VARICELLA ZOSTER VIRUS (Chickenpox and Shingles) POLICY

POLICY

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	YES	**NO**	**N/A**
	X		
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Sponsor (Position)	Director of Infection Prevention and Control		
Author (Position & Name)	Nurse Consultant Infection Prevention and Control – Sally Palmer		
Lead Division/ Directorate	Diagnostics & Outpatients		
Lead Specialty/ Service/ Department	Infection Prevention and Control		
Position of Person able to provide Further Guidance/Information	Nurse Consultant Infection Prevention and Control Other staff in Infection Prevention and Control Team		

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Not applicable	Not applicable
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1.0 INTRODUCTION

Chickenpox (varicella) and shingles (zoster) are two distinct self-limiting clinical illnesses, both caused by the same virus, known as Varicella Zoster virus or VZV. The word varicella refers to chickenpox and derives from its close clinical resemblance with variola i.e. smallpox.

Upon infecting a susceptible individual, the virus causes an acute systemic illness characterised by:

- Fever
- Generalised vesicular rash
- Malaise, anorexia, listlessness

Skin lesions usually crust within a week but may take longer in patients with diminished immunity. After causing illness the virus does not go away completely but settles in the nervous tissues (ganglia) for the rest of the patient's life. The immune system ensures the virus is confined to this space but if immunity wanes, albeit temporarily, it can reappear locally on the skin through the nerves, causing what we call shingles; this is known as reactivation. Reactivation of the virus in shingles is usually a localised phenomenon restricted to one or two adjacent dermatomes (part of the central nervous system). It is therefore characterized by a unilateral vesicular eruption with a dermatomal distribution. Rarely, reactivation occurs throughout the body, when it is termed disseminated herpes zoster. From an infection control perspective, disseminated herpes zoster is dealt with as if it was chickenpox because of the risk of aerosol/airborne transmission.

Although chickenpox is self-limiting, certain patient populations are at increased risk of developing complications (and death). It is important to identify individuals at high risk of developing severe varicella so that post exposure prophylaxis with Varicella Zoster Immunoglobulin (VZIG) can be offered to those who are non-immune. This has to be done within a set time from first contact.

Transmission

Chickenpox

- Person to person through direct contact
- Droplet or airborne spread of secretions from the respiratory tract or of vesicle fluids
- Indirect spread through articles freshly soiled by discharges from vesicles and mucous membranes of infected people
- Incubation 14-21 days
- Infectious period 1-2 days prior to rash (in prodromal illness) and until vesicles all scabbed and dry.

Shingles

- Person to person through direct contact
- Indirect spread through articles freshly soiled by discharges from vesicles
- Droplet or airborne spread may occur if:
    - shingles is disseminated or
    - the person is immunocompromised
    - infectious until vesicles are dry.

This policy should be triggered as soon as a clinical diagnosis of chickenpox/shingles has been established. Management of VZV briefly includes:

a) Index - patient
    1. Reporting of clinical cases to the IPC Team
    2. Confirming the diagnosis including taking viral swab of vesicle
    3. Patient placed in isolation
    4. Personal Protective Equipment
    5. Hand Hygiene
    6. Discourage visitors

b) Index – Staff member
    1. Send member of staff home
    2. Report to Occupational Health
    3. Report to IPCT

c) Patient contacts
    1. Identifying patients exposed to VZV
    2. Identifying those at risk of severe VZV
    3. Among ‘at-risk’ contacts, identifying those susceptible & offering them Varicella Zoster Immunoglobulin (VZIG) if appropriate a discussion with the microbiologist is required to assist decision.

d) Staff contacts
    1. Identify all staff exposed to VZV and provide information to occupational health
    2. Identifying those susceptible, the pregnant or immunosuppressed and remove them from caring for source patient
    3. Identifying staff at risk of severe VZV and offering them Varicella Zoster Immunoglobulin (VZIG)on advice from Occupational Health

2.0 POLICY STATEMENT

The aim of this policy is to ensure patients with chickenpox and shingles are cared for appropriately and actions are taken to minimise the risk of cross- infection and severe infection.

