<table>
<thead>
<tr>
<th><strong>NAME OF DOCUMENT</strong></th>
<th>Chicken Pox and Shingles (Varicella Zoster) Herpes Zoster Policy</th>
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<tbody>
<tr>
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<td><strong>DOCUMENT NUMBER</strong></td>
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<td><strong>DATE OF PUBLICATION</strong></td>
<td>Published May 2003&lt;br&gt;Updated November 2004&lt;br&gt;Updated June 2006&lt;br&gt;Updated April 2011</td>
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<td>Medium</td>
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<td>NSW Health Policy Directive</td>
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<td>April 2014&lt;br&gt;Documents are to be reviewed a maximum of five years from date of issue</td>
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<tr>
<td><strong>FORMER REFERENCE(S)</strong></td>
<td>Replaces former IAHS Varicella – Zoster (Chicken Pox and Shingles) – Patient Management Section V: V6&lt;br&gt;Former SESIAHS V6</td>
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<tr>
<td><strong>EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR</strong></td>
<td>Director Clinical Governance</td>
</tr>
<tr>
<td><strong>AUTHOR</strong></td>
<td>Infection Control Manual Working Party</td>
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<tr>
<td><strong>KEY TERMS</strong></td>
<td>Chicken pox, Varicella, Varicella Zoster, Herpes Zoster, Herpes, disseminated zoster, contacts</td>
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<tr>
<td><strong>SUMMARY</strong></td>
<td>Preventing patients, staff and visitors from developing chicken pox and herpes in the healthcare environment. Managing patients with Chicken Pox and Shingles and management of the contacts.</td>
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**COMPLIANCE WITH THIS DOCUMENT IS MANDATORY**

Feedback about this document can be sent to areaexecutiveservices@sesiahs.health.nsw.gov.au
1. **POLICY STATEMENT**
   Patients with suspected or confirmed Varicella Zoster infection (Chicken Pox and Shingles) must be managed as outlined in this procedure.

2. **BACKGROUND**
   Chickenpox is an infectious disease caused by the Varicella-zoster virus. Transmission to susceptible persons is via the airborne route and direct contact with the vesicular fluid of skin lesions.

   The disease varies in severity, with adults usually having a more severe form of chickenpox than children. Immunocompromised patients who acquire chickenpox are at risk of severe infection and/or complications and which could be fatal if untreated. Fetal abnormalities may occur if infection occurs during pregnancy.

   Patients are infectious early in the illness (i.e. the prodromal illness) when the virus is abundant in the upper respiratory tract and mouth up to 2 days prior to the appearance of the rash and during the vesicular stage of the skin rash.

   Patients are non-infectious when all the skin lesions have formed dry scabs

**Definitions:**

- **Chickenpox (varicella):** is a highly contagious infection caused by the varicella-zoster virus. It is a generalised viral disease with sudden onset of fever and malaise followed by crops of pruritic vesicular eruptions on the skin

- **Transmitted by**
  - Direct contact with the infected person’s mucous membranes, vesicles or the vesicle fluid or articles soiled with these
  - Droplet spread from the respiratory tract of infected persons, usually in the prodromal period or the early stages of the rash

- **Period of communicability**
  - As long as 5, but usually 1 - 2 days before onset of rash
  - Continuing until lesions have crusted (usually about 5 days)
  - Contagiousness may be prolonged in patients with altered immunity

- **Incubation**
  - From 2 to 3 weeks from exposure, commonly 14 – 16 days. May be prolonged after administration of immunoglobulin and in the immunosuppressed
  - Susceptible individuals should be considered infectious 10 - 21 days following exposure (extended to 28 days if immunoglobulin is given)

- **Immunoglobulin:** human antibodies produced by the body in response to specific agents

- **Immunosuppressed:** an abnormal condition of the immune system characterised by markedly inhibited ability to respond to antigenic stimuli
Prodrome: period of non-specific generalised symptoms that occur prior to the development of specific localised features of an illness.

Shingles (herpes zoster): is caused by the reactivation of latent varicella-zoster virus in a period of waning immunity, usually several years after the initial infection. It is characterised by painful vesicular skin eruptions that follow the underlying route of cranial or spinal nerves inflamed by the virus. Small blisters occur in a localised group, commonly on one side of the trunk or face.

