Introduction

Infection due to the varicella zoster virus (VZV) causes both varicella (chickenpox) and herpes zoster (shingles). Herpes zoster is caused by a reactivation of the virus in the sensory ganglia and leads to neuropathic pain and a dermatomal rash, typically in adulthood (see Appendix B for dermatomes).

The first sign of shingles is typically pain in the area of the affected nerve. A rash of fluid filled blisters appears in the affected area. This rash is usually persistent for about 7 days but the pain may continue for longer.

All staff caring for a client with suspected VZV (chickenpox/shingles) should have a previous history of chickenpox or be known to be immune. Contact Occupational Health & Safety or designate if you are unsure of your immune status or if you are immune compromised.

Definitions

Localized herpes zoster (Shingles) Lesions that are localized to one or two dermatomes and can overlap adjacent dermatomes but do not cross the body’s midline (Appendix B)

Disseminated herpes zoster (shingles) Appearance of lesions outside the primary or adjacent dermatomes or lesions involve more than one body system (i.e., skin and respiratory system); may be transmitted by the airborne route

Immune compromised Refer to Policy 40 – 60 Immune Compromised Clients – Precautions. In the 40-140 Shingles (Herpes Zoster) Policy the term refers to clients with congenital or acquired immunodeficiency or immunodeficiency due to chemotherapeutic agents or haematological malignancies.

Primary Constituting or belonging to the first stage in any process
Policy

1. All clients infected with herpes zoster (shingles) are to be evaluated for the need for additional precautions during the period of communicability as per Table 1 Herpes Zoster to protect non-immune health care workers (HCW)/clients/visitors and prevent the spread of the varicella zoster virus (VZV).

2. All health care workers (HCWs) caring for clients with confirmed or suspected herpes zoster should be immune to varicella. For those who are either not immune or where immune status is unknown appropriate Personal Protective Equipment (PPE) must be used.

Purpose and Scope

1. To outline the infection control principles for the management of a client infected with herpes zoster (shingles) and their contacts to prevent the spread of VZV disease within Saskatoon Health Region (SHR) care facilities and community-based services.

Procedure

Identification - As per Table 1 Herpes Zoster
The virus can be transmitted by direct and indirect contact with vesicular fluid. The incubation period is between 10 – 21 days; however this may extend to 28 days if varicella zoster immune globulin (VariZIG™) is given. The lesions are infectious until all lesions have crusted and dried.

Standard Precautions
Clients who are immune competent with localized covered lesions can be managed with Standard Precautions.

Contact Precautions
Clients with localized herpes zoster who have an area that cannot be covered shall be placed on Contact Precautions.

Airborne Precautions
Clients shall be placed on airborne precautions in addition to contact precautions if they:

- have disseminated herpes zoster or
- immune compromised until dissemination can be ruled out

If the client is immunocompetent with
- Localized herpes zoster, then routine practices should be followed and lesions should be completely covered.
- Disseminated (physician verified) herpes zoster (defined as appearance of lesions outside the primary or adjacent dermatomes), then routine practices plus airborne and contact precautions should be followed until lesions are dry and crusted.

If the client is immunocompromised with
- Localized herpes zoster, then routine practices plus airborne and contact precautions should be followed until disseminated infection is ruled out. Once dissemination is ruled out, routine practices should be followed and lesions should be completely covered.
- Disseminated (physician verified) herpes zoster, then routine practices plus airborne and contact precautions should be followed until lesions are dry and crusted.

1. Health Care Workers
- Must be aware of their immune status (OH&S Policy 5.1.2).
• Non-immune or immune suppressed HCWs are to seek further advice from OH&S.
• Non-immune pregnant HCWs who must enter the room should seek further advice from OH&S or designate (maternal infection during the first 20 weeks of pregnancy may result in transmission of VZV to the foetus and cause congenital varicella syndrome).

2. Perform a Point of Care Risk Assessment (See Appendix A)

3. Respirator (i.e., N95)
• If the healthcare worker/visitor is immune (i.e., previously had the disease) or has been vaccinated, no respirator is required.
• If the healthcare worker/visitor is non-immune, immune status is unknown or is immune compromised and must enter the room, s/he must wear a respirator (i.e., N95). Exception: A respirator is not indicated in the care of immune competent clients with covered localized lesions.

4. Client accommodation
• Assign room and post signage according to the precautions required. See Table 1 Herpes Zoster.
• If an airborne isolation (negative pressure) room is required but not available, place the client in a single room with the door closed.

