GUIDELINE FOR THE CONTROL AND MANAGEMENT OF CHICKENPOX (VARICELLA) & SHINGLES (HERPES ZOSTER)

TARGET AUDIENCE	NHSL WIDE, Acute, Health and Social Care Partnerships
PATIENT GROUP	All in patients, and outpatients

Clinical Guidelines Summary

To ensure that patients with Chickenpox (Varicella) or shingles (herpes zoster) 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 suspected or known cases of chickenpox or shingles.

To ensure staff who have or are exposed to Chickenpox or Shingles are followed up and advised appropriately

INTRODUCTION

This guideline has been developed for use in NHS Lanarkshire (NHSL) based on guidance from the National Infection Prevention and Control Manual (NIPCM):

Chapter 1: Standard Infection Control Precautions (SICPS)
Chapter 2: Transmission Based Precautions: (TBPS)
Chapter 3: Healthcare Infection Incidents, Outbreak and data exceedance.
Chapter 4: Infection Control in the Built Environment and Decontamination

The Green Book and Meded can be accessed via Firstport.

Aim, purpose and outcome

To ensure that patients with Chickenpox (Varicella) or shingles (herpes zoster) 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 suspected or known cases of chickenpox or shingles.

To ensure staff who have or are exposed to Chickenpox or Shingles are followed up and advised appropriately

Scope, roles and responsibilities

This guideline is designed to safeguard patients / users of NHS Lanarkshire Services and visitors to inpatient areas.

This guideline is aimed at all employees of NHS Lanarkshire, in particular:

- Nurses, midwives and medical staff working in in-patient & community settings
- Allied Health Professional's (AHPs)
- Domestic staff working in in-patient areas
- HPT
- IPCT
- Salus Occupational Health & Safety service

All staff are responsible for implementing and following the information provided in this guideline. Staff must inform their line manager, SALUS and the IPCT if this guideline cannot be followed.

Principle content

Chickenpox (Varicella)

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 reliably made on physical examination; swabs /specimens are not usually required.
Incubation period	10-21 days.
Period of infectivity	1-2 days 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	• Droplet or aerosol spread from vesicular fluid from skin lesions. • Direct contact with 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 a house or classroom or a 2-6 bed hospital bay 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 (remember that they may be infectious up to 48 hours *before* the rash appears).
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 a clinician to determine the risk they may have of contracting chickenpox. Please refer to the The Green Book: Chapter 34 • Antiviral treatment is the recommended post-exposure prophylaxis for all at risk individuals Post-exposure prophylaxis for chickenpox and shingles - GOV.UK • For the management of pregnant women exposed to varicella please refer to Chicken pox in pregnancy
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 programme.

Shingles (Herpes Zoster)

Communicable Disease /Causative organism	Shingles (Herpes Zoster) (HZ)
Clinical manifestation / Diagnosis	• Previous infection with chickenpox is necessary before a person can develop shingles (i.e. you cannot catch 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. •
Period of infectivity	• Until all the lesions have dried /crusted.
Mode of transmission	• Direct contact with an infected person • 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 VZ Virus	Three aspects of the exposure are relevant in assessing patients at risk of developing severe disease: • **type of VZ infection in the index case:** the risk of acquiring infection from an immunocompetent individual with non-exposed zoster lesions (e.g. thoracolumbar (the trunk)) is remote. Contact with chickenpox, or those in contact with the following carries higher risk: ➢ disseminated zoster ➢ immunocompetent individuals with exposed lesions (e.g. ophthalmic zoster) ➢ immunosuppressed patients with localised zoster on any part of the body (in whom viral shedding may be greater). • **the timing of the exposure in relation to onset of rash in the index case:** exposure to a case of chickenpox or disseminated zoster between 48 hours before onset of rash until crusting of lesions, or day of onset of rash until crusting for those exposed to localised zoster carries higher risk. • **closeness and duration of contact:** the following should be used as a guide to the type of exposure, other than maternal/neonatal and continuous home contact and the risk each carries, ➢ contact in the same room (e.g. in a house or classroom or a two- to four-bed hospital bay) for a significant period of time (15 minutes or more). ➢ face-to-face contact, e.g. while having a conversation. ➢ in the case of large open wards, airborne transmission at a distance has occasionally been reported.
Management of patients exposed to shingles	• Patients who have had significant exposure with a person who has shingles should be assessed by a clinician to determine the risk they may have of contracting chickenpox. • Varicella vaccine may be appropriate, however Varicella vaccine is a live vaccine & should not be given to immunocompromised or pregnant contacts. Information on prophylaxis can be found

	in The Green Book: Chapter 34 • Antiviral treatment is the recommended post-exposure prophylaxis for all at risk individuals Post-exposure prophylaxis for chickenpox and shingles - GOV.UK • If there is a risk of cross transmission, IPCT should 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 (see section 7). • Immunocompromised individuals may suffer more severe and prolonged symptoms (see section 4.4 for definitions and management).
Vaccine preventable	• Yes. In 2013 a vaccination programme for those of 70 years of age began, in conjunction with a catch up programme.

