

Subject: INFECTION CONTROL AND PREVENTION	Page 1 of 8	Policy # INF 8.11
Title: ISOLATION PRECAUTIONS	Revision of: 04/2004	Effective Date: 01/2007

I. PURPOSE:

Appropriate isolation precautions minimize the risk of exposure to and spread of communicable infectious diseases and/or healthcare- or community-associated organisms to patients, staff and visitors. Patients with known or suspected communicable infectious diseases or certain healthcare- or community-associated organisms must be placed on appropriate isolation precautions. Compliance with isolation precautions reduces the risk of transmission of potential pathogens and contributes to reducing rates of healthcare-associated infections.

II. POLICY:

- A. Recommendations for appropriate isolation precautions are based on guidelines from the Centers for Disease Control and Prevention (CDC) and other current sources. In addition to CDC recommendations, the Northwestern Memorial Hospital Infection Control & Prevention Department (NMH IC) may determine certain communicable infectious diseases and/or healthcare- or community-associated organisms significant based on the needs of our patient population, community and local predominance.
- B. NMH employees, members of the medical staff and housestaff, students, volunteers, and agency personnel (Staff) engaged in patient contact or contact with the patient's environment shall adhere to these guidelines regarding isolation precautions as defined by the CDC and IC.
- C. Any category of isolation precautions implemented for a patient are to be used in addition to Standard Precautions. Standard Precautions requires that the blood, body fluids, secretions and excretions of all patients be treated as potentially infectious (see Policy # 8.02 INF Standard Precautions).
- D. Any exceptions to this policy must be cleared with IC.

III. PERSONS AFFECTED:

This policy applies to all Staff.

IV. DEFINITIONS:

- A. Airborne droplet nuclei – A particle smaller than 5 µm in size that can remain suspended in air for long periods of time and can be aerosolized by coughing, sneezing, talking or during procedures involving the respiratory tract. Airborne droplet nuclei can be widely dispersed by air currents and travel on dust particles. Transmission may occur when the aerosolized nuclei are inhaled by or deposited onto a susceptible host not wearing appropriate personal protective equipment.
- B. Anteroom – An entrance, room or area that leads to another room.
- C. Colonization - The presence of microorganisms in a host that do not cause a specific immune response or infection.
- D. Contamination - The presence of a potentially infectious agent on a body surface, clothing, bedding, toys, surgical instruments or dressings, or other inanimate articles or substances including water and food.
- E. Droplet – A particle larger than 5 µm in size that is transmitted as a result of coughing, sneezing, talking or during procedures involving the respiratory tract. Droplets can travel

distances of 3-6 feet when aerosolized and may survive for a period of time on surfaces. Transmission involves close contact. The conjunctivae or mucous membranes of a susceptible host is exposed by direct contact, contact with droplets when within 3-6 feet of an infectious patient as well as by contact with objects recently contaminated with respiratory secretions when not wearing appropriate personal protective equipment.

- F. Immunocompromised persons - Persons with immune deficiencies, HIV infection, leukemia, lymphoma, generalized malignancy, or immunosuppressive therapy with corticosteroids, alkylating agents, antimetabolites, or radiation.
- G. Infection – Invasion of the body’s natural barriers by microorganisms (bacteria, fungi, prion, viruses or parasites) that can multiply and cause symptoms.
- H. Isolation precautions – Measures taken in the healthcare setting to prevent spread of potentially infectious agents from an infected or colonized patient or the environment to susceptible hosts.
- I. Multi-drug resistant organism (MDRO) – Microorganisms, predominantly bacteria that are resistant to one or more classes of antimicrobial agents.
- J. N95 Respirator - Respiratory protective device with a filter efficiency of at least 95%, used to protect staff from exposure to potentially infectious organisms transmitted via the airborne or droplet routes (see Safety Management policies # 6.57 SFTY Respiratory Protection Program and # 6.11 Personal Protective Equipment).
- K. Negative airflow room – A room or area with a lower pressure than its surroundings that causes the air to flow into the room, resulting in a negative pressure environment.
- L. Non-critical patient care equipment - Instruments or objects that come in contact with intact skin but not mucous membranes, i.e., stethoscopes, blood pressure cuffs, bed pans, bed rails, patient furniture and bedside tables.
- M. Powered Air Purifying Respirator (PAPR) – Respiratory protective devices that use a battery powered blower that passes contaminated air through a cartridge or filter where the air is cleansed and forced through a hose to the face piece. Used by staff who cannot wear an N95 respirator or as indicated by IC (see Safety Management policies # 6.57 SFTY Respiratory Protection Program and # 6.11 Personal Protective Equipment).

