THE STATE HOSPITALS BOARD FOR SCOTLAND

THE MANAGEMENT AND CONTROL OF CHICKENPOX (VARICELLA) & SHINGLES (HERPES ZOSTER) POLICY AND PROCEDURE

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Lead Author	Senior Nurse for Infection Control	
Contributing Authors	The State Hospital Infection Control Committee	
	NHS Lanarkshire Guideline for the Control and Treatment of Scabies	
Advisory Group	The State Hospital Infection Control Committee	
Approval Group	Policy Approval Group (PAG)	
Implementation Date	29 September 2023	
Next Review Date	29 September 2025	
Accountable Executive Director	Director of Nursing and Operations	

The date for review detailed on the front of all State Hospital policies/ procedures/ guidance does not mean that the document becomes invalid from this date. The review date is advisory and the organisation reserves the right to review a policy/ procedure/ guidance at any time due to organisational/legal changes.

Staff are advised to always check that they are using the correct version of any policy/ procedure/ guidance rather than referring to locally held copies.

The most up to date version of all State Hospital policies/ procedures/ guidance can be found on the intranet: http://intranet.tsh.scot.nhs.uk/Policies/Policy%20Docs/Forms/Category%20View.aspx

REVIEW SUMMARY SHEET

No changes required to policy (evidence base checked)	☒

Changes required to policy (evidence base checked)	☐
Summary of changes within policy:	

CONTENT **PAGE**

1. INTRODUCTION

This policy has been developed for use in The State Hospital as part of the Control of Infection policy manual and should be read in conjunction with: National Infection Prevention and Control Manual Chapters 1, 2 and 3

2. AIM

To ensure that patients with chickenpox or shingles receive appropriate care and management in line with current national guidelines and best practice.

To ensure that every effort is made to protect susceptible patients, staff and visitors to inpatient areas from the risk of cross infection from known cases of chickenpox or shingles.

3. SCOPE

This policy is designed to safeguard patients / staff / volunteers and visitors to the State Hospital.

This policy is aimed at all employees of the State hospital.

4. ROLES AND RESPONSIBILITIES

Who	Roles & Responsibilities
NHS Board	• To implement this policy across the State Hospital
Infection Control Team	• Keep this policy up to date. • Engage with staff to support implementation of Infection Prevention and Control (IPC) precautions described in this policy as required. • Review national guidance • Provide education opportunities on this policy.
Lead Nurses	• Support clinical staff in following this policy
Senior Charge Nurses	• To provide leadership within the clinical area and act as role models in relation to IPC. • To ensure implementation and ongoing compliance with Standard Infection Control Precautions (SICPs) and Transmission Based Precautions (TBPs) and take appropriate action to address any area of noncompliance. • To report any difficulty in accessing or providing sufficient resource to achieve this. • Recognise and report to the Infection Control Team (ICT) any incidences of clinical conditions where the signs/symptoms are suggestive of an outbreak.
Clinical staff	• To ensure implementation and ongoing compliance with SICPs and TBPs. • Recognise and report to the ICT any incidences of clinical conditions where the signs/symptoms are suggestive of an outbreak. • Recognise and report to the ICT any incidences of clinical conditions where the signs/symptoms are suggestive of an outbreak. • Inform a member of the ICT if this policy cannot be followed and inform their clinical lead or line manager

Who	Roles & Responsibilities
	• Prompt recognition and appropriate management and treatment of patients displaying symptoms • Isolate the patient.
Head of Estates and Facilities	• To provide support to maintain the cleanliness and safety of premises.
Occupational Health	• To provide specialist advice and support to clinical teams and the ICT in relation to staff health and other matters of health & safety

All staff are responsible for implementing and following the information provided in this policy. Staff must inform the Senior Charge Nurse and ICT immediately either by email or telephone if this policy cannot be followed.