Management of at risk individuals (see above) following significant exposure to chicken pox or herpes zoster:

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.

Antiviral treatment is the recommended post-exposure prophylaxis for all at risk individuals Post-exposure prophylaxis for chickenpox and shingles - GOV.UK

In these circumstances seek advice from an Infectious Diseases Specialist (Monklands Hospital 01236 748748 or local Microbiologist).

Management of a pregnant woman exposed to chickenpox or shingles should be discussed with an Obstetrician and/ or midwife, who will contact the Microbiologist and, if appropriate, arrange for the booking for the blood to be tested.

The management of neonates or infants should be decided by a Paediatrician, in conjunction with a Consultant in Infectious Diseases and Microbiologist.

For those at increased risk during pregnancy, or the neonatal period and for immunocompromised patients please refer to The Green Book: Chapter 34 and/or Chicken pox in pregnancy . Further treatment information is available in the British National Formulary .

N.B. Varicella-zoster immunoglobulin (VZIG) is no longer licensed in the UK. Varitect® CP is licensed for use in Germany as a single dose as post-exposure prophylaxis in eligible neonates. The use of this product in neonates has been considered and recommended by the PHE/UKHSA convened expert working group: Varitect® CP should only be offered to those susceptible individuals who are unable to take oral antivirals, i.e. due to malabsorption or renal toxicity, or aged less than 4 weeks. Further guidance on VZIG and IVIG (including Varitect® CP request form) can be found at: Post-exposure prophylaxis for chickenpox and shingles - GOV.UK

Management of healthcare workers exposed to chickenpox and shingles infection

HCWs with chickenpox	Should inform Occupational Health and be excluded from work until no new crops are appearing and all lesions have dried and crusted.
HCWs with shingles	Should inform Occupational Health who will complete a risk assessment and agree if staff can continue to work.
Immune HCWs 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 for assessment *before* having further patient contact.
Non immune HCWs exposed to chickenpox or shingles	• Healthcare Workers without a definite history of chickenpox and who have not been vaccinated against it should report to their Occupational Health department *before* having further patient contact. • May require to be excluded from contact with high-risk patients (patients in oncology / haematology, transplant and maternity units for e.g.) until their immune status is known. • Occupational Health can provide advice and take blood for serological testing where immunity is uncertain.
Pregnant HCWs	• 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 HCWs exposed to chickenpox or shingles	• Should be discussed with the Occupational Health team. • There is some evidence that varicella vaccine administered within 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 exposed / exposing patients to chickenpox virus in the future. • Exceptions: Varicella vaccine is not suitable for pregnant or immunocompromised people. • In pregnancy, treatment with immunoglobulin may be indicated; see Green Book Chapter 34 and speak to Occupational Health and own Obstetrician / Midwife for guidance without delay. • Immunocompromised staff should speak to Occupational Health for advice.

SICPs & TBPs	
Patient care	• Patients should only be cared for by staff who are immune to chickenpox i.e. have a definite history of chickenpox or who have been vaccinated against chickenpox.
Patient placement	• The patient should be nursed in a single side room (for chickenpox a negative pressure room should be used if available) until all the vesicles have dried /crusted (and no new crops are appearing. • Immunocompromised patients may require a longer period of isolation (this should be discussed with IPCT) • A risk assessment can be carried out by the IPCT/ HPT
Hand hygiene	Hand hygiene is the single most important measure to prevent cross-transmission. Hand Hygiene must be carried out before and after each episode of direct patient contact and after contact with the patient's environment, including before and after use of Personal Protective Equipment (PPE). Hand Rub can be used to decontaminate visibly clean hands. Refer to Hand Hygiene Policy.
Moving between wards, hospitals and departments	Transfer of infectious patients should be prevented where possible. If it is essential then the receiving area must be informed prior to moving the patient in order that the appropriate facilities can be prepared for them.

SICPs & TBPs	
Personal protective equipment	• Gloves and aprons must be worn for direct contact with the patient, the patient's environment/equipment and exposure to blood and/or body fluids. • Gloves and aprons are single use and must be discarded as clinical waste immediately after completion of task, and hand hygiene carried out. • FFP3 Masks should be worn for direct patient care and aerosol generating procedures for chickenpox • Gloves are not required for simple tasks such as placing meal trays in room, but hand hygiene must be carried out immediately after the task.
Linen	• Used linen to be disposed of in a red alginate bags as per local laundry policy • Clean linen should not be stored within the isolation room
Patient clothing	• Patients clothing must be placed into a white disposable patient laundry bag then into a clear bag. • Patient and or relative should receive the laundry leaflet.
Waste	Waste should be designated as clinical / healthcare waste and placed in an orange bag as per NIPCM and NHSL Waste Management poster.
Removing precautions	Precautions should remain in place until all Lesions are dry and crusted and discuss with IPCT.
Equipment &environmental cleaning	• Surface contamination has mainly been associated with near patient surfaces/ frequently touched sites and items of reusable patient care equipment. Environmental cleaning is therefore important in helping to control spread. The patient should be allocated their own equipment which should not be shared with other patients. Where this is not possible, equipment must be thoroughly cleaned with a disinfectant wipe before being used on another patient as per National Infection Prevention and Control Manual. • The patient's room and equipment should be cleaned at least once daily by Nursing staff using a disinfectant wipe and domestic staff with a chlorine releasing agent. • Dedicated equipment – clean as above after each use.

