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	Infection Control Management of Exposures of Patients and Personnel to Selected Communicable Diseases	<i>Supersedes</i>	10/01

KEY WORDS: exposure, communicable diseases, prophylaxis

POLICY

- When clinically possible, patients with communicable diseases should be managed on an outpatient basis in order to reduce the risk of disease transmission in the Hospital.
- When patients with communicable diseases are admitted to the hospital, they should be placed in the appropriate type of isolation as outlined in the Isolation Policy, IFC023: Appendix II <http://www.insidehopkinsmedicine.org/icpm/ifc023diseases.pdf>. When a patient is admitted to the Hospital with a known communicable disease transmissible by the airborne or droplet contact route, arrangements should be made to have the patient met at the door. The patient should be asked to wear a standard surgical mask (if tolerated) while moving to a patient care area.
- When a patient is admitted to the hospital with a history of having been exposed to a communicable disease prior to admission, the patient should be placed in isolation on the first day of the potential communicable period (before symptoms or signs of the disease develop), as outlined in Appendix B of this policy.
- Personnel who are exposed to a communicable disease to which they are susceptible (during work or away from work) must contact Occupational Health Services (OHS) after notifying HEIC. During business hours, Occupational Health Services can be reached at 410-955-6211, after hours, call operator at 410-955-500 for on-call pager.

RESPONSIBILITIES


- | | |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| JHH/JHU Staff | ▪ Must follow this policy. |
| Supervisor/Managers of all Departments | ▪ Must assist in the control of any exposure. |
| Hospital Epidemiology and Infection Control (HEIC) | ▪ Will direct the exposure of communicable diseases. |
| Occupational Health Services | ▪ Will evaluate the exposed personnel, and provide prophylaxis when needed, follow work restriction recommendations. |

I. PROCEDURES

Managing Exposures to Communicable Diseases

A. Responsibilities

1. The first person to note an exposure must notify the Hospital Epidemiology and Infection Control Department (HEIC) at ext. 5-8384 on weekdays, or by pager (410) 283-3855 at night or weekends. If no one is available page the Hospital Epidemiologist.
2. The nurse manager, charge nurse or designee is responsible for ensuring that appropriate infection control measures are initiated and that exposed patients and personnel are listed on an Exposure Survey (Appendix A). The Nurse Manager is responsible for notifying staff of their exposure and instructing them to call OHS or designated individual for follow-up.

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3. HEIC is responsible for prevention and assessing the nature, extent, and timing of exposures and ensuring that appropriate infection control measures are taken. Control measures beyond those specified may be implemented by the HEIC when warranted by unusual circumstances such as disease outbreaks.
4. HEIC is responsible for forwarding names of exposed personnel to OHS.
5. OHS will initiate prophylactic therapy as indicated. HEIC and OHS will also exclude personnel from duty when necessary, while OHS will clear personnel for return to duty.
6. Exposed individuals, including HCWs, patients, and visitors, must follow HEIC recommendations while on Hospital premises in regards to isolation, visitation and work restrictions.

B. Procedure


1. The nurse manager (or designee) should utilize the Exposure Form (Appendix A) to establish a list of patients, visitors and personnel who meet the exposure definition as defined by HEIC (Appendix B). This list should be faxed (410-614-0888) or emailed to HEIC.
 - a. The Exposure Form (Appendix A₁ or A₂) should include visitors exposed to varicella, pertussis, diphtheria, rubella, measles, mumps, meningococcal disease and other communicable diseases (e.g. SARS, smallpox, etc.).
 - b. The immune status of exposed persons is to be defined by history of disease or appropriate tests as specified by HEIC. OHS will obtain appropriate tests on exposed personnel. The responsible physician (or designee) will recommend Patient/visitor tests.
2. Providers must assist in determining the susceptibility of exposed patients, including discharged patients and in determining needs for prophylactic therapy. Providers must assist in identifying exposed providers and students.
3. HEIC will be responsible for contacting ancillary or service departments to obtain lists of exposed personnel.