5. Visitors
• Visitors are to consult with nursing staff before entering room.
• Visitors to be given clear instructions regarding necessary precautions to be followed, appropriate PPE, and fit checking of respirator (i.e., N95) if necessary. Airborne Precautions – Client, Family and Visitor Information

6. Meals (If Dietary staff member is NOT immune or if immune status unknown)
• Dietary staff to leave meal trays outside the client’s room and inform nursing staff.
• Nursing staff to deliver and remove meals from the client’s room.

7. Environmental Cleaning
• Daily cleaning of rooms is performed in the same manner as for all clients with appropriate PPE worn as per precaution signage and Table 1 Herpes Zoster. For cleaning at discharge, refer to Environmental Cleaning [WAGS].

8. Transport / transfer of client
• Receiving facilities/departments must be informed of required precautions.
• If client is on airborne precautions the client should be out of the room for essential tests only. The client should wear a procedure mask and have skin lesions covered when out of the room. See Airborne Precautions.

9. Client education
• All clients with varicella zoster are to be given a Herpes Zoster (Shingles) Fact Sheet.

10. Contacts
• Consult the Infection Control Practitioner (ICP) to determine exposure and need for contact tracing.

11. Post-exposure management
• Please call OH&S Incident Reporting Line.

12. Duration of precautions - Please refer to Table 1 Herpes Zoster
• Herpes zoster – until all lesions are dry and crusted.
• Exposed persons who are susceptible should be considered infectious 8 days from the first contact to 21 days following exposure (extended to 28 days if immunoglobulin [VariZIG™] is given).
• If Varicella (chicken pox) develops due to shingles exposure isolation is required until all the vesicles have crusted. This period may be prolonged if the client has altered immunity. See 40-20 Varicella Zoster (Chickenpox) Policy.
• For discontinuation of precautions consult Infection Prevention and Control.

References


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<th>Microorganism</th>
<th>Clinical Presentation/ Potential Pathogens</th>
<th>Precautions</th>
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<tr>
<td><strong>Localized:</strong> Immune competent host</td>
<td>Vesicular skin lesions localized to one or two dermatomes and do not cross body’s midline (may overlap adjacent dermatomes)</td>
<td><strong>Routine Practices</strong> if area can be covered</td>
<td>Private room preferred*</td>
<td>Direct and indirect contact with vesicular fluid</td>
<td>Until all lesions have crusted and dried.</td>
<td>Until all lesions have crusted and dried.</td>
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<tr>
<td><strong>Localized:</strong> Immune compromised host*</td>
<td>Vesicular skin lesions localized to one or two dermatomes and do not cross body’s midline (may overlap adjacent dermatomes)</td>
<td><strong>Airborne and Contact Precautions</strong> until dissemination is ruled out. <strong>Routine Practices</strong> if area can be covered</td>
<td>Negative pressure room if available Private room required (door closed)</td>
<td>Airborne, direct and indirect contact with vesicular fluid</td>
<td>Until all lesions have crusted and dried.</td>
<td>Until all lesions have crusted and dried.</td>
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<tr>
<td>Disseminated</td>
<td>Vesicular skin lesions outside the involved and adjacent dermatomes or crossing the body’s midline, OR lesions involving more than one body system</td>
<td><strong>Airborne</strong> (until lesions are dry &amp; crusted) and <strong>Contact Precautions</strong></td>
<td>Negative Pressure room if available Private room required (door closed)</td>
<td>Airborne, direct and indirect contact with vesicular fluid</td>
<td>Until all lesions have crusted and dried.</td>
<td>Until all lesions have crusted and dried.</td>
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*Non-immune patients should preferably not share rooms with patients with varicella or zoster. Add Contact Precautions for cases of localized zoster that cannot be covered.

*Localized zoster may disseminate in immune compromised host if not treated.

*Consult ICP to review duration of precautions if this type of patient is on antiviral therapy.
Appendix A

Point of Care Risk Assessment for HCW, Family and/or Visitors to direct the choice of appropriate Personal Protective Equipment

Ask yourself
Have you previously had varicella zoster virus (chicken pox)?
Have you been vaccinated against chicken pox or shingles?
Do you know your immune status against varicella zoster virus (chicken pox)?
Do you consider your immune status healthy or normal?

These questions apply whether you are pregnant or not.

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* N95