DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
2300 E STREET NW
WASHINGTON DC 20372-5300

Canc frp: Apr 99

IN REPLY REFER TO
BUMEDNOTE 6230
BUMED-24
20 Apr 98

BUMED NOTICE 6230

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical Department Personnel

Subj: IMMUNIZATION REQUIREMENTS AND RECOMMENDATIONS

Ref: (a) BUMEDINST 6230.15
(b) NAVMEDLOGCOM Fort Detrick 051704Z Dec 97 (NOTAL)
(c) ASD(HA) memo of 29 Oct 97 (NOTAL)
(d) ASD(HA) memo of 12 Aug 96 (NOTAL)
(e) Armed Forces Epidemiological Board (AFEB) memo 15-1A/97-1 (NOTAL)
(f) ASD(HA) memo of 5 May 97 (NOTAL)
(g) AFEB memo 15-1A/98-1 (NOTAL)
(h) BUMEDINST 6220.4

Encl: (1) Index of Current Recommendations of the Advisory Committee on Immunization Practices (ACIP)
(2) ACIP Guidelines for Spacing Vaccines and Immune Globulin
(3) National Vaccine Injury Compensation Program Vaccine Injury Table (VIT)
(4) Vaccine Adverse Event Reporting System (VAERS) Form
(5) Adult Dosages and Routes of Vaccine Administration
(6) Recommended Childhood Immunization Schedule United States, January-December 1998
(7) Preventive Medicine Points of Contact and Information Resources
(8) Civilian Immunization Information Resources
(9) Terms, Abbreviations, and Acronyms

1. Purpose. To update requirements and recommendations for administering immunizing agents to Navy and Marine Corps personnel, beneficiaries, civilian employees, and volunteers.

2. General Considerations

a. Immunizations and Chemoprophylaxis. Reference (a) provides basic guidance on immunizations and chemoprophylaxis. Any requirements or recommendations of reference (a) not specifically modified by this notice remain in effect.

b. Vaccine Recipients

(1) This notice applies to active duty Navy and Marine Corps personnel, reservists coming on active duty for periods of

10 or more days, and nonactive duty beneficiaries, as well as civilian employees, civilian volunteers, and students who require occupationally-directed vaccination.

(2) Civilian personnel working under contract to the Navy or Marine Corps must meet the requirements of this notice. Contractors must provide these immunizations to their employees. Immunization requirements must be addressed in service contracts.

c. Standard of Care. Before administering immunizing agents, health care providers must be familiar with the contents of this notice and the appropriate package insert. Vaccine administration policies must follow current Centers for Disease Control (CDC) and Prevention's Advisory Committee on Immunization Practices (ACIP) recommendations unless specifically directed otherwise in this notice, or subsequent directives. Enclosure (1) is an index of ACIP recommendations, which include routine immunization schedules for all age groups.

d. Performance Metric or Measure of Quality. All commands holding medical records will conduct an ongoing, at least annual, self-assessment to determine the level of vaccine coverage of their supported populations. The self-assessment should include reviewing a representative sample of health records. Commands will plot the results of their self-assessments to facilitate trend analysis, and retain the results on file.

(1) Vaccine coverage must be tracked for all recipients. Separate tracking for the following recipient populations is required:

(a) Active duty personnel.

(b) Nonactive duty adults; adults age 65 and older.

(c) Children from birth to 18 months, 4-6 years, and 11-16 years.

(d) High-risk groups of any age (such as those with diabetes, chronic pulmonary and heart disease, etc.).

(e) Occupational specialty groups (such as health care workers, etc.).

(2) Vaccine coverage levels are determined by measuring compliance. Compliance is confirmed by either documented immunization, serological immunity, clinical disease, or medical contraindication to each immunization.

(3) Commands are also encouraged to identify and measure the presence of missed vaccination opportunities so they may make process improvements and raise coverage levels.

(4) Commands may obtain consultative assistance regarding vaccine assessment and delivery methods from their staff clinical epidemiologist or preventive medicine department, cognizant Navy environmental and preventive medicine unit (NAVENPVNTMEDU), or the Navy Environmental Health Center (NAVENVIRNHLTHCEN).

e. Put Prevention into Practice (PPIP). As part of the Navy's implementation of PPIP and other health promotion and wellness activities, immunization status should be reviewed as part of each patient's medical visit when vital signs are obtained and documented on the Chronological Record of Medical Care, standard form (SF) 600, or similar form. All personnel needing recommended immunizations should be promptly immunized, preferably during the same visit. Others should be encouraged to be vaccinated as soon as possible.

f. Barriers to Immunization. Obstacles to providing prompt, thorough vaccine coverage should be eliminated. For example, eliminate the requirement for:

(1) Appointments or prescriptions of those seeking routine (such as well baby) immunizations.

(2) Patients to see a physician and receive a prescription before receiving vaccinations.

(3) Immunizations to be given only by preventive medicine technicians (PMTs).

(4) Vaccinees to remain in the vaccine administration area after receiving a vaccine.

(5) Deferring administration of measles, mumps, and rubella (MMR) vaccine in accession settings (such as recruit training) to women who have verbally denied pregnancy, or the possibility of pregnancy, until a pre-vaccination pregnancy test is obtained.

(6) Deferring immunization for minor afebrile illnesses (such as those with upper respiratory infections and on antibiotic therapy).

g. Jet Injectors. The use of jet injectors is prohibited unless otherwise directed by the Bureau of Medicine and Surgery.

This is in view of concerns regarding the potential spread of blood-borne disease when using the jet injector in the multiple dose mode (see reference (b)).

h. Automated Immunization Tracking

(1) Reference (c) directs immunization data for active duty service personnel be entered into the Defense Enrollment Eligibility Reporting System (DEERS). This requires an automated system be established for tracking and reporting immunizations. Over the long term, immunization tracking will be provided by the Preventive Health Care System (PHCS), with deployment scheduled to commence in 1999.

(a) Until this occurs, the Shipboard Non-Tactical ADP Program (SNAP) Automated Medical System (SAMS) will be the interim system for immunizations administered to service personnel at medical treatment facilities (MTFs). There is no requirement for the automated tracking of immunizations given to other beneficiaries.

(b) Ships will continue to use SAMS to collect and report immunization data. Marine Corps units will also use SAMS, however, only anthrax data is currently required to be tracked. Immunization data resides in a number of independent readiness systems used within the Marine Corps. When a SAMS converter engine to transfer this data into SAMS becomes available, all immunization data will then be tracked in SAMS.

(c) Immunization data on Navy Reserve personnel will be tracked and reported through the Reserve Standard Training, Administration, and Readiness Support (RSTARS) System. The choice of a tracking system for the Marine Corps Reserves has not been made at this time.

(2) A central repository for all SAMS immunization data resides at the Naval Medical Information Management Center (NAVMEDINFOMGMTCEN). Electronic transfer to NAVMEDINFOMGMTCEN of immunization data collected in SAMS will occur from MTFs on a weekly basis and from operational units on a monthly basis. Immunization data from the Navy Reserves will be transmitted directly to DEERS through a central interface. If electronic data transmission from a specific unit is not feasible, SAMS data may be saved to a 3.5 inch floppy disk and mailed to NAVMEDINFOMGMTCEN. MTFs will have the capability to query the DEERS database to obtain immunization information on service personnel, to update the local SAMS database.

(3) Twenty-four hour customer support for SAMS is available. East coast units should call (757) 523-8131 or DSN 565-8131. West coast units should call (619) 556-9092

or DSN 526-9092. For customer or technical support from NAVMEDINFOMGMTCEN, call (301) 295-1598 or DSN 295-1598; e-mail address is kamcgrane@us.med.navy.mil.

3. Clinical Considerations

a. Vaccine Intervals and Missed Vaccine Doses. Doses given at less than the recommended interval may not provide adequate antibody response and should not be counted as part of the primary (initial) series. Restarting or adding extra doses is not necessary when an initial series of a vaccine or toxoid is interrupted. Increasing the interval between doses of a multi-dose vaccine does not diminish vaccine efficacy. Enclosure (2) provides ACIP guidelines for spacing of vaccines and immune globulin (IG).

b. Hypersensitivity or Allergy. Review the manufacturer's package insert before administering any biological product. Determine if the individual has previously shown any unusual degree of adverse reaction or allergy to a specific immunizing agent or vaccine component such as eggs, preservatives, or antibiotics. Defer individuals with reported hypersensitivity to vaccines or vaccine components from immunization and refer to an allergy specialist for evaluation unless the medical record provides evidence of prior consultation and allergist recommendations.

c. Screening for Pregnancy. In females of childbearing age, a pregnancy screening test is not routinely required before administering vaccines or toxoids, including live virus vaccines. The following precautions should be taken to avoid immunization during pregnancy:

(1) Ask if pregnant. If the answer is "yes" or "maybe," exclude from immunization and refer for evaluation. If the answer is "no," immunize.

(2) If a live virus vaccine is administered, counsel the individual to avoid becoming pregnant for a specified time period and document counseling in the health record on SF 600. Individuals should be advised to avoid pregnancy for 1 month after receiving varicella vaccine and 3 months after receiving other live virus vaccines, (such as oral poliovirus vaccine (OPV), MMR, yellow fever).

d. Preimmunization Serological Screening for Susceptibility. Activities providing immunizations may elect to either immunize all individuals, or screen individuals if the serological results can be available in less than 10 days. Individuals with serological evidence of immunity do not need to be immunized; however, test results must be entered in the SF 601 (Immunization

Record) and in the PHS 731 (International Certificate of Vaccination). It is not necessary to immunize or screen persons with a reliable history of varicella (chickenpox). If susceptibility to one or two of the MMR components is identified, persons may be vaccinated with the specific component. The SF 601 and PHS 731 must reflect receipt of the specific vaccine. Commands using serologic screening and selective immunization should evaluate its cost-effectiveness at least annually.

e. Human Immunodeficiency Virus (HIV) Infection and Vaccine Administration. HIV testing and documentation is neither recommended nor required before administering vaccines or toxoids. Consult current ACIP recommendations for guidance on immunizing persons known to be HIV infected or otherwise immunocompromised.

f. Administering Specific Immunizing Agents to Asplenic Individuals. Asplenic individuals not previously immunized should be administered pneumococcal polysaccharide vaccine, Haemophilus influenza type b vaccine (conjugate or polysaccharide), and quadrivalent meningococcal vaccine as soon as possible. Consult current ACIP recommendations for guidance concerning booster doses for asplenic individuals.

g. Informing Vaccine Recipients About Potential Adverse Effects. Section 2126 of the Public Health Service Act, effective 1 October 1994, requires all health care providers who administer any vaccine containing tetanus, diphtheria, pertussis, measles, mumps, rubella, or polio vaccine will, before administration of the vaccine, provide a copy of the relevant vaccine information sheet to the adult or legal representative of any child to whom such a provider intends to administer such vaccine. Providers will use only the vaccine information sheets prepared by the Centers for Disease Control and Prevention (CDC) and published in the Federal Register. (Vaccine information sheets can be obtained from the CDC or the NAVENVIRHLTHCEN home page at http://www-nehc.med.navy.mil/prevmed). Additional information regarding vaccine information sheets (VIS), including foreign language translations, may be obtained from the NAVENVIRHLTHCEN, the cognizant NAVENPVNTMEDU, CDC (National Immunization Program), and State and county health departments. An entry will be made in each patient's medical treatment record to document the vaccine information material was provided. Health care providers are not required to obtain the signature of the patient or legal representative acknowledging receipt of the vaccine information materials.

h. Reporting Adverse Events After Vaccination

(1) Enclosure (3) lists events which must be reported using the Vaccine Adverse Event Reporting System (VAERS) form, enclosure (4). Reporting other significant vaccine related events not listed in enclosure (3) is encouraged.