V. RESPONSIBILITIES:

A. Staff

1. Any person entering a patient room, engaged in direct patient contact or contact with the patient’s environment shall adhere to Standard Precautions and hand hygiene practices (see policy # 8.01 INF Hand Hygiene) in addition to the guidelines outlined in this policy regarding specific isolation precautions.
2. Those authorized to initiate orders for isolation precautions will do so based on the known or suspected disease or condition as outlined in Appendix A: Isolation Precautions Chart or at the direction of IC.
3. Post a laminated isolation precautions sign on the patient room door corresponding with the type of isolation precautions ordered for the patient.
4. Affix an isolation precautions sticker to the front of the patient chart corresponding with the type of isolation precautions ordered for the patient.
5. The isolation precautions cart shall be kept outside of the patient room or within the anteroom and unit staff will restock the cart as needed.
6. Educate the patient, family and visitors of isolation precaution specifics and on the practice of appropriate hand hygiene (see Infection Control policy # 8.01 INF Hand Hygiene and Patient Care policy # 5.02 PC Visitors to Patients).

7. Accurate documentation in the medical record will be made daily detailing the reason for and category of isolation precautions for each patient on isolation precautions.
8. Limit movement of patients on isolation precautions off the patient care unit. Any test or procedure that can be, should be performed at the bedside. Non-emergent tests or procedures should be scheduled during periods of lowest activity in the receiving area.
9. A verbal report shall be made to any receiving department on the reason for and category of isolation precautions prior to patient arrival to the receiving department. Place a clean patient gown on patient prior to transport to any receiving department if the patient has draining wounds, skin lesions or other contamination of the gown.
10. Discontinuation of isolation precautions requires a physician order and accurate documentation must be made in the patient medical record of the type of isolation precautions being discontinued and reason for discontinuation.

B. Infection Control and Prevention Department

1. When indicated, will initiate or discontinue isolation precautions and communicate these actions to appropriate Staff.
2. Provide education and support to unit staff on an as needed basis regarding isolation precautions and diseases and conditions requiring isolation precautions.
3. Maintenance of the VRE Flagging System; enter patients into the system, ensure previously flagged patients are placed on appropriate isolation precautions when readmitted, determine when/if patients may be taken out of the VRE Flagging System and remove patients from the flagging system as indicated.
4. Report communicable diseases in accordance with Illinois State law to the Chicago Department of Public Health (CDPH) on all inpatients (see policy # 8.10 INF Reportable Diseases).

VI. PROCEDURE:

A. Isolation Precautions

NMH has three categories of isolation precautions. Isolation precautions for specific causative agents, diseases or conditions can be found in Appendix A: Isolation Precautions Chart.

1. Mask, Glove and Gown Precautions (Yellow sign):
 - a. Used to prevent transmission of highly contagious organisms spread by the airborne droplet nuclei, droplet and contact routes. Patients on Mask, Glove and Gown Precautions must be placed in a negative airflow room.
 - b. All Staff entering the patient room, regardless of anticipated patient contact, must wear a N95 or PAPR respirator, gloves and a gown prior to entering the patient room. The gloves and gown must be removed and discarded prior to leaving the patient room. The respirator must be removed in the anteroom.
 - c. Unless otherwise indicated in Appendix A: Isolation Precautions Chart, N95 and PAPR respirators may be used for the duration of the shift worked per patient room, in accordance with Safety Management policies # 6.57 SFTY Respiratory Protection Program and # 6.11 Personal Protective Equipment. For patients in Prentice Women's Hospital (PWH) please see Infection Control Policy # 8.08 INF Care of Prentice Patient Requiring Isolation Precautions.
 - d. Patients on Mask, Glove and Gown Precautions who must leave their rooms for a diagnostic test or procedure must wear a surgical mask, gloves and gown for transport and the receiving area called prior to patient arrival. Patients with an artificial airway(s) must have their airway(s) covered prior to transport. Place a clean patient gown on the patient prior to transport if they have draining wounds, skin lesions or other contamination of the gown.

