

IC6: Airborne Precautions

1.0 STANDARD

All residents known or suspected of being infected with a communicable disease transmissible by the airborne route will be cared for using Airborne Precautions. Organisms spread by the airborne route can travel long distances and so transmission can occur readily. Therefore, the differential diagnosis is essential for early identification of suspect cases. Implementation of appropriate isolation measures is essential for reducing and preventing airborne transmission of health care-associated infections. Additionally, aerosol generating procedures (AGP), such as nebulized therapies, and others, may fragment large droplets into tiny particles that can act similarly to airborne pathogens. To reduce the risk of aerosolization, AGP should be performed on residents suspected or confirmed to have a RI only if medically necessary. Isolation requirements for maintaining residents on airborne precautions in a negative pressure room are not available in Long-term care communities (LTC); therefore, residents should be moved to a facility equipped with the airborne isolation rooms during their period of infectivity

Examples of communicable diseases requiring Airborne Precautions include:

- Mycobacterium tuberculosis (pulmonary and laryngeal TB)
- Chicken Pox (Varicella)
- Measles (Rubeola or Red Measles)
- Herpes Zoster (disseminated)

2.0 DEFINITION

Airborne transmission occurs when small particles with viable microorganisms (i.e., aerosols containing droplet nuclei) are generated, propelled over short or long distances, and inhaled. Aerosols containing viable microorganisms can be generated naturally from an infected source during coughing, sneezing and talking, or artificially through AGP

Aerosol Generating Procedures: AGP are processes that involves manipulation of a resident's airway in a manner that may stimulate coughing and/or promote the generation of aerosols. Nebulized therapies, sputum induction, open airway suction, non-invasive positive pressure ventilation (CPAP, BIPAP) are examples of AGP.

Negative Pressure room: direction of air flows from the hallway into the room then is exhausted directly outdoors or filtered before recirculation.

Personal Protective Equipment: A barrier between an infectious source and clothing, skin, mucous membranes and airways to prevent exposure to microorganisms. PPE may include gowns, gloves, eye protection, medical masks and N95 respirators

N95 Respirator: A high filtration mask used to prevent inhalation of small particles that may contain infectious microorganisms transmitted via the airborne route (e.g. TB).

Point-of-Care Risk Assessment (POCRA) is an evaluation of the risk factors related to the resident, task and resident’s environment. PoCRA is used to assess the risk of an HCP being exposed to an infectious agent(s) and must be performed before each interaction with the resident or their environment to determine which interventions are required to prevent transmission of microorganisms. A PoCRA is based on the HCP’s judgement of the clinical situation (including the resident’s clinical condition, physical, emotional and mental state) and the environment (including clutter or contamination from blood and body fluids). Control measures that include additional precautions and a choice of personal protective equipment (PPE) are based on the risk factors identified.

3.0 PROCEDURE

<p>Room</p>	<p>Negative Pressure Room is required. As there are no negative pressure rooms available in LTC, place the resident in a single room with the door closed until arrangements are made to transfer the resident to a facility with a negative pressure room</p> <p>Contact IPC Practitioner for further guidance</p>
<p>Door</p>	<p>The door must remain closed except to enter and exit the room. The door should remain closed for at least 1 hour after the discharge of a resident requiring airborne precautions (depending on number of air exchanges the room has per hour)</p>

Signage	Airborne Precaution signage at the entrance to the room and at the bed space in a multi-bedroom.
Required Personal Protective Equipment (PPE)-Respirator	<p>Respirator protection is required for all who enter the room</p> <p>Donning Respirator:</p> <ol style="list-style-type: none"> 1. Perform hand hygiene 2. Don appropriate fit-tested N95 respirator before entering the room 3. Conduct a user seal check every time an N95 respirator is applied to face <p>Doffing Respirator:</p> <ol style="list-style-type: none"> 1. Remove N95 respirator after leaving room (if anteroom, doff in anteroom) 2. Perform hand hygiene
Gloves	Follow POCRA
Long sleeved Gowns	Follow POCRA
Eye Protection	Follow POCRA
Hand Hygiene	<p>Follow the four moments of hand hygiene</p> <ul style="list-style-type: none"> • Use alcohol-based hand rub or soap and water • Use plain soap and water when hands are visibly soiled or when caring for residents
Resident Equipment	<ul style="list-style-type: none"> • Dedicate to the resident, or clean and disinfect after use • Dedicate laundry hamper to the room • Maintain minimal supplies in the resident environment