This clinical document applies to:

Staff group(s)

- all clinical staff
- all non-clinical staff when they enter a clinical environment

Clinical area(s)

- all clinical environments

Patient group(s)

- all patient groups (adult, maternity, paediatric)

Exclusions

- none

3.0 DEFINITIONS/ ABBREVIATIONS

3.1 Definitions

Trust:	Sherwood Forest Hospitals NHS Foundation Trust
Staff:	All employers of the Trust including those managed by a third party on behalf of the Trust
Endemic:	Disease or condition regularly found among particular people or in a certain area
Vesicles:	Small fluid filled blisters
Chickenpox:	Is a highly infectious disease caused by the VZV that is transmitted by airborne droplets
Shingles:	Is caused by the VZV, following an attack of chickenpox, the virus lays dormant in the sensory nerves
Herpes zoster:	Shingles
Varicella	Chickenpox
Latent:	Virus latency is the ability of a pathogenic virus to lie dormant within a cell, demoted as the lysogenic part of the viral life cycle. A latent viral infection is a type of persistent viral infection which is distinguished from a chronic viral infection
Sensory Nerves:	A nerve that passes impulses from receptors toward or to the central nervous system appropriate integration centre
Central Nervous System:	Complex of nerve tissues that controls the activities of the body, comprises the brain and spinal cord
Immunoglobulin:	A specialised preparation of antibodies taken from the plasma of blood donors
Incubation period:	Time from becoming infected to when symptoms first appear
IPC:	Infection prevention and control processes to prevent and reduce the risk of the acquisition of an infection amongst patients, healthcare workers and any others in the healthcare setting

Isolation of patients:	The aim of patient isolation or single room care is to contain and prevent the spread of potential or known pathogenic or epidemiologically important organisms in order to reduce the risk of transmission of infection to and from patients, visitors or staff

3.2 Abbreviations

CNS	Central nervous system
HCAI	Healthcare Associated Infection
HAI	Hospital Acquired Infections
RCOG	Royal College of Obstetricians and Gynaecologist
IPCT	Infection Prevention and Control Team
DIPC	Director of Infection Prevention and Control
IPCD	Infection Prevention and Control Doctor
IPCN	Infection Prevention and Control Nurse
IPCC	Infection Prevention and Control Committee
VZV	Varicella zoster virus
VZIG	Varicella immunoglobulin
QMC	Queen's Medical Centre
SFH	Sherwood Forest Trust Hospitals NHS Foundation Trust

4.0 ROLES AND RESPONSIBILITIES

4.1 Trust Board

The Trust Board has overall responsibility for ensuring there are strategic, corporate and operational arrangements in place to maintain effective infection prevention and control programmes and that appropriate financial resources are in place to support that programme.

4.2 Chief Executive

The Chief Executive is ultimately responsible for ensuring that there are effective arrangements for infection prevention and control and that the control of hospital infection is addressed accordingly to divisions and departments. This responsibility is delegated to the Director of Infection Prevention and Control.

4.3 Director of Infection Prevention and Control

The Director of Infection Prevention and Control (DIPC) has Trust wide responsibility for the development of strategies and policies for the management of infection prevention and control, and for the organisational adoption of the policy for the control and management of chickenpox and shingles infection.

4.4 Infection Prevention and Control Team

The Infection Prevention and Control Team (IPCT) will inform and support all staff in relation to the identification, and management requirements of patients with suspected/known infection. The IPCT are also responsible for:

- carrying out a risk assessment with the Ward Sister /Nurse-in-charge to identify the risk of infection to other patients, staff and visitors

- In conjunction with the Ward Sister commence contact tracing in the event of a chickenpox/shingles outbreak for patients
- Providing education to clinical staff on the early detection of possible infectious conditions
- Communicating up to date information relating to isolation issues
- Advising and co-ordinating the appropriate action to be taken to isolate patients

4.5 Microbiology Laboratory

The microbiology laboratory is responsible for conducting relevant investigations and if required sending samples to other laboratories for further microbiology investigations.

4.6 Consultant Microbiologist/Infection Prevention and Control Doctor

The Consultant Microbiologist/Infection Prevention and Control Doctor is responsible for providing advice regarding varicella immunoglobulin prescriptions.

4.7 Chief Operating Officer (COO)

The Coo will ensure that the divisions have well developed clinical governance forum which monitors the application of this policy.

4.8 Divisional General Managers and Service Line Managers

Managers will ensure that the necessary management arrangements and structures are in place to support all employees to fulfil their obligations in their role of infection prevention and control practices.