(2) Mail completed VAERS form to the address listed on the form, with an information copy to: Commanding Officer, Navy Environmental Health Center, Attention: Preventive Medicine Directorate, 2510 Walmer Avenue, Norfolk, VA 23513-2617, or Fax (757) 444-1345. Submitting activity must retain a record copy.

i. Vaccination Records

(1) Health care providers who administer vaccines, toxoids, and other immunobiologicals must record on the SF 601 the date the vaccine was administered, the manufacturer and lot number of the vaccine, dose given, route of administration, and the name, address, and title of the person administering the vaccine.

(2) The SF 601 must be reviewed for completeness and accuracy at each medical encounter. Required immunizations must be administered when indicated, preferably during the same visit. The PHS 731 serves as the individual's official record of immunization. The PHS 731 should remain in the custody of the individual or legal guardian and should be updated at the time of immunization.

4. Immunization of Military Personnel

a. Initial Training. After completion of initial training, military personnel must have documentation of receiving the following:

(1) Adenovirus vaccine (enlisted recruits only).

(2) Hepatitis A virus (HAV) vaccine (first dose).

(3) Influenza vaccine.

(4) MMR (Measles, Mumps, Rubella) vaccine (one dose).

(5) Meningococcal vaccine (enlisted recruits only).

(6) Oral poliovirus vaccine (OPV) (one dose). If contact with immunocompromised individuals is anticipated within 1 month, consider administering inactivated poliovirus vaccine (IPV).

(7) Td (tetanus-diphtheria) toxoid (one dose).

(8) Varicella vaccine (two-dose primary series). Immunize only susceptible personnel. (Refer to paragraph 6n for guidance.)

(9) Yellow fever vaccine (one dose).

b. Immunizing Enlisted Recruits. MMR, varicella, adenovirus, and quadrivalent meningococcal vaccines, protect against diseases which have a significant outbreak potential in high density recruit settings. Therefore, MMR, varicella, adenovirus, and quadrivalent meningococcal vaccines must be administered as early as possible in recruit training. Polio, hepatitis A, and yellow fever vaccinations can be administered during the last half of recruit training. In the case of an adenovirus vaccine shortage, this vaccine may be administered on a seasonal basis to conserve supplies.

c. Immunizing Officer Accessions and Midshipmen (both Naval Academy and Naval Reserve Officer Training Corps (NROTC)). Officer accessions and midshipmen must receive MMR vaccine or appropriate serological testing as early as possible in initial training. Officer accessions and midshipmen must also receive varicella vaccine. It is unnecessary to immunize those with a reliable history of chickenpox or serological evidence of immunity. Vaccinate midshipmen with two doses of HAV vaccine before graduation. Vaccinate midshipmen, before executing summer assignment orders to Operational Forces, with at least one dose of HAV vaccine.

d. Immunizing Reserve Component Personnel. Regardless of the length of time on active duty status, all members of the Navy and Marine Corps Ready Reserve must be immunized per Table 1 of reference (a). Required immunizations may be administered when the reservist is on inactive duty training (IDT), inactive duty training travel (IDTT), additional duty training (ADT), annual training (AT), or active duty for special work (ADSW). Ready Reserve personnel include members of the Selected Reserve assigned to a Naval Reserve Activity and members of the Individual Ready Reserve assigned to the Active Status Pool at the Naval Reserve Personnel Center.

e. Immunizations for Personnel Assigned to Navy Medical Department Mobilization Platforms. Medical Department personnel with Mobile Medical Augmentation Readiness Teams (MMART), Medical Augmentation Program (MAP), Fleet Hospital, or hospital ship assignments must have current immunizations (initial series and

appropriate booster doses) to protect against all of the following: tetanus, diphtheria, polio, yellow fever, measles, mumps, rubella, influenza, typhoid, hepatitis A, and hepatitis B.

f. Immunizing Aviation Personnel. For information and guidance regarding immunization of aviation personnel, consult the cognizant flight surgeon or the 1997 Aeromedical Reference and Waiver Guide (10th Edition) of December 1996, published by the Naval Operational Medical Institute, Pensacola, Florida. Specific grounding guidance for Japanese B encephalitis vaccine (JEV) is contained in this notice.

g. Other Vaccines, Additional Doses, and Booster Dose Requirements. Other vaccines, additional doses, and booster doses of vaccines may be required for personnel in certain occupations or billets, or personnel deploying to, or residing in, areas with specific disease risks. Enclosure (5) lists vaccine dosages, routes of administration, and booster dose requirements.

5. Immunization of Non-Active Duty Beneficiaries

a. Infants and Children. Enclosure (6) is the current listing of immunizations recommended by ACIP and other professional organizations. All infants and children must be immunized following these guidelines. Comprehensive guidance in routine immunization of infants and children is beyond the scope of this notice. Other immunizations must be provided as detailed in the discussion of specific immunizing agents below.

b. Adults. Routine immunizations which should be made available to adults include tetanus-diphtheria and influenza. Pneumococcal vaccine should be routinely provided to adults over the age of 65 years, as well as those with specific risk factors, as detailed in paragraph 6j(1). Other immunizations must be provided as detailed in the discussion of specific immunizing agents below.

6. Specific Immunizing Agents

a. Anthrax Vaccine

(1) Vaccine Recipients. Inoculations of personnel in high-threat areas are scheduled to begin this calendar year. Information regarding the prioritization of vaccine recipients will be forthcoming. The Anthrax Vaccination Program requires all active duty, selected reservists, and specially identified civilian employees to complete the anthrax series over the next 6 years.

(2) Dosage and Administration. The primary immunization series consists of a total of six doses of 0.5 ml each, administered subcutaneously (SC). Doses are given on day 0, 2 weeks, 4 weeks, 6 months, 12 months, and 18 months. This vaccine is Formalin inactivated (dead) and was licensed for use by the Food and Drug Administration (FDA) in 1970.

(3) Booster Dose. An annual booster dose of 0.5 ml administered SC after completion of the primary series is required to maintain immunity.

(4) Documentation. Document the receipt of this immunization on the SF 601 and PHS 731 as required for all other vaccines under paragraph 3i of this notice.

(5) Immunization Tracking and Reporting Requirements. Due to the length of time required to complete the primary series, it is vital to track progress towards the completion of this vaccine series, for both individual recipients and units or commands. Entry of immunization data into automated tracking systems, as described in paragraph 2h, must be ensured. Series completion status of units or commands will be reported as directed by higher authority.

b. Cholera Vaccine. The currently available parenteral vaccine is not routinely recommended due to limited efficacy and brief duration of protection. Consult cognizant NAVENPVNTMEDU for guidance if operational orders require administration.

c. HAV Vaccine

(1) Vaccine Recipients. Per reference (d), HAV vaccine is now a requirement for all active duty and Selected Reserve personnel. Department of Defense's (DoD) goal is to achieve HAV immunization of the total force by 31 December 1998.

(a) The first dose will be administered to all Navy and Marine Corps accessions, both officer and enlisted, including Naval Academy and NROTC midshipmen, before their completion of initial training.

(b) HAV vaccine should also be administered to family members, ages 2 and older, and DoD civilian personnel who are under orders to, assigned to, or traveling to, countries with high endemicity.

(c) All persons in occupational situations who have a reasonable risk of mucocutaneous or oral contact with raw (untreated) sewage should receive HAV vaccine. The senior

occupational physician or occupational health nurse at the cognizant medical facility will determine which personnel should be vaccinated.

(2) Dosage and Administration

(a) Primary Dose

1. HAVRIX (SmithKline Beecham). The primary immunization for adults, 19 years of age and older, is a single dose of 1440 EL.U./1.0 ml, intramuscular (IM) in the deltoid muscle. The primary immunization for military personnel 17 and 18 years of age is one dose of 720 EL.U./0.5 ml, IM in the deltoid muscle.

2. VAQTA (Merck & Company, Inc.). The primary immunization for adults, 18 years of age and older, is a single dose of 1.0 ml (~50 U), IM in the deltoid muscle. The primary immunization for individuals 2 through 17 years of age is one dose of 0.5 ml (~25 U), IM in the deltoid muscle.

(b) Booster Dose

1. HAVRIX (SmithKline Beecham). Administer a booster dose 6-12 months after receipt of the primary immunization. For those age 19 and older, the booster dose is one dose of 1440 EL.U./1.0 ml. For military personnel 17 and 18 years of age, the booster dose is one dose of 720 EL.U./0.5 ml.

2. VAQTA (Merck & Company, Inc.). Administer a booster dose 6 months after receipt of the primary immunization for adults, 18 years of age and older. The booster dose consists of 1.0 ml (~50 U), IM in the deltoid muscle. For individuals 2 through 17 years of age, administer a booster dose of 0.5 ml (~25 U), IM in the deltoid muscle 6-18 months after receipt of the primary immunization.

3. The booster dose can be administered even if the recommended period of time has been exceeded.

(c) Interchangeability. Though not clearly indicated in the package insert for the HAV vaccine preparations, based on available data and recommendations from the Armed Forces Epidemiology Board (AFEB) (reference (e)), the two preparations may be used interchangeably. Recognize recommendations for use of the full strength, adult dose are different for the two preparations. Careful documentation of which preparation is given is important.

