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**To:** Hospitals, Long-Term Care Facilities, Providers and Local Health Departments

**From:** New York State Department of Health  
Bureau of Communicable Disease Control, Immunization Program

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**HEALTH ADVISORY: RECOMMENDATIONS FOR VACCINATION OF  
HEALTH CARE PERSONNEL (HCP)**

**Please distribute to the Infection Control Department, Employee Health Service,  
Infectious Disease Department, Nursing Director, Medical Director, and  
all patient care areas.**

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**SUMMARY**

- This advisory summarizes recommendations of the Advisory Committee on Immunization Practices (ACIP), the Healthcare Infection Control Practices Advisory Committee (HICPAC), and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) concerning the use of immunizations in the health care setting. It also discusses those immunizations that are required by law and regulation for health care personnel (HCP) according to the Occupational Safety and Health Agency (OSHA), New York State Public Health Law (PHL), and New York Codes, Rules and Regulations (NYCRR).
- The New York State Department of Health (NYSDOH) strongly recommends protecting HCP and the patients they care for by promoting vaccination initiatives.
- Maintenance of immunity is an essential part of prevention and infection control programs for HCP including, but not limited to, physicians, nurses, aides, respiratory therapists, radiology technicians, students (medical, nursing, and others), emergency medical personnel, dentists, social workers, chaplains, volunteers, and dietary, housekeeping and clerical workers.

**BACKGROUND**

The NYSDOH recommends that all health care facilities (hospitals, long-term care facilities, provider offices, etc.) protect HCP and the patients or residents they care for by promoting vaccination initiatives. HCP are at risk for exposure to and are able to transmit vaccine-

preventable diseases because of their contact with patients or infective material from patients. HCP include not only physicians, nurses and emergency medical personnel, but also those who have any contact with patients or materials touched by patients, such as dental professionals, students, respiratory therapists, radiology personnel, social workers, chaplains, volunteers, and dietary, housekeeping and clerical workers. Maintenance of immunity is an essential part of prevention and infection control programs for HCP.

- It has been demonstrated that HCP are vectors for the spread of communicable diseases to patients who are most vulnerable to complications and death. HCP vaccination helps to protect patients from these vaccine-preventable communicable disease infections and decreases patient morbidity and mortality.
- Vaccination against communicable diseases protects HCP by reducing or eliminating serious diseases, saves employees and employers money by reducing the need for medical visits or missed days of work due to illness, and decreases medical errors committed when working while ill.
- Vaccines are a cost-effective benefit and provide a safer environment for employees and patients. Although health care organizations may be concerned about the cost of vaccinating their employees, the costs of not doing so are much higher.

The recommendations and requirements summarized in this advisory can assist hospital administrators, infection control practitioners, employee health staff, and HCP in optimizing infection prevention and control programs. Background information for each vaccine-preventable disease and specific recommendations for the use of each vaccine may be found on the ACIP website at <http://www.cdc.gov/vaccine/>

## **VACCINE RECOMMENDATIONS**

### **Hepatitis B**

In accordance with the United States Department of Labor's Office of Safety and Health Administration (OSHA) regulation CPL 2-2.69, HCP who perform tasks that may involve exposure to blood or body fluids should receive a 3-dose series of hepatitis B vaccine at 0, 1, and 6-month intervals. HCP should be tested for hepatitis B surface antibody (anti-HBs) to document immunity 1 to 2 months after receiving dose #3.

- If the level of anti-HBs is at least 10 mIU/mL (positive) after 3 immunizations, the patient is immune. No further serologic testing or vaccination is recommended.
- If the level of anti-HBs is less than 10 mIU/mL (negative) after 3 immunizations, the patient is considered unprotected against hepatitis B virus (HBV) infection. The recommendation is to revaccinate with a 3-dose series. Retest anti-HBs levels 1 to 2 months after dose #3.
  - If anti-HBs is positive, the patient is immune. No further testing or vaccination is recommended.
  - If anti-HBs is negative following 6 doses of vaccine, the patient is a non-responder.

**For non-responders:** Persons who are non-responders should be considered susceptible to HBV and should be counseled regarding precautions to prevent HBV infection and the need to obtain

hepatitis B immune globulin (HBIG) prophylaxis for any known or probable parenteral exposure to hepatitis B surface antigen (HBsAg)-positive blood. It is also possible that non-responders are persons who are HBsAg positive and testing should be considered. Persons found to be HBsAg positive should be counseled and receive a medical evaluation.

**Note:** Anti-HBs testing is not recommended routinely for previously vaccinated HCP who were not tested 1 to 2 months after their original vaccine series. These HCP should be tested for anti-HBs when they have an exposure to blood or body fluids. If found to be anti-HBs negative, individuals should be treated as if susceptible.

### **Influenza**

**The standard of care in New York State (NYS) is that all HCP should receive an annual influenza vaccination.** In addition, Public Health Law (PHL) Article 21A, the Long-term Care Resident and Employee Immunization Act, requires that all long-term care facilities, adult homes, adult day healthcare facilities, and enriched housing programs offer influenza vaccine to all employees and residents ([http://www.health.state.ny.us/nysdoh/infection/ltc\\_act/index.htm](http://www.health.state.ny.us/nysdoh/infection/ltc_act/index.htm)).

