SOP Objective

To ensure that patients with chickenpox (Varicella Zoster Virus) are cared for appropriately and actions are taken to minimise the risk of cross-infection.

This SOP applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts and volunteer staff.

KEY CHANGES FROM THE PREVIOUS VERSION OF THIS SOP

- Addition of section on Occupational Health Service (OHS) in section 1.
- Laundry has been renamed as Linen in Section 3
- Marking Notes has been removed from Section 3
- Audit has been removed
- Specimens marked ‘danger of infection’ Removed from Section 3

Document Control Summary

<table>
<thead>
<tr>
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<th>Board Infection Control Committee 27th July 2015</th>
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<tbody>
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<tr>
<td>Implications of Race Equality and other diversity duties for this document</td>
<td>This SOP must be implemented fairly and without prejudice whether on the grounds of race, gender, sexual orientation or religion.</td>
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<tr>
<td>Lead Manager</td>
<td>Board Infection Control Manager</td>
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<tr>
<td>Responsible Director</td>
<td>Board Medical Director</td>
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The most up-to-date version of this SOP can be viewed at the following website: www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/
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1. Responsibilities

Healthcare Workers (HCWs) must:
• Follow this SOP.
• Inform a member of the Infection Control Team (IPCT) if this SOP cannot be followed.

Managers must:
• Ensure that staff are aware of the contents of this SOP.
• Support HCWs and IPCTs in following this SOP.

IPCTs must:
• Keep this SOP up-to-date.
• Provide education opportunities on this SOP.

OHS must:
• Advise HCW regarding immune status and provision of Chickenpox vaccine
• Advise HCW regarding possible infection exposure and return to work issues as necessary
2. General Information on Chickenpox

<table>
<thead>
<tr>
<th>Communicable Disease / Alert Organism</th>
<th>Chickenpox - Varicella Zoster Virus (VZV).</th>
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<tbody>
<tr>
<td>Clinical Condition</td>
<td>A generalised viral disease with acute onset of slight fever, and an itchy rash. Blister-like lesions (vesicles) on the body, but more commonly concentrated on the face, scalp and trunk, form a granular scab 3-4 days after they appear. Non-immune adolescents and adults are most at risk from severe disease. Non-immune pregnant women with VZV may develop life-threatening pneumonitis. It is life-threatening in immunocompromised persons due to dissemination. Babies born to mothers with chickenpox within 4-7 days either side of birth are at enhanced risk of serious disease.</td>
</tr>
<tr>
<td>Mode of Spread</td>
<td>Direct contact, droplet or airborne.</td>
</tr>
<tr>
<td>Incubation period</td>
<td>14-21 days but this may be shortened in the immunocompromised. It may be prolonged up to 28 days in those on regular IVIG or given VZIG.</td>
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<tr>
<td>Notifiable disease</td>
<td>Notifiable by diagnostic laboratory.</td>
</tr>
<tr>
<td>Period of Communicability</td>
<td>The full infectivity range is 5 days before spots appear and until all lesions are dry and crusted. Most Infectious 1-2 days before spots/vesicles appear, to shortly after development.</td>
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<tr>
<td>Persons most at risk</td>
<td>This virus can cause serious disease in the foetus in the first 20 weeks of pregnancy. Neonates whose mothers are not immune to VZV or who develop varicella around the time of delivery, patients with leukaemia, cancer patients, transplant patients, immunosuppressed patients, patients on steroids and non-immune pregnant women may suffer severe, prolonged or fatal chickenpox.</td>
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<tr>
<td>Evidence of Immunity</td>
<td>A history of chickenpox is considered adequate evidence of immunity. Approximately 95% of adults are immune and infection usually results in life-long immunity.</td>
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<tr>
<td>High-Risk environment</td>
<td>Oncology/ Haematology, Transplant and Maternity Units.</td>
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*NB - A vaccine is now available for non-immune HCWs.

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3. Transmission Based Precautions for Patients with Chickenpox in High-Risk Areas

**Accommodation (Patient Placement)**

Patients who require admission should be admitted into a single side room with en suite and preferably with negative pressure. The door MUST remain closed. Immunocompromised patients should not be nursed in the same area. In low-risk areas, e.g. Mental Health Services (MHS), a risk assessment will be undertaken by the IPCT.

<table>
<thead>
<tr>
<th>Care Plan available</th>
<th>No.</th>
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**Clinical / Healthcare Waste**

Waste should be designated as clinical / healthcare waste and placed in an orange bag. Please refer to the NHSGCC Waste Management Policy.

**Contacts Patients/ Visitors**

**Action to be taken following exposure:**

Identify staff and patients who are deemed ‘significant exposure’. The following should be used as a guide to the type of exposure, other than maternal/ neonatal and continuous home contact. ‘Significant exposure’ is defined as ‘exposure to someone who has no history of varicella or serological evidence of immunity’.