(3) Use of Immune Globulin. Prior vaccination with HAV vaccine, 2 or more weeks before exposure, eliminates the need for IG to prevent hepatitis A disease. Per reference (f), release of IG from DoD stocks requires authorization from ASD(HA). Such release is to be considered in only two situations: A domestic emergency, after consultation with the Department of Health and Human Services; and a case of military necessity, as determined by the Secretary of Defense. Commercial sources of IG will be relied on for all other requirements. For further guidance contact one of the Navy preventive medicine resources listed in enclosure (7), or review the NAVENVIRHLTHCEN home page at http://www-nehc.med.navy.mil/prevmed.

(4) Sanitation. Vaccination does not substitute for stringent adherence to food and water sanitation guidelines and policies which protect against multiple disease threats.

d. Hepatitis B Virus (HBV) Vaccine

(1) Vaccine Recipients. The following personnel groups must receive HBV vaccine as specified below, unless previously immunized or infected, as documented by medical records:

(a) All Medical Department officers accessioned into the Navy, hospital corpsmen (HM), and dental technicians (DT) must be administered two doses of HBV vaccine, at least 1 month apart, during indoctrination training or "A" school. The third dose will be administered at their next assignment.

(b) All personnel presenting for evaluation of a possible sexually transmitted disease will receive the complete HBV vaccine series.

(c) Both military and civilian personnel in occupational situations having a reasonable risk of contact with human blood, blood products, body fluids, or tissues potentially infected with HBV must receive HBV vaccine. These include, but are not limited to: health care workers, public safety workers, police, fire fighters, search and rescue personnel, correctional facility staff, etc.

(d) The senior occupational physician, or occupational health nurse at the cognizant medical facility will determine which personnel should receive HBV vaccine.

(2) Dosage and Administration

(a) Routine doses. The primary adult immunization series with HBV vaccine consists of three 1.0 ml doses

administered IM in the deltoid on days 0, 30 and 6 months for both Recombivax-HE (Merck, Sharp, and Dohme)and Engerix-B (SmithKline Beecham) vaccines.

(b) Reduced doses. Per reference (g), a reduced dose of HBV vaccine (5 micrograms (0.5 ml) of Recombivax-HE (Merck, Sharp, and Dohme), or 10 micrograms (0.5 ml) of Engerix B (SmithKline Beecham)) may be used to immunize recruits. The reduced dose may also be used in other military personnel <30 years of age, provided they are nonsmokers and are not obese. For nonmilitary beneficiaries, this reduced dose is only authorized up to and including age 19. The complete three dose immunization series may include both 5 microgram and 10 microgram doses.

(c) Vaccine Intervals and Missed Doses. Those who start the HBV vaccine series, but do not complete the prescribed three dose series should receive the remaining doses as soon as possible. Do not restart the series.

(d) Post-vaccination Serological Testing. Post-vaccination testing of health care workers (HCW) and others with high-risk occupational exposures to blood is required to identify nonresponders to HBV vaccine. The senior occupational physician or occupational health nurse at the cognizant medical facility will determine which personnel are considered to have high-risk occupational exposures. Quantitative post-vaccination serosusceptability testing should be done for anti-HBs at 1 month to 3 months after administering dose three.

(e) Vaccine Non-Response in Personnel with High-Risk Occupational Exposures. Individuals who have completed the three dose HBV vaccine series, and do not have protective levels of anti-HBs, require careful evaluation and followup. The primary series should be repeated using either Engerix-B or Recombivax-HE vaccine. Antibody testing should be performed 1 to 3 months after the last dose to determine if there is a protective titer. Individuals who have not responded after completing the second series should be referred to the nearest internal medicine, infectious disease, gastroenterology, or occupational medicine clinic for counseling on implications of nonresponse.

(f) Booster Doses. Booster doses of HBV vaccine, after a properly completed series, are not routinely recommended.

(g) Interchangeability. Both recombinant HBV vaccines, Recombivax-HE and Engerix-B, may be used either singularly or interchangeably to complete a vaccination series. An exception is when a reduced dose of Recombivax-HE is used as shown in 6d(2)(e) above.

e. Influenza Vaccine. Vaccine recipients include all active duty and Reserve Navy and Marine Corps personnel, health care workers, day care workers and volunteers, and teachers and volunteers at DoD-sponsored schools. An annual dose must be administered, preferably each fall. Non-military beneficiaries must also be offered influenza vaccine. Orders for influenza vaccine should be based on the expected needs of all beneficiaries. The Navy-wide "influenza message" issued at the end of each summer provides additional guidance.

f. JEV

(1) Vaccine Recipients. Administration of this vaccine is based on the risk of disease. Japanese encephalitis (JE) remains a significant threat to exposed personnel in the Far East and Indian subcontinent, particularly in Southeast Asia and rural Okinawa. U.S. Forces are at risk primarily at night during field operations in rural areas. JE is not readily transmitted in urban areas or during daylight hours. There is little or no risk to most Navy personnel on typical port visits or to family members traveling to or living in urban areas. Administer the JEV primary immunization series or booster dose to the following personnel:

(a) All active duty personnel, including reservists, likely to experience field living conditions in JE endemic areas as a result of scheduled transfer or deployment (such as personnel assigned to shore-based Navy or Fleet Marine Force units in the endemic region). These personnel must have the vaccine series started and should receive all three initial doses or appropriate booster before departure for the endemic area, if possible. If the series cannot be completed before departure, it will be completed upon arrival. However, completion before departure is the goal.

(b) Selected active duty personnel who may be subject to rapid, short notice deployment or transfer to field living conditions in an endemic region; primarily those assigned to special operations, Navy mobile construction battalions, and Marine expeditionary units operating in the Western Pacific. It is especially important for the entire initial series or booster to be completed before departure for certain groups who will not have ready access to shore-based MTFs upon arrival in a JE risk area. This does not preclude deployment or transfer if specific arrangements for completion enroute can be made.

(c) Medical Department personnel assigned to MAP or an MMART should be evaluated on a case-by-case basis in consultation with a NAVENPVNTMEDU.

(d) Family members traveling to endemic countries on PCS orders do not need JEV before departure. They must be briefed upon medical check-in at the overseas MTF regarding JE disease, local a JE threat, risk factors, and personal protective measures. Vaccinate only those at significant risk of disease.

(e) Any military health care beneficiary traveling to a JE-endemic area on temporary additional duty, leave, personal, or professional travel, must be evaluated on a case-by-case basis to determine a JE risk. Provide JEV and prevention education when indicated.

(2) Dosage and Administration. The primary immunization series is three doses of 1.0 ml each, administered SC on days 0, 7, and 30. In those situations where personnel are deploying to a JE endemic area in less than 30 days, a shortened vaccine schedule consisting of three doses of 1.0 ml each, administered SC on days 0, 7, and 14 may be used. The last dose should be administered at least 10 days before entering the endemic area to ensure both adequate immune response and access to medical care in case of adverse reactions.

(3) Booster Doses. A booster dose is required every 3 years for personnel who remain at risk.

(4) Grounding Guidance for Aviation Personnel. All aviation personnel who receive JEV must be grounded for 24 hours after each dose. Individuals who have previously experienced urticaria or hypersensitivity to any other vaccine must be grounded for at least 72 hours after dose one, 5 days after dose two, and 72 hours after dose three.

g. MMR Vaccine

(1) Vaccine Recipients

(a) All active duty personnel will be immunized against MMR. Acceptable alternatives are a documented history of prior receipt of MMR vaccine at or after age 12, with date administered, or serological evidence of immunity to all three agents.

(b) All health care providers engaged in the delivery of health care and having patient contact will be immunized against MMR, or have documented serological immunity.

(2) Concurrent Administration with Purified Protein Derivative (PPD). MMR vaccine may decrease the response to a tuberculin (TB) skin test, potentially causing a false negative

response in someone who actually has tuberculosis. MMR can be given the same day as a TB skin test. If MMR has been given and one or more days have elapsed, in most situations it is recommended to wait 4-6 weeks before giving a routine TB skin test.

h. Meningococcal Vaccine

(1) Vaccine Recipients

(a) Enlisted recruits.

(b) Individuals traveling or deploying to outbreak areas or the sub-Saharan Africa meningococcal belt.

(c) Individuals deploying ashore for more than 15 days in the U.S. Central Command (USCENTCOM) area of operations (AOR).

(d) Individuals entering Saudi Arabia during the Hajj.

(2) Dosage and Administration. The primary immunization is one dose, 0.5 ml SC. The booster dose is 0.5 ml SC administered 5 years after the primary vaccination or previous booster dose. A booster dose is required within the previous 3 years for personnel entering Saudi Arabia during the Hajj.

i. Plague Vaccine. Plague vaccine is not routinely recommended. Consider selective immunization for personnel subject to assignment or deployment to high-risk areas. Contact the cognizant NAVENPVNTMEDU for recommendations on when plague vaccine is indicated.

j. Pneumococcal Vaccine

(1) Vaccine Recipients

(a) Pneumococcal polysaccharide vaccine should be administered routinely to all adults 65 years and older. The vaccine is also indicated for adults with normal immune systems who have chronic illnesses, including cardiovascular disease, pulmonary disease, diabetes, alcoholism, cirrhosis, or cerebrospinal fluid (CSF) leaks.

(b) Immunocompromised adults who are at increased risk of pneumococcal disease or its complications should also be vaccinated. This includes those with splenic dysfunction or asplenia, Hodgkin's disease, lymphoma, multiple myeloma, chronic renal failure, nephrotic syndrome, conditions such as organ transplantation associated with immunosuppression, and HIV infection.

(c) Children 2 years old and older with long-term illnesses that are associated with high risk for serious pneumococcal infections or its complications should be vaccinated. This includes children with asplenia, sickle cell disease, nephrotic syndrome, cerebrospinal fluid leaks, immunosuppression, and HIV infection.

(2) Dosage and Administration. Follow the manufacturer's package insert.

k. Rabies Vaccine

(1) Vaccine Recipients. Reference (a) provides guidance on pre-exposure administration of rabies vaccine.

