” it may be administered to these persons because the HPV vaccine is not a live-virus vaccine. However, the immune response and vaccine efficacy might be less for persons with the medical indications described in Figure 2 than in persons who do not have the medical indications described or who are immunocompetent. Health-care personnel are not at increased risk because of occupational exposure, and should be vaccinated consistent with age-based recommendations.

3. Varicella vaccination

All adults without evidence of immunity to varicella should receive 2 doses of single-antigen varicella vaccine if not previously vaccinated or the second dose if they have received only 1 dose, unless they have a medical contraindication. Special consideration should be given to those who 1) 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 2) 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).

Evidence of immunity to varicella in adults includes any of the following: 1) documentation of 2 doses of varicella vaccine at least 4 weeks apart; 2) U.S.-born before 1980 (although for health-care personnel and pregnant women, birth before 1980 should not be considered evidence of immunity); 3) history of varicella based on diagnosis or verification of varicella by a health-care provider (for a patient reporting a history of or presenting with an atypical case, a mild case, or both, health-care providers should seek either an epidemiologic link with a typical varicella case or to a laboratory-confirmed case or evidence of laboratory confirmation, if it was performed at the time of acute disease); 4) history of herpes zoster based on diagnosis or verification of herpes zoster by a health-care provider; or 5) laboratory evidence of immunity or laboratory confirmation of disease.

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 4–8 weeks after the first dose.

4. Herpes zoster vaccination

A single dose of zoster vaccine is recommended for adults aged ≥ 60 years regardless of whether they report a prior episode of herpes zoster. Persons with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication.

5. Measles, mumps, rubella (MMR) vaccination

Adults born before 1957 generally are considered immune to measles and mumps.

Measles component: Adults born during or after 1957 should receive 1 or more doses of MMR vaccine unless they have 1) a medical contraindication; 2) documentation of vaccination with 1 or more doses of MMR vaccine; 3) laboratory evidence of immunity; or 4) documentation of physician-diagnosed measles.

A second dose of MMR vaccine, administered 4 weeks after the first dose, is recommended for adults who 1) have been recently exposed to measles or are in an outbreak setting; 2) have been vaccinated previously with killed measles vaccine; 3) have been vaccinated with an unknown type of measles vaccine during 1963–1967; 4) are students in postsecondary educational institutions; 5) work in a health-care facility; or 6) plan to travel internationally.

Mumps component: Adults born during or after 1957 should receive 1 dose of MMR vaccine unless they have 1) a medical contraindication; 2) documentation of vaccination with 1 or more doses of MMR vaccine; 3) laboratory evidence of immunity; or 4) documentation of physician-diagnosed mumps.

A second dose of MMR vaccine, administered 4 weeks after the first dose, is recommended for adults who 1) live in a community experiencing a mumps outbreak and are in an affected age group; 2) are students in postsecondary educational institutions; 3) work in a health-care facility; or 4) plan to travel internationally.

Rubella component: 1 dose of MMR vaccine is recommended for women who do not have documentation of rubella vaccination, or who lack laboratory evidence of immunity. For women of childbearing age, regardless of birth year, rubella immunity should be determined and women should be counseled regarding congenital rubella syndrome. 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) and 1 dose of MMR vaccine (for rubella), respectively.

During outbreaks, health-care facilities should recommend that unvaccinated health-care personnel born before 1957, who lack laboratory evidence of measles, mumps, and/or rubella immunity or laboratory confirmation of disease, receive 2 doses of MMR vaccine during an outbreak of measles or mumps, and 1 dose during an outbreak of rubella.

Complete information about evidence of immunity is available at www.cdc.gov/vaccines/recs/provisional/default.htm.

6. Seasonal Influenza vaccination

Vaccinate all persons aged ≥ 50 years and any younger persons who would like to decrease their risk of getting influenza. Vaccinate persons aged 19 through 49 years with any of the following indications.

Medical: Chronic disorders of the cardiovascular or pulmonary systems, including asthma; chronic metabolic diseases, including diabetes mellitus; renal or hepatic dysfunction, hemoglobinopathies, or immunocompromising conditions (including immunocompromising conditions caused by medications or HIV); cognitive, neurologic or neuromuscular disorders; and pregnancy during the influenza season. No data exist on the risk for severe or complicated influenza disease among persons with asplenia; however, influenza is a risk factor for secondary bacterial infections that can cause severe disease among persons with asplenia.

Occupational: All health-care personnel, including those employed by long-term care and assisted-living facilities, and caregivers of children aged < 5 years.

Other: Residents of nursing homes and other long-term care and assisted-living facilities; persons likely to transmit influenza to persons at high risk (e.g., in-home household contacts and caregivers of children aged < 5 years, persons aged ≥ 50 years, and persons of all ages with high-risk conditions).

Healthy, nonpregnant adults aged < 50 years without high-risk medical conditions who are not contacts of severely immunocompromised persons in special-care units may receive either intranasally administered live, attenuated influenza vaccine (FluMist) or inactivated vaccine. Other persons should receive the inactivated vaccine.

7. Pneumococcal polysaccharide (PPSV) vaccination

Vaccinate all persons with the following indications.