There are two types of influenza vaccine available:

- **Trivalent Inactivated Vaccine (TIV):** May be given by injection to any HCP.
- **Live Attenuated Influenza Vaccine (LAIV or FluMist™):** May be given by nasal spray to all non-pregnant healthy HCP age 49 years and younger.

Groups that should be targeted for influenza vaccine include all personnel (including volunteers) in hospitals, outpatient, long-term care facilities, and home-health settings who have any patient contact. TIV should be used rather than LAIV for HCP who are in close contact with severely immunosuppressed persons (e.g., stem cell transplant patients) when those patients require a protective environment.

### **Measles, Mumps, Rubella (MMR)**

All persons who work in health care facilities are required to be immune to measles and rubella according to NYS regulations. It is also recommended that HCP be immune to mumps.

- Persons born in 1957 or later can be considered immune to measles, mumps, or rubella only if they have documentation of either:
  - laboratory evidence of measles, mumps, or rubella immunity (persons who have an “indeterminate” or “equivocal” level of immunity upon testing should be considered susceptible); or
  - two doses of live measles and mumps vaccines administered on or after the first birthday and separated by at least 28 days, and at least one dose of live rubella vaccine administered on or after the first birthday.
  - Note: although, according to NYS regulations, diagnosis of measles disease by a physician, nurse practitioner, or a physician’s assistant is allowed as evidence of immunity, it is recommended that health care facilities discontinue allowing employees born after 1957 to claim immunity to measles and mumps based on health care provider diagnosis alone. Health care provider diagnosis of rubella has never been permitted as evidence of immunity.

- For persons born before 1957:
  - Birth before 1957 is **not** considered evidence of immunity against rubella according to NYS regulations. Person born before 1957 must have either laboratory evidence of rubella immunity or one dose of live rubella vaccine administered on or after the first birthday.
  - In addition, it is recommended that a dose of MMR vaccine be given to unvaccinated HCP born before 1957 who do not have a history of measles and mumps diagnosed by a physician, nurse practitioner, or a physician's assistant or laboratory evidence of measles and mumps immunity.
  - For unvaccinated HCP born before 1957 who do not have other evidence of mumps immunity (e.g., mumps diagnosed by a physician, nurse practitioner, or a physician's assistant, or laboratory evidence of mumps), consider giving 1 dose on a routine basis and strongly consider giving a second dose during a mumps outbreak.

For more information on NYS regulations regarding immunity to measles and rubella, please refer to NYCRR Title 10, Sections 405.3 (hospitals), 415.26 (nursing homes), 751.6 (diagnostic and treatment centers), 763.13 and 766.11 (home health agencies and programs), and 793.5 (hospices). These regulations can be found at [www.health.state.ny.us/regulations](http://www.health.state.ny.us/regulations).

For more information on updated recommendations on mumps immunity, please see the June 9, 2006 MMWR entitled, *Notice to Readers: Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP) for the Control and Elimination of Mumps*, available at: [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5522a4.htm?s\\_cid=mm5522a4\\_e](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5522a4.htm?s_cid=mm5522a4_e)

### **Meningococcal Meningitis**

Vaccination is recommended for microbiologists who are routinely exposed to isolates of *N. meningitidis*. Use of meningococcal conjugate vaccine (MCV4 or Menactra™) is preferred among persons ages 11–55 years and should be given as an intramuscular injection. If MCV4 is unavailable, then meningococcal polysaccharide vaccine (MPSV or Menomune™) is an acceptable alternative for persons ages 11 years and older. Use of MPSV is recommended for persons older than age 55 and is given as a subcutaneous injection.

### **Tetanus/Diphtheria/Pertussis (Td/Tdap)**

It is recommended that all HCP be vaccinated with one dose of Tdap to protect themselves, their patients, other HCP and the community against tetanus, diphtheria, and pertussis. Priority should be given to vaccination of HCP who have direct contact with infants aged <12 months.

All adults who have completed a 3-dose primary series of a tetanus/diphtheria-containing vaccine (DTP, DTaP, DT, or Td) should receive a tetanus/diphtheria booster every 10 years. As soon as feasible, HCP younger than age 65 years with direct patient contact should be given a one-time dose of Tdap. Although Td booster doses are routinely recommended at an interval of 10 years, an interval as short as 2 years from the last dose of Td is recommended for the Tdap dose among HCP.

## **Varicella**

It is recommended that all HCP be immune to varicella. Evidence of immunity in HCP includes documentation of 2 doses of varicella vaccine given at least 28 days apart, history of varicella disease (chickenpox) or herpes zoster based on physician diagnosis, laboratory evidence of immunity, or laboratory confirmation of disease.

### **ADDITIONAL INFORMATION**

For further information, please contact your local health department or the NYSDOH Immunization Program at (518) 473-4437.

Additional information can be obtained at the CDC's National Immunization Program website at <http://www.cdc.gov/nip/menus/groups.htm#hc-wkers>.

#### Additional References:

- Healthcare Infection Control Practices Advisory Committee:  
[http://www.cdc.gov/ncidod/dhqp/hicpac\\_pubs.html](http://www.cdc.gov/ncidod/dhqp/hicpac_pubs.html).
- Immunization Action Coalition's "Immunization and Health Care Workers":  
<http://www.immunize.org/hcw/index.htm#recommendations>.