(2) Dosage and Administration. Reference (h) and the ACIP Guidelines for Rabies Prevention - United States 1991 (MMWR, March 1991, Vol. 40, No. RR-3) provide specific guidance on the post-exposure administration of rabies vaccine. Rabies vaccine should be administered simultaneously with human rabies immune globulin (HRIG), except as noted in the ACIP guidelines. Treatment facilities which may have to administer post-exposure prophylaxis should have reference (h) and the ACIP Guidelines for Rabies Prevention readily available.

l. Tetanus-Diphtheria

(1) Vaccine Recipients. All adults should be immunized against tetanus and diphtheria, using tetanus-diphtheria toxoid (Td), per ACIP guidelines.

(2) Dosage and Administration. Individuals previously vaccinated with Td should receive a booster dose at least once every 10 years. There is virtually no reason to use tetanus toxoid as a single antigen for protection (such as administration of a booster dose after acute injury). Tetanus toxoid should be given in combination with diphtheria toxoid since periodic boosting is needed against both diseases.

m. Typhoid Vaccine

(1) Vaccine Recipients

(a) Military personnel in receipt of orders to a ship, squadron, Naval mobile construction battalion, the Fleet Marine Corps expeditionary forces, special boat unit, special operations unit, embassy, or consulate duty.

(b) All personnel and accompanying beneficiaries traveling under orders or deploying to highly endemic areas, as defined by the cognizant NAVENPVNTMEDU.

(c) All Navy enlisted personnel attending apprenticeship training.

(d) Medical Department personnel with MMART, MAP, Fleet Hospital, or hospital ship assignments.

(2) Dosage and Administration

(a) The oral, live-attenuated typhoid vaccine (Ty21a) is the preferred vaccine for use in training populations (e.g., apprenticeship training and "A" schools) because it offers greater duration of immunity (5 years). Both the primary and booster dose series for the oral, live, attenuated vaccine consist of one capsule taken by mouth, with a cool beverage, 1 hour before a meal on days 1, 3, 5, and 7. An alternative schedule for administration on days 1, 3, 5, and 8 (e.g., Monday, Wednesday, Friday, and the following Monday) is acceptable. Particular attention to assure compliance with this vaccine should be given, inasmuch as it is self-administered. Administration under direct supervision is encouraged.

(b) The modified acellular, parenteral, typhoid vaccine (ViCPS) is an acceptable alternative, but provides a much shorter duration of immunity (2 years). The primary and booster dose for this vaccine is 0.5 ml administered either SC or IM every 2 years.

(3) Interchangeability. The acellular (ViCPS) and oral typhoid (Ty21a) vaccines do not provide interchangeable immunity. Anyone who received primary vaccination with acellular typhoid vaccine and requiring a booster dose must either receive one dose of the acellular vaccine or a full, four-dose series of the oral vaccine.

(4) The "Old" Typhoid Vaccine. Injectable, heat-phenol-inactivated typhoid vaccine (Typhoid Vaccine USP) was commonly used before either the oral or the acellular typhoid vaccines were licensed. This vaccine causes significantly more adverse reactions, which may diminish readiness, and provides immunity for 3 years. Use of this vaccine is not authorized.

n. Varicella (Chickenpox) Virus Vaccine (VARIVAX)

(1) Vaccine Recipients

(a) Susceptible Navy and Marine Corps recruits and officer accessions should be immunized with the two-dose vaccine

series. It is unnecessary to immunize those with a reliable history of varicella or serological evidence of immunity.

(b) All Naval Academy plebes and first-year NROTC midshipmen should be immunized with the two-dose vaccine series before the middle of the fall semester. It is unnecessary to immunize those with a reliable history of varicella or serological evidence of immunity.

(c) Children should be routinely immunized at 12 to 18 months of age. The ACIP has recommended a new immunization visit at 11-12 years of age. Unimmunized children lacking a reliable history of chickenpox are susceptible and should be vaccinated. Immunizing those with a reliable history of chickenpox is unnecessary.

(d) Susceptible school teachers, health care, and child care workers.

(e) Susceptible adolescents and adults living or working closely with immunocompromised individuals.

(f) Women capable of childbearing. Vaccinating nonpregnant women, who may later become pregnant, will reduce their risk of transmitting varicella to their fetuses. Women should be asked if they are pregnant and advised to avoid pregnancy for 1 month following each dose of vaccine.

(g) Susceptible international travelers, especially if the traveler expects to have close personal contact with local populations, since varicella is endemic in most countries.

(2) Dosage and Administration. A single dose of 0.5 ml SC is required for children between 12 months and 13 years of age. Persons 13 years of age and older must receive a two-dose primary series. This consists of one 0.5 ml dose SC followed by a second 0.5 ml dose SC given 4 to 8 weeks after the first dose. Booster doses are not required.

(3) Rash Development After Vaccination. A few individuals may develop a post-vaccination chickenpox-like rash. These persons should avoid close or household contact with pregnant or immunocompromised individuals until the rash resolves. Health care providers may contact their cognizant NAVENPVNTMEDU for additional guidance.

(4) Use of Salicylates. No adverse events associated with the use of salicylates after varicella vaccination have been reported. However, the manufacturer recommends recipients avoid using salicylates for 6 weeks after vaccination because of the association between aspirin use and Reye's syndrome following varicella.

(5) Storage Requirements. This vaccine has stringent storage requirements and must be stored frozen. Refrigerated storage facilities must be capable of sustaining temperatures of 5 degrees Fahrenheit (5°F) or minus 15 degrees (-15°C) Celsius or colder. The manufacturer recommends using a frost-free refrigerator with a separate, insulated freezer. Small, dormitory-style refrigerators are incapable of maintaining sufficiently cold temperatures and should never be used to store varicella vaccine.

o. Yellow Fever

(1) Vaccine Recipients. Yellow fever immunization is required for all active duty personnel and others traveling to yellow fever endemic areas.

(2) Dosage and Administration. See enclosure (5). A booster dose is required every 10 years.

7. Additional Vaccine Storage and Handling Recommendations

a. Refrigerated Storage Units. Only household, commercial, or industrial-type, refrigerator-freezers with a separately insulated and temperature controlled freezer compartment, or stand-alone freezers are acceptable for routine storage of immunobiologicals. Small, dormitory style, combination refrigerator-freezers are not acceptable for storing immunobiologicals.

b. Temperature Checks. Check and record the refrigerator and freezer temperatures twice daily to determine correct temperatures are maintained. Both the refrigerator and freezer compartments should be equipped with a bimetallic thermometer (either NSN 6685-641-0189 or 6685-585-5761). Mercury thermometers are prohibited.

c. Warning Signs. Post warning signs on electrical outlets, and on corresponding electrical panels, to notify electricians and others to warn cognizant medical or supply personnel before unplugging or securing power to vaccine refrigeration units.

d. Stock Rotation. Rotate stock to avoid outdating. Note the expiration dates on vials or cartons and use vaccines with the earliest expiration date first.

e. The CDC publication, "Vaccine Management," provides templates for refrigeration logs, warning plates, general vaccine handling rules, and additional advice on storing immunobiologicals. It can be obtained from NAVENVIRHLTHCEN home page at http://www-nehc.med.navy.mil/prevmed.

8. Training. The following training resources are recommended:

a. CDC satellite immunization courses (such as Epidemiology and Prevention of Vaccine Preventable Diseases, Immunization Update, Vaccines for International Travelers, etc.). Continuing medical education (CME) units and continuing education units (CEUs) are awarded by the CDC for successful course completion. Contact NAVENVIRHLTHCEN, distance learning coordinator at e-mail canalsd@nehc.med.navy.mil, commercial (757) 363-5509, DSN 864-5509 for additional information and course schedules.

b. NAVENVPVNTMEDU course entitled, "Immunizations and Prophylaxis," CANTRAC course number B-322-2203. Contact your cognizant NAVENPVNTMEDU for course dates and quota control.

c. The Naval School of Health Sciences, Portsmouth, VA, immunization correspondence course (currently under revision). Contact the correspondence course program manager at e-mail at keiferja@hsp10.med.navy.mil, or telephone (757) 953-6449.

d. The CDC vaccine handling videotape, "Ice, Champagne and Roses," is a free 12-minute VHS tape and can be ordered from CDC.

e. The CDC and National Immunization Program Publications and Resources Request List contains a listing of helpful publications, materials, and videotapes. The list can be obtained from NAVENVIRHLTHCEN, or from: Information and Distribution Center, National Immunization Program, M/S E-34, Centers for Disease Control and Prevention, 1600 Clifton Road NE, Atlanta, GA 30333.

f. Additional resources for civilian immunization information are provided in enclosure (8).

g. Enclosure (9) is a glossary of terms, abbreviations, and acronyms used in this notice.

9. Forms

a. PHS 731 (9-71), International Certificate of Vaccination, S/N 0108-LF-400-0706 and SF 601 (10-75), Immunization Record, S/N 7540-00-634-4177, is available from the Federal Supply System through normal procurement procedures.

b. SF 600, Chronological Record of Medical Care (Rev. 6-97) is available on the internet at http://www.gsa.gov/forms/zero.htm and is approved for local reproduction.

c. Vaccine Adverse Event Reporting System (VAERS) Form, enclosure (4), is approved for local reproduction.

10. Cancellation Contingency. Retain until incorporated into reference (a).

JOAN M. ENGEL
Assistant Chief for
Operational Medicine and Fleet Support

Available at:
http://support1.med.navy.mil/bumed/instruct/external/external.htm

BUMEDNOTE 6230
20 Apr 98

INDEX OF CURRENT RECOMMENDATIONS OF THE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES (ACIP)

To request publications, mail your request for item by title, citation, and date to: Information Services Office, (E-06), National Center for Prevention Services, Centers for Disease Control and Prevention, Atlanta, GA 30333. Recommendations by title, citation, and date:

1. Cholera vaccine. MMWR 1988;37(40):617-624.

2. Diphtheria, tetanus, and pertussis: Recommendations for vaccine use and other preventive measures. MMWR 1991;40(RR-10):1-28.

3. General recommendation on immunization. MMWR 1994;43(RR-1).

4. Haemophilus b conjugate vaccine for prevention of Hib disease among infants and children 2 months of age and older. MMWR 1991;40(RR-1):1-7.

5. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination. MMWR 1991;40(RR-13):1-25.

6. Immunization of adolescents. MMWR 1996;45(RR-13):1-16.

7. Inactivated Japanese encephalitis virus vaccine. MMWR 1993;42(RR-1):1-15.

8. Measles prevention. MMWR 1989;38(S-9):1-13.

9. Meningococcal vaccines. MMWR 1997;46(RR-5):1-7.

10. Mumps prevention. MMWR 1989;38(22):388-392,397-400.

11. Pertussis vaccination: Use of acellular pertussis vaccines among infants and young children. MMWR 1997;46(RR-7):1-25.