- e. Patients on Mask, Glove and Gown Precautions are not allowed to leave their rooms to walk the unit or other areas of the hospital.
2. Mask Precautions (Blue sign):
 - a. Used to prevent transmission of organisms by the airborne or droplet routes. Patients on Mask Precautions must be placed in a negative airflow room.
 - b. All Staff entering the patient room, regardless of anticipated patient contact, must wear a N95 or PAPR respirator prior to entering the patient room. The respirator must be removed after leaving the patient room.
 - c. Unless otherwise indicated in Appendix A: Isolation Precautions Chart, the N95 and PAPR respirators may be used for the duration of the shift worked for one patient room, in accordance with Safety Management policies # 6.57 SFTY Respiratory Protection Program and # 6.11 Personal Protective Equipment. For patients in PWH please see Infection Control Policy # 8.08 INF Care of Prentice Patient Requiring Isolation Precautions.
 - d. Patients on Mask Precautions who must leave their rooms for a diagnostic test or procedure must wear a surgical mask for transport and the receiving area called prior to the patient arrival. Patients with an artificial airway(s) must have their airway(s) covered prior to transport. Place a clean patient gown on the patient prior to transport if they have draining wounds, skin lesions, or other contamination of the gown.
 - e. Patients on Mask Precautions are not allowed to leave their rooms to walk the unit or other areas of the hospital.
 - f. **During influenza season**, a patient diagnosed with known or suspected influenza must be placed in a negative airflow room on Mask Precautions. If a negative airflow room is not available the patient may be placed in a regular room (excluding rooms on Feinberg 11E, 15E, 15W, 16E) on Mask Precautions and the room door remain closed at all times until influenza has been ruled out or the patient has been discharged.
 3. Glove and Gown Precautions (Orange sign):
 - a. Used to prevent transmission of organisms by direct or indirect contact. Glove and Gown Precautions are indicated for patients colonized or infected with epidemiologically significant organisms that may be transmitted by direct contact with the patient or indirectly by contact with the patient's environment.
 - b. All Staff entering the patient room, regardless of anticipated patient contact, must wear gloves and gown prior to entering the patient room. These items must be removed and discarded before leaving the patient room.
 - c. Patients placed on Glove and Gown Precautions who must leave their rooms for a diagnostic test or procedure must wear gloves and a gown for transport and the receiving area called prior to the patient arrival. Place a clean patient gown on the patient prior to transport if they have draining wounds, skin lesions or other contamination of the gown.
 - d. Patients on Glove and Gown Precautions may walk the unit and visit the family area immediately adjacent to the unit while wearing gloves and a gown. Patients on Glove and Gown Precautions must not leave their patient care floors to visit public areas of the hospital.
 - B. Glove Precautions (Pink sign):

Used as an enhancement to Standard Precautions on selected high risk patient care units including (Feinberg 11E, 15E, 15W, 16E, MICU, NSICU, SICU) and while ruling out for VRE colonization for patients from long-term care or rehabilitation facilities. (see VI.H. below).

 1. All patients on these units are placed on Glove Precautions unless they require isolation precautions.

2. Post a laminated Glove Precautions sign on the patient room door.
 3. Staff must wear gloves for every contact with the patient and their environment.
- C. Equipment and Supplies
1. Patients on isolation precautions should have disposable or dedicated non-critical patient care equipment, i.e., blood pressure cuffs and stethoscopes.
 2. If use of common equipment is unavoidable, it must be adequately cleaned and disinfected before use on another patient with a hospital-grade disinfectant (see Infection Control Policy # 8.12 INF Cleaning, Disinfection and Sterilization).
 3. Reusable patient care equipment visibly contaminated with blood or body fluids must be cleaned with hospital-grade disinfectant at the point-of-use prior to being sent for reprocessing.
 4. Disposable, single-use patient care equipment must be handled and transported in a manner that reduces the risk of transmission of microorganisms and decreases environmental contamination.
 5. Limit items, including medications, IV solutions and enteral feedings taken into the room of a patient on isolation precautions.
 6. Unused items must be disinfected prior to returning to the Pharmacy or Food & Nutrition Departments. Unused items with packaging that has been compromised must be discarded.
- D. Linen
1. Soiled linen from the room of a patient on isolation precautions is to be handled, transported and laundered in the same manner as other linen in the hospital.
 2. Linen is to be bagged in a designated soiled linen bag at the point of use and placed in the soiled linen room for processing.
- E. Dishes, Glasses, Cups, Eating Utensils
1. No special precautions are necessary for dishes, glasses, cups or eating utensils from the room of a patient on isolation precautions. Hot water and detergents used in the cleaning process for these items is sufficient to decontaminate them.
- F. Routine and Terminal Cleaning
1. Patient rooms with isolation precautions in place must receive daily routine cleaning.
 2. In addition to thorough cleaning, adequate disinfection of bedside equipment and environmental surfaces is important as certain microorganisms can survive on surfaces for prolonged periods of time.
 3. Upon patient discharge, the isolation sign must remain outside the patient room to alert Environmental Services staff performing the terminal clean of the type of precautions to follow.
 4. Respirator must be worn when entering a patient room where Mask Precautions were in place until 35 minutes following patient discharge.
- G. VRE Flagging System
1. Patients identified to be colonized or infected with vancomycin-resistant enterococci (VRE) are entered by IC into the NMH VRE Flagging System.
 2. Each subsequent admission to NMH will trigger an automatic order initiating Glove and Gown Precautions and isolation precautions cart delivery to the assigned patient room.
 3. Removal from the system requires three negative rectal swabs or two negative stool cultures obtained at least one week apart from patients who have not received antimicrobial therapy for at least one week. These cultures may be obtained over multiple admissions.

