

	<p>POLICIES &amp; PROCEDURES</p> <p>Number: <b>40-60</b></p> <p>Title: <b>Immune Compromised Clients - Protective Environment</b></p>
<p><b>Authorization:</b>  <input checked="" type="checkbox"/> SHR Infection Control Committee  <input type="checkbox"/> Facility Board of Directors</p>	<p>Source: <b>Infection Prevention &amp; Control</b>  Date Initiated: December, 2006  Date Reaffirmed: May, 2007  Date Revised: July, 2014  Scope: SHR Agencies &amp; Affiliates</p>

Any PRINTED version of this document is only accurate up to the date of printing. Saskatoon Health Region, (SHR) Infection Prevention & Control (IP&C) can not guarantee the currency or accuracy of any printed policy. Always refer to the IP&C internal website for the most current versions of documents in effect. SHR IP&C accepts no responsibility for use of this material by any person or organization not associated with SHR. No part of this document may be reproduced in any form for publication without permission of SHR IP&C.

### Introduction

Management of immune compromised clients can present complex issues for healthcare workers. This policy will help guide you in defining immune compromised, assessing client risk for communicable disease, determining client placement and what provision of the protective environment entails.

There is no evidence to support what has historically been termed as “Reverse Isolation”. Even in the case of hematopoietic stem cell transplant recipients, the Center for Disease Control does not recommend “reverse isolation”. In the majority of circumstances, Routine Practices are sufficient for protection of most immune compromised hosts, if they are followed strictly and accompanied by good hand hygiene.

### Definitions

Immune Compromised - Means that a client's immune system is defective, and the B and T cells are unable or only partially able to respond to foreign substances such as bacteria, viruses or fungi. Immune compromised can be congenital (i.e., hypogammaglobinemia, etc.) or acquired (i.e., HIV, renal failure, etc.). It can be temporary (i.e., chemotherapy for cancer, etc.) or lifelong (i.e., post organ transplant, etc.).

Protective Environment - Certain immune compromised clients have been shown to benefit from specific additional “interventions”. These interventions create a “Protective Environment”. Protective Environment **does not** mean “Reverse Isolation”. Reverse Isolation refers to the practice of healthcare workers and visitors wearing barriers (i.e., gown, gloves, mask, etc.) routinely upon entry to the client room, for the purpose of preventing client exposure to external microbes. Most studies have shown that this practice did not improve outcomes. This is because the majority of clinical infections in this client population arise from endogenous (client's own flora) source.

For the majority of immune compromised persons, the use of **Routine Practices** alone is effective for reducing the risk of microbial transmission.

**Routine Practices** include:

- Hand hygiene
- Appropriate use of PPE
- Restriction of ill visitors and health care workers
- Routine environmental cleaning

**Policy**

1. Routine Practices, are to be used for immune compromised clients.

All staff with ongoing or recent infections are restricted from providing care/services in this room.

**Purpose**

1. To protect the immune compromised client from acquiring an infection that could potentially become life threatening.

**Table 1**

Routine Practices	Protective Environment
<p>Concerns</p> <ul style="list-style-type: none"> <li>• Increased risk of prolonged shedding of infectious agents which therefore requires longer use of precautions (i.e., RSV, Influenza)</li> <li>• Increased risk of acquiring specific diseases based on the cause of the immune deficiency (i.e., HIV)</li> <li>• Increased risk of activating latent infection (i.e., shingles)</li> </ul> <p>Clients who do not require protective isolation include:</p> <ul style="list-style-type: none"> <li>• Neutropenia with absolute neutrophil count over <math>0.5 \times 10^9 /L</math></li> <li>• Oncology clients who are on cytotoxic chemotherapy, high dose/systemic corticosteroids (equivalent to prednisone <math>\geq 15</math> mg/day), or other immune suppressants daily for &gt;2 weeks.</li> </ul> <p>◇ Transplant recipients</p> <ul style="list-style-type: none"> <li>• clients who are in their transplant hospital stay</li> <li>• Blood and marrow recipients &lt;24 months post-transplant</li> <li>• Transplant recipients who require immunosuppressive therapy</li> <li>• Transplant recipients who have graft versus host disease</li> </ul> <p>◇ Congenital or acquired hypogammaglobinemia or agammaglobinemia, severe combined immunodeficiency.            ◇ Neonatal clients</p>	<p>Clients with increased risk of "normal flora" invading and becoming the cause of an infection. This may occur either from translocation across the gut wall or portals of entry created by breaks in the skin barrier, long duration IV access sites and catheters in any orifice.</p> <ul style="list-style-type: none"> <li>• Prevent potential mucosal injury by avoiding the use of enemas, suppositories and rectal swabs/exams.</li> <li>• Maintain skin integrity</li> </ul> <p>Clients who may require a protective environment include:</p> <ul style="list-style-type: none"> <li>• Neutropenia: Clients with a neutrophil count of <b>less than</b> <math>0.5 \times 10^9 /L</math></li> </ul> <p><b>Procedure:</b></p> <ul style="list-style-type: none"> <li>• Visitors should check with the nurse before entering</li> <li>• Strict adherence to hand hygiene protocol</li> <li>• No visitors or staff members who display cold/flu symptoms can enter the client room</li> <li>• A mask is necessary for the client when leaving the room for tests/procedures</li> <li>• No fresh or dried flowers allowed</li> <li>• wash all fresh fruits/vegetables</li> <li>• visitors may be limited related to client needs</li> </ul>

References:

1. Center for Disease Control and Prevention (CDC). *Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings* Hospital Infection Control Practices Advisory Committee (HICPAC), 2007.
2. Association for Professionals in Infection Control and Epidemiology (APIC), *The Immunocompromised Host, Chapter 15*, 2005.
3. Alberta Health Services. Infection Prevention and Control Manual (March 2009); Section 10; page 102-104.