

EAST CAROLINA UNIVERSITY

INFECTION CONTROL POLICY

Recognition & Implementation of Isolation Procedures and Precautions

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Approved by

Chairman, Infection Control Committee

Infection Control Nurse

- I. **Description of Precautions:** Airborne precautions are designed to reduce the risk of transmission of airborne droplet nuclei (small particle residue < 5 microns or smaller in size) of evaporated droplets containing microorganisms that remain suspended in then air and which can be widely dispersed by currents within a room or over a long distance.

Purpose: To consistently implement isolation procedures and precautions to prevent exposure to ECU staff, students and visitors and to reduce the risk of transmission of epidemiologically important organisms by direct or indirect contact.

Tuberculosis Isolation

- A. Description of Isolation: Airborne Isolation is designed to reduce the risk of transmission of *Mycobacterium tuberculosis* via droplet nuclei. AFB Isolation needs a private room with negative air pressure in relation to surrounding areas, a minimum of 6-12 air changes per hour and appropriate discharge of air outdoors.

- Early identification of patients with active pulmonary or laryngeal tuberculosis is fundamental.

Screening patients for signs and symptoms of active disease is done by patient services at the time of appointment scheduling per the “Tuberculosis Screen for Scheduling Appointments/Referrals (Appendix A).

Clinical staff will also screen patients during the intake process during the clinic visit for signs and symptoms of active disease.

Tuberculosis should be considered if the patient complains of:

- A persistent cough greater than 2-3 weeks duration
- Productive cough with purulent sputum
- Fever
- Night sweats
- Hemoptysis (blood in sputum)
- Recent weight loss

Clinic staff will instruct patients with known or suspected tuberculosis to don a mask immediately upon entrance to the clinical area or as soon as symptoms are noted during the intake process.

The patient will be removed as soon as possible from the waiting area and placed in an Airborne Infection Isolation (AII) Room (negative pressure). If no AII room is available, the patient will be placed in the most secluded exam room from other patients.

All ECU staff and students must wear appropriate respiratory protection, i.e. N-95 mask or PAPR (respirator helmet) when entering the room.

The patient’s room door will be kept closed and minimize the number or persons entering the room will be minimized.

The patient will be asked to wear the mask to other areas for service, i.e. lab, x-

ray).

The receiving service will be notified by phone of the need for AII precautions.

Clinic staff will place the red airborne isolation sign (Appendix B) on the outside of the closed door and indicate the time when adequate air changes will have occurred in order to safely enter the room without respirator protection. After patient discharge, allow 30 minutes for negative pressure rooms and 3 hours for non-negative pressure rooms (Appendix B).

II. Airborne Agents

Conditions that require airborne precautions:

- Measles (Rubeola)
- SARS (2006)
- Norovirus (possibly)
- Varicella (chicken pox)
- Disseminated Zoster (shingles) or localized Zoster in an immuno compromised host
- Tuberculosis –See above

Clinical Symptoms (or Syndromes) that may require Airborne Precautions

- Rash or Exanthems, generalized, etiology unknown
- Vesicular lesions
- Maculopapular with coryza and fever

Management of patients with known diseases or symptoms that may require airborne procedures.

- Place patient in private room with negative pressure if possible
- Keep room door closed
- Keep patient in room
- If a private room with negative pressure is not available, then a designated room within the clinical area that is secluded from other patients is used to evaluate the patient.
- Personnel must wear appropriate respiratory protection during patient care activities.
- If patient is to be admitted, communication with the accepting facility is necessary.
- Place mask on the patient during transfer or if they must go to other areas for services (i.e. lab or X-ray) Cover skin lesions/rash with gown or drape..
- Strict attention to handwashing must be followed by all staff.
- Gowns and gloves may be necessary for potential splash or splatter situations (Standard Precautions).

Red airborne isolation sign will be posted on outside of closed exam room door with safe time for re-entry without respiratory protection. (Appendix B).

Environmental Control and Disinfection

- Patient care items, bedside equipment and surfaces potentially contaminated with secretions are cleaned after the patient is discharged from the clinic
- A new mop head is used for each isolation room and changed after use in an isolation room.
- Red airborne isolation sign will be posted on outside of closed door. Write safe time for re-entry.

II Droplet Precautions

Description of Precaution: Droplet Precautions are designed to reduce the risk of transmission of microorganisms transmitted by droplet (large particle droplets [larger than 5 microns in size] that can be generated by the patient during coughing, sneezing, talking, or the performance of procedures.)