Transmitted by
- Direct contact with vesicles or the vesicle fluid or articles soiled with these.

Period of communicability
As long as 5, but usually 1 - 2 days before onset of rash. Up to a week after appearance of vesiculopustular lesions or until lesions have formed scabs and dried.

Incubation
Susceptible individuals should be considered infectious 10 - 21 days.

Significant contact" is defined as follows:
Primary Varicella (Chicken pox): contact with the index case from 1-2 days before the onset of the rash until all lesions have dried and crusted.
Herpes zoster: in general, direct contact with uncovered lesions in localised herpes zoster in immunocompetent persons and airborne contact 1 – 2 days before onset of rash in disseminated herpes zoster. If the significance of contact is in doubt, the situation should be discussed with the AO or CRMO.

Case - Chickenpox: An illness with a generalised vesicular rash generally occurring in “crops” and affecting mainly the trunk and head. A prodromal illness consisting of fever, headache, malaise and coryza-like symptoms usually precedes the rash.

Case - Herpes Zoster: Vesicular eruption along skin supplied by sensory nerves, prior to the lesions forming scabs.

Disseminated Herpes Zoster: Immunodeficient patients including those on immunosuppressive therapy may have an increased risk of severe localised or disseminated zoster. Immunosuppressed patients with herpes zoster, especially if extensive, may transmit the virus via the air-borne route.

Susceptible Contact: A person with no history of VZV infection or serological evidence of chickenpox who has had a significant exposure as defined in item 4.3.

Paediatric and Maternity Patients:
All patients shall have a history of chickenpox infection recorded in the nursing admission form upon admission. A varicella vaccination history should also be recorded at.
admission. Those who have been vaccinated ≥2 weeks ago at the time of contact shall be regarded as VZV immune.

A history of chickenpox exposure shall be elicited from all patients and recorded in the Recommendation For Admission (RFA), medical record and nursing admission on admission to the hospital inpatient or outpatient services. Family members should also be questioned about possible chickenpox exposure to establish potential infection risk.

Patients with chickenpox or disseminated herpes zoster shall be managed in a single room, preferably with negative pressure ventilation.

Patients identified as susceptible chickenpox contacts shall be managed in a single room with Airborne Precautions. Isolation commences on day 10 (from the first exposure) until the end of day 21 (from the last exposure) or, the end of day 28 if zoster immunoglobulin (ZIG) has been given. If chickenpox develops, the patient shall be transferred to a single room, preferably with negative pressure ventilation.

Patients identified as chickenpox contacts who are anticipated to remain in hospital for the duration of the incubation period shall have their VZV serology tested.

Family members and close friends of immunocompromised patients should be encouraged to have their Varicella VZV sero status established when patients are newly diagnosed. Varicella vaccination should be recommended to susceptible siblings and susceptible adult caregivers to minimise the risk of potential exposure to the immunocompromised patient at home, school and other immunocompromised patients in hospital.

Patients identified as chickenpox contacts shall have an Infection Alert entered into the electronic medical record that will remain active for the duration of the incubation period for VZV infection.

3. RESPONSIBILITIES

3.1 Employees (including students and volunteers) must:

- be aware of their immune status to chickenpox, established by
  - a personal memory of chicken pox
  - or herpes zoster
  - or appropriate vaccinations
  - or by serology.

Employees who are not immune MUST NOT care for patients with active chicken pox, herpes zoster or chicken pox contacts who are still within the incubation period. Staff unaware of their immune status must contact Staff Health for assessment Care for these patients as outlined in this document

Employees who develop chickenpox must inform the Department Manager as soon as the infection is suspected.
3.2 **Line Managers will:**
- Ensure staff are aware of their responsibilities
- Ensure staff have resources to care for these patients
- Inform IC of any patients admitted with suspected/confirmed chicken pox or disseminated shingles
- Commence a Varicella contact list (see Appendix 1) of exposed susceptible staff and patient when an exposure has occurred in a ward or department, in conjunction with Infection Prevention and Control Practitioner.
- Inform IC of any employees who report chicken pox or disseminated shingles infections

3.4 **Medical staff will:**
- Follow transmission based (isolation) precautions
- Ensure the appropriate diagnostic tests are performed