5. PRINCIPLE CONTENT

5.1 Chickenpox

Communicable disease / causative organism	Chickenpox (Varicella)
Clinical manifestation / diagnosis	• May initially begin with cold-like symptoms • Raised temperature • Intensely itchy vesicular rash. Clusters of vesicular (blisters) • Spots appear over 3-5 days, which start on the face and scalp, spread to the trunk, abdomen and limbs. • It is possible to be infected but show no symptoms • Diagnosis can usually be reliable made on physical examination; swabs/specimens are not usually required
Incubation period	• 10-21 days
Period of infectivity	• 1-2 days (48hours) before the onset of the rash until the vesicles (blisters) are dry /crusted which is usually 4-5 days after the onset of rash. This may be prolonged in immunosuppressed patients.
Mode of transmission	• Direct contact with an infected person • Droplet or aerosol spread from vesicular fluid from skin lesions. • Secretions from the respiratory tract (the virus enters the individual through the upper respiratory tract). • Indirectly via contaminated articles e.g. clothing / bedding.
Groups susceptible to chickenpox	• Most commonly seen in children under ten years old. In healthy children the illness is usually mild with no complications. • Non immune adolescents and adults are at increased risk of severe disease. • Individuals without a definite history of chickenpox and who have not been vaccinated against Varicella may be at risk of contracting Chickenpox.
Definition of a significant exposure to chickenpox	• Non immune individuals who have had: – Contact in the same room as a person with chickenpox (e.g. in the ward or at placement for a significant period of time 15 minutes or more). – Face to face contact, with a person with chickenpox for example while having a conversation (48 hours before the

	rash appears until it has crusted over). – In larger wards, airborne transmission at a distance has occasionally been reported.
Management of patients exposed to chickenpox	• Patients who have had significant exposure (significant exposure can be deemed as exposure to someone who has no history of varicella or serological evidence of immunity) with a person who has chickenpox should be assessed by the Practice Nurse, Senior Nurse for Infection Control or the duty medic to determine the risk they may have of contracting chickenpox. • Varicella Zoster Immunoglobulin (VZIG) or Varicella vaccine may be appropriate. • Varicella vaccine is a live vaccine & should not be given to immunocompromised or pregnant contacts of chickenpox (Varicella). They should receive VZIG instead. Information on prophylaxis can be found in The Green Book: Chapter 34
Groups at increased risk of severe disease	• Adolescents and adults. • Smokers. • Non immune pregnant women and their baby. • Neonates whose mothers develop chickenpox in the period 7 days before to 7 days after the birth. • Neonates born to non-immune mothers who have been exposed to chickenpox or shingles in the first month of the baby's life. • Immunocompromised patients (see section 7 for definitions and management).
Complications of Chickenpox	May include: • secondary bacterial infections of skin lesions • pneumonia • cerebellar ataxia • encephalitis • haemorrhagic conditions
Immunity	• The majority of people are infected in childhood and remain immune to chickenpox for life. 90% of adults raised in the UK are immune.
Vaccine preventable	• Yes, however this is not a routine part of the UK's childhood immunisation program.

5.2 Shingles

Communicable Disease / Causative organism	Shingles / Herpes Zoster (HZ)
Clinical manifestation / Diagnosis	• Previous infection with chickenpox is necessary before a person can develop shingles. It appears following reactivation of chickenpox virus which lies dormant in dorsal root ganglia (spinal nerve tissue) – often for decades. • Pain in the area of the affected nerve is often the first symptom followed by a dermatomal (one sided) rash of fluid filled vesicles (blisters). • Diagnosis can usually be reliably made on physical examination; swabs /specimens are not usually required. • This rash is usually present for about seven days but the pain

