

Recommendations for Isolation Precautions in Hospitals

The Hospital Infection Control Practices Advisory Committee (**HICPAC**) and the National Center of Infectious Diseases (**CDC**) in the U.S. proposed the **HICPAC isolation system** in the Federal Register (**1994**) and published it in the Journal of Infection Control in 1996. The system described below is based on the HICPAC isolation system for acute care, although some principles apply elsewhere. Certain features of Long Term Care facilities (e.g., shared rooms and toilets, common dining rooms, wandering or confused patients, high resident to staff ratios) are impediments to the application of the HICPAC guidelines. Infections in the Home Care setting are related to procedures and invasive devices (e.g., urinary catheter use) and risks of transmission can be minimized by using aseptic practices, cleaning and disinfection of equipment and supplies used between clients, and by environmental cleanliness. No single isolation system can address all the needs of all health care facilities; potential users are advised to modify the isolation system according to what is possible, practical, and applicable to their facility considering available resources, e.g. type of facility, costs of prevention (gloves, gowns, masks, dedicated equipment). Infection Control Guidelines, “**Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care,**” Health Canada, 1999, similar in many respects to the HICPAC isolation precautions, provides suggestion throughout the continuum of care (e.g. acute care, chronic care, ambulatory care.). “Routine Practices ”used in the acute care facility does not differ in principle from the “ Standard Precautions” published by the CDC.

There are **two tiers** in the **HICPAC isolation precautions**

1. Standard Precautions combines the major features of **Universal (Blood and Body Fluid) Precautions** (designed to reduce the risk of transmission of blood borne pathogens), and **Body Substance Isolation** (designed to reduce the risk of transmission of pathogens from moist body substances) and applies them consistently to **all** clients regardless of their diagnosis or presumed infectious status.

Use **Standard Precautions** when performing procedures that may require contact with: blood, all body fluids, secretions, and excretions *except sweat*, regardless of whether or not they contain visible blood, non-intact skin and mucous membranes.

To protect you and others follow these guidelines:

1.1 Hand washing

- Wash hands after touching any of the substances to which Standard Precautions apply
- Use an antimicrobial soap or a waterless hand wash antiseptic agent (if a sink is not readily available) for specific circumstances (i.e. control of outbreaks). Plain soap is acceptable otherwise.

1.2 Gloves

- Wear gloves when touching any of the substances to which Standard Precautions apply.
- Change gloves between procedures on the same patient, between patients, and after contact with material that may contain a high concentration of microorganisms (e.g. fecal material).
- Remove gloves promptly after use, and before touching non-contaminated items /surfaces
- Wash hands promptly after glove removal

1.3 Protective eyewear, face shields , mask

Wear these items to protect mucous membranes of the eyes, nose and mouth during procedures that are likely to produce splashes of blood, body fluids, secretions and excretions.

1.4 Gown

- Wear a gown to protect skin and prevent soiling of clothing during procedures /patient-care activities that are likely to generate splashes of any of the substances above .Remove a soiled gown as quickly as possible and wash hands

1.5 Patient-care equipment

- Handle items contaminated with any of the above substances with care to avoid skin and mucous membrane exposure, contamination of clothing, other clients and /or the environment.

1.6 Environmental control

- Ensure that there is adequate routine cleaning and disinfection of environmental surfaces (i.e., bedrails, beds, commodes, sinks, toilets)
- Place a client who may contaminate the environment in a private room (i.e., has diarrhea, poor hygiene, or is uncooperative, etc.).

1.7 Handling Sharps

- Use a needle removing device-don't remove used needles from a syringe by hand
- Avoid recapping needles; if unavoidable only use the one hand "scoop" method (or a recapping device)
- Place all used sharps in an approved sharps container

1.8 To clean Blood/Body Fluids spills

- Wear gloves and other personal protective equipment as needed (dependent on size of spill)
- Use paper towels to blot the excess, then wipe surface with an approved hospital disinfectant- cleaner
- Flood area with appropriate disinfectant (e.g. undiluted Hydrox, dilute bleach) for 10 minutes
- Wipe surfaces with paper towel (discard paper towel, contaminated gloves, etc. in the designated medical waste container with a biohazard sign)
- Wash hands after removing gloves.