12. Pertussis vaccination: Acellular pertussis vaccine for reinforcing and booster use. MMWR 1992;41(RR-1):1-10.

13. Pertussis vaccination: Acellular pertussis vaccine for the fourth and fifth dose of the DPT series. MMWR 1992;1(RR-15):1-5.

14. Prevention of plague. MMWR 1996;45(RR-1).

15. Prevention of pneumococcal disease. MMWR 1997;46(RR-8).

16. Poliomyelitis prevention in the United states: Introduction of a sequential vaccination schedule of inactivated polio virus vaccine followed by oral polio virus vaccine. MMWR 1997;46(RR-3):1-25.

17. Protection against viral hepatitis. MMWR 1990;39(RR-2):1-26.

18. Prevention of hepatitis A through active or passive immunization. MMWR 1996;45(RR-15):1-30.

19. Prevention and control of influenza. MMWR 1997;46(RR-9):1-25.

20. Rabies prevention-United States, 1991. MMWR 1991;40(RR-3):1-19.

21. Recommendations for use of Haemophilus b conjugate vaccines and a combined diphtheria, tetanus, pertussis, and Haemophilus b vaccine. MMWR 1993;42(RR-13):1-15.

22. Recommended childhood immunization schedule-United States, 1995. MMWR 1995;44(RR-5).

23. Rubella prevention. MMWR 1990;39(RR-15):1-18.

24. Typhoid immunization. MMWR 1994;43(RR-14):1-7.

25. Update on adult immunization. MMWR 1991;40(RR-12):1-94.

26. Recommendations to prevent hepatitis B virus transmission-United States. MMWR 1995;44(30):574-574 [Update].

27. Vaccine side effects, adverse reactions, contraindications, and precautions. MMWR 1996;45(RR-12)1-35 [Update].

28. Use of vaccines and immune globulins in persons with altered immunocompetence. MMWR 1993;42(RR-4):1-18.

29. Vaccinia (smallpox) vaccine. MMWR 1991;40(RR-14):1-10.

30. Prevention of Varicella. MMWR 1996;45(RR-11).

31. Yellow fever vaccine. MMWR 1990;39(RR-6):1-6.

ACIP GUIDELINES FOR SPACING VACCINES AND IMMUNE GLOBULIN

1. Guidelines for Spacing the Administration of Live and Killed Vaccines.

Vaccine Combination	Recommended Minimum Interval Between the Two Different Vaccines
2 killed vaccines	None. May be given simultaneously or at any interval between vaccines. See note 1.
1 killed and 1 live	None. May be given simultaneously or at any interval between vaccines. See note 2.
2 live vaccines	Four-week minimum interval, or administer simultaneously. See note 3. However, oral polio vaccine can be administered any time before, with, or after MMR, if indicated.

Note 1: If possible, vaccines associated with local or systemic side effects should be given on separate occasions to avoid accentuated reactions.

Note 2: Cholera vaccine with yellow fever vaccine is the ***exception***. If time permits, these antigens should not be administered simultaneously, and at least 3 weeks should elapse between administration of yellow fever vaccine and cholera vaccine. If vaccines must be given simultaneously, or within 3 weeks of each other, the antibody response may not be optimal.

Note 3: If oral live typhoid vaccine is indicated (e.g., for international travel undertaken on short notice), it can be administered before, simultaneously with, or after OPV.

2. Guidelines for Spacing the Administration of IG Preparations and Vaccines

a. Simultaneous Administration of IG and Vaccines

Immunobiologic Combination	Recommended Minimum Time Interval Between Doses
IG and killed vaccines	None. May be given simultaneously (at different sites) or at any time interval between the different vaccines.

Immunobiologic Combination	Recommended Minimum Time Interval Between Doses
IG and live vaccine	Should generally not be administered simultaneously, see note 1. If simultaneous administration of MMR, measles-rubella, and monovalent measles vaccine, and IG is unavoidable, administer at different site and revaccinate or test for seroconversion after the recommended interval.

b. Nonsimultaneous administration of IG and Vaccines.

Sequence of Administration First	Second	Minimum Time Interval
IG	Killed vaccine	None.
Killed vaccine	IG	None.
IG	Live vaccine	Dose related - See notes 1 and 2.
Live vaccine	IG	2 weeks.

Note 1: Oral polio virus, yellow fever, and oral typhoid (Ty21a) vaccines are exceptions to these recommendations. These vaccines may be administered at any time before, after, or simultaneously with an IG-containing product, without substantially decreasing the antibody response.

Note 2: The duration of interference of IG preparations with the immune response to the measles component of the MMR, measles-rubella, and monovalent measles vaccine is dose-related. Suggested interval before measles vaccination is a minimum of 3 months.

National Vaccine Injury Compensation Program

*Vaccine Injury Table**

Vaccine	Illness, disability, injury or condition covered	Time period for first symptom or manifestation of onset or of significant aggravation after vaccine administration
I. Vaccines containing tetanus toxoid (e.g., DTaP, DTP, DT; Td, or TT)	A. Anaphylaxis or anaphylactic shock	4 hours
	B. Brachial Neuritis	2-28 days
	C. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable
II. Vaccines containing wholecell pertussis bacteria, extracted or partial cell pertussis bacteria, or specific pertussis antigen(s) (e.g., DTaP, DTP, P, DTP-HiB)	A. Anaphylaxis or anaphylactic shock	4 hours
	B. Encephalopathy (or encephalitis)	72 hours
	C. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable
III. Measles, mumps, and rubella vaccine or any of its components (e.g., MMR, MR, M, R)	A. Anaphylaxis or anaphylactic shock	4 hours
	B. Encephalopathy (or encephalitis)	5-15 days (not less than 5 days and not more than 15 days) for measles, mumps, rubella, or any vaccine containing any of the foregoing as a component.
	C. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable
IV. Vaccines containing rubella virus (e.g., MMR, MR, R)	A. Chronic arthritis	7-42 days
	B. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable.
V. Vaccines containing measles virus (e.g., MMR, MR, M)	A. Thrombocytopenic purpura	7-30 days
	B. Vaccine-Strain Measles Viral Infection in an immunodeficient recipient	6 months
	C. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable
VI. Vaccines containing polio live virus (OPV)	A. Paralytic Polio	
	— in a non-immunodeficient recipient	30 days
	— in an immunodeficient recipient	6 months
	— in a vaccine associated community case	Not applicable
	B. Vaccine-Strain Polio Viral Infection	
	— in a non-immunodeficient recipient	30 days
	— in an immunodeficient recipient	6 months
	— in a vaccine associated community case	Not applicable
	C. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable
VII. Vaccines containing polio inactivated virus (e.g., IPV)	A. Anaphylaxis or anaphylactic shock	4 hours
	B. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	Not applicable

VIII. Hepatitis B. vaccines	A. Anaphylaxis or anaphylactic shock. B. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	4 hours Not applicable
IX. Hemophilus influenzae type b polysaccharide vaccines (unconjugated, PRP vaccines)	A. Early-onset Hib disease B. Any acute complication sequela (including death) of an illness, disability, injury, or condition referred to above which illness, disability, injury, or condition arose within the time period prescribed	7 days Not applicable
X. Hemophilus influenzae type b polysaccharide conjugate vaccines	No Condition Specified	Not applicable
XI. Varicella vaccine	No Condition Specified	Not applicable
XII. Any new vaccine recommended by the Centers for Disease Control and Prevention for routine administration to children, after publication by the Secretary of a notice of coverage.	No Condition Specified	Not applicable

*(Effective date: 3/24/97)

Qualifications and Aids to Interpretation.

(1) Anaphylaxis and anaphylactic shock mean an acute, severe, and potentially lethal systemic allergic reaction. Most cases resolve without sequelae. Signs and symptoms begin minutes to a few hours after exposure. Death, if it occurs, usually results from airway obstruction caused by laryngeal edema or bronchospasm and may be associated with cardiovascular collapse. Other significant clinical signs and symptoms may include the following: Cyanosis, hypotension, bradycardia, tachycardia, arrhythmia, edema of the pharynx and/or trachea and/or larynx with stridor and dyspnea. Autopsy findings may include acute emphysema which results from lower respiratory tract obstruction, edema of the hypopharynx, epiglottis, larynx, or trachea and minimal findings of eosinophilia in the liver, spleen and lungs. When death occurs within minutes of exposure and without signs of respiratory distress, there may not be significant pathologic findings.

(2) Encephalopathy. For purposes of the Vaccine Injury Table, a vaccine recipient shall be considered to have suffered an encephalopathy only if such recipient manifests, within the applicable period, an injury meeting the description below of an acute encephalopathy, and then a chronic encephalopathy persists in such person for more than 6 months beyond the date of vaccination.

(i) An acute encephalopathy is one that is sufficiently severe so as to require hospitalization (whether or not hospitalization occurred).

(A) For children less than 18 months of age who present without an associated seizure event, an acute encephalopathy is indicated by a "significantly decreased level of consciousness" (see "D" below) lasting for at least 24 hours. Those children less than 18 months of age who present following a seizure shall be viewed as having an acute encephalopathy if their significantly decreased level of consciousness persists beyond 24 hours and cannot be attributed to a postictal state (seizure) or medication.

(B) For adults and children 18 months of age or older, an acute encephalopathy is one that persists for at least 24 hours and characterized by at least two of the following:

(1) A significant change in mental status that is not medication related; specifically a confusional state, or a delirium, or a psychosis;
(2) A significantly decreased level of consciousness, which is independent of a seizure and cannot be attributed to the effects of medication; and
(3) A seizure associated with loss of consciousness.

(C) Increased intracranial pressure may be a clinical feature of acute encephalopathy in any age group.

(D) A "significantly decreased level of consciousness" is indicated by the presence of at least one of the following clinical signs for at least 24 hours or greater (see paragraphs (2)(I)(A) and (2)(I)(B) of this section for applicable timeframes):

(1) Decreased or absent response to environment (responds, if at all, only to loud voice or painful stimuli);
(2) Decreased or absent eye contact (does not fix gaze upon family members or other individuals); or
(3) Inconsistent or absent responses to external stimuli (does not recognize familiar people or things).