SICPs & TBPs	
Terminal Cleaning- following transfer, discharge or once the patient is no longer considered infectious	Remove all of the following from the vacated single room: • healthcare waste and any other disposable items (bagged before removal from the room); • bedding/bed screens/curtains and manage as infectious linen (bagged before removal from the room); and • Reusable non-invasive care equipment (decontaminated in the room prior to removal). • The room should be decontaminated: with a solution of 1,000ppm available Chlorine releasing agent. • The room must be cleaned from the highest to lowest point and from the least to most contaminated point.
Discharge planning	The clinical team with overall responsibility for the patient must inform the General Practitioner and others in the community care team of the patient's status.
Last Offices	No additional precautions required.
Visitors	• No restrictions on visitors. Advise visitors to perform hand hygiene with either Hand Rub or liquid soap and water before entering and leaving the facility. • Visitors are advised not to visit if they if they do not have a clear history of chickenpox or vaccination.

Roles and responsibilities

Who	Roles & Responsibilities
NHS Board	• To implement this guideline across NHS Board
Hospital Management Teams	• Support the HCWs, HPT and the IPCT in following this guideline
IPCT / HPT	• Keep this policy up to date. • Engage with staff to support implementation of IPC precautions described in this guideline as required. • Review national guidance • Provide education opportunities on this Guideline

Senior Charge Nurse (Ward Manager) **Care Home Manager** **Health and Social Care Partnerships**	• To provide leadership within the clinical area and act as role models in relation to IPCT. • To ensure implementation and ongoing compliance with SICPs and TBPs and take appropriate action to address any area of non-compliance. • To report any difficulty in accessing or providing sufficient resource to achieve this. • Recognise and report to the IPCT / HPT any incidences of clinical conditions where the signs / symptoms are suggestive of an outbreak.
HCWs, AHPS and Clinicians	• To ensure implementation and ongoing compliance with Standard Infection Control Precautions (SICPs) and Transmission Based Precautions (TBP). • Recognise and report to the IPCT / HPT any incidences of clinical conditions where the signs/symptoms are suggestive of an outbreak. • Inform a member of the IPCT if this guideline cannot be followed and inform their clinical lead or line manager • Prompt recognition and appropriate management and treatment of patients displaying symptoms • Isolate the patient.
PSSD	• To provide support services including domestic services to NHS Lanarkshire to maintain the cleanliness and safety of premises in line with local / national policy.

SALUS Occupational Health & Safety	• To provide specialist advice and support to clinical teams and the IPCT in relation to staff health and other matters of health & safety
	• To assess staff at pre-placement if the role involves clinical or social contact, requesting the following information:
	  • A clear history of having chicken pox
	  • Or document evidence of 2 vaccinations or serology
	Where there is no evidence available SALUS then appoint for Serology.
	If not detected SALUS offer the staff member the varicella vaccine program.

Communication Plan

This policy is available on NHS Lanarkshire intranet. Changes to policy or guidance will be communicated to key personnel via:

- Staff Brief
- Hospital and Health and Social Care Partnership Hygiene Groups
- NHSL intranet-Firstport
- NHSL external website

References 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 (2013) The Green Book Chapter 34 Varicella
- Chicken pox: Public Health Management guidance
- Chicken pox in pregnancy

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CHANGE RECORD			
Date	**Author**	**Change**	**Version**
16/07/2015	IP&CT	Revised Section P Management & Control of (Varicella) & Shingles (Herpes Zoster) Chickenpox	V1.0
06/06/2017	IP&CT	Section reviewed and updated in line with the 2 year Vale of Leven recommendations.	V2.0
09/05/2019	Governance Review Group (GRG)	Changed from a Policy to Guideline and SOP	V3.0
06/07/2021	GRG	Reviewed in line with the Vale of Leven recommendations 4.4 and appendix 2 was removed.	V4
27/07/2023	GRG	Date extended to reflect NHSL protocol for policies, guidelines and SOP	V4.1
11-09-2024	GRG	SOP added to document Guideline reviewed and updated in line with NHS Lanarkshire guidance	V5
20-03-2025	GRG	Guideline reviewed and updated in line with NHS Lanarkshire guidance and the Clinical Guideline for Chicken pox in Pregnant women was incorporated.	V6