Conditions that require droplet precautions

- Invasive *Haemophilus Influenzae* type b disease in infants and children (any age) including meningitis, pneumonia, epiglottitis, and sepsis.
- Invasive *Neisseria meningitidis* disease, including meningitis (precautions required until 24 hours after the start of effective therapy) (meningococcal meningitis), pneumonia, (meningococcal pneumonia) and sepsis (meningococemia) (precautions required until 24 hours after the start of effective therapy).
- Other serious bacterial respiratory infections spread by droplet transmission, including: Diphtheria (pharyngeal) (precautions required until off antibiotics and culture negative in 2 cultures taken 24 hours apart).
- Mycoplasma pneumonia (Primary atypical pneumonia) (precautions required for the duration of the illness).
- Pertussis (Whooping Cough) (precautions required until 5 days after patient is placed on effective therapy).
- Pneumonic Plague (precautions required until after 72 hours after the start of effective therapy).
- Streptococcal (group A) pharyngitis, pneumonia, or scarlet fever in infants and young children. (precautions required until 24 hours after start of effective therapy).
- Serious viral infections spread by droplet transmission, including:
 - Adenovirus in infants and young children and abscess in infants and young children (precautions required for the duration of the illness).
 - Influenza (precautions required for the duration of the illness).
 - Mumps (infectious parotitis) (precautions required for 9 days after onset of swelling).
 - Parvovirus B19 (precautions required during acute phase and if chronic disease occurs in an immunodeficient patient).
 - Patients with transient aplastic crisis or red cell crisis.

- Rubella (German Measles) and Congenital Rubella (precautions required until 7 days after onset of rash).

Clinical Symptoms (or Syndromes) that Require Droplet Precautions

- Meningitis (until Meningococcal Meningitis is ruled out).
- Rash or exanthem (petechia/ecchymotic) with fever,
- Respiratory infection with paroxysmal or severe persistent cough during periods of pertussis activity in the community.

III. Contact Precautions

Descriptions of Precautions: Contact precautions are designed to reduce the risk of transmission of epidemiologically important microorganisms by direct or indirect contact.

Contact precautions are applied to specified patients known or suspected to be infected or colonized with epidemiologically important microorganisms that can be transmitted by direct or indirect contact.

Direct contact transmission involves skin-to-skin contact and physical transfer of microorganisms to a susceptible host from an infected or colonized person. Colonized means the presence of a microorganism in or on the patient but without clinical signs and symptoms of infection. Direct contact transmission occurs when personnel performs patient-care activities that require physical contact.

Indirect contact transmission involves contact of a susceptible host with a contaminated intermediate object, usually inanimate (such as contaminated thermometer or other medical equipment) in the patient's environment.

Conditions that Require Contact Precautions

(Please note that one asterisk (*) means that the disease will also require droplet precautions whereas two (***) means that the disease will also require airborne precautions.)

- Gastrointestinal, respiratory, skin or wound infections or colonization with multi-drug resistant bacteria which are specified by the Infection Control Committee, based on current state, regional or national recommendations, to be of special clinical and epidemiologic significance.
Examples includes:
 - Vancomycin-resistant Enterococcus (VRE) and Methicillin-resistant Staphylococcus aureus (MRSA).
 - Droplet Precautions are also necessary if the source site of infection involves the respiratory system (ex. Sputum, tracheal aspirate). These organisms will be identified on the laboratory culture reports as "Resistant Microorganism".
- Enteric infections with a low infectious dose or prolonged environmental survival, including:
 - Diapered or incontinent patients: enterohemorrhagic Escherichia coli 1257:H7, Shigella, Hepatitis A, or rotavirus (precautions required for duration of illness).

- Norovirus
- Clostridium difficile precautions required for duration of illness (until absence of fever, abdominal pain, and/or diarrhea) in patients with diarrhea, regardless of whether diapered or incontinent.
- *Respiratory syncytial virus (RSV), *parainfluenza virus, or enteroviral infections in infants and young children (precautions required for duration of illness).
- Skin infections that are highly contagious or that may occur on dry skin, including:
 - Diphtheria (cutaneous) precautions required until off antibiotics and two cultures 24 hours apart are negative.
 - Herpes simplex virus (neonatal: and mucocutaneous, which is disseminated or primary and is severe) – precautions required for duration of illness, i.e. while lesions are open and draining.
 - Impetigo-precautions required until 24 hours after initiation of effective therapy.
 - Major skin infections (non contaminated, abscesses, cellulitis, or decubiti only when dressing does not contain drainage) precautions required for duration of illness.
 - Pediculosis (lice)-precautions required until 24 hours after initiation of effective therapy.
 - Scabies-precautions required until 24 hours after initiation of effective therapy.
 - Staphylococcal furunculosis (boils) in infants and young children-precautions required for duration of illness.
 - Staphylococcal disease (S. aureus) in major skin wound or burn wound-precautions required for duration of illness.
 - Staphylococcal scaled skin syndrome-precautions required for duration of illness.
 - **Varicella – Zoster (disseminated or in the immunocompromised hosts, Shingles or Chicken Pox)-precautions must be maintained until all lesions are crusted.
 - Viral/hemorrhagic conjunctivitis-precautions required for duration of illness.
 - Viral hemorrhagic fevers (eg Lassa fever, Marburg virus)-precautions required for duration of illness.
 - Acinetobacter

Clinical symptoms (or Syndromes) that may require contact precautions pending confirmation of diagnosis.