(E) The following clinical features alone, or in combination, do not demonstrate an acute encephalopathy or a significant change in either mental status or level of consciousness as described above: Sleepiness, irritability (fussiness), high-pitched and unusual screaming, persistent inconsolable crying, and bulging fontanelle. Seizures in themselves are not sufficient to constitute a diagnosis of encephalopathy. In the absence of other evidence of an acute encephalopathy, seizures shall not be viewed as the first symptom or manifestation of the onset of an acute encephalopathy.

(ii) Chronic encephalopathy occurs when a change in mental or neurologic status, first manifested during the applicable time period, persists for a period of at least 6 months from the date of vaccination. Individuals who return to a normal neurologic state after the acute encephalopathy shall not be presumed to have suffered residual neurologic damage from that event; any subsequent chronic encephalopathy shall not be presumed to be a sequela of the acute encephalopathy. If a preponderance of the evidence indicates that a child's chronic encephalopathy is secondary to genetic, prenatal or perinatal factors, that chronic encephalopathy shall not be considered to be a condition set forth in the Table.

(iii) An encephalopathy shall not be considered to be a condition set forth in the Table if in a proceeding on a petition, it is shown by a preponderance of the evidence that the encephalopathy was caused by an infection, a toxin, a metabolic disturbance, a structural lesion, a genetic disorder or trauma (without regard to whether the cause of the infection, toxin, trauma, metabolic disturbance, structural lesion or genetic disorder is known). If at the time a decision is made on a petition filed under section 2111(b) of the Act for a vaccine-related injury or death, it is not possible to determine the cause by a preponderance of the evidence of an encephalopathy, the encephalopathy shall be considered to be a condition set forth in the Table.

(iv) In determining whether or not an encephalopathy is a condition set forth in the Table, the Court shall consider the entire medical record.

(3) Residual Seizure Disorder. A petitioner may be considered to have suffered a residual seizure disorder for purposes of the Vaccine Injury Table, if the first seizure or convulsion occurred 5-15 days (not less than 5 days and not more than 15 days) after administration of the vaccine and 2 or more additional distinct seizure or convulsion episodes occurred within 1 year after the administration of the vaccine which were unaccompanied by fever (defined as a rectal temperature equal to or greater than 101.0 degrees Fahrenheit or an oral temperature equal to or greater than 100.0 degrees Fahrenheit). A distinct seizure or convulsion episode is ordinarily defined as including all seizure or convulsive activity occurring within a 24-hour period, unless competent and qualified expert neurological testimony is presented to the contrary in a particular case.

For purposes of the Vaccine Injury Table, a petitioner shall not be considered to have suffered a residual seizure disorder, if the petitioner suffered a seizure or convulsion unaccompanied by fever (as defined above) before the fifth day after the administration of the vaccine involved.

(4) Seizure and convulsion. For purposes of paragraphs (2) and (3) of this section, the terms, "seizure" and "convulsion" include myoclonic, generalized tonic-clonic (grand mal), and simple and complex partial seizures. Absence (petit mal) seizures shall not be considered to be a condition set forth in the Table. Jerking movements or staring episodes alone are not necessarily an indication of seizure activity.

(5) Sequela. The term "sequela" means a condition or event which was actually caused by a condition listed in the Vaccine Injury Table.

(6) Chronic Arthritis. For purposes of the Vaccine Injury Table, chronic arthritis may be found in a person with no history in the 3 years prior to vaccination of arthropathy (joint disease) on the basis of:

A) Medical documentation, recorded within 30 days after the onset, of objective signs of acute arthritis (joint swelling) that occurred between 7 and 42 days after a rubella vaccination;

(B) Medical documentation (recorded within 3 years after the onset of acute arthritis) of the persistence of objective signs of intermittent or continuous arthritis for more than 6 months following vaccination:

(C) Medical documentation of an antibody response to the rubella virus.

For purposes of the Vaccine Injury Table, the following shall not be considered as chronic arthritis: Musculoskeletal disorders such as diffuse connective tissue diseases (including but not limited to rheumatoid arthritis, juvenile rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis, mixed connective tissue disease, polymyositis/dermatomyositis, fibromyalgia, necrotizing vasculitis and vasculopathies and Sjogren's Syndrome), degenerative joint disease, infectious agents other than rubella (whether by direct invasion or as an immune reaction), metabolic and endocrine diseases, trauma, neoplasms, neuropathic disorders, bone and cartilage disorders and arthritis associated with ankylosing spondylitis, psoriasis, inflammatory bowel disease, Reiter's syndrome, or blood disorders.

Arthralgia (joint pain) or stiffness without joint swelling shall not be viewed as chronic arthritis for purposes of the Vaccine Injury Table.

(7) Brachial neuritis is defined as dysfunction limited to the upper extremity nerve plexus (i.e., its trunks, divisions, or cords) without involvement of other peripheral (e.g., nerve roots or a single peripheral nerve) or central (e.g., spinal cord) nervous system structures. A deep, steady, often severe aching pain in the shoulder and upper arm usually heralds onset of the condition. The pain is followed in days or weeks by weakness and atrophy in upper extremity muscle groups. Sensory loss may accompany the motor deficits, but is generally a less notable clinical feature. The neuritis, or plexopathy, may be present on the same side as or the opposite side of the injection; it is sometimes bilateral, affecting both upper extremities. Weakness is required before the diagnosis can be made. Motor, sensory, and reflex findings on physical examination and the results of nerve conduction and electromyographic studies must be consistent in confirming that dysfunction is attributable to the brachial plexus. The condition should thereby be distinguishable from conditions that may give rise to dysfunction of nerve roots (i.e., radiculopathies) and peripheral nerves (i.e., including multiple mononeuropathies), as well as other peripheral and central nervous system structures (e.g., cranial neuropathies and myelopathies).

(8) Thrombocytopenic purpura is defined by a serum platelet count less than 50,000/mm^3. Thrombocytopenic purpura does not include cases of thrombocytopenia associated with other causes such as hypersplenism, autoimmune disorders (including alloantibodies from previous transfusions) myelodysplasias, lymphoproliferative disorders, congenital thrombocytopenia or hemolytic uremic syndrome. This does not include cases of immune (formerly called idiopathic) thrombocytopenic purpura (ITP) that are mediated, for example, by viral or fungal infections, toxins or drugs. Thrombocytopenic purpura does not include cases of thrombocytopenia associated with disseminated intravascular coagulation, as observed with bacterial and viral infections. Viral infections include, for example, those infections secondary to Epstein Barr virus, cytomegalovirus, hepatitis A and B, rhinovirus, human immunodeficiency virus (HIV), adenovirus, and dengue virus. An antecedent viral infection may be demonstrated by clinical signs and symptoms and need not be confirmed by culture or serologic testing. Bone marrow examination, if performed, must reveal a normal or an increased number of megakaryocytes in an otherwise normal marrow.

(9) Vaccine-strain measles viral infection is defined as a disease caused by the vaccine-strain that should be determined by vaccine-specific monoclonal antibody or polymerase chain reaction tests.

(10) Vaccine-strain polio viral infection is defined as a disease caused by poliovirus that is isolated from the affected tissue and should be determined to be the vaccine-strain by oligonucleotide or polymerase chain reaction. Isolation of poliovirus from the stool is not sufficient to establish a tissue specific infection or disease caused by vaccine-strain poliovirus.

(11) Early-onset Hib disease is defined as invasive bacterial illness associated with the presence of Hib organism on culture of normally sterile body fluids or tissue, or clinical findings consistent with the diagnosis of epiglottitis. Hib pneumonia qualifies as invasive Hib disease when radiographic findings consistent with the diagnosis of pneumonitis are accompanied by a blood culture positive for the Hib organism. Otitis media, in the absence of the above findings, does not qualify as invasive bacterial disease. A child is considered to have suffered this injury only if the vaccine was the first Hib immunization received by the child.

VACCINE ADVERSE EVENT REPORTING SYSTEM

VAERS

24 Hour Toll Free Information 1-800-822-7967
P.O. Box 1100, Rockville, MD 20849-1100
PATIENT IDENTITY KEPT CONFIDENTIAL

For CDC/FDA Use Only
VAERS Number _____
Date Received _____

Patient Name: _____
Last First M.I.
Address _____
City State Zip
Telephone no. (____) _____

Vaccine administered by (Name): _____
Responsible Physician _____
Facility Name/Address _____
City State Zip
Telephone no. (____) _____

Form completed by (Name): _____
Relation to Patient ☐ Vaccine Provider ☐ Patient/Parent ☐ Manufacturer ☐ Other
Address *(if different from patient or provider)* _____
City State Zip
Telephone no. (____) _____

1. State
2. County where administered
3. Date of birth ___/___/___ (mm dd yy)
4. Patient age
5. Sex ☐ M ☐ F
6. Date form completed ___/___/___ (mm dd yy)

7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any

8. Check all appropriate:
- ☐ Patient died (date ___/___/___ (mm dd yy))
- ☐ Life threatening illness
- ☐ Required emergency room/doctor visit
- ☐ Required hospitalization (_____days)
- ☐ Resulted in prolongation of hospitalization
- ☐ Resulted in permanent disability
- ☐ None of the above

9. Patient recovered ☐ YES ☐ NO ☐ UNKNOWN

10. Date of vaccination ___/___/___ (mm dd yy) Time _____ AM PM

11. Adverse event onset ___/___/___ (mm dd yy) Time _____ AM PM

12. Relevant diagnostic tests/laboratory data

13. Enter all vaccines given on date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous Doses
a.					
b.					
c.					
d.					

14. Any other vaccinations within 4 weeks prior to the date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous doses	Date given
a.						
b.						

15. Vaccinated at:
- ☐ Private doctor's office/hospital
- ☐ Public health clinic/hospital
- ☐ Military clinic/hospital
- ☐ Other/unknown

16. Vaccine purchased with:
- ☐ Private funds
- ☐ Public funds
- ☐ Military funds
- ☐ Other/unknown

17. Other medications

18. Illness at time of vaccination (specify)

19. Pre-existing physician-diagnosed allergies, birth defects, medial conditions(specify)

20. Have you reported this adverse event previously? ☐ No ☐ To health department ☐ To doctor ☐ To manufacturer

Only for children 5 and under

22. Birth weight _____ lb. _____ oz.

23. No. of brother and sisters

21. Adverse event following prior vaccination (check all applicable, specify)

	Adverse Event	Onset Age	Type Vaccine	Dose no. in series
☐ In patient				
☐ In brother or sister				

Only for reports submitted by manufacturer/immunization project

24. Mfr./imm. proj. report no.

25. Date received by mfr./imm.proj.

26. 15 day report? ☐ Yes ☐ No

27. Report type ☐ Initial ☐ Follow-Up

Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.

