# Varicella Zoster Virus, Chickenpox & Shingles Guidance

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<th>Task / Information</th>
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<tbody>
<tr>
<td>Post holder responsible for Procedural Document</td>
<td>Judy Potter, Lead Nurse, Infection Prevention and Control</td>
</tr>
<tr>
<td>Author of Guideline</td>
<td>Catharine Pym, Infection Prevention and Control Nurse</td>
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<tr>
<td>Division/ Department responsible for Procedural Document</td>
<td>Specialist Services/ Infection Control</td>
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<td>Ratifying body and date ratified</td>
<td>Infection Control Operational Group: Date: 14&lt;sup&gt;th&lt;/sup&gt; November 2016</td>
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<tr>
<td>Review date (and frequency of further reviews)</td>
<td>August 2019 (3 years)</td>
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<td>Expiry date</td>
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<tr>
<td>Date document becomes live</td>
<td>30&lt;sup&gt;th&lt;/sup&gt; November 2016</td>
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Please specify standard/criterion numbers and tick ✓ other boxes as appropriate

## Monitoring Information

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<td>Monitor/Finance/Performance</td>
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| CQC Fundamental Standards - Regulation: 12 and 15                                  | Infection Control                                                       ✓

Other (please specify): |

**Note:** This document has been assessed for any equality, diversity or human rights implications

## Controlled document

This document has been created following the Royal Devon and Exeter NHS Foundation Trust Development, Ratification & Management of Procedural Documents Policy. It should not be altered in any way without the express permission of the author or their representative.
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**Associated Trust Policies/ Procedural documents:**
- Employee screening and immunisation policy
- Standard infection control procedures
- Torridge ward operational guidance
- Infection prevention and control policy

**Key Words**
- Chicken pox
- Varicella Zoster
- Shingles
- Herpes Zoster

**In consultation with and date:**
- Infection Prevention & Control Team:
- Consultant Microbiologists:
- Infection Control Operational Group: 14th November 2016

**Contact for Review:**
- Lead Nurse, Infection Prevention and control

**Executive Lead Signature:**
- (Applicable only to Trust Strategies & Policies)
- N/A
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1. INTRODUCTION

1.1 Chickenpox is an acute, highly infectious disease caused by the varicella zoster (VZ) virus. The incubation period is between 7-21 days. Chickenpox is infectious for 1-2 days before the rash appears until the vesicles are dry or have crusted over. Chickenpox usually confers lifelong immunity, although the virus persists in a latent form in the sensory nerve ganglia of the dorsal root. Reactivation of the latent VZ virus in later life results in Shingles (Herpes zoster). It is not known what causes the virus to reactivate and reactivation can be spontaneous or follow a period of physical illness or stress. It is possible to develop chickenpox from exposure to a person with shingles, but not possible to develop shingles from exposure to a person with chickenpox.

1.2 Immunisation against VZ virus is available. It is Trust policy to offer varicella vaccine to all non-immune employees working in clinical areas. Please refer to the employee screening and immunisation policy.

1.3 Chickenpox does not require PHE notification in England and Wales.

2. PURPOSE

2.1 The purpose of this document is to provide guidance for staff on how to manage patients with chickenpox and shingles.

3. DEFINITIONS

3.1 Incubation period – the time it takes for the symptoms to appear

3.2 Infectious period – the period during which an infected person can transmit a pathogen to a susceptible host

4. DUTIES AND RESPONSIBILITIES OF STAFF

4.1 The Chief Executive and Board of Directors are responsible for ensuring the provision of suitable and sufficient resources and facilities to enable effective management of a patient admitted with chickenpox or shingles.

4.2 The Directors of Infection Prevention and Control (DsIPC) are responsible for providing expert guidance and advice to the Infection Prevention and Control Team, clinical and managerial staff about measures needed to protect staff, patients and members of the public from infection.

4.3 The nursing staff in the clinical area/ward in which a patient who may have chickenpox or shingles is recognised, are responsible for ensuring that appropriate actions with regards to the implementation of source isolation and/or other infection control interventions are implemented.

4.4 The clinician is responsible for diagnosing and treating the patient with chickenpox or shingles, if required.

4.5 The Infection Prevention & Control Team are responsible for advising on infection control measures, relating to chickenpox or shingles.

4.6 The Infection Control Doctor and Consultant Microbiologists are responsible for providing advice on the diagnosis of chickenpox or shingles.
4.7  The **Occupational Health Physician** is responsible for ensuring that processes are in place to screen new employees who may be required to have contact with patients with chickenpox or shingles in accordance with the Immunisation and screening policy.