2. Transmission-based Precautions (used along with Standard Precautions) are for patients known or suspected to be infected by pathogens spread by any of the following routes: Transmission-based Precautions signs are placed on a client's door to alert individuals entering the room regarding the appropriate precautions. **Some infections** fall into two categories because microorganisms are transmitted in more than one way (e.g. chicken pox, by the airborne and contact routes; adenovirus in children, by the droplet and contact routes.) Both types of precautions are checked on the Transmission-based Precautions sheet.

2.1 Airborne Precautions

- 2.1.1 Use these guidelines when caring for clients who have infections (e.g. **tuberculosis, chickenpox, measles**) that spread through the air as small airborne droplets or dust particles containing the pathogen (5 microns or smaller).
- 2.1.2 Place any infected client in a negative-pressure isolation room with the door closed.
- 2.1.3 Wear an high efficiency respiratory mask (the mask, which filters inspired air, should filter particles one micron in size, have a 95% filter, and provide a tight facial seal (less than 10% facial seal leak), when entering the room.
- 2.1.4 A client on Airborne Precautions must wear a surgical mask (filters expired air) when leaving the room

2.2 Droplet Precautions

- 2.2.1 Use these precautions when caring for clients who have infections (e.g. **mumps, pertussis, meningitis, Influenza, adenovirus in children**) that spread by large particle droplets containing microorganisms (larger than 5 microns in size that are spread by coughing, sneezing, or talking).
- 2.2.2 Wear a high filtration mask when working within 3 feet of clients with there infections
- 2.2.3 Place client in a private room or with another client with the same infection.
- 2.2.4 Special ventilation is not required and the door may remain open
- 2.2.5 Client is to wear a surgical mask when leaving the room

2.3 Contact Precautions

- 2.3.1 Use these precautions for clients who are infected or colonized by a microorganism that spreads by **direct contact** (skin to skin) with the client or by **indirect contact** with a contaminated object (e.g., **antimicrobial resistant microorganism (ARO)** (e.g. **MRSA**), **C. difficile**, **Respiratory syncytial virus** (children and immunosuppressed adults), **enteric pathogens** (diapered or incontinent) (e.g. **Shigella**, **E.coli 0157.H7**, **Rotavirus**, **Hepatitis A**), major wounds, abscesses, or cellulitis (no dressing or dressing doesn't adequately contain drainage), disseminated mucocutaneous/neonatal **Herpes simplex** or localized immunocompromised/disseminated **Zoster** infections.
- 2.3.2 Place a client with any of these infections in a private room
- 2.3.3 Masks are to be worn with respiratory infections with AROs
- 2.3.4 Wear gloves when entering the client's room and change gloves as needed
- 2.3.5 Wear a gown if you anticipate that your clothing may come in contact with the client, or environmental surfaces in the client's room.; remove the gown before leaving the client's room
- 2.3.6 Use dedicated equipment when treating a client with antimicrobial resistant microorganisms
- 2.3.7 During transfer of a client requiring "Contact" precautions make certain staff in the receiving area have been notified and understand the precautions to take.

References:

1. Infection Control and Applied Epidemiology, Principles and Practice, Association for Professionals in Infection Control and Epidemiology, Inc., Mosby, 1996.
2. Infection Control Guidelines, Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care, Canada Communicable Disease Report Supplement, Volume 25S4, Health Canada, July 1999.
3. Saskatchewan Biomedical Waste Management Guidelines, Saskatchewan Health, Saskatchewan Environment and Resource Management, and Saskatchewan Labour, March, 1998.

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