"Fold in thirds, tape & mail - DO NOT STAPLE FORM"

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES OR APO/FPO

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 1895 ROCKVILLE, MD

POSTAGE WILL BE PAID BY ADDRESSEE

VAERS
P.O. Box 1100
Rockville MD 20849-1100

DIRECTIONS FOR COMPLETING FORM

(Additional pages may be attached if more space is needed)

GENERAL

Use a separate form for each patient. Complete the form to the best of your abilities. Items 3, 4, 7, 8, 10, 11, and 13 are considered essential and should be completed whenever possible. Parents/Guardians may need to consult the facility where the vaccine was administered for some of the information (such as manufacturer, lot number or laboratory data.)

Refer to the Reportable Events Table (RET) for events mandated for reporting by law. Reporting for other serious events felt to be related but not on the RET is encouraged.

Health care providers other than the vaccine administrator (VA) treating a patient for a suspected adverse event should notify the VA and provide the information about the adverse event to allow the VA to complete the form to meet the VA's legal responsibility. These data will be used to increase understanding of adverse events following vaccination and will become part of CDC Privacy Act System 09-20-0136, "Epidemiologic Studies and Surveillance of Disease Problems". Information identifying the person who received the vaccine orthat person's legal representativewill not be made available tothe public, but may be available to the vaccinee or legal representative.

Postage will be paid by addressee. Forms may be photocopied (must be front & back on same sheet).

SPECIFIC INSTRUCTIONS

Form Completed By: To be used by parents/guardians, vaccine manufacturers/distributors, vaccine administrators, and/or the person completing the form on behalf of the patient or the health professional who administered the vaccine.

Item 7: Describe the suspected adverse event. Such things as temperature, local and general signs and symptoms, time course, duration of symptoms diagnosis, treatment and recovery should be noted.

Item 9: Check "YES" if the patient's health condition is the same as it was prior to the vaccine, "NO" if the patient has not returned to the pre-vaccination state of health, or "UNKNOWN" if the patient's condition is not known.

Item 10: Give dates and times as specifically as you can remember. If you do not know the exact time, please

Item 11: indicate "AM" or "PM" when possible if this information is known. If more than one adverse event, give the onset date and time for the most serious event.

Item 12: Include "negative" or "normal" results of any relevant tests performed as well as abnormal findings.

Item 13: List ONLY those vaccines given on the day listed in Item 10.

Item 14: List any other vaccines that the patient received within 4 weeks prior to the date listed in Item 10.

Item 16: This section refers to how the person who gave the vaccine purchased it, not to the patient's insurance.

Item 17: List any prescription or non-prescription medications the patient was taking when the vaccine(s) was given.

Item 18: List any short term illnesses the patient had on the date the vaccine(s) was given (i.e., cold, flu, ear infection).

Item 19: List any pre-existing physician-diagnosed allergies, birth defects, medical conditions (including developmental and/or neurologic disorders) for the patient.

Item 21: List any suspected adverse events the patient, or the patient's brothers or sisters, may have had to previous vaccinations. If more than one brother or sister, or if the patient has reacted to more than one priorvaccine, use additional pages to explain completely. For the onset age of a patient, provide the age in months if less than two years old.

Item 26: This space is for manufacturers' use only.

ADULT DOSAGES AND ROUTES OF VACCINE ADMINISTRATION

Booster Vaccine	Initial Dose/Route	Dose/Route	Comments
Adenovirus (types 4&7)	1 dose, orally (PO) of each.	None.	Recruits only.
Cholera	1 dose, 0.5 ml SC or IM.	Every 6 months if residing in, or traveling to, highly endemic area..	Consult cognizant NAVENPVNTMEDU before administering.
Haemophilus Influenza b	2 doses, 0.5 ml IM, 2 months apart.	None.	For asplenic accessions not previously immunized.
Hepatitis A	Varies with vaccine preparation.	Varies with vaccine preparation.	Refer to page 10 of this notice.
HBV (Hepatitis B recombinant vaccine)	3 doses IM, 1.0 ml at 0, 1, and 6 months.	None.	Alternate dosage schedules may be found on page 11 of this notice.
Influenza	As directed by annual message.	None.	None.
JE Vaccine	3 doses SC: 1.0 ml at 0, 7, and 30 days.	1.0 ml SC every 3 years.	Contact cognizant NAVENPVNTMEDU. Alternate dosage schedules may be found on page 14.
Measles (monovalent or combination product)	1 dose: 0.5 ml SC.	None.	Two doses for adults born after 1957.
Meningococcal (quadrivalent)	1 dose: 0.5 ml SC.	Refer to page 15.	May be required by some countries. Contact proper NAVENPVNTMEDU.
Mumps	1 dose: 0.5 ml SC.	None.	None.
Plague	3 doses IM: 1.0 ml initially; 0.2 ml, 1-3 months after initial dose; and 0.2 ml, 3-6 months after second dose.	0.2 ml IM at 6 and 12 months after initial series. Every 1 to 2 years thereafter.	Contact proper NAVENPVNTMEDU.
Pneumococcal polysacharide	1 dose: 0.5 ml SC or IM.	Refer to package insert.	For asplenic new accessions.

Booster Vaccine	Primary Dose/Route	Booster Dose/Route	Comments
Polio: IPV (Inactivated poliovirus vaccine)	1 dose: 0.5 ml SC.	None.	See note 1.
Polio: OPV (Live poliovirus vaccine)	1 dose: 0.5 ml PO.	None.	See note 2.
Rabies	Post-exposure prophylaxis, 5 doses if not previously immunized. 5 doses: 1.0 ml at 0, 3, 7, 14, and 28 days.	None.	Administer dose one simultaneously with HRIG dose. For pre-exposure prophylaxis contact cognizant NAVENPVNTMEDU.
Rubella	1 dose: 0.5 ml SC.	None.	None.
Tetanus-diphtheria	1 dose: 0.5 ml SC or IM.	0.5 ml SC or IM every 10 years or as indicated for wound management.	Adult series if no prior history of immunization: 2 doses: 0.5 ml 4 to 8 weeks apart, and a third dose: 0.5 ml 6 to 12 months later.
Typhoid (Live attenuated Ty21a)	4 doses: One capsule PO on alternate days for a total of 4 capsules.	Repeat 4-dose series every 5 years.	Capsules should be taken with cool liquid, approximately 1 hour before meals. See note 3.
Typhoid (ViCPS)	1 dose: 0.5 ml SC or IM.	0.5 ml SC or IM every 2 years.	See note 3.
Varicella	2 doses: 0.5 ml SC given 4-8 weeks apart.	None.	For certain personnel not previously immunized who lack a history of varicella infection.
Yellow fever	1 dose: 0.5 ml SC or IM.	0.5 ml SC or IM every 10 years.	None.

Note 1: Only IPV should be administered to personnel who are in close household or intimate contact with immunocompromised individuals.

Note 2: Should not be administered to adults who did not complete the OPV series during childhood.

Note 3: Refer to pages 17 and 18 of this notice for specific guidance on the use of this vaccine.

Recommended Childhood Immunization Schedule United States, January - December 1998

Vaccines[1] are listed under the routinely recommended ages. [Bars] indicate range of acceptable ages for immunization. Catch-up immunization should be done during any visit when feasible. Shaded (ovals) indicate vaccines to be assessed and given if necessary during the early adolescent visit.

Age ▶ Vaccine ▼	Birth	1 mo	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	4-6 yrs	11-12 yrs	14-16 yrs
Hepatitis B[2,3]	Hep B-1										
		Hep B-2			Hep B-3					Hep B[3]	
Diphtheria, Tetanus, Pertussis[4]			DTaP or DTP	DTaP or DTP	DTaP or DTP		DTaP or DTP[4]		DTaP or DTP	Td	
H influenzae type b[5]			Hib	Hib	Hib	Hib					
Polio[6]			Polio[6]	Polio	Polio[6]				Polio		
Measles, Mumps, Rubella[7]						MMR			MMR[7]	MMR[7]	
Varicella[8]						Var				Var[8]	

Approved by the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP).

[1] This schedule indicates the recommended age for routine administration of currently licensed childhood vaccines. Some combination vaccines are available and may be used whenever administration of all components of the vaccine is indicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

[2] ***Infants born to HBsAg-negative mothers*** should receive 2.5 µg of Merck vaccine (Recombivax HB) or 10 µg of SmithKline Beecham (SB) vaccine (Engerix-B). The 2nd dose should be administered at least 1 mo after the 1st dose. The 3rd dose should be given at least 2 mos after the second, but not before 6 mos of age.

Infants born to HBsAg-positive mothers should receive 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hrs of birth, and either 5 µg of Merck vaccine (Recombivax HB) or 10 µg of SB vaccine (Engerix-B) at a separate site. The 2nd dose is recommended at 1-2 mos of age and the 3rd dose at 6 mos of age.

Infants born to mothers whose HBsAg status is unknown should receive either 5 µg of Merck vaccine (Recombivax HB) or 10 µg of SB vaccine (Engerix-B) within 12 hrs of birth. The 2nd dose of vaccine is recommended at 1 mo of age and the 3rd dose at 6 mos of age. Blood should be drawn at the time of delivery to determine the mother's HBsAg status; if it is positive, the infant should receive HBIG as soon as possible (no later than 1 wk of age). The dosage and timing of subsequent vaccine doses should be based upon the mother's HBsAg status.

[3] Children and adolescents who have not been vaccinated against hepatitis B in infancy may begin the series during any visit. Those who have not previously received 3 doses of hepatitis B vaccine should initiate or complete the series during the 11 to 12-year-old visit, and unvaccinated older adolescents should be vaccinated whenever possible. The 2nd dose should be administered at least 1 mo after the 1st dose, and the 3rd dose should be administered at least 4 mos after the 1st dose and at least 2 mos after the 2nd dose.

[4] DTaP (diphtheria and tetanus toxoids and acellular pertussis vaccine) is the preferred vaccine for all doses in the vaccination series, including completion of the series in children who have received 1 or more doses of whole-cell DTP vaccine. Whole-cell DTP is an acceptable alternative to DTaP. The 4th dose (DTP or DTaP) may be administered as early as 12 mos of age, provided 6 mos have elapsed since the 3rd dose and if the child is unlikely to return at age 15-18 mos. Td (tetanus and diphtheria toxoids) is recommended at 11-12 years of age if at least 5 years have elapsed since the last dose of DTP, DTaP or DT. Subsequent routine Td boosters are recommended every 10 years.