4.8  **Patient Flow Manager and Site Management Team** are responsible for organising patient movements to isolation rooms.

4.9  **Isolation Ward (Torridge Ward) staff** are responsible for ensuring that patients are managed in an appropriate isolation room.

4.10  **All staff** required to have contact with patients are responsible for ensuring that they are compliant with the Staff Screening and Immunisation policy.

5.  **CLINICAL FEATURES**

5.1  **Chickenpox**

5.1.1  Chickenpox is characterised by red, itchy spots that turn into fluid filled blisters. It usually appears initially on the face, ears, scalp and trunk, but can spread over the entire body. Other symptoms which may precede the rash by 48 hours include general malaise, fever and headache.

5.1.2  Complications include:
- Bacterial skin infection, most common in young children
- Lung involvement, more common in adults
- In pregnancy severe maternal chickenpox, intrauterine infection and foetal varicella syndrome. In later pregnancy, varicella can result in premature delivery or neonatal chickenpox

5.2  **Shingles**

5.2.1  Shingles is an infection of a sensory nerve and the skin around it.

5.2.2  The infection has three phases
- **Prodrome** (1-4 days before rash): burning, tingling, numbness or pruritus in affected skin
- **Acute** (painful rash, lasting 7–10 days): macules and papules developing into blister-like lesions, occurring at the site of the affected sensory nerve, typically causing a strip-like pattern on one side of the body.
- **Healing** (2–4 weeks): crusting of lesions

5.2.3  Complications include:
- Post–herpetic neuralgia (common in adults)
- Skin changes: secondary infection, scarring, changes in pigmentation
- Ocular complications
- Ramsay Hunt syndrome: lesions in ear, facial paralysis, associated hearing and vestibular symptoms
6. **TRANSMISSION**

6.1 **Chickenpox**

6.1.1 Chickenpox is transmitted by direct person to person contact, via airborne spread of respiratory droplet nuclei and vesicle fluid or through contact with infected items such as clothing and bedding.

6.2 **Shingles**

6.2.1 Shingles is much less infectious than chickenpox although spread may occur from patients who have extensive lesions and susceptible contacts can develop chickenpox. Transmission can occur through direct contact with exudate from wet lesions or airborne via vesicle fluid in disseminated shingles.

7. **INFECTIOUS PERIOD**

7.1 **Chickenpox**

7.1.1 The infectious period is from 48 hours before onset of the rash and continues until all lesions are dry and have crusted, usually 5-6 days after onset. Immunosuppressed patients may be infective for longer.

7.2 **Shingles**

7.2.1 A person with shingles is infectious until their lesions have dried (usually 5-7 days after onset). The blisters that form contain the live virus. If a person, who has never had chickenpox, makes direct contact with an open blister they can contract the virus and develop chickenpox. The period of infectivity may be slightly reduced by acyclovir.

8. **DIAGNOSIS**

8.1 Adults suspected of having chickenpox require a viral swab taken from a wet vesicle.

8.2 In children, any lesions that look secondarily infected should also be swabbed for MC&S and necrotising fasciitis considered. Discuss antibiotic treatment with a microbiologist.

8.3 Patients should be reviewed for any possible underlying immunosuppression risk factors.

9. **INFECTION CONTROL MEASURES**

9.1 Patients with chickenpox or shingles must only be cared for by staff known to be immune and not immunocompromised or pregnant (refer to [employee screening and immunisation policy](#)).

9.2 Standard infection control precautions must be used for all patients regardless of perceived or known infection risk factors (refer to [standard infection control procedures](#)).

9.3 In addition to standard infection control precautions the use of gloves and aprons are also required for direct patient contact and cleaning.
9.4 In addition to routine hand hygiene at the point of care, hands should be washed with soap and water after removing personal protective equipment prior to leaving the isolation room. Once outside the room clean hands with alcohol gel.

10. **ISOLATION**

10.1 **Chickenpox**

10.1.2 Admission of patients with chickenpox should be avoided where possible. In acute settings, patients with suspected or confirmed chickenpox must be isolated immediately in a single room. If symptoms develop during an inpatient stay, transfer to a single room should occur promptly. Isolation rooms require en-suite facilities, preferably negative pressure ventilation, and doors must be kept closed. If capacity permits, admission/transfer of adult patients to Torridge ward is preferable (refer to Torridge ward operational guidance).

10.2 **Shingles**

10.2.1 Patients with shingles must be cared for in a single room, during their infectious period. Negative pressure ventilation is not required.

