

Information Sheet
Immunization and TB Requirements
For Health Career Programs

Why is immunization important for students in health career programs?

Health care providers are at risk of exposure to, and possible transmission of, preventable diseases. Risk of communicable diseases in the workplace is due to health care providers contact with infected patients or infective material from patients. Maintenance of immunity is therefore an essential part of prevention and infection control.

Vaccinating health care providers helps protect their health and prevent disease transmission between patients and providers and among providers and their family and friends outside the workplace.

What routine immunizations and screenings are required?

The vaccines required are Diphtheria and Tetanus, Hepatitis B, Measles Mumps Rubella (MMR), Hepatitis B, and Varicella. Influenza vaccine is highly recommended. Students must also be tested for TB on an annual basis.

Diphtheria and Tetanus

Diphtheria is a serious communicable disease, causing death in 5-10 percent of cases with the highest rates among the very young and the elderly.

Diphtheria disease is most common and most severe in non-immunized or partially immunized individuals. Protection from vaccine decreases over time unless periodic boosters are given.

Tetanus is an acute and often fatal disease. While rare, cases have been reported that are associated with injection drug use, animal bites and wounds contaminated with dirt, feces or saliva.

Immunization against diphtheria and tetanus is recommended for all adults in the USA and **required for students in health career programs** at HACC; booster doses with tetanus/diphtheria (Td) or the new Tdap (tetanus-diphtheria-acellular pertussis) should be administered every ten years.

Measles, Mumps, Rubella

Measles (Rubeola) is a highly contagious disease that can be more severe in infants, children and adults who have weakened immune systems. Students born after 1957 **MUST** have one of the following: proof of two measles vaccinations, documentation of

physician-diagnosed measles, or laboratory evidence of immunity to be considered protected against measles infection. Individuals born before 1957 have probably had measles disease and are therefore considered immune.

Mumps is generally a mild disease; however, complications like encephalitis or inflammation of the brain are more common in adults. Students **MUST** have one of the following: proof of one dose of live mumps-containing vaccine, documentation of physician-diagnosed mumps, or laboratory evidence of immunity.

Rubella infection in adults may cause swelling and pain in the joints. Infections in the first three months of pregnancy have an 85 per cent risk of causing severe damage to a developing baby. Rubella outbreaks in health care facilities are of particular concern due to the potential spread to pregnant health care providers and patients. According to the CDC 10% to 15% of young adults are susceptible to rubella infection.

Rubella titer is required for all students. Individuals are considered protected against rubella infection if they have a positive titer. Those with a negative titer should have one dose of live rubella-containing vaccine. A titer must be drawn 4 to 8 weeks following the vaccine to prove immunity via a positive titer.

Hepatitis B Virus

Hepatitis B vaccine is required because students may be exposed to blood or body fluids through needle stick or other similar injuries, bites, or non-intact skin. The risk of transmission of hepatitis B virus to a health care provider from a highly infectious source, such as a needle stick injury, has been reported to be 19-40 percent.

Individuals are considered immune if they have completed a series of hepatitis B vaccine and one documented lab test that shows they have developed adequate immunity to hepatitis B virus. Post vaccination testing for antibody to Hepatitis B surface antigen (anti-HBs) is required. Post vaccination testing should be done 1 to 2 months after the 3rd dose of the vaccine. Persons who do not develop immunity (non-responders) to an initial vaccine series should be given a second series of vaccine with post vaccination testing to check immunity. Persons who do not respond after the second vaccination series should be tested for Hepatitis B surface antigens (HBsAg) to determine if they have Hepatitis B virus infection. If positive they should receive appropriate treatment and counseling. Those who test negative for HBsAg should be considered susceptible to Hepatitis B viral infections and should be counseled appropriately.

Students who have no documentation showing they received Hepatitis B vaccine should receive the 3 dose series and post vaccination testing. There is no harm in receiving extra doses of vaccine. **Long term immunity has only been shown for person attaining adequate anti-HBs results of at least 10mIU/ml after a 3 dose vaccination series.**

*For those students who completed the series of hepatitis B vaccine in the past but were **NOT tested for immunity**; testing is **required**. Documentation of a protective Hepatitis B surface antibody titer(anti-HBs >10 mIU/mL) is required.*

Varicella

Varicella (chickenpox) infection tends to be more severe in adults. Students **MUST** have one of the following: physician diagnosis of varicella disease or herpes zoster (shingles), laboratory documentation of immunity or documentation of two doses of live varicella vaccine for adults.

Influenza (not required)

All health care providers are at risk of getting and passing on the influenza virus to their patients, families and friends. It is important to prevent disease transmission to persons at high risk of influenza-related complications, such as those with cardiac or pulmonary disorders, weakened immune systems, other chronic medical conditions, and the elderly.

Influenza vaccination of health care providers has been shown to help reduce the illness and death of patients under their care in long-term settings and to reduce worker illness during the influenza season.

Tuberculosis Screening

Health care workers are at risk of contracting Tuberculosis (TB). Cases in health care workers constituted 3% of all TB cases. TB is a potentially severe contagious disease that is spread from person to person through the air. People with TB infection do not feel sick and do not have any symptoms. However, they may develop TB disease at some time in the future.

Two-step Testing is required for all students. The 2-step testing procedure is required to improve test reliability. If the reaction to the first test is classified as negative, a second test should be done 10 to 21 days later. In some people who are infected with *M. tuberculosis*, their reaction to the tuberculin test may wane over the years. When these people are skin tested many years after infection, they may have a negative reaction. However, the first skin test may stimulate (boost) their ability to react to tuberculin, causing a positive reaction to subsequent test.

Students who have a documented 2-step PPD need to submit evidence of this testing and continuous yearly testing. If a lapse occurred in the yearly PPD, the student will need to repeat the 2-step.

Students who have a positive PPD are required to obtain a chest x-ray and provide details of any prescribed medication(s).

Annual PPD skin testing is required of all students. An annual symptom review is required for students with a history of positive skin test.

References

"Ask the Experts" Questions Relating to Health Care Workers, Immunization Action Coalition. July 30, 2006. www.immunize.org/hcw/ate.htm

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"Healthcare Worker Vaccination Recommendations," Immunization Action Coalition, adapted from Michigan Department of Community Health,
www.immunize.org/catg.d/p2017.pdf

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"Recommendations for Institutional Prematriculation Immunizations," Advisory Committee on Immunization Practices ACHA Guidelines, January 2006. Centers for Disease Control.

**U.S. Department of Labor, OSHA Regulations (Standards - 29 CFR)
Hepatitis B Vaccine Declination (Mandatory) - 1910.1030 App A.**
http://www.osha.ov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=1005