[5] Three *H influenzae* type b (Hib) conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB[Merck]) is administered at 2 and 4 mos of age, a dose at 6 mos is not required.

[6] Two poliovirus vaccines are currently licensed in the US: inactivated poliovirus vaccine (IPV) and oral poliovirus vaccine (OPV). The following schedules are all acceptable to the ACIP, the AAP, and the AAFP. Parents and providers may choose among these options.

1) 2 doses of IPV followed by 2 doses of OPV.
2) 4 doses of IPV.
3) 4 doses of OPV.

The ACIP recommends 2 doses of IPV at 2 and 4 mos of age followed by 2 doses of OPV at 12-18 mos and 4-6 years of age. IPV is the only poliovirus vaccine recommended for immunocompromised persons and their household contacts.

[7] The 2nd dose of MMR is recommended routinely at 4-6 yrs of age but may be administered during any visit, provided at least 1 mo has elapsed since receipt of the 1st dose and that both doses are administered beginning at or after 12 mos of age. Those who have not previously received the second dose should complete the schedule no later than the 11 to 12-year visit.

[8] Susceptible children may receive varicella vaccine (Var) at any visit after the first birthday, and those who lack a reliable history of chickenpox should be immunized during the 11-12-year-old visit. Susceptible children 13 years of age or older should receive 2 doses, at least 1 month apart.

PREVENTIVE MEDICINE POINTS OF CONTACT AND INFORMATION RESOURCES

Officer in Charge
Navy Environmental and Preventive Medicine Unit Number Two
1887 Powhatan Street
Norfolk, VA 23511-3394
DSN: 564-7671 Commercial: (757) 444-7671
FAX: DSN 564-1191 Commercial: (757) 444-1191
PLAD: NAVENPVNTMEDU TWO NORFOLK VA
E-mail: epc0epu2@bumed30.med.navy.mil

Officer in Charge
Navy Environmental and Preventive Medicine Unit Number Five
Naval Station, Box 368143
3035 Albacore Alley
San Diego, CA 92136-5199
DSN: 526-7070 Commercial: (619) 556-7070
FAX: DSN 526-7071 Commercial: (619) 556-7071
PLAD: NAVENPVNTMEDU FIVE SAN DIEGO CA
E-mail: nepmu5@nepmu5.med.navy.mil

Officer in Charge
Navy Environmental and Preventive Medicine Unit Number Six
Box 112, Building 1535
Pearl Harbor, HI 96860-5040
DSN: 471-9505 (operator assistance) Commercial: (808) 471-9505
FAX: (808) 474-9361
PLAD: NAVENPVNTMEDU SIX PEARL HARBOR HI
E-mail: epi@nepmu6.med.navy.mil

Officer in Charge
Navy Environmental and Preventive Medicine Unit Number Seven
PSC 824, Box 2760
FPO AE 09623-2760
DSN: 624-4101
Commercial within US: 011-39-95-56-4101
Commercial within Italy: 095-56-4101
Commercial within Europe: 0039-95-56-4101
FAX: 011-39-95-56-4100
PLAD: NAVENPVNTMEDU SEVEN SIGONELLA IT
E-mail: sig1pmu@sig10.med.navy.mil

Commanding Officer
Navy Environmental Health Center
2510 Walmer Avenue
Norfolk, VA 23513-2617
DSN: 864-5500 Commercial: (757)363-5500
FAX: DSN 564-3672 Commercial: (757)444-3672
PLAD: NAVENVIRNHLTHCEN NORFOLK VA
E-mail: prevmed@med.navy.mil

CIVILIAN IMMUNIZATION INFORMATION RESOURCES

Routine Immunization

American Academy of Pediatrics*	(847) 228-5005	(800) 433-9016
CDC's National Immunization Program*		(800) CDC-SHOT
COSSHMO (National Coalition of Hispanic Health Organizations)*		(800) 232-0233
National Institute on Aging	(301) 587-2528	(800) 222-2225
Office of Minority Health*	(301) 587-9704	(800) 444-6472
Vacunas desde la cuna (Hispanic* Immunization Hotline)		(800) 232-0233

Hepatitis Information

American Liver Foundation*	(201) 256-2550	(800) 223-0179
Hepatitis A Brochure for Travelers		(800) 437-2829
Hepatitis A Information Kit		(800) 437-2344
Hepatitis Foundation	(201) 239-1035	(800) 891-0707
National Hepatitis Detection, Treatment and Prevention		(800) 822-4633

Vaccine Companies

Connaught Laboratories, Inc.	(717) 839-7187	(800) 822-2463
Merck & Co., Inc.	(215) 652-5000	(800) 672-6372
SmithKline Beecham	(215) 751-4000	(800) 366-8900
Wyeth-Lederle Vaccines	(610) 644-8000	(800) 358-7443

* Material available in other languages in addition to English, these organizations also provide information on Hepatitis C.

Publications

The publications listed here are public domain materials and duplication or distribution of contents is encouraged. These publications often contain tables, patient education materials, useful telephone numbers, and topics or articles which may be published in the command plan-of-the-day, base newspaper, etc. Written requests for these publications should include title of individual responsible for your command's immunization program (list position vice name), requesting organization's name, branch of service (USN or USMC), address, city, state, (or APO or FPO), zip code, telephone number, fax number and e-mail address (if available).

Needle Tips & The Hepatitis B Coalition News - This publication can be obtained free of charge by sending a written request to:

Immunization Action Coalition
1573 Shelby Avenue Suite 229
St. Paul, MN 55104
FAX: (612) 647-9131
E-mail: mail@immunize.org

Immunization Action News - This publication can be obtained free of charge by sending a written request to:

National Immunization Program Information Center
Centers for Disease Control and Prevention
NIP (Mail stop E-34)
1600 Clifton Road NE
Atlanta, GA 30333
FAX: (404) 639-8828
E-mail: niphomepg@nip1.em.cdc.gov

World Wide Web Sites

1. Navy Environmental Health Center and Navy Environmental and Preventive Medicine Units at http://www-nehc.med.navy.mil

2. Centers for Disease Control and Prevention at http://www/cdc/gov/

3. Immunization Action Coalition at http://www.immunize.org/

4. National Coalition for Adult Immunization at http://www.medscape.com/ncai/

5. Pan American Health Organization at http://www.paho.org/

6. World Health Organization at http://www.who.ch/

Immunization Tracking

1. Clinic Assessment Software Application (CASA). CASA, developed by CDC, can help you assess your pediatric clinic's vaccination coverage levels for the 2-year-old population. Other data provided, include baseline rates and the extent of missed vaccination opportunities. Contact the Community Health Program Specialist, Health Promotions Directorate at NEHC via e-mail at vonterschn@nehc.med.navy.mil or telephone (757) 363-5605, DSN 864-5605 to obtain a copy of this program. CASA can be downloaded from CDC at http://www.cdc.gov/nip/casa/index/htm.

2. Shipboard Non-Tactical ADP Program (SNAP) Automated Medical System, or SAMS has been used for over 10 years on fleet units to automate many of the programs required to be tracked by shipboard medical department personnel. With a recent upgrade, it has migrated to the MTFs and Marine Corps units as an interim system to track immunization compliance until the Preventive Health Care System (PHCS) is deployed. Additional information regarding SAMS can be obtained by calling the Space and Naval Warfare Systems Center, Chesapeake, at (757) 523-8131.

TERMS, ABBREVIATIONS, AND ACRONYMS

ACIP	Advisory Committee on Immunization Practices
ADT	Additional duty training
AT	Annual training
ADSW	Active duty for special work
AFEB	Armed Forces Epidemiological Board
Anthrax	Infectious disease with high mortality; can be used as a biological warfare agent.
AOR	Area of operations
ASD(HA)	Assistant Secretary of Defense for Health Affairs
CANTRAC	Catalog of Navy Training Courses
CASA	Clinic Assessment Software Application
CDC	Centers for Disease Control and Prevention, Atlanta, GA
CEU	Continuing education units
CME	Continuing medical education
CSF	Cerebrospinal fluid
DEERS	Defense Enrollment Eligibility Reporting System
DoD	Department of Defense
DT	Dental technician
EL.U.	Elisa unit
FDA	Food and Drug Administration
Hajj	The annual period of time when those of Islamic faith make their pilgrimage to Mecca
HAV	Hepatitis A vaccine
HBV	Hepatitis B vaccine
HCW	Health care worker
HDCV	Human diploid cell (rabies) vaccine
HIV	Human immunodeficiency virus
HM	Hospital corpsman
HRIG	Human rabies immune globulin
IDT	Inactive duty training
IDTT	Inactive duty training travel
IG	Immune globulin
IM	Intramuscular route of administration
IPV	Inactivated poliovirus vaccine
JEV	Japanese B encephalitis vaccine
MAP	Medical Augmentation Program
MEF	Marine Corps expeditionary forces
MMART	Mobile Medical Augmentation Readiness Team
MMR	Measles, mumps, and rubella
MTFs	Medical treatment facilities
NAVENPVNTMEDU	Navy Environmental and Preventive Medicine Unit
NAVENVIRNHLTHCEN	Navy Environmental Health Center
NAVMEDINFOMGMTCEN	Naval Medical Information Management Center

NIP	National Immunization Program, Centers for Disease Control and Prevention
NOTAL	Not to all
NROTC	Naval Reserve Officer Training Corps
NSN	National Stock Number
OPV	Oral poliovirus vaccine
PHCS	Preventive Health Care System
PHS 731	U.S. Public Health Service International Certificate of Vaccination
PCEC	Purified Chick Embryo Culture rabies vaccine
PCS	Permanent change of station orders
PMTs	Preventive Medicine Technicians, U.S. Navy Hospital Corpsman holding the Navy Enlisted Classification Code HM-8432
PPD	Purified Protein Derivative used in tuberculin skin testing
PPIP	Put Prevention into Practice
RSTARS	Reserve Standard Training, Administration, and Readiness Support
SC	Subcutaneous route of administration
SNAP	Shipboard Non-Tactical ADP Program
SAMS	SNAP Automated Medical System
Td	Tetanus-diphtheria toxoid
USCENTCOM	U.S. Central Command
VAERS	Vaccine Adverse Event Reporting System
Varicella	Chickenpox
VIS	Vaccine Information Sheet
VIT	Vaccine Injury Table