	may persist for longer. Persistent pain is more common in elderly people and is termed 'post herpetic neuralgia'. On average this lasts for 3 to 6 months although it can continue for years.
Period of infectivity	• Until all the lesions have dried /crusted.
Mode of transmission	• Direct contact with an infected person (via hands) • Droplet or aerosol spread from vesicular fluid from skin lesions. • Indirectly via contaminated articles e.g. clothing / bedding.
Groups susceptible to shingles	• Individuals who have had chickenpox previously may develop Shingles at any time in their lives although it does seem to be associated with older age and conditions which suppress the immunity. • Individuals without a definite history of chickenpox and who have not been vaccinated against Varicella may be at risk of contracting Chickenpox.
Definition of a significant exposure to HZ Virus	Three aspects of the exposure are relevant: 1) Type and location of infection in the index case: the risk of acquiring infection from individual with non-exposed lesions (e.g. the trunk)) is remote. 2) The timing of the exposure in relation to onset of rash in the index case: between 48 hours before onset of rash until crusting of lesions, or day of onset of rash until crusting for those exposed to localised HZ. 3) Closeness and duration of contact For further information contact Health Centre or ICT
Management of patients exposed to shingles	• Patients who have had significant exposure with a person who has shingles must be assessed by the Practice Nurse, Senior Nurse for Infection Control or the duty medic to determine the risk they may have of contracting Shingles. • Following the assessment it may be appropriate to prescribe VZIG or Varicella vaccine. Varicella vaccine is a live vaccine & should not be given to immunocompromised or pregnant contacts of VZV. They should receive VZIG instead. Information on prophylaxis can be found in The Green Book: Chapter 34 • Advice may be sought via recommendation from an Infectious Diseases Specialist (Monklands Hospital 01236 748748 or local Microbiologist). • If cross infection occurs, the ICT need to be notified.
Groups at increased risk of severe disease	• Pregnant women and their baby, when the woman has no immunity to chickenpox (a pregnant woman who has shingles presents no risk to her unborn baby). • Neonates born to non-immune mothers who come into direct contact with a person with shingles may develop chickenpox. • Immunocompromised individuals may suffer more severe and prolonged symptoms
Vaccine preventable	• Yes. In 2013 a vaccination program for those of 70 years of age began, in conjunction with a catch up program.

5.3 Standard Infection Control Precautions (SICPs) & Transmission Based Precautions (TBPs)

Patient Placement	The patient should be nursed separately from their peers until all the vesicles have dried /crusted (and no new blisters are appearing if it is chickenpox). Immunocompromised patients may require a longer period of isolation (seek advice from Practice Nurse or Senior Nurse for Infection Control). Patients with chickenpox should avoid contact with non-immune people until their lesions are dried and crusted. Patients with shingles may not necessarily require to be nursed separate from their peers e.g. if the rash is not on the extremities, can be covered, the patient will comply with hand hygiene advice and is not in contact with people at high risk of contracting chickenpox and complications from same. A risk assessment can be carried out by the seek advice from Practice Nurse or Senior Nurse for Infection Control or duty medic
Patient Care	Patients with chickenpox or shingles should receive their care from staff that are immune i.e. those who have had a history of varicella or who have on blood sampling been tested positive as having had past exposure
Hand Hygiene	With soap and water or alcohol gel and ensure hands are washed after patient contact as per National Infection Prevention and Control Manual Chapter 1
Personal Protective Equipment (PPE)	As per National Infection Prevention and Control Manual Appendix 16
Healthcare Waste	Waste should be designated as clinical / healthcare waste and placed in an orange bag. As per National Infection Prevention and Control Manual Chapter 1 and local policy
Linen	Linen should be treated as 'infectious linen' as outlined in the SOP for Safe Management of Linen. Bed linen and patient clothing should be changed daily.
Equipment	The patient should be allocated their own equipment e.g. blood pressure machine etc which should not be shared with other patients. Where this is not possible, equipment must be thoroughly cleaned with a chlorine based detergent before being used on another patient. National Infection Prevention and Control Manual Chapters 1

5.4 Management of at-risk individuals following significant exposure to chickenpox or herpes zoster

It is a viral infection so will not respond to antibiotics. Chickenpox in otherwise healthy children is unlikely to result in complications and active treatment is not usually required. Treatment should be based on reducing symptoms such as fever and itch although early treatment with oral antiviral drugs can shorten the duration and number of vesicles.

Shingles can be treated with oral antiviral drugs such as aciclovir. Data is inconclusive about the benefits of giving antiviral drugs such as acyclovir to adolescents and adults with chickenpox.