4.9 Heads of Nursing and Matrons

Matrons are responsible for ensuring that all staff accountable to them are aware of this policy and adhere to its statement. They will actively promote and support all current infection prevention and control measures.

4.10 Ward Sister/Charge nurses/Departmental Leaders

They will act as exemplary role models and are responsible and accountable for infection prevention and control within their sphere of responsibility. They will ensure that all staff are aware of all relevant infection prevention and control measures. They are also responsible for:

- Ensuring the IPCT are notified of any suspected cases of chickenpox or shingles
- Ensuring dissemination of this policy
- Ensuring compliance with this policy and ensuring patient safety is maintained
- Monitor compliance in line with the Outcome 8 audits and Nursing Matrix
- Facilitating the delivery of education provided by the IPCT
- Ensuring staff in their area have the knowledge and skills to work safely
- Taking action when staff fail to follow the principles of this policy

4.11 Infection Prevention and Control Link Representatives

Infection Prevention and Control Link Representatives will disseminate all relevant infection prevention and control information to staff within their own work environment.

4.12 Occupational Health

The Trust Occupational Health Department is responsible for:

- Pre-employment screening and assessment of staff immunity for chickenpox
- Alerting the IPCT of any infectious conditions amongst Trust employees that could be transmitted during the course of their work

- In conjunction with the Ward Leader commenced contract tracing of staff exposed to chickenpox/shingles (staff considered to be high risk i.e. immune suppressed or pregnant)
- Co-ordinating staff treatment if applicable
- follow up of non-immune at pre-employment screening and offer vaccination as appropriate in line with Department of Health recommendations to vaccinate use for non-immune healthcare workers who have patient contact (PL/CMO/2003/8)

4.13 Clinical Team

Clinical teams are responsible for the prompt communication to the IPCT details of patients known or suspected of having chickenpox or shingles, and for the clinical management of the patient and ensuring that they comply with this policy.

4.14 All Staff

All staff are responsible for:

- Implementing standard infection prevention and control precautions for all patients and abiding by the guidance of this policy
- Gaining the appropriate lawful consent prior to examination, treatment or care. Where necessary undertake a two stage test and plan care in a patients best interests as required.
- Providing the special requirements for the management of patients with known or suspected VZV
    - Ensuring that prompt action is taken and the isolation policy followed (Refer to ICP 31)
    - Ensuring effective communication to other members of the team both verbally and through appropriate clinical protocols/policies and patient care pathways
    - Ensuring that appropriate personal protective equipment (PPE) is readily available and easily accessible
    - Liaising as appropriate with the IPCT and the site co-ordinator when a side room is not available so that a risk assessment can be undertaken
    - Ensuring that the room/bed space is AMBER cleaned in the appropriate way after the discharge/transfer of the patient (Refer the ‘RAG: Infection Level Cleans’)
    - Informing their Line Manager, Occupational Health and the Infection Prevention and Control Team if they suspect or develop symptoms of chickenpox or shingles

4.15 Soft FM Services

Medirest, as the Trust cleaning contractors are responsible for:

- Ensuring that the room/bed space used for patients with known or suspected infections are cleaned daily
- Ensuring that the room/bed space used for patients with known or suspected infections are AMBER cleaned according to the 'RAG: Isolation Level Clean' specifications following the discharge/transfer of the patient
- Ensuring that all healthcare cleaners have the knowledge and skills required to undertake daily and isolation cleaning of single rooms used for isolation purposes
- Ensuring that all Medirest staff comply with this policy

5.0 APPROVAL

This policy has been approved at the Infection Prevention and Control Committee

6.0 DOCUMENT REQUIREMENTS (POLICY NARRATIVE)

6.1 Management of patients with suspected or confirmed VZV

On identification of an individual with chickenpox or shingles (patient or staff) in a clinical area, clinical staff must ensure prompt communications to appropriate medical staff, the Infection Prevention and Control Team (IPCT) and Occupational Health (OH). Patients with suspected or confirmed chickenpox or shingles **must not** be nursed on the oncology clinical area, or in the vicinity of patients who are categorised as high risk (Refer to section 5.4). If a member of staff is identified to be have chicken pox they must be sent home immediately. If a patient is immuno-compromised and contracts VZV then the decision regarding where the patient should be nursed will be made in consultation with the Clinician responsible for their care and the IPCT.