Medical: Chronic lung disease (including asthma); chronic cardiovascular diseases; diabetes mellitus; chronic liver diseases, cirrhosis; chronic alcoholism; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy [if elective splenectomy is planned, vaccinate at least 2 weeks before surgery]); immunocompromising conditions including chronic renal failure or nephrotic syndrome; and cochlear implants and cerebrospinal fluid leaks. Vaccinate as close to HIV diagnosis as possible.

Other: Residents of nursing homes or long-term care facilities and persons who smoke cigarettes. Routine use of PPSV is not recommended for American Indians/Alaska Natives or persons aged < 65 years unless they have underlying medical conditions that are PPSV indications. However, public health authorities may consider recommending PPSV for American Indians/Alaska Natives and persons aged 50 through 64 years who are living in areas where the risk for invasive pneumococcal disease is increased.

8. Revaccination with PPSV

One-time revaccination after 5 years is recommended for persons with chronic renal failure or nephrotic syndrome; functional or anatomic asplenia (e.g., sickle cell disease or splenectomy); and for persons with immunocompromising conditions. For persons aged ≥ 65 years, one-time revaccination is recommended if they were vaccinated ≥ 5 years previously and were younger than aged < 65 years at the time of primary vaccination.

9. Hepatitis A vaccination

Vaccinate persons with any of the following indications and any person seeking protection from hepatitis A virus (HAV) infection.

Behavioral: Men who have sex with men and persons who use injection drugs.

Occupational: Persons working with HAV-infected primates or with HAV in a research laboratory setting.

Medical: Persons with chronic liver disease and persons who receive clotting factor concentrates.

Other: Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A (a list of countries is available at www.cdc.gov/travel/content/diseases.aspx).

Unvaccinated persons who anticipate close personal contact (e.g., household contact or regular babysitting) with an international adoptee from a country of high or intermediate endemicity during the first 60 days after arrival of the adoptee in the United States should consider vaccination. The first dose of the 2-dose hepatitis A vaccine series should be administered as soon as adoption is planned, ideally ≥ 2 weeks before the arrival of the adoptee.

Single-antigen vaccine formulations should be administered in a 2-dose schedule at either 0 and 6–12 months (Havrix), or 0 and 6–18 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, administered on days 0, 7, and 21–30 followed by a booster dose at month 12 may be used.

10. Hepatitis B vaccination

Vaccinate persons with any of the following indications and any person seeking protection from hepatitis B virus (HBV) infection.

Behavioral: Sexually active persons who are not in a long-term, mutually monogamous relationship (e.g., persons with more than one 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.

Occupational: Health-care personnel and public-safety workers who are exposed to blood or other potentially infectious body fluids.

Medical: Persons with end-stage renal disease, including patients receiving hemodialysis; persons with HIV infection; and persons with chronic liver disease.

Other: Household contacts and sex partners of persons with chronic HBV infection; 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 (a list of countries is available at www.cdc.gov/travel/content/diseases.aspx).

Hepatitis B vaccination is recommended for 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 daycare facilities for persons with developmental disabilities.

Administer or complete a 3-dose series of HepB to those persons not previously vaccinated. The second dose should be administered 1 month after the first dose; the third dose should be administered 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, administer 3 doses at 0, 1, and 6 months; alternatively, a 4-dose schedule, administered on days 0, 7, and 21–30 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 $\mu\text{g/mL}$ (Recombivax HB) administered on a 3-dose schedule or 2 doses of 20 $\mu\text{g/mL}$ (Engerix-B) administered simultaneously on a 4-dose schedule at 0, 1, 2 and 6 months.

11. Meningococcal vaccination

Meningococcal vaccine should be administered to persons with the following indications.

Medical: Adults with anatomic or functional asplenia, or persistent complement component deficiencies.

Other: First-year college students living in dormitories; microbiologists routinely exposed to isolates of *Neisseria meningitidis*; military recruits; and persons who travel to or live in countries in which meningococcal disease is hyperendemic or epidemic (e.g., the “meningitis belt” of sub-Saharan Africa during the dry season [December through June]), particularly if their contact with local populations will be prolonged. Vaccination is required by the government of Saudi Arabia for all travelers to Mecca during the annual Hajj.

Meningococcal conjugate vaccine (MCV4) is preferred for adults with any of the preceding indications who are aged ≤ 55 years; meningococcal polysaccharide vaccine (MPSV4) is preferred for adults aged ≥ 56 years. Revaccination with MCV4 after 5 years is recommended for adults previously vaccinated with MCV4 or MPSV4 who remain at increased risk for infection (e.g., adults with anatomic or functional asplenia). Persons whose only risk factor is living in on-campus housing are not recommended to receive an additional dose.

12. Selected conditions for which *Haemophilus influenzae* type b (Hib) vaccine may be used

Hib vaccine generally is not recommended for persons aged ≥ 5 years. No efficacy data are available on which to base a recommendation concerning use of Hib vaccine for older children and adults. However, studies suggest good immunogenicity in patients who have sickle cell disease, leukemia, or HIV infection or who have had a splenectomy. Administering 1 dose of Hib vaccine to these high-risk persons who have not previously received Hib vaccine is not contraindicated.

13. Immunocompromising conditions

Inactivated vaccines generally are acceptable (e.g., pneumococcal, meningococcal, influenza [inactivated influenza vaccine]) and live vaccines generally are avoided in persons with immune deficiencies or immunocompromising conditions. Information on specific conditions is available at www.cdc.gov/vaccines/pubs/acip-list.htm.