

Frequently Asked Questions Regarding Pre-Employment Immunization and Testing for Health Care Workers

BACKGROUND: The Rhode Island Department of Health's *Rules and Regulations Pertaining to Immunization, Testing, and Health Screening for Health Care Workers (R23-17-HCW)* define the minimum requirements for pre-employment immunizations and disease testing for new employees starting work in licensed health care facilities. The language in the regulations is based upon the most current Centers for Disease Prevention and Control's (CDC) publications on communicable disease screening and the immunization of health care workers (see references).

This document is intended to be a technical guide to assist health care practitioners in screening individuals in accordance with regulatory requirements, and to clarify some frequently asked questions. The intent of this document is not to replace medical practice standards or the execution of medical judgement in an individual case. The broad goal of such activities is to ensure that new employees in the health care industry remain free of the communicable diseases cited in the regulations, to protect them and the public from the consequences of possible workplace exposures, and the transmission of these diseases. The *Medical Record of Adult Immunization and Testing* form accompanies the regulations. This document is to be completed by the health care practitioner providing immunization and testing or for transcribing information from previous records.

Employers who are licensed as health care facilities, such as hospitals and nursing homes, may choose to utilize employee health services staff, or occupational health contracted services, or their own nursing staff to screen their new employees. Alternatively, they may ask the prospective employee to obtain the required screening from an independent provider.

Tuberculosis

A health care worker must present evidence-based certification that he/she is free of active tuberculosis prior to employment. The following tests are acceptable:

1. ***A negative two-step tuberculin skin test using purified protein derivative (PPD).*** A two-step test is defined as the application and reading of two consecutive PPD tests. Optimally the second PPD should be administered 1-3 weeks after the first. The maximum allowable interval between the first and the second dose cannot be more than 365 days for it to qualify as a two step procedure.
2. ***The health care worker with a history of a positive PPD skin test result in the past*** is required to present proof that he/she is currently free of active disease. Such proof may include:
 - a) Physician documentation of a negative chest X-ray at the time the PPD was first read positive, accompanied by physician certification that the person is currently free of signs and symptoms of active TB. NOTE: Such a chest x-ray may be completed at any time prior to hire, provided that it is accompanied by a physician certification that the health care worker is currently free of signs and symptoms of active disease. **OR**

- b) In the absence of a negative chest X-ray at the time the PPD was first read as positive, a chest X-ray should be documented as negative before the person can start work. This X-ray must be done at any time prior to hire provided it is after the PPD was first noted to be positive and the person currently remains symptom free. **OR**
- c) Physician certification of completion of a course of prophylactic therapy for latent TB infection, or completion of therapy for active disease in the past and the person currently remains symptom free. **OR**
- d) Physician certification that the health care worker is currently free of active TB disease based on his/her clinical assessment. Because there can be many complex clinical scenarios with TB infection and disease, the practitioner may exercise judgement in certifying a person free of infectious TB.

What does one do with an individual who has a positive reaction?

In the event that during pre-employment screening the PPD skin test is positive (first or second step), the health care worker must be referred to a physician to rule out the possibility of active tuberculosis before the health care worker may begin to work in a health care facility. Also if the prospective health care worker presents written evidence of a positive PPD (as a result of testing relative to immigration requirements), but has not had a physician assessment for this problem, the person must be referred to a physician to rule out active disease prior to employment. If the health care worker is uninsured, she/he may be referred to the Rhode Island Department of Health's tuberculosis clinic at 401-793-2427.

All post-employment PPD testing must conform to the OSHA rule requiring an institution-specific plan per CDC's "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health Care Facilities."

When can the health care worker start work?

A health care worker who has ***never had a PPD test***: If the first test result is negative, the health care worker may begin to work immediately, but the second PPD must be administered between one and three weeks after the first PPD. Note that if the first test is positive a second test must **not** be done, instead follow procedure in #2 above.

A health care worker who has had ***one previous negative PPD test***: If a health care worker brings in a negative test result from a previous test, the test result can count as the first step. A second PPD test can now be applied provided the interval between the first and second test is no more than 365 days and no less than 7 days. The facility must ensure that the health care worker's second step PPD is negative prior to the health care worker's commencing work in the facility. Thus, a health care worker with a negative PPD prior to employment can only count it as the initial step if it was given within 365 days of the new employment PPD.