6.2 Infection prevention and control measures

Admission of patients with chickenpox should be avoided where possible, where this is not possible all patients with suspected or confirmed chickenpox must be isolated immediately into a side room and the IPCT informed. They should be cared for by staff known to be immune. If symptoms develop during an in-patient stay, transfer to a single room must occur promptly.

- In addition to routine hand hygiene at the point of care, hands must be washed with soap and water after removing personal protective equipment (PPE) prior to leaving the isolation room, once outside the isolation room repeat hand hygiene
- Inform the IPCT immediately of suspected or confirmed cases of VZV, and make a list of all staff and patient contacts to ensure that all risks are assessed and followed up
- All patients with suspected or confirmed chickenpox must be nursed under isolation precautions. On the King's Mill site this will be the bespoke isolation room (special ventilation available) with respiratory isolation precaution signage on the door. On

remaining Trust sites a side room, with the door kept closed at all times, ensuring respiratory isolation signage is placed on the door (Refer to ICP 31)
    - Immunocompetent patients must be isolated for period of 7 days after the onset of the rash
    - Immuno-compromised patients must be isolated until all the lesions are crusted
- Chickenpox reported after admission, and the patient had not been previously isolated; must be moved to a side room immediately. Confirmation test should be undertaken
- In the unlikely event of there being several affected patients, the IPCT will consider co-horting these patients
- All patients with suspected or confirmed shingles, which cannot be covered or are in an areas where there are high risk contacts, must be nursed in a side room under contact isolation precautions (the bespoke isolation rooms is not specifically required for shingles) (Refer to ICP 31)
- Identify when the vesicles appeared as the patient will have been infectious for at least 48 hours prior to this, with potential risks to others
- Only staff, including Medirest, with known immunity (definite history of vaccination, or history of previous chickenpox infection or shingles) are allocated to the care of the patient and cleaning of the environment of the index case
- Ensure that visitors entering the room have had chickenpox or vaccination; non-immune visitors should be advised and excluded from visiting during the infective period. Contact the IPCT/Consultant Microbiologist regarding the appropriate precautions, as these may vary depending on the ward, patient and visitor
- Visiting should be restricted to close family members/designated guardians known to have immunity
- Non-sterile gloves and a disposable plastic apron **must** be worn for direct patient contact, removed, bagged in the room and hands decontaminate prior to exit (Refer to ICP 09)
- During the isolation period it is not necessary to wear face protection/masks for general healthcare duties
- Used tissues must be disposed of as clinical waste
- Linen must be placed in an alginate bag in the room prior to placing it into a white plastic laundry bag outside of the door
- Ensure that Medirest staff are aware of isolation precautions and use the correct colour coded equipment for cleaning
- If the side room has no en-suit, provide a dedicated toilet/commode for the duration of isolation
- Provide dedicated nursing and medical equipment for the duration of isolation, wherever possible use disposable equipment i.e., B/P cuff
- Patients should not leave the room until they are deemed to be non-infectious
- If essential investigation/treatments necessitate leaving the room, the IPCT should be notified, the department where the patient is going must be informed in advance to enable non-VZV immune staff to be excluded
- If the patient requires transfer to another healthcare provider (internally or externally), the receiving area and ambulance staff must be informed in advance of the infectious condition prior to transfer
- Provide an information leaflet to allay further anxiety (located on the Trust intranet page)

- Toys and games used require to be cleaned with a Clinell® Universal Wipe
- Nursing and medical equipment that are not disposable require to be cleaned with a Clinell® Universal wipe (Refer to ICP 40)
- Ensuring that the room/bed space is cleaned in the appropriate way after the discharge/transfer of the patient (Refer the 'RAG: Infection Level Cleans')

6.3 Patients transferred to theatre

Non urgent elective surgery must be re-scheduled for when the VZV infection has cleared. For emergency theatre care:

- Theatre staff must be informed prior to the transfer to theatre of the patients suspected/confirmed infectious status
- Clinical staff must have discussed the case with the Consultant Microbiologist/Infection Prevention and Control Doctor as soon as possible
- Wherever possible the patient should be placed on the end of the theatre list
- All staff who will come into contact with the patient must have immunity of VZV (past infection with chickenpox or shingles)
- Gloves and aprons must be worn by all staff who have direct contact with the patient
- Areas of skin affected by shingles must be covered with a semi-occlusive dressing
- The patient must go straight into the operating theatre
- Laryngoscope blades must be single use
- Disposable anaesthetic circuits and bacterial filters must be used, and changed following the case
- Number of staff within the operating room must be kept to a minimum
  Wherever possible the patient should be recovered in the operating room and returned directly to the ward. When this is not possible there must be a clear bed space between the patient and the next patient in the recovery area.