- a) Contact in the same room (e.g. in a house, a classroom or a 2-4 bed hospital bay) for a significant period of time (15 minutes or more).
- b) Face-to-face contact, e.g. while having a conversation for more than 5 minutes.
- c) In the same 2-4 bed bay or adjacent beds in a large ward.
- d) Face-to-face indoor play.

Patients should be isolated in a single room within 10 days of first exposure or discharged home. Isolation should continue until day 21 after last exposure.

Consult an ID Physician, Virologist or Microbiologist for advice regarding the administration of varicella vaccine or VZIG. Please also refer to the Varicella Chapter in Immunisation Against Infectious Disease ‘Green Book’ and the Immunoglobulin Handbook.

**Crockery/ Cutlery**

No special requirements.
# Standard Operating Procedure (SOP)  
## Chickenpox  
### Varicella Zoster Virus (VZV) 
#### Transmission Based Precautions 

- **Domestic Advice:** Domestic staff must follow the NHSGGC SOP for **Twice Daily Clean of Isolation Rooms**. Cleans should be undertaken at least four hours apart.

- **Equipment:** Allocate individual equipment, e.g. own washbowl, commodes, moving slings or slip-sheets. Decontaminate equipment as per the NHSGGC Decontamination Policy.

- **Exposures:** Prevent infection by allowing only HCWs who are immune, to care for patients with chickenpox. Consider vaccination of all staff working in high-risk areas who have no immunity to varicella. Please see NHSGGC SOP for Occupational Related Illness.

- **Hand Hygiene:** Varicella can be transmitted via hands. Hands must be decontaminated with liquid soap and water or alcohol based hand rub before and after each direct patient contact, and after contact with the environment regardless of whether personal protective equipment (PPE) is worn. If hands are visibly contaminated they must be decontaminated with liquid soap and water.

  See NHSGGC [Hand Hygiene Policy](#).

- **Last Offices:** See NHSGGC SOP for [Last Offices](#).

- **Linen:** The risk from laundry is minimal however to prevent contamination of the environment and to comply with isolation procedures all laundry should be placed into a water soluble alginate bag then into a clear bag and then into a laundry bag. Bed linen and patient clothing should be changed daily.

- **Moving between wards, hospitals and departments (including theatres):** Movement should be restricted as far as possible. Seek advice of ICT if required. Receiving areas **MUST** be informed of the patient’s condition **before** the patient is transferred.

- **Notice for Door:** Yes.

- **Outbreak:** Possible.

- **Precautions required until:** There are no fresh crops and all lesions are dry and crusted.

- **Personal Protective:** Gloves and aprons should be used for all direct patient care and contact with patient’s immediate environment. (Contact in this...
### Equipment (PPE)

context would mean, direct contact with the patient, their equipment or the environment in which they are nursed).

### Staff

Pregnant staff, who have been exposed to Chickenpox should contact the OHS immediately who will refer the staff member to their maternity unit or named nurse to check their immune status. Refer to OHS if in a high-risk group. Refer to **Persons most at risk** section.

### Specimens Required

On advice of clinicians. Send swabs of lesions in viral transport medium – not charcoal. A blood sample is required when screening for immunity.

### Terminal Cleaning of Room

Follow NHSGGC SOP for [Terminal Clean of Isolation Rooms](#).

### Visitors

Close contacts of the patient who are not immune could potentially be incubating the infection and should be advised against visiting the patient. Non-immune pregnant women and children should not visit. Contact IPCT for advice.
4. Recommendation for Varicella Immunisation for HCWs

*Please refer to the Varicella Chapter in Immunisation Against Infectious Disease ‘green book’ the link below will direct you to this publication.*

*Extract from SEHD/CMO(2004)2 Varicella Immunisation for HCWs*

The recommendation covers non-immune HCWs who work in primary care and in hospitals who have direct patient contact. Those having direct patient contact include ambulance drivers, cleaners on wards, catering staff, receptionists as well as medical, nursing, dental and other professional staff, whether employed directly or through a sub-contract.

HCWs with a definite history of chickenpox or herpes zoster can be considered already immune. Those with a negative or uncertain history of chickenpox or herpes zoster should be serologically tested and vaccine offered only to those without varicella zoster antibody.

Non-immune HCWs should receive two doses of live attenuated varicella vaccine 4-8 weeks apart. Routine post-vaccination serological testing is not advised.

Varicella vaccine is contraindicated in pregnancy and pregnancy should be avoided for 3 months following vaccination.
5. Evidence Base


Immunisation against infectious disease ‘Green Book’ Department of Health.  

HPA Immunoglobulin Handbook, Chapter 7 Chickenpox, 2008  

Standard Infection Control Precautions (SICPs) (HPS National IPC Manual)