10.2.2 If isolation is inappropriate for the patient please seek advice from the Infection Prevention and Control Team.

11. **RELATIVES/VISITORS**

11.1 Non immune visitors should be advised and excluded from visiting during the infective period.

12. **CONTACTS**

12.1 **Chickenpox ‘contact’** is defined as any patient who is non-immune to the VZ virus and who has had contact with a case of chickenpox at any time from 48 hours before the onset of the rash until all the lesions are crusted.

12.2 **Shingles ‘contact’** is defined as any patient who is non-immune to the VZ virus and who has had contact with a case of disseminated, exposed shingles from the day of the rash until crusting of the exposed rash.

12.3 Patients should be considered immune if there is a good history of chicken pox or episode of zoster in the past or antibody test confirms specific antibodies or varicella immunisation complete.

12.4 The likelihood of infection in the index case must be assessed by a doctor and infectious chickenpox or shingles must be the likely diagnosis.

12.5 Significant contact is defined as:

- Contact in the same room or within 10 metres on an open ward for 15 minutes or more
- Direct face to face contact for three minutes
- Contact with clothing and bedding soiled by discharge from the blisters
- Maternal – neonatal transmission
- Continuous household
12.6 Significant contacts that are believed to be non-immune are at risk of developing chicken pox and should be advised of this possibility.

13. STAFF CONTACTS

13.1 See definitions for chickenpox and shingles ‘contact’ in section 12

13.2 Contact Occupational Health if non-immune or unsure of immune status

13.3 Please refer to the Occupational Health Varicella Zoster Virus Policy (this is being updated by Occupational Health. Expired policy is available on IaN, but is not available currently on Hub). Remove this bracketed clause before putting on HUB

14. IMMUNOCOMPROMISED CONTACTS

14.1 Following known or possible exposure to chickenpox and shingles, immunocompromised patients with no known history of chickenpox should have their immune status checked by serology and a Microbiologist should be contacted. Varicella Zoster immunoglobulin (VZIG) should be given to susceptible contacts and is available from Microbiology.

14.2 Certain groups of patients, especially bone marrow transplant patients, may not be immune, even if they have had previous chickenpox or VZIG. For advice contact Microbiology.

15. PREGNANT CONTACTS

15.1 Following known or possible exposure to VZ virus, pregnant patients and staff should have their immune status checked. If susceptibility is confirmed by antibody testing the women should be offered VZIG within 10 days of contact. Due to the potential risks to the unborn child, pregnant staff should not care for infectious patients unless their immunity has been confirmed by antibody testing. If unsure, staff should check their immune status with Occupational Health.

16. MATERNITY UNIT/NEONATAL UNIT/ PAEDIATRIC UNIT

16.1 Maternity Unit

16.1.1 The immune status of mothers who have been exposed to a suspected or confirmed case of either chickenpox or shingles should be assessed prior to admission to the maternity unit. Pregnant contacts with a positive history of chickenpox do not require VZIG. Those with a negative history must be tested for VZ antibody before VZIG is given. The outcome in pregnant women is not adversely affected if administration is delayed up to 10 days after initial contact while a VZ antibody test is undertaken.

16.1.2 In addition to the infection control measures above, if a mother has or develops chickenpox whilst on the maternity unit the following measures are required:

- Isolate from other mothers, babies, neonates and those known to be susceptible
- If mother develops chickenpox less than 7 days before delivery or up to 7 days after, her baby must be given VZIG – Microbiology hold the stocks
- VZIG is also indicated for babies of exposed susceptible mothers
16.2 **Paediatrics and Neonatal Unit**

16.2.1 Paediatric patients with a history of significant contact (as defined in section 12) must be isolated in a single cubicle on Bramble.

16.2.2 Babies requiring neonatal unit care with a history of significant contact (as defined in section 12) must be isolated in a single room on the neonatal unit.

16.2.3 Babies who are exposed to chickenpox after discharge from the neonatal unit who require hospital admission must be admitted to Bramble Ward and NOT the NNU.

16.2.4 If Bramble Ward is unable to isolate the patient due to ward pressures a risk assessment of patient groups will determine whether non-immune asymptomatic contacts can be placed with other children in a bay.

16.2.5 The patients considered suitable to expose to a child who may be incubating chickenpox include:
- Those considered to be immune
- Those most likely to be discharged home within a short period

16.2.6 The patients who should not be exposed to a child who may be incubating chickenpox are:
- Those who are immunocompromised
- Those likely to remain in hospital during the full incubation period
- Those who attend regular day case and outpatient appointments

17. **NOTIFICATION**

17.1 Healthcare staff must report, at the earliest opportunity, patients suspected or infected with chickenpox or shingles to the Infection Control Team (refer to the [infection prevention and control policy](#)).