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Use of Standard Precautions	IPCT	Audit	Quarterly	IPCC
Hand hygiene compliance	IPCT	Audit	Monthly	IPCC
Clinical practice and environmental standards	IPCT	Audit	On identification of a case	IPCC

8.0 TRAINING AND IMPLEMENTATION

There is no specific training requirement in relation to this policy. All infection prevention and control precautions including hand hygiene; personal protective equipment and isolation care are provided both on induction and as part of the mandatory programme. If required, further assistance can be sought from senior colleagues and/or the Infection Prevention and Control Team.

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix A
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

- Editorial BMJ 2005; 330 ***Chickenpox (varicella) immunisation for healthcare workers*** http://www.bmj.com/content/330/7489/433 assessed April 2022

- Loveday. H., Wilson. J Pratt. R., Pellowe. C; Golsorkhi, A. Tingle, A. Bak, J. Browne, J, Prieto, J.., Wilcox. M. 2014. ***Epic 3. National evidence based guidelines for preventing healthcare associated infections in NHS hospitals in England.*** Journal of Hospital Infection https://www.his.org.uk/files/3113/8693/4808/epic3_National_Evidence-Based_Guidelines_for_Preventing_HCAI_in_NHSE.pdf

- Enders. G., Miller. E., Cradock-Warson. J., Bolley. I., Ridehalgh. M. 1994. ***The consequences of chickenpox and herpes in pregnancy: a prospective study of 1739 cases***. Lancet. 343: 1548-51

- Department of Health.(2015) *Varicella (Green Book).* https://www.gov.uk/government/publications/varicella-the-green-book-chapter-34

- NICE. 2016 Chicken Pox Clinical Knowledge Summaries. *https://cks.nice.org.uk/chickenpox*

- Royal College of Obstetricians and Gynaecologists. (2015) ***Chickenpox in Pregnancy (Green-top13)***

https://www.rcog.org.uk/globalassets/documents/guidelines/gtg13.pdf accessed October 2017

- Public Health England (PHE). 2017 **Guidance for issuing varicella-zoster immunoglobulin (VZIG)** *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/638221/VZIG_Gudiance_Version_7_August_2017__.pdf* Accessed October 2017

- Control of substances hazardous to health. *The Control of Substances Hazardous to Health Regulations 2002. Approved Code of Practice and guidance* L5 (Fourth edition) HSE Books 2002 ISBN 0 7176 2534 6

- The Health and Safety at Work Act 1974 http://www.legislation.gov.uk/ukpga/1974/37/contents accessed November 2017

- Department of Health (2003) '**Chicken pox (varicella) vaccination for healthcare workers'** PL CMO (2003)8 http://webarchive.nationalarchives.gov.uk/20121210120600/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4065217.pdf accessed November 2017

Related SFHFT Documents:

- Personal protective equipment (PPE) policy (ICP 9)
- Hand hygiene policy (ICP 17)

11.0 KEYWORDS

VZV

12.0 APPENDICES

- Appendix A – Equality Impact Assessment Form

APPENDIX A – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Varicella zoster virus (chickenpox and shingles) policy			
New or existing service/policy/procedure: Existing			
Date of Assessment: 04/04/2022			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?	b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?	c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality
The area of policy or its implementation being assessed:			
Race and Ethnicity:	None	None	None
Gender:	None	None	None
Age:	None	None	None
Religion:	None	None	None
Disability:	None	None	None
Sexuality:	None	None	None
Pregnancy and Maternity:	None	None	None
Gender Reassignment:	None	None	None
Marriage and Civil Partnership:	None	None	None
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation):	None	None	None

What consultation with protected characteristic groups including patient groups have you carried out?

- Sent to all members of the IPCC

What data or information did you use in support of this EqIA? • National Guidance
As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments? • No

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact:

High Level of Impact/Medium Level of Impact/**Low Level of Impact** *(Delete as appropriate)*

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment: Sally Palmer
Signature: Sally Palmer
Date: 04/04/2022