3.5 **Infection Control Coordinator**
- Resource person
- Assist with information info for patients and staff
- Assist with management of occupational exposure

3.6 **Network Managers/ Service Managers will:**
- Ensures resources for appropriate care of these patients

4. **PROCEDURE**

**Contact Precautions** are to be used in addition to Standard Precautions for the management of patients with shingles (localised)

**Airborne Precautions and Contact Precautions** are to be used in addition to Standard Precautions for the management of patients with chicken pox and shingles (disseminated)

**Precautions consist of:**

**Staff:**
- Only HCWs with immunity to enter the room
- Immunosuppressed HCWs are to seek further advice

**Patient Accommodation:**
- Single room accommodation with ensuite facilities or cohort with other varicella zoster patient in multi bedded room with ensuite facilities
- Preferably the room is to have an extraction system for removing air to the outside environment or air conditioning set on negative pressure
- Door is to be kept closed
- Transmission based precaution sign to be placed prominently at the entrance to the room
- Restrict the patient to the room and ward/unit
Hand Hygiene
- Perform hand hygiene between patient contact as per 5 Moments of hand hygiene
- Alcohol hand rub or plain liquid soap is sufficient

Personal Protective Equipment
- Must be worn as per Standard Precautions and Transmission based precautions
- Must be removed prior to exiting the room
- Airborne Precautions – masks must be removed outside of room and hand hygiene performed

Visitors
- Visitors to consult with senior nursing staff before entering room
- Visitors to be given clear instructions regarding necessary precautions to be followed
- Only visitors with immunity should enter the room

Patient Education
- All patients with varicella-zoster are to be given a Chickenpox/Shingles Patient Information Leaflet and provided with additional information as required.
- See Appendix – Patient Information Leaflets

Contacts
- Following significant exposure to varicella or zoster, Zoster Immunoglobulin (ZIG) should be given within 96 hours to:
  - patients suffering from disease associated with cellular immune deficiency eg. Hodgkin’s Disease
  - those receiving immunosuppressive therapy
  - pregnant women susceptible to varicella infection
  - neonates whose mothers are susceptible to varicella infection (i.e. who show no antibodies on testing)
  - premature infants born at less than 28 weeks gestation (or less than 1,000g) regardless of maternal history of varicella

Period of Isolation
- Chicken pox – until all of the vesicles have crusted (usually 5 days after appearance of the first crop of vesicles). This period may be prolonged if the patient has altered immunity
- Shingles – 7 days after the appearance of vesiculopustular lesions or until lesions are dried

Susceptible persons should be considered infectious 10 – 21 days following exposure (extended to 28 days if immunoglobulin is given)

6. DOCUMENTATION
   SCH Varicella and Herpes Zoster Flow Chart
7. **AUDIT**
   Not required

8. **REFERENCES**

8. **REVISION AND APPROVAL HISTORY**

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision No.</th>
<th>Author and Approval</th>
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<tr>
<td>May 03</td>
<td>0</td>
<td>Infection Control Co-ordinators and Area Infection Control Committee</td>
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<tr>
<td>November 2004</td>
<td>1</td>
<td>Infection Control Co-ordinators. Approved for release by the Area Policy and Procedure Committee 25 November 2004</td>
</tr>
<tr>
<td>April 2011</td>
<td>3</td>
<td>Updated to reflect change to Local Health Network</td>
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<tr>
<td>Nov 2011</td>
<td>4</td>
<td>Policy number corrected and correct logo placed on exposure record form</td>
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## Chicken Pox/Herpes Zoster Exposure Record

This sheet is to be completed by the Nurse Unit Manager or delegate. Please return to the Infection Prevention and Control Nurse when completed.

### Index Case (Name and MRN) Age and category

<table>
<thead>
<tr>
<th>Ward</th>
<th>Category = staff or patient or others family member, friend, school class</th>
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### Contacts Exposed From To

### EXPOSED SUSCEPTIBLE CONTACTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>Category*</th>
<th>Exposure time and details</th>
<th>Previous Chicken Pox Vaccine Dose 1/2</th>
<th>Serology</th>
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<th>If patient, please state MRN</th>
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<th>From</th>
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<th>Y/N</th>
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<th>To</th>
<th>Notes (e.g. pregnant, immunosuppressed vaccinated)</th>
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