18. **ARCHIVING ARRANGEMENTS**

18.1 The original of this guideline, will remain with the Lead Nurse/ Director for Infection Prevention and Control. An electronic copy will be maintained on the Trust Intranet, P – Policies – V - Varicella Zoster Virus, Chickenpox & Shingles Guidance. Archived electronic copies will be stored on the Trust’s “archived policies” shared drive and will be held indefinitely. A paper copy (where one exists) will be retained for 10 years.

19. **PROCESS FOR MONITORING COMPLIANCE WITH AND EFFECTIVENESS OF THE POLICY/ STRATEGY**

19.1 To monitor compliance with this policy/ strategy, the auditable standards will be monitored as follows:

<table>
<thead>
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<th>No</th>
<th>Minimum Requirements</th>
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<tbody>
<tr>
<td>1.</td>
<td>Annual Audit</td>
<td>Appropriate isolation of patients during the annual patient placement audit</td>
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19.2 **Frequency**
19.2.1 On a case by case basis as part of a routine review of infectious patients. Any concerns will be discussed by the IPCT at routine meetings and if relevant reported to ICOG. Significant incidents will be included in the DIPC annual report.

19.3 Undertaken by

Infection Control Nurses

19.4 Dissemination of Results

At the Infection Control Operational Group which is held quarterly and at the Infection Control and Decontamination Assurance Group and the relevant Divisional Governance Groups if there is failure to comply with the guidance.

19.5 Recommendations/ Action Plans

Implementation of the recommendations and action plans will be monitored by the Infection Control and Decontamination Assurance Group, which meets quarterly. Any barriers to implementation will be risk-assessed and added to the risk register. Any changes in practice needed will be highlighted to Trust staff via the Governance Managers’ cascade system.

19.6 Any barriers to implementation will be risk-assessed and added to the risk register.

19.7 Any changes in practice needed will be highlighted to Trust staff via the Governance Managers’ cascade system.

20. REFERENCES


APPENDIX 1: COMMUNICATION PLAN

The following action plan will be enacted once the document has gone live.

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<td>The key objectives</td>
<td>The purpose of this document is to provide guidance for staff on how to manage patients with Chickenpox and Shingles</td>
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<tr>
<td>How new staff will be made aware of the policy and manager action</td>
<td>Induction process</td>
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Specific Issues to be raised with staff

Training available to staff

Any other requirements

Issues following Equality Impact Assessment (if any) | No negative impacts |

Location of hard / electronic copy of the document etc. | Trust intranet ‘Hub’ |
## APPENDIX 2: EQUALITY IMPACT ASSESSMENT TOOL

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<th>Varicella Zoster Virus, Chickenpox &amp; Shingles Guidance</th>
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<td>Division/Directorate and service area</td>
<td>Trust wide</td>
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<tr>
<td>Name, job title and contact details of person completing the assessment</td>
<td>Judy Potter, Lead Nurse/Director Infection Prevention and Control</td>
</tr>
<tr>
<td>Date completed:</td>
<td>23/08/16</td>
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### The purpose of this tool is to:
- identify the equality issues related to a policy, procedure or strategy
- summarise the work done during the development of the document to reduce negative impacts or to maximise benefit
- highlight unresolved issues with the policy/procedure/strategy which cannot be removed but which will be monitored, and set out how this will be done.

1. **What is the main purpose of this document?**
   To provide a framework for treatment and management of patients with chickenpox and shingles.

2. **Who does it mainly affect?** *(Please insert an “x” as appropriate:)*
   - Carers ☐
   - Staff ☒
   - Patients ☒
   - Other (please specify)

3. **Who might the policy have a ‘differential’ effect on, considering the “protected characteristics” below?**

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4. **Apart from those with protected characteristics, which other groups in society might this document be particularly relevant to?**
5. Do you think the document meets our human rights obligations? ☒

**A quick guide to human rights:**

- **Fairness** – how have you made sure it treat everyone justly?
- **Respect** – how have you made sure it respects everyone as a person?
- **Equality** – how does it give everyone an equal chance to get whatever it is offering?
- **Dignity** – have you made sure it treats everyone with dignity?
- **Autonomy** – Does it enable people to make decisions for themselves?

6. Looking back at questions 3, 4 and 5, can you summarise what has been done during the production of this document and your consultation process to support our equality / human rights / inclusion commitments?

There were no concerns that may be relevant to equality or human rights identified during the creation of this guideline.

The Infection Control Operational Group, Infection Control & Decontamination Assurance Group, Occupational Health and the Policy Expert Panel were involved in this review.

7. If you have noted any ‘missed opportunities’, or perhaps noted that there remains some concern about a potentially negative impact please note this below and how this will be monitored/addressed.

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