People at higher risk of developing serious complications from chickenpox or shingles may be given antiviral drugs such as aciclovir and/or immunoglobulin (VZIG), which may prevent severe illness developing.

The aim of post-exposure management is to protect individuals at high risk of suffering from severe chickenpox and those who might transmit infection to those at high risk. There is no benefit once chickenpox is present.

The aim of post-exposure management is to protect individuals at high risk of suffering from severe varicella (see below) and those who might transmit infection to those at high risk. There is no benefit once chickenpox is present, therefore ideally give within 7 days of exposure but can be up to 10 days.

VZIG prophylaxis is recommended for individuals who fulfil all of the following three criteria.

- Significant exposure to chickenpox or herpes zoster
- A clinical condition that increases the risk of severe varicella (see below – high risk groups)
- No antibodies to Varicella Zoster (VZ)

VZIG prophylaxis would be via recommendation from an Infectious Diseases Specialist (Monklands Hospital 01236 748748 or local Microbiologist).

5.5 Potential High Risk Patients

Certain groups of people such as neonates (infants within the first four weeks of life), pregnant women and those who are immunocompromised due to illness or treatments may experience more serious complications. These include viral pneumonia, secondary bacterial infections and encephalitis.

Examples of immunosuppression include:

- Those currently being treated for malignant disease with immunosuppressive chemotherapy or radiotherapy and for at least 6 months after treatment completed
- Those having received a solid organ transplant and currently on immunosuppressive treatment
- Those having received a bone marrow transplant until at least 12 months after completion of immunosuppressive treatment
- Those receiving systemic high dose steroids until at least 3 months after treatment has stopped i.e. considered in those who have received 40mgs of prednisilone per day for more than 1 week.
- Those receiving other types of immunosuppressive drugs e.g. methotrexate
- Those with immunosuppression due to underlying conditions e.g. HIV infection

VZIG should be given to immunocompromised patients

Whenever possible, immunosuppressed contacts should be tested for VZ antibodies irrespective of their history of chickenpox. However, VZIG should not be delayed past 7 days after initial exposure whilst an antibody test is checked. VZIG should be administered based on a negative history of chickenpox. If the patient has a positive history, wait for antibody results.

Practicalities of issuing VZIG

- VZIG will be issued following instruction from the Infectious Diseases Consultant or

Microbiologist

- VZIG is a prescription only medicine (POM) and needs to be prescribed on HEPMA
- Arrangements for collection/delivery must be arranged at time of discussion with Infectious Diseases Consultant (Monday – Friday via Pharmacy department, outwith as per CP06 Safer Use of Medicines Policy)

5.6 Management of healthcare workers exposed to chickenpox or shingles infection

It is not possible to develop shingles from exposure to a person with chickenpox. It is possible however, to develop chickenpox as a result of exposure to a person with shingles.

Chickenpox occurs throughout the year but it is most common in winter and spring. The majority of people are infected in childhood and remain immune for life.

Healthcare Workers with chickenpox	Should inform Occupational Health and be excluded from work until no new crops are appearing and all lesions have dried and crusted.
Healthcare Workers with shingles	Should inform Occupational Health who will complete a risk assessment. May be able to continue to work if the lesions can be covered with a dressing, do not impede hand hygiene and do not work with high risk patients (see 5.3)
Immune Healthcare Workers exposed to Chickenpox or shingles	Healthcare Workers with either a definite history of chickenpox/ shingles or who have been vaccinated against varicella, should be considered protected and be allowed to continue working. If however they develop any symptoms consistent with chickenpox they should report to Occupational Health or their GP for assessment before having further patient contact.
Non immune Healthcare Workers exposed to chickenpox or shingles	Healthcare Workers without a definite history of chickenpox and who have not been vaccinated against it should report to Occupational Health department before having further patient contact. May require to be excluded from contact with high-risk patients (refer to 5.3) until their immune status is known. Occupational Health can provide advice and take blood for serological testing where immunity is uncertain.
Pregnant Healthcare Workers	Pregnant staff who have previously had chickenpox / were previously vaccinated against it are likely to be immune and at less risk; regardless they should discuss this with Occupational Health and their own Obstetrician / Midwife without delay. Pregnant staff that have not had chickenpox / were not previously vaccinated against it may be at increased risk and should discuss this with Occupational Health and their own Obstetrician / Midwife without delay. Occupational Health can provide advice and take blood for serological testing where immunity is uncertain.
Treatment of non-immune Healthcare Workers exposed to chickenpox or	Should be discussed with the Occupational Health team. There is some evidence that varicella vaccine administered within

