

SECTION 5:
EMPLOYEE
IMMUNIZATIONS





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Employees working in a long-term care facility will be potentially exposed to vaccine-preventable diseases. The exposure of the causative organisms may come from resident's secretions, contaminated medical devices used for the care of a resident, or from a colleague. Education relative to vaccine-preventable diseases and availability of vaccines should be a part of a facility's occupational risk management program to maintain a healthy workforce. By following national guidelines (1-4), you provide and enhance an important component of your employee health program. This mandatory program should include all newly hired and currently hired employees.

An effective immunization program for employees includes identifying employees at higher risk of acquiring a vaccine-preventable disease. These employees may have:

- immune-suppressive disorders such as being HIV +;
- immunosuppression as a result of drug therapy or organ transplant;
- pregnancy;
- functional or anatomical disorders of their spleen;
- diabetes;

Often, employees want a rational reason for participating in your immunization program. Informing the employee of the risks taken when a decision is made to not get vaccinated and remain susceptible to vaccine-preventable diseases is essential. Inform susceptible employee of their increased risk of:

- acquiring the vaccine-preventable disease;
- having the disease become chronic or progressive to disability;
- transmitting the disease causing agent to other employees or residents;

POLICY

At the time of hire, the employee shall be provided educational material relative to vaccine-preventable diseases and the facility's policy regarding payment for any vaccine. The current Centers for Disease Control and Prevention (CDC) Guideline and Occupational Safety and Health Administration (OSHA) rule relative to post-exposure management should be followed relative to providing the hepatitis B vaccine (5, 6).

HEPATITIS A VACCINE

Hepatitis A is the most common type of hepatitis in the United States. Hepatitis A is acquired by mouth (fecal-oral). Three vaccines are available: HAVRIX, VAQTA, and TWINRIX (combination hepatitis A and hepatitis B). All vaccines are highly immunogenic, generally resulting in more than 95% of adults developing protective antibodies within two weeks of receiving the series. In nursing homes, the risk of acquiring hepatitis A virus from performing routine duties is very low. The risk of transmitting the virus in the dietary department is very low. Therefore, there is no recommendation at this time to vaccinate employees in nursing homes for the purpose of protecting other employees or residents. Persons at increased risk for acquiring hepatitis A disease should consult their personal provider for information and availability of vaccinations.

HEPATITIS B VACCINE

During the period of 1982-1998, CDC has noted a dramatic decrease in the incidence of hepatitis B disease (7). Risk of acquiring the hepatitis B virus (HBV) while performing routine duties in a nursing home is low. When the virus is acquired, chronic active hepatitis develops in over 25% of carriers, and often results in cirrhosis. Persons with chronic HBV infection are at 12 to 300 times higher risk of liver cancer than non-carriers (4). In 1982, a safe and effective vaccine was Food and Drug Administration (FDA)-approved for usage and, in 1991, a comprehensive vaccination program was adopted. OSHA requires the free offering of a vaccine series with either ENGERIX B or RECOMBIVAX, to employees who are at potential risk for exposure while performing routine duties (6). You should consult your facility's management personnel regarding your eligibility for free vaccine. If you are eligible, arrangements should be made to receive the vaccine within ten (10) days of acceptance of the offer. When the three-vaccine series is completed, you should ascertain whether you have seroconverted (positive antibody test). If you did not seroconvert, your employer should repeat the entire series at no cost to you.

INFLUENZA VACCINE

Each year millions of U.S. citizens are infected with the influenza virus. Hundreds of thousands are hospitalized. Approximately 20,000-40,000 die each year from influenza or influenza-related pneumonia. Institutionalized elderly are particularly susceptible to influenza and, therefore, present an increased risk of exposure to health-care workers caring for these elderly. It is estimated that 30%-40% of those institutionalized may not respond to the influenza vaccine. Therefore, vaccinating the employee reduces the risk of spread of influenza to residents.

- A. Annual flu shots should be offered to employees. The most effective offering includes the employer paying for the cost of vaccine and administration. The vaccine is particularly recommended for employees with histories of diabetes, chronic cardio-pulmonary, or renal diseases. Employees who will be pregnant beyond the 14th week of gestation during flu season, or 50 years of age or older should be advised to be vaccinated.
- B. In the event of an outbreak, the facility should follow the current CDC Guideline for the Prevention of Influenza. This guideline is published by CDC in April of each year. It is available through your county health department.

MEASLES VACCINE

Health-care workers are at increased risk of exposure to the measles virus. Current guidelines recommend that the employee who was born after 1957, has not had measles, and who did not receive the primary series, should receive two measles vaccines. Current guidelines recommend that the employee who was born after 1957 and has had measles, no longer needs to be vaccinated. An employee who was born before 1957 is probably immune to measles, but health care facilities should recommend a single dose of MMR if immune status is uncertain.

PNEUMOCOCCAL VACCINE

Employees should be alerted that certain strains of the bacterium *Streptococcus pneumoniae* (pneumococcus) are becoming very resistant to commonly used antibiotics. Antibiotic treatment failure of life-threatening pneumococcal infections, i.e., sepsis and meningitis, results in increased absenteeism and decreased work productivity. The current pneumococcal vaccine contains most of the strains which cause these diseases. Employees who are at increased risk of complications of pneumococcal disease may have cardio-pulmonary-renal-splenic dysfunction or diabetes.

TETANUS-DIPHTHERIA TOXOID VACCINE (Td)

Current guidelines recommend that the employee who has never received the primary Td series should do so. The guidelines recommend boosting the employee every ten (10) years. Intermittent or prophylactic vaccination after certain injuries shall be at the discretion of the employee's health-care provider.

VARICELLA VACCINE

Institutionalized elderly often develop shingles. Shingles (or, zoster) is the common term for varicella-zoster. The virus usually first infects us as a child with the disease called varicella (or, chickenpox). Decreased immune response as a function of aging, allows the varicella-zoster virus to activate out of its "carrier" condition to form lesions called shingles/zoster. Employees who have never had chickenpox are susceptible to acquiring the varicella-zoster virus upon exposure to the resident with shingles. All susceptible employees should be informed of the availability and issues of the varicella vaccine.

References:

1. Bolyard, E. et al. Guideline for infection control in health care personnel, 1998. AJIC, 1998; 26:289-354.
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3. CDC, Prevention of Pneumococcal Disease. Recommendations of the Advisory Committee on Immunization Practices. MMWR, April 7, 1997;46(RR-8); 1-24.5
4. CDC, Epidemiology and Prevention of Vaccine-Preventable Diseases. Jan, 2000; 6th Edition.
5. OSHA, Occupational Exposure to Bloodborne Pathogens, needlesticks and other sharps injuries; final rule (OSHA 29 CFR Part 1910) Federal Registry, January, 2001; 66:5318-5325.
6. CDC, Updated U.S. Public Health Services guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for post-exposure prophylaxis. MMWR, June 29, 2001; 50(RR-11):1-42