4. IC may determine that other organisms are deemed to be epidemiologically significant and initiate a flagging system.
- H. Admission from Long-Term Care or Rehabilitation Facility (Facility)
1. Obtain a rectal swab or stool culture to rule out VRE from patients known to have transferred from a Facility.
 2. Adhere to Glove Precautions until culture results are returned (see VI.B. above).
 3. Institute Glove and Gown Precautions if culture results are positive for VRE or other organisms necessitating Glove and Gown Precautions. If culture results are negative, Glove Precautions remain in place only if the patient resides on a high risk unit where Glove Precautions are universal.
- I. Postmortem Handling of Bodies
1. Personnel must adhere to isolation precautions during postmortem handling.
 2. Autopsy personnel must be notified so appropriate precautions can be maintained during and after autopsy.
 3. Isolation precautions signage must be placed on the outside of the body bag in accordance with Illinois State law.
- J. Norman and Ida Stone Institute of Psychiatry
1. In order to best serve the needs of this patient population, patients who would normally require Glove and Gown Precautions in the acute care setting do not require these precautions in the Norman and Ida Stone Institute of Psychiatry. These include but are not limited to:
 - a. *Clostridium difficile*
 - b. *E. coli* gastroenteritis
 - c. Impetigo
 - d. Vancomycin-resistant *Enterococcus*
 - e. Pediculosis (Lice)
 - f. Salmonellosis
 - g. Shigellosis
 - h. Streptococcal disease (skin, wound or burn)
 2. Patients with any of the above conditions transmitted by direct contact should be placed in a private room with a dedicated bathroom and hand washing facilities.
 3. Patients must be fully clothed when out of their rooms.
 4. Staff must counsel patients on basic hygiene practices and compliance with hand hygiene. Patients who cannot control their bowel or bladder or perform consistent, basic hygiene should be considered for transfer to the Feinberg Pavilion.
 5. Patients with known or suspected communicable diseases requiring Mask Precautions or Mask, Glove and Gown Precautions must be cared for in the Feinberg Pavilion until they are no longer considered infectious or the disease has been ruled out.
- K. Discontinuation of Isolation Precautions
1. See Appendix A: Isolation Precautions Chart for disease/condition-specific guidance on discontinuation of isolation precautions.
 2. Patients colonized with a multi-drug resistant organism may continue to be colonized for prolonged periods of time and shedding of these organisms may be intermittent. Consideration for discontinuation of isolation precautions for these patients, unless otherwise stated, will be on a case-by-case basis.

VII. RELEVANT REGULATORY REFERENCE

Centers for Disease Control and Prevention. Management of multi-drug resistant organisms in healthcare settings, 2006. Atlanta, GA 2006.

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Pickering, L. (2003). *2003 Red Book: Report of the Committee on Infectious Diseases* (26th ed.) American Academy of Pediatrics.

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Hospital Infection Control Practices Advisory Committee (HICPAC). (2004). DRAFT Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.

Illinois Department of Public Health. Rules and Regulations for the Control of Communicable Disease and Related Documents. July 1, 2002.

VIII. POLICY UPDATE SCHEDULE

Every 3 years.

IX. KEY WORDS AND CROSS REFERENCING

Cart, colonization, flagging system, glove, gown, infection, infection control, isolation, mask, MDRO, N95, negative airflow, PAPR, precautions, personal protective equipment, respirator, transmission, VRE.

RESPONSIBLE PARTIES:

Medical Director, Infection Control and Prevention
Electronically Approved: Month day, 2007

Manager, Infection Control and Prevention
Electronically Approved: Month day, 2007

REVIEWER(S):

Committee on Infection Control and Prevention

APPROVAL PARTY:

Senior Vice President, Quality and Planning
Electronically Approved: Month day, 2007