C. Control Measures

1. Exposed susceptible patients who cannot be discharged before the time they might become communicable are to be isolated appropriately for the known incubation period as outlined in Appendix B. If the disease develops, isolation will be continued as outlined in the Isolation Policy, IFC023 <http://www.insidehopkinsmedicine.org/icpm/afc023diseases.pdf>.
2. In certain situations, prophylactic therapy of exposed patients and/or personnel may be indicated.
3. In certain situations, it maybe necessary to:
 - cohort patients and/or health care workers
 - close patient care units to admissions
 - admit only immune individuals.

HEIC will assist in determining if such measures are necessary.

4. Exposed, susceptible employees may be excluded from duty for the entire period of potential communicability. OHS and HEIC will determine exclusion from duty.

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- Family members rooming-in with exposed patient on isolation should be screened for susceptibility to the disease. Susceptible individuals should be discouraged from visiting during the potential incubation period.

REFERENCES

Pickering, L.K. (Ed.). (2003). *Red Book 2003: 2003 Report of the committee on infectious diseases* (26th ed.). Chicago: American Academy of Pediatrics.

Chin, J. (Ed.). (2000). *Control of Communicable Diseases Manual* (17th ed., pp. 427-429). Washington, DC: American Public Health Association.

Bolyard, E. A., Tablan, O.C., Williams, W.W., Pearson, M.L., Shapiro, C.N., Deitchmann, S.D. and the Hospital Infection Control Practices Advisory Committee. (1998). *Guidelines for infection control in healthcare personnel*. Retrieved August 4, 2004, from Centers for Disease Control and Prevention website: <http://www.cdc.gov/ncidod/hip/guide/InfectControl98.pdf>.

APPENDICES

Appendix A1 – Infection Control Management of Exposures of Patients and Personnel to Selected Communicable Diseases, Hospital Exposure Form <http://www.insidehopkinsmedicine.org/icpm/IFC012-exposuresA1.pdf>

Appendix A2 – Infection Control Management of Exposures of Patients and Personnel to Selected Communicable Diseases, Tuberculosis Form <http://www.insidehopkinsmedicine.org/icpm/IFC012-exposuresA2.pdf>

Appendix B – Infection Control Measures for Exposures of Patients and Personnel to Selected Communicable Diseases <http://www.insidehopkinsmedicine.org/icpm/IFC012-exposuresB.pdf>

SPONSOR

- Medical Care Evaluation Committee


DEVELOPERS

- Department of Hospital Epidemiology and Infection Control
- Occupational Health Services

COMMUNICATION & EDUCATION

This policy will be communicated to the appropriate JHH personnel via the following channels:

- Updates and revisions will be communicated via Medical Staff and Nursing publications.
- Nurse Managers, Physician Advisors, Residency Coordinators, Department Chiefs and Department Management will be responsible to train new employees regarding the policy as appropriate, and to communicate updates to the protocol.
- This policy will be placed in the Interdisciplinary Clinical Practice Manual on the JHH Intranet site <http://www.insidehopkinsmedicine.org/icpm>. Paper distributions will be made to the Functional Unit Nursing offices in the event of web access difficulty.
- Placement of policy online at www.hopkins-HEIC.org.

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REVIEW CYCLE	• Three (3) years	MEDICAL BOARD	Approval Date: 9/28/04 Effective Date: 10/31/04
<p>VICE PRESIDENT FOR MEDICAL AFFAIRS</p> <hr/> <p>Date:</p>			

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**INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS
AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶**