- Diarrhea
 - Acute diarrhea with a likely infectious cause in an incontinent or diapered patient.
 - Diarrhea in an adult with a history of broad spectrum or long-term antibiotics
- Rash or exanthems, generalized, etiology unknown
 - Vesicular (chicken pox)

- Respiratory infections, particularly bronchiolitis and croup, in infants and young children.
- Risk of multi-drug resistant microorganism.
 - History of infection or colonization with multi-drug resistant organisms (until screening cultures are negative).
 - Patients who have been hospitalized \geq four (4) days and have received antibiotics.
 - Skin, wound or urinary tract infection in a patient with a recent hospital or nursing home stay for at least 24 hours in a facility where multi-drug resistant-organisms are prevalent.
 - Any dialysis patient (home dialysis, peritoneal dialysis, HDU patient)
- Skin, abscess or wound infectious (large, draining, non-contained within a dressing)

Management of Patients with known diseases or symptoms that may require contact precautions.

- Place patient in private room
- Ensure proper signage is displayed on patient's door
- Wear gloves (clean, non-sterile) when entering the room and during the course of providing care for a patient.
- Change gloves after having contact with infective material that may contain high concentrations of microorganisms (wound drainage).
- Remove gloves before leaving the patient's room and wash hands immediately.
- Alcohol based hand rubs are not effective against spore forming bacteria such as *C. difficile* and therefore should not be used to clean hands after caring for patients with diarrhea that may be caused by *C. difficile*. Soap and water must be used to physically remove spores from the surface of contaminated hands.
- Wear gown during the course of providing care for a patient.
- Remove gown before leaving the patient's environment.
- Wear a mask & institute droplet precaution if the site of the infection involves the respiratory tract.
- If the patient is transported to another area for services (i.e. lab or X-ray), the receiving department is notified of precautions in place.

Management of Resistant Bacteria

- Patients with resistant organisms; whether infected or colonized are placed on appropriate isolation
- Communication to clinical staff is necessary
- Clinic staff will place contact isolation sign for housekeeping on closed door, after patient is discharged from the Clinical area. (Appendix B)

Management of patients with known disease or symptoms that may require droplet precautions.

- Place patient in private room.
- Ensure proper sign is displayed on patient's door
- In addition to standard precautions, wear a mask when entering room.
- If the patient is transported to another area for services (i.e. lab or X-ray) the receiving department is notified of precautions in place.
- If the patient is transported, the patient is to wear a mask.
- Strict attention to handwashing is necessary.

IV. Management of undiagnosed patients

- Telephone triage
 - An effort will be made to determine the nature of the patient's illness when they call.
 - If patient's complaint or symptoms suggest contact precautions are needed, the patient is instructed on how to directly enter the clinic area to be triaged by clinic staff.
- Walk-In Patients
 - Patients who present with a complaint or symptoms that suggest contact precautions are needed, are seen and triaged by clinical staff as expeditiously as possible.

Environmental Control and Disinfection

- Patient care items, bedside equipment and surfaces potentially contaminated with secretions are cleaned after the patient is discharged from the clinic.
- A new mop head is used for each isolation room and changed after use in an isolation room.
- Whenever potentially contaminated items are carried out of the room, of the infected or colonized patient, the person removing the item must ensure that the item is disinfected and/or handled in a manner to maintain contact precautions.
- All patient care equipment is disinfected that cannot be dedicated for an individual patient is disinfected before use of another patient.
- A sign will be placed on door of room informing Housekeeping of the needed precautions. (Appendix C)

V. Protective Precautions

Description of Precautions: Guidelines to protect patients from potentially infectious organisms carried by caregivers, visitors and the inanimate environment.

Immunosuppression may be present in patients who:

- Receive bone marrow transplants
- Receive organ transplants
- Are neutropenic due to treatment or disease
- Have immune deficiency disorders

- Receive prolonged steroid therapy

Protective Precautions for immunocompromised patients include:

- Private room
- Strict handwashing when entering room and strict asepsis when handling patient items.
- Mask the patient when the patient leaves the room
- Care provided by employees free of infection (see Work Restrictions for Healthcare Workers Policy in the Infection Control Manual.)

Appendix A

Tuberculosis Screen for Scheduling Appointments/Referrals

Reason for visit is:

- “Possible Tuberculosis” or “Rule Out Tuberculosis”
- Symptom of cough for 2-3 weeks or more, PLUS any one of the following:
- _____ fever
 - _____ night sweats
 - _____ weight loss
 - _____ hemoptysis or coughing blood
 - _____ known HIV infection
 - _____ positive TB skin test
 - _____ foreign birth or immigration from Central or South American/Caribbean, Africa, Asia

If either box is checked, flag appointment as “Use Airborne Infection Control Precautions: ask patient to don surgical mask, minimize time in waiting area, notify RN ASAP on arrival”

AIRBORNE ISOLATION

**N-95 mask required to enter room until
_____ am/pm**

**Negative Pressure Room – Wait 30 minutes
Non-negative Pressure Room – Wait 2 hours**

ISOLATION

Attention: Housekeeping

Use Standard Precautions, AND

Contact Precautions (GLOVES AND GOWN)
and/or

Airborne Precautions (MASK)

Until _____ AM/PM

Negative Pressure Room – Wait 30 minutes

Non-Negative Pressure Room – Wait 2 hours

