IMMUNOCOMPROMISED CONDITION

1. Clinical Presentation
Patients with congenital or acquired immunodeficiency or immunodeficiency due to chemotherapeutic agents or hematologic malignancies e.g., solid organ transplant patients or neutropenic patients are at increased risk for numerous types of opportunistic infections while receiving healthcare. The specific defects of the immune system determine the types of infections that are most likely to be acquired.

2. Transmission
Immunocompromised patients vary in their susceptibility to healthcare-associated infections, depending on the severity and duration of their immune compromised state. These patients are generally at increased risk for bacterial, fungal, parasitic, and viral infections from their own (endogenous) and exogenous sources.

Generally, immunocompromised patients can be cared for in the same environment as other patients. However, it is always advisable to minimize exposure to other patients with highly transmissible infections such as respiratory and gastrointestinal infections.

A Protective Environment is designed to minimize fungal spore counts in the air and reduce the risk of invasive environmental fungal infections. A protective environment includes a high efficiency particulate air (HEPA) filtered positive pressure environment.

3. Infection Prevention and Control Precautions
3.1. Protective Precautions
3.1.1. Implement Protective Precautions for allogeneic hematopoietic stem cell transplant patients, as well as those patients with significantly compromised immune functions, specifically those patients whose Absolute Neutrophil Count (ANC) is expected to fall or is less than 0.5 x 10^9/L (500 cells/µl) for greater than 7 to 10 days. Protective Precautions are required until the ANC has recovered to greater than, or equal to 0.5 x 10^9/L (500 cells/µl).

Note: ANC is found in the CBC report under differential count in the # absolute section. The ANC is calculated automatically; the #neutrophils is expressed as X10^9/L (units are indicated after the reference range).

- Place the Protective Precautions sign in a visible location
- Single room with a high efficiency particulate air (HEPA) filtered positive pressure environment
- If a positive pressure environment is not available, patient may be placed in a single room with the door closed
- Follow Routine Practices, with meticulous attention to hand hygiene
- HCWs and visitors do NOT routinely require gown, gloves, eye protection or mask for entry into the room. HCWs and visitors use
gown, gloves, eye protection and mask according to Routine Practices and as indicated for suspected or known infections or procedures for which Additional Precautions are recommended

- Apply an N95 respirator to patient prior to transport if deemed necessary by the patient’s attending physician. Consult the patient’s attending physician if the patient cannot wear a respirator (or procedure or surgical mask for pediatric patients)
- Consider increased patient hygiene

3.1.2. Equipment

- Dedicate equipment to the patient, and use disposable patient care supplies when possible
- Clean and disinfect equipment with facility-approved disinfectant prior to dedicating to the patient on Protective Precautions

3.1.3. Staff and Visitors

- Individuals with signs or symptoms of infectious diseases (e.g., gastrointestinal, respiratory infections, herpes zoster/shingles or other infectious rashes, whether covered or not, open herpes simplex virus lesions of lips or fingers [i.e., not dry and crusted over],) or recent known exposure to infectious diseases, e.g., pertussis, measles/rubeola, mumps/rubella, varicella/chickenpox or varicella vaccinees with a rash or live oral polio vaccination (only available outside of Canada & the US) within past 6 weeks should NOT enter the room.
  - Contact Occupational and Environmental Safety and Health (OESH) for staff assessment and / or concerns
- Screen visitors of all ages for:
  - signs and symptoms of infectious diseases
  - infectious disease exposure history
  - Visitors with open facial lesions may visit immunosuppressed patients only after assessment on a case-by-case basis by the Manager of Patient Care or designate. Open lesions must be covered completely by bandages and, if appropriate, an N95 respirator

3.2. Modified Protective Precautions

3.2.1. Implement Modified Protective Precautions for immunocompromised patients who DO NOT meet the criteria for Protective Precautions:
- Place the Modified Protective Precautions sign in a visible location
- Single room; door may remain open
- If a single room is not available, patient may be cohorted with a suitable roommate, provided measures are taken to minimize their exposure to patients with transmissible infections such as respiratory and gastrointestinal viruses
NOTE: A ‘suitable roommate’ is a patient who does not have an infection or is not at high risk for infection (i.e., roommate should not be a patient with wounds, diarrhea, and/or respiratory symptoms or recent known exposure to infectious diseases)
  - Maintain a separation of ideally 2 metres; minimally 1 metre between patients
  - Draw curtains
- Follow Routine Practices, with meticulous attention to hand hygiene
- HCWs and visitors do NOT routinely require gown, gloves, eye protection or mask for entry into the room. HCWs and visitors use gown, gloves, eye protection and mask according to Routine Practices and as indicated for suspected or known infections or procedures for which Additional Precautions are recommended
- Apply procedure or surgical mask if you have a respiratory infection and cannot avoid entering the room
- Apply an N95 respirator or procedure or surgical mask to patient for transport if deemed necessary by the patient’s attending physician

3.2.2. Equipment
- Dedicate equipment to the patient, and use disposable patient care supplies when possible
- If equipment cannot be dedicated to the patient, clean and disinfect it with facility-approved disinfectant prior to use with the patient on Modified Protective Precautions

3.2.3. Staff and Visitors
- Individuals with signs or symptoms of infectious diseases (e.g., gastrointestinal, respiratory infections, herpes zoster/shingles or other infectious rashes, whether covered or not, open herpes simplex virus lesions of lips or fingers [i.e., not dry and crusted over]) or recent known exposure to infectious diseases (e.g., pertussis, measles/rubeola, mumps/rubella, varicella/chickenpox or varicella vaccines with a rash or live oral polio vaccination (only available outside of Canada & the US) within past 6 weeks should not enter the room.
  - Contact Occupational and Environmental Safety and Health (OESH) for staff assessment/clarification if required
- Screen visitors of all ages for:
  - signs and or symptoms of infectious diseases
  - infectious disease exposure history
  - Visitors with open facial lesions may visit Immunosuppressed patients only after assessment on a case-by-case basis by the Manager of Patient Care or designate. Open lesions must be covered completely by bandages and, if appropriate, an N95 respirator

7.10.3
4. References


