



DEDER GENERAL HOSPITAL

SOP for Standard and Transmission-Based

Precautions for Airborne Pathogen Transmission

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1. Purpose

The purpose of this SOP is to provide detailed guidelines for preventing and controlling the transmission of airborne pathogens in healthcare facilities. It outlines both standard precautions to be applied universally and specific transmission-based precautions for airborne pathogens such as *Mycobacterium tuberculosis*, measles, and varicella.

2. Scope

This SOP is applicable to all healthcare workers (HCWs), including physicians, nurses, support staff, and other personnel in healthcare settings, and covers patients, visitors, and contractors. It also applies to all patient care areas, particularly where there is a risk of exposure to airborne pathogens.

3. Definitions

➤ Standard Precautions:

Basic infection control practices applied to all patients regardless of infection status.

➤ Transmission-Based Precautions:

Additional infection control practices required for patients suspected or confirmed to have infections that can be transmitted by contact, droplet, or airborne routes.

Airborne Pathogens:

Infectious agents transmitted via aerosols that can remain

4. Responsibilities:

Healthcare Workers (HCWs):

-  Ensure compliance with standard and transmission-based precautions.
-  Properly use personal protective equipment (PPE), perform hand hygiene, and adhere to cleaning protocols.

Infection Control Team:

-  Provide training on precautions and monitor adherence to infection control practices.
-  Conduct periodic audits and investigate breaches in infection control.
-  Stay updated with evolving standards and communicate them to HCWs.

Facility Management:

-  Ensure that sufficient stocks of PPE and disinfectants are available.
-  Maintain proper ventilation systems, including negative pressure rooms.

5. Procedure:

5.1 Standard Precautions:

5.1.1 Hand Hygiene:

☞ Perform hand hygiene before and after patient contact, following the **5 Moments of Hand Hygiene**:

1. Before touching a patient.
2. Before aseptic procedures.
3. After body fluid exposure risk.
4. After touching a patient.
5. After touching patient surroundings.

☞ **Method:**

- Use an alcohol-based hand rub if hands are not visibly soiled.
- Use soap and water for at least 20 seconds if hands are visibly dirty or contaminated with body fluids.

5.1.2 Personal Protective Equipment (PPE):

☞ **Gloves:**

Wear gloves when anticipating contact with blood, body fluids, mucous membranes, or non-intact skin.

 **Gown:**

Wear a gown during procedures likely to generate splashes or sprays of fluids or when handling contaminated patient equipment.

 **Mask, Eye Protection, or Face Shield:**

Wear a face mask and eye protection when there is a risk of splash or spray of fluids into the face.

5.1.3 Respiratory Hygiene/Cough Etiquette:

-  Instruct symptomatic patients and visitors to cover their nose and mouth with a tissue when coughing or sneezing.
-  Provide face masks to symptomatic individuals in waiting areas.
-  Use proper disposal for tissues, and ensure patients perform hand hygiene afterward.

5.1.4 Safe Injection Practices:

-  Use sterile, single-use needles and syringes for each injection.
-  Use single-dose vials when possible. If multi-dose vials are necessary, store and handle them according to facility guidelines.

5.1.5 Patient Equipment and Linen Handling:

-  Clean and disinfect reusable patient care equipment before use on another patient.

- Handle soiled linens carefully to prevent contamination of skin or clothing and promptly transport them to the laundry.

5.2 Transmission-Based Precautions:

Transmission-based precautions apply in addition to standard precautions and are categorized as **Airborne Precautions**, **Droplet Precautions**, and **Contact Precautions**.

5.2.1 Airborne Precautions:

5.2.1.1 Purpose: Airborne precautions prevent the transmission of pathogens that remain suspended in the air and can be inhaled over a long distance, such as tuberculosis, measles, and varicella.

5.2.1.2 Patient Placement:

- Place patients in a **negative pressure airborne infection isolation room (AIIR)**, ensuring a minimum of 6-12 air exchanges per hour.
- If an AIIR is unavailable, transfer the patient to a facility with an AIIR as soon as possible.
- Ensure the room door remains closed, and visitors are restricted.

5.2.1.3 Personal Protective Equipment (PPE):

- **N95 Respirator or Equivalent:**

All HCWs must wear a fit-tested N95 respirator before entering the room. Respirators must be removed after leaving the room and hand hygiene performed immediately after removal.

- **Powered Air-Purifying Respirator (PAPR):**

Use PAPRs when recommended or available, especially during high-risk procedures such as bronchoscopy or intubation.

5.2.1.4 Patient Transport:

- Limit patient transport to essential purposes only.
- During transport, the patient must wear a surgical mask to prevent the spread of infectious droplets.

5.2.1.5 Environmental Controls:

- Ensure proper functioning of negative pressure systems.
- Maintain a log of air exchange rates for each AIIR and report any failures immediately to facility engineering.

5.2.1.6 Cleaning and Disinfection:

- ☒ Use EPA-approved disinfectants with activity against airborne pathogens.
- ☒ After patient discharge, allow enough time for the air to clear based on the number of air exchanges before cleaning staff enter.
- ☒ Perform a terminal cleaning and disinfection of the AIIR.

5.2.2 Droplet Precautions:

5.2.2.1 Purpose:

Prevent the spread of pathogens transmitted by large respiratory droplets, such as influenza, pertussis, and SARS-CoV-2.

5.2.2.2 Patient Placement:

- ☒ Place patients in a single room or cohort patients with the same infection.
- ☒ Maintain at least 3 feet of separation between the patient and others.

5.2.2.3 PPE:

- ☒ Wear a surgical or procedural mask upon entering the room.
- ☒ Use gloves, gowns, and eye protection when performing procedures that may generate droplets.

5.2.2.4 Patient Transport:

- ☒ Limit movement outside the room.
- ☒ Provide the patient with a surgical mask for any necessary transport.

5.2.3 Contact Precautions:

5.2.3.1 Purpose:

Prevent the spread of pathogens transmitted by direct or indirect contact with patients or contaminated surfaces (e.g., MRSA, VRE).

5.2.3.2 Patient Placement:

- Place patients in a single room or cohort patients with the same pathogen.

5.2.3.3 PPE:

- ☒ Wear gloves and gowns upon entering the room.

- Remove PPE before leaving the room and perform hand hygiene immediately.

5.2.3.4 Environmental Cleaning:

- Frequently clean high-touch surfaces such as bed rails, doorknobs, and patient care equipment.

6. Education and Training:

- Provide initial and annual refresher training for HCWs on standard and transmission-based precautions.
- Ensure HCWs undergo N95 respirator fit testing at least annually or as required.
- Train staff on the proper donning and doffing of PPE, hand hygiene, and cough etiquette.

7. Compliance Monitoring and Auditing:

- Conduct regular audits of hand hygiene, PPE use, and adherence to airborne isolation protocols.
- Provide immediate feedback and remedial training as needed.
- Document audit results and report non-compliance to facility leadership.

8. Record Keeping:

- Maintain a log of patients placed under transmission-based precautions, including the type of precaution, duration, and compliance reports.
- Keep records of training sessions and compliance audits.

9. Incident Reporting:

- Report any breaches in airborne precaution measures immediately to the Infection Control Team.
- Investigate exposure incidents and document findings, including corrective actions taken.

10. Review and Updates:

- This SOP will be reviewed and updated every 2 years or whenever new guidelines are issued by public health authorities.