<p>Resident Mobility and Transfers</p>	<p>Clinical staff:</p> <ul style="list-style-type: none"> • Must notify receiving area of airborne precautions before the resident leaves the unit • Before resident leaves the room educate and assist them to: <ul style="list-style-type: none"> ○ Perform hand hygiene ○ Don procedure mask before exiting room ○ Wear clean clothing or hospital gown/housecoat ○ Cover open wounds-if applicable ○ Change and secure incontinence products-if applicable <p>Transport staff:</p> <ul style="list-style-type: none"> • Don required PPE if assisting resident to wheelchair or stretcher • Doff PPE and clean hands once patient is settled in wheelchair or stretcher • Disinfect handles of wheelchair or stretcher with hospital grade disinfectant before beginning transport of patient to destination • Must wear fit-checked N95 respirator during transport of resident <p>Resident must wear procedure mask during transport. If resident non-compliant to wearing the procedure mask the transporting staff to wear an N 95 respirator or a PAPR. Notify receiving health care facility and ambulance service</p>
<p>Resident Hand Hygiene</p>	<p>Resident should perform hand hygiene and be assisted as necessary before leaving their rooms after toileting and before meals</p>
<p>Meal Trays</p>	<p>Any staff member delivering or collecting meal tray to resident environment must wear appropriate PPE. Dishes and Cutlery- follow routine practices</p>

Housekeeping	<p>Environmental Services staff:</p> <ul style="list-style-type: none"> • Clean room following routine schedule • Perform isolation discharge clean when patient is discharged • Must wear an N95 Respirator to clean the room and up to one hour post discharge when in room Keep door closed during this time
Waste Management	<ul style="list-style-type: none"> • Routine waste management
Visitors	<ul style="list-style-type: none"> • Report to nursing station before entering resident room • Perform hand hygiene and don PPE as indicated on the Airborne Precautions sign on entry to the room • Unit staff to assist visitor with the selection and application of the mask/respirator • Doff PPE and perform hand hygiene upon exiting resident room

Equipment

Whenever possible, equipment shall be dedicated to the resident's exclusive use such as

- BP cuff
- Stethoscope
- Thermometer
- Wheelchair
- Sling for the lifting device (preferably the whole device)
- Transfer belt

Non-dedicated Equipment

Equipment which cannot be dedicated for individual use must be appropriately cleaned and disinfected before being removed from the room and used by another resident.

Supplies

- Avoid overstocking items in resident rooms
- At entrance to the room have the following supplies:
 - Hospital-grade disinfectant wipes (store away from access by the resident)
- Personal Protective Equipment such as disposable gloves and long-sleeved gowns. The following items should be supplied in the resident's room:
 - Dedicated personal care supplies such as periwash, periwipes, mouth wash, shampoo, creams lotions etc.
 - Garbage bin with plastic liners
 - Laundry hamper, double bagging is not required
 - Alcohol based hand rub (ABHR) at point of care
 - Liquid hand soap and paper towels at the hand washing sink

5.0 Initiating Airborne Precautions

- Airborne precautions can be initiated by unit staff based on PoCRA; a physician order is not required
- Choose additional precautions based on clinical presentation or suspected organism confirmed (see IPC Resource Manual A-Z Table) or Appendix 1

6.0 Discontinuation of Airborne Precautions

- Consultation with IPC is mandatory prior to discontinuing airborne and droplet precautions. Immunocompromised residents require isolation until all symptoms have resolved.
- Once a resident is eligible for discontinuation of airborne and droplet precautions, HCP must contact Environmental Services to request an isolation discharge clean of the room or bed space including bathroom prior to discontinuation of precautions ensuring that respiratory protection is used if the required time air exchanges has not been met

7.0 REFERENCES

Public Health Agency of Canada (PHAC). Routine practices and additional precautions for preventing the transmission of infection in health care settings. 2012

Provincial Infectious Diseases Advisory Committee (PIDAC). Routine practices and additional precautions in all health care settings, 3rd edition. 2012

British Columbia Center for Disease Control (October 2023).
[Tuberculosis Manual](#)

Canadian Tuberculosis Standards 7th Edition, 2013.
<http://www.respiratoryguidelines.ca/tb-standards-2013>