shingles	three days of exposure may be effective in preventing chickenpox. Irrespective of the interval since exposure, vaccine should be offered to reduce the risk of the Healthcare Workers being infected.

6. EQUALITY AND DIVERSITY

The State Hospitals Board (the Board) is committed to valuing and supporting equality and diversity, ensuring patients, carers, volunteers and staff are treated with dignity and respect. Policy development incorporates consideration of the needs of all Protected Characteristic groups in relation to inclusivity, accessibility, equity of impact and attention to practice which may unintentionally cause prejudice and / or discrimination.

The Board recognises the need to ensure all stakeholders are supported to understand information about how services are delivered. Based on what is proportionate and reasonable, we can provide information/documents in alternative formats and are happy to discuss individual needs in this respect. If information is required in an alternative format, please contact the Person-Centred Improvement Lead on 01555 842072.

Line Managers are responsible for ensuring that staff can undertake their role, adhering to policies and procedures. Specialist advice is available to managers to ensure that reasonable adjustments are in place to enable staff to understand and comply with policies and procedures. The Equality and Impact Assessment (EQIA) considers the Protected Characteristic groups and highlights any potential inequalities in relation to the content of this policy.

Patient pre-admission assessment processes and ongoing review of individual care and treatment plans support a tailored approach to meeting the needs of patients who experience barriers to communication (e.g. Dementia, Autism, Intellectual Disability, sensory impairment). Rapid access to interpretation / translation services enables an inclusive approach to engage patients for whom English is not their first language. Admission processes include assessment of physical disability with access to local services to support implementation of reasonable adjustments. Patients are encouraged to disclose their faith / religion / beliefs, highlighting any adapted practice required to support individual need in this respect. The EQIA considers the Protected Characteristic groups and highlights any potential inequalities in relation to the content of this policy.

Carers / Named Persons are encouraged to highlight any barriers to communication, physical disability or anything else which would prevent them from being meaningfully involved in the patient's care (where the patient has consented) and / or other aspects of the work of the Hospital relevant to their role. The EQIA considers the Protected Characteristic groups and highlights any potential inequalities in relation to the content of this policy".

The volunteer recruitment and induction process supports volunteers to highlight any barriers to communication, physical disability or anything else which would prevent them from contributing meaningfully to patient care and / or engage in other aspects of the work of the Hospital relevant to their role. The EQIA considers the Protected Characteristic groups and highlights any potential inequalities in relation to the content of this policy.

7. COMMUNICATION, IMPLEMENTATION, MONITORING AND REVIEW OF POLICY

This policy will be communicated to all stakeholders within the State Hospital via the intranet and through the staff bulletin.

The Infection Control Committee will be responsible for the implementation and monitoring of this policy.

All policy documentation will be monitored and reviewed on an ongoing basis by the policy author and advisory group as part of working practice.

This policy will be reviewed every two years or earlier if required.

8. STAKEHOLDER ENGAGEMENT

Key Stakeholders	Consulted (Y/N)
Patients	N/A
Staff	N/A
TSH Board	N/A
Carers	N/A
Volunteers	N/A

9. REFERENCE AND BIBLIOGRAPHY

- British National Formulary
- Chickenpox: Public Health Guidance
- Health Protection Agency: Shingles Guidance and Vaccination Programme
- NIPCM National Infection Control Manual
- Public Health England (2013) The Green Book Chapter 28 Shingles. chapter-28a
- Public Health England (2019) The Green Book Chapter 34 Varicella
- Chicken pox: Public Health Management guidance