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Chickenpox (Varicella)	10-21 days (Usually 14-16 days)	From 1-2 days before appearance of rash until all lesions are crusted	<p>If VZIG is not taken: exclude from duty on days 8 through day 21 post exposure</p> <p>If VZIG is taken: exclude from duty on days 8 through day 28 post exposure</p>	<p>If VZIG is not taken: Standard, airborne & contact Isolation on days 8 through day 21 post exposure</p> <p>If VZIG is taken: Standard, airborne & contact Isolation on days 8 through day 28 post exposure</p>	Varicella zoster immune globulin (VZIG) may attenuate infection. Post exposure VZIG, given within 96 hours, is recommended for several categories of susceptible children (see 2003 Pediatric Red Book p. 678-679); and for susceptible, immuno-suppressed adults, provided there are no contraindications. Post exposure VZIG for other persons may be considered on an individual basis as a matter of clinical judgement	Those with no history of chickenpox and have not received the vaccine or negative varicella titers; all infants under 12 months of age	<ol style="list-style-type: none"> 1) Close proximity (3-6 feet) to an infectious person for more than 5 minutes or 2) Physical contact with vesicles or 3) Same-room proximity to an infectious person for one hour or more

* Durations apply to personnel who do not develop disease after exposure. For information on returning to duty for personnel with disease, contact Occupational Health Service.

** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Diphtheria, pharyngeal	2-7 days	<p>Treated persons who do not become carriers: from beginning of symptoms to 4 days after beginning effective therapy</p> <p>Untreated persons who do not become carriers: from beginning of symptoms to 2-6 weeks</p> <p>Persons who become chronic carriers: from beginning of symptoms to 6 months or longer</p>	<p>Exposed personnel should have nasal and pharyngeal cultures taken for <i>C. diphtheria</i></p> <p>Surveillance by OHS for 7 days for low-grade fever, pharyngitis and/or presence of pseudo membrane</p> <p>If exposed personnel develop symptoms of pharyngitis: exclude from duty until final culture results are negative (follow-up cultures should be obtained at least 2 weeks after completion of therapy)</p> <p>If exposed personnel do not develop symptoms of pharyngitis: do not exclude from duty unless cultures are positive. Personnel with positive cultures must be excluded from duty until two cultures from nose and pharynx, taken 24 hours apart after cessation of antibiotics, are negative</p>	<p>Exposed patients should have nasal and pharyngeal cultures taken for <i>C. diphtheria</i></p> <p>Surveillance by OHS for 7 days for low-grade fever, pharyngitis and/or presence of pseudo membrane</p> <p>If exposed patients develop symptoms of pharyngitis: Droplet Precautions, Private Room Required, until 2 cultures, taken 24 hours apart, from both nares and throat are negative</p> <p>If exposed patients do not develop symptoms of pharyngitis: no isolation unless cultures are positive. Patients with positive cultures must be kept in isolation until two cultures from nose and pharynx, taken 24 hours apart after cessation of antibiotics, are negative</p>	<p>Antibiotic prophylaxis: all exposed persons should be given a 7-day course of oral erythromycin or a 5 day course of Azithromycin or single IM injection of penicillin G benzathine, provided there are no contraindications</p> <p>Diphtheria toxoid vaccination:</p> <ol style="list-style-type: none"> 1) Previously immunized exposed persons need to receive a dose of Td if they have not been vaccinated within the previous 5 years 2) For previously unimmunized individuals a primary series of 3 doses of adsorbed tetanus and diphtheria toxoids (Td) is given 	<p>Primarily those with no history of diphtheria and incomplete vaccination; however, infection can occur even in immunized persons</p>	<ol style="list-style-type: none"> 1) Physical contact with infectious secretions or 2) Close proximity (3-6 feet) to an infectious person for more than 5 minutes

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** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

**INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS
AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶**

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Influenza	1-3 days	3-7 days after onset of symptoms	<p>Employees who are febrile and have influenza like symptoms must stay home. If they become sick while at work they must go to Occupational Health Services.</p> <p>Employees who have cold symptoms, such as a cough, and runny nose <u>without fever</u> must wear a surgical mask during patient contact and practice rigorous hand hygiene.</p>	<p>Monitor patients for 3 days post exposure for influenza like symptoms. If patient develops sign and/or symptoms of flu follow the hospital flu plan</p> <p>(link to flu plan if possible)</p>	<p>Flu vaccine, if not already administered, and Amantadine hydrochloride or rimantadine hydrochloride is recommended after exposure to influenza A in Adults, but only amantadine is licensed for the treatment of children. Neuraminidase inhibitors (oseltamivir or zanamivir) will be used to treat patients exposed to influenza B.</p>	<p>Those with no history of disease with that viral strain and no history of vaccination with vaccine protective against the current, prevalent viral strain</p>	<p>Close proximity (3-6 feet) to an infectious person for more than 5 minutes</p>

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** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

**INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS
AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶**

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Measles	8-12 days	From exposure until 4 days after rash appears (in otherwise healthy children) and duration of illness in immunocompromised patients	<p>If vaccine is taken within 72 hours after exposure: do not exclude from duty.</p> <p>If vaccine is not taken or is taken >72 hours after exposure: exclude from duty from day 5 through day 21 post exposure or until 4 days after onset of rash.</p>	<p>If vaccine is taken 72 hours after exposure: no isolation</p> <p>If vaccine is not taken or is taken >72 hours after exposure: airborne isolation on days 5 through day 21 post exposure or 4 days after rash appears</p>	<p>Susceptible, immunocompetent, exposed persons >6 months of age: Measles vaccine, MR, or MMR is recommended (provided there are no contraindications) and should be given as soon as possible within 72 hours of exposure</p> <p>Susceptible, exposed persons <1 year of age and immunocompromised persons of any age: Immune globulin is recommended (provided there are no contraindications) and should be given as soon as possible within 6 days of exposure</p>	<p>Those with negative measles antibody titers</p> <p>When titers are not available, susceptible persons are presumed to be those born after 1956 who do not have either documentation of physician-diagnosed measles or history of two doses of measles vaccine taken on and after the first birthday</p>	<p>1) Same-room proximity to an infectious person for any amount of time</p> <p>2) Presence in a room previously occupied by an infectious patient within the past 1-4 hours, depending on room size and ventilation characteristics</p>
Meningococcal meningitis	1-10 days (usually less than 4 days)	Until 24 hrs after initiation of appropriate therapy	None	None	<p>Ciprofloxacin x 1 dose (provided there are no contraindications) or rifampin PO 300mg BID x 2 days or ceftriaxone 250mg IM for pregnant women</p> <p>Prophylaxis should ideally be administered within 24 hours of exposure</p>	<p>All persons are considered susceptible unless they have been recently infected by the same <i>N. meningitidis</i> strain as the source person</p>	<p>Direct exposure to index patient's secretions (ie mouth-to-mouth resuscitation, unprotected intubation or unprotected suctioning)</p>

* Durations apply to personnel who do not develop disease after exposure. For information on returning to duty for personnel with disease, contact Occupational Health Service.

** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

**INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS
AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶**

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Meningococcal pneumonia	1-10 days (usually less than 4 days)	Until 24 hrs after initiation of appropriate therapy	None	None	Ciprofloxacin x 1 dose (provided there are no contraindications) or rifampin PO 300mg BID x 2 days or ceftriaxone 250mg IM for pregnant women Prophylaxis should ideally be administered within 24 hours of exposure	All persons are considered susceptible unless they have been recently infected by the same <i>N. meningitidis</i> strain as the source person	Direct exposure to index patient's secretions (ie mouth-to-mouth resuscitation, unprotected intubation or unprotected suctioning)
Mumps	12-25 days (usually 16-18 days)	From 1 to 2 days before onset of parotid swelling until 5 days after onset of swelling	Exclude from duty from days 12 through day 26 post exposure	Droplet Precautions until 9 days after onset of parotid swelling	None	Those with negative mumps antibody titers. When titers are not available, susceptible persons are presumed to be those born after 1956 who have no history of mumps or history of mumps vaccination on or after the first birthday	1) Physical contact with respiratory secretions of an infectious person or 2) Close proximity (3-6 feet) to an infectious person for more than 5 minutes or 3) Same-room proximity to an infectious person for about an hour or more

* Durations apply to personnel who do not develop disease after exposure. For information on returning to duty for personnel with disease, contact Occupational Health Service.

** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

IFC012 – APPENDIX B

INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Pertussis	6-21 days (usually 7-10 days)	From the beginning of the catarrhal stage until completion of 5 days of effective antibiotic therapy. If effective antibiotic therapy is not taken, the period of communicability may last as long as 3 weeks	None	<p>If effective antibiotic therapy is not taken: Droplet Precautions, Private Room Required, 3 weeks after onset of paroxysms</p> <p>If effective antibiotic therapy is taken: Droplet Precautions, Private Room Required, until completion of 5 days of therapy</p>	<p>Persons >7 years of age: erythromycin for 14 days or trimethoprim-sulfamethoxazole in 2 doses (provided there are no contraindications)</p> <p>Persons <7 years of age: erythromycin for 14 days or trimethoprim-sulfamethoxazole in 2 doses (provided there are no contraindications) and pertussis vaccine, depending on age and vaccination history (see 2003 Pediatric Red Book p. 475). Vaccination may be recommended to adults in certain settings</p>	Primarily those with no history of pertussis and incomplete vaccination; however, infection can occur even in immunized persons	<p>1) Physical contact with respiratory secretions of an infectious person or</p> <p>2) Close proximity (3-6 feet) to an infectious person for more than 5 minutes</p>
Rubella	14-23 days (usually 16-18)	From 7 days before onset of rash until 7 days after rash onset	Exclude from duty from days 7 through day 21 post exposure or 7 days after onset of rash	Droplet Isolation from days 7 through day 21 post exposure or 7 days after onset of rash	None, except that immune globulin may be considered for pregnant women	<p>Those with negative rubella antibody titers</p> <p>When titers are not available, susceptible persons are presumed to be those who have no history of rubella or history of rubella vaccination on or after the first birthday</p>	<p>1) Physical contact with respiratory secretions of an infectious person or</p> <p>2) Close proximity (3-6 feet) to an infectious person for more than 5 minutes or</p> <p>3) Same-room proximity to an infectious person for about an hour or more</p>

* Durations apply to personnel who do not develop disease after exposure. For information on returning to duty for personnel with disease, contact Occupational Health Service.

** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.

**INFECTION CONTROL MEASURES FOR EXPOSURES OF PATIENTS
AND PERSONNEL TO SELECTED COMMUNICABLE DISEASES ¶**

Disease	Incubation Period	Period of Communicability of Persons with Active Disease	Exclusion of Exposed, Susceptible, Asymptomatic Personnel From Duty*	Isolation of Exposed, Susceptible, Asymptomatic Patients**	Prophylaxis for Exposed Persons	Definition of Susceptible Persons	Definition of Exposure***
Tuberculosis (TB) – Pulmonary or laryngeal	2 to 12 weeks	Until completion of 2 weeks of appropriate therapy and clinical improvement has been documented with the addition of 2 negative AFB smears.	None	None	INH prophylaxis is used for persons whose PPD skin tests convert from negative to positive after exposure. (see TB Control Policy for additional details)	All persons are presumed to be susceptible, although persons with preexisting, latent TB infection or past BCG vaccination (previous 6 years) may be resistant to TB infection or active disease	<ol style="list-style-type: none"> 1) Same-room proximity to a person with AFB smear-positive, culture-positive respiratory tract TB for any amount of time or 2) During autopsies, if precautionary measures are not taken, same-room proximity to the body of a patient with AFB smear-positive tuberculosis lesions in tissues.

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** Durations apply to patients who do not develop disease after exposure. For information on duration of isolation for patients with disease, see Isolation Policy.

*** Exposure to an infectious source person who is not isolated.

¶ For diseases not listed contact HEIC.