Measles, Mumps, and Rubella

Before a new health care worker may work in a health care facility, evidence of immunity to measles, mumps, and rubella must also be presented. Five to ten percent (5-10%) of health care workers born prior to 1957 are not likely to be immune to measles or mumps or rubella, therefore it

is recommended that vaccination be offered to this population of health care workers. The following evidence is acceptable:

1. ***Documented record of Measles, Mumps and Rubella vaccination***

Health care workers born on or after January 1, 1957 must present evidence of two doses of a live viral vaccination with measles vaccine, administered at least 4 weeks apart, with the first dose being administered after the first birthday. There is a grace period of 4 days, so a vaccine dose received 4 days prior to the first birthday is acceptable. Two doses of MMR vaccine will satisfy compliance with this requirement. In the instance where reliable records of single antigen vaccination are available, there is a single dose requirement for mumps and rubella, but a two-dose requirement for measles.

A documented record of immunization includes, but is not limited to, an official immunization record card, a copy of a medical record indicating administration of vaccine, school immunization record, medical passport, or a World Health Organization immunization record, or the Rhode Island Department of Health's "Medical Record of Adult Vaccination and Testing."

2. ***Serologic evidence of immunity to Measles, Mumps and Rubella in a person with documented single dose of MMR***

A standard serologic test performed at any time prior to employment and interpreted as showing evidence of either past infection or vaccination for measles, mumps and rubella is acceptable, in a person with evidence of one prior dose of MMR.

If the health care worker does not meet the above requirements when can the health care worker start to work?

1. If the worker has no documentation of MMR vaccine and the health care worker receives **MMR** (measles, mumps, and rubella) vaccine, the health care worker may begin to work after receiving the first dose of vaccine. The second dose can be administered at a minimum interval of 4 weeks after the first or as soon as is feasible thereafter. This is the optimal recommended option.
2. If the worker has no documentation and wants to have blood tests done, then the blood test results for measles, mumps and rubella must be positive before the worker can start work. If any one of these is negative, they must be vaccinated prior to work (first dose of two doses if measles is negative).
3. If the health care worker has one documented MMR vaccination and wishes to have a **blood test** (IgG titers) to determine immunity to measles in lieu of a second vaccination, then the blood test results for measles must come back and be positive for immunity before the health care worker may start to work. This testing usually takes 24--48 hours. If the blood test (titer) is positive, it indicates that the health care worker is immune to measles and the health care worker may start to work. If the blood test (titer) is negative, it indicates that the worker is not immune, then the health care worker must receive the MMR vaccine before he/she may begin to work.
4. If the health care worker presents a medical exemption from this vaccination requirement, the risks and benefits of working in a particular health care setting must be discussed with the health care worker and appropriate accommodations made. If the exemption results from a temporary

condition such as pregnancy and provided the worker voluntarily, and with consent, reveals this information to the employer, an attempt should be made to meet the immunization requirements, when the period of exemption is over.

PPD and MMR Interaction

The MMR vaccine can significantly interfere with the body's ability to react to PPD for up to 4 weeks after vaccination. Because of this, the two-step PPD testing should be completed before the MMR vaccination can be given. For example, administer the first PPD, wait one week and then administer the second PPD. When the health care worker returns to have this read administer the first MMR. At this stage the health care worker may start to work. The health care worker in this example had to wait approximately 10 days before beginning to work. However, if an employee has to receive a single dose of PPD for pre-employment testing, both the PPD and MMR may be administered on the same day.

Hepatitis B Vaccine

Hepatitis B vaccinations shall be made available to all employees who have occupational exposure to blood within ten (10) working days of assignment, at no cost, at a reasonable time and place, under the supervision of licensed physician/licensed healthcare professional and according to the latest recommendations of the U.S. Public Health Service (USPHS). Prescreening may not be required as a condition of receiving the vaccine. Employees must sign a declination form if they choose not to be vaccinated, but may later opt to receive the vaccine at no cost to the employee. Should booster doses later be recommended by the USPHS, employees must be offered them.

The current series consists of a 3 dose series administered as two doses at least 4 weeks apart followed by a third dose optimally five months after the second dose, though a minimum interval of 2 months between dose 2 and dose 3 is acceptable. Note that these are minimum intervals between doses and any interval longer than these between doses is acceptable without a need to re-start or repeat a dose. A titer to confirm sero-conversion is recommended 1 to 3 months after the last dose. Persons failing to sero-convert should be offered a repeat 3 dose series with follow up titers and a physician consultation. Employees have the option of signing a standard OSHA declination form if they choose not to be vaccinated with Hepatitis B vaccine.

References:

Measles, Mumps, and Rubella -- Vaccine Use and Strategies for Elimination of Measles, Rubella, and Congenital Rubella Syndrome and Control of Mumps: Recommendations of the Advisory Committee on Immunization Practices (ACIP) at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00053391.htm>

Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC) at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00050577.htm>

Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 1994 at http://www.cdc.gov/mmwr/preview/ind94_rr.html

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