Leicestershire Partnership NHS Trust

The Management of Chickenpox/shingles, including Screening Processes policy

This Policy sets out the process and management of chickenpox and shingles with the inclusion of screening processes for all healthcare staff within Leicestershire Partnership Trust (LPT) staff who are involved in the care of patients that develop or who suffer from symptoms of chickenpox or shingles.

Key words: Shingles, chickenpox, infection, prevention, control.

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SUMMARY & AIM

The purpose of this policy is to inform all healthcare staff within Leicestershire Partnership Trust (LPT) who are involved in the care of patients that develop or suffer from symptoms of chickenpox or shingles, the process and management of the infection.

Chickenpox, also known as Varicella, is a very contagious disease caused by the varicella-zoster virus. Because chickenpox is very contagious, it is possible for people who have never had chickenpox nor been vaccinated against it to become infected just by being in a room with someone who has the disease. However, transient exposure is not likely to result in infection. It is important therefore that staff working within healthcare are aware of how to manage or prevent the spread of infection and the treatments available.

The aim of this policy is to provide trust-wide guidance for the management of a patient with suspected or confirmed chickenpox and shingles. It is intended to provide infection prevention and control guidance to minimise the risk of transmission of the organism from the patient to other patients, staff, or members of the public.

KEY REQUIREMENTS

The intention of this policy is to provide staff employed by the Leicestershire Partnership Trust (LPT) with a clear and robust process for staff to follow in relation to the management of a patient with suspected or confirmed chickenpox or shingles to minimise the risk of transmission of the organism from patients to other patients, staff, or members of the public and applies to all staff working in LPT.

TARGET AUDIENCE:

This policy applies to all permanent employees working within LPT including medical staff and any members of staff working on the bank, agency, or honorary contract.

TRAINING

There are no specific training requirements that apply to this policy.

1.0 Quick look summary

Please note that this is designed to act as a quick reference guide only and is not intended to replace the need to read the full policy.

1.1 Version control and summary of changes

Version number	Date	Comments (description change and amendments)
1		New guideline: Infection Prevention and Control Policy for Screening and the Management of Chicken Pox/Shingles in Community Health Services, Inpatient Facilities and Primary Care
2	November 2009	Review of guideline by Amanda Howell
3	December 2009	Amendments following Consultation process. Revisions to incorporate requirements of NHSLA Standards
4	May 2010	Amendments following Identification that no longer requires policy status. Roles and responsibilities removed, will be covered under the general infection control policy,
5	July 2010	Comments incorporated from Consultation.
6	July 2011	Harmonised in line with LCRCHS, LCCHS, LPT (Historical Organisations)
7	May 2018	Review of document to reflect commonly asked questions and current practice based on updated. Source material.
8	November 2021	Reviewed in line with current guidance
9	November 2024	Reviewed in line with current guidance

For Further Information Contact: Infection Prevention and Control Department

(0116 2952320)

1.2 Key individuals involved in developing and consulting on the document.

- Accountable Director-James Mullins Interim Director of Nursing, AHPS & Quality and Emma Wallis Deputy Director of Nursing & Quality
- Implementation lead- Amanda Hemsley Head of Infection Prevention & Control
- Author(s)- Reviewed by Claire King Infection Prevention and Control Nurse
- Core policy reviewer Group- Infection Prevention & Control Assurance Group
- Trust Policy experts – see checklist for list of current contact details.
    - Corporate Governance Leads with a responsibility for policies.
    - Head of quality Governance & Quality Improvement
    - Deputy head of Nursing
    - Equality & Diversity Lead
    - Patient safety lead
    - Patient experience and Engagement lead
    - HR representative
    - Health & Safety Representatives
    - Clinical Safety Officer
    - Infection Control Representative
    - Trust Secretary
    - Head of Training and Development

1.3Governance

Level 2 or 3 approving delivery group – Infection Prevention & Control Assurance Group

Level 1 Committee to ratify policy – Quality and Safety Group

1.4 Equality Statement

Leicestershire Partnership NHS Trust (LPT) aims to design and implement policy documents that meet the diverse needs of our service, population, and workforce, ensuring that none are placed at a disadvantage over others. It takes into account the

provisions of the Equality Act 2010 and promotes equal opportunities for all. This document has been assessed to ensure that no one receives less favourable treatment on the protected characteristics of their age, disability, sex (gender), gender reassignment, sexual orientation, marriage and civil partnership, race, religion or belief, pregnancy, and maternity.

If you would like a copy of this document in any other format, please contact lpt.corporateaffairs@nhs.net

1.5 Due Regard

LPT will ensure that due regard for equality is taken and as such will undertake an analysis of equality (assessment of impact) on existing and new policies in line with the Equality Act 2010. This process will help to ensure that:

- Strategies, policies and procedures and services are free from discrimination.
- LPT complies with current equality legislation.
- Due regard is given to equality in decision making and subsequent processes.
- Opportunities for promoting equality are identified.

Please refer to due regard assessment (Appendix 4) of this policy

1.6 Definitions that apply to this policy.

Consent: a patient's agreement for a health professional to provide care. Patients may indicate consent non-verbally (for example by presenting their arm for their pulse to be taken), orally, or in writing. For the consent to be valid, the patient must:

- be competent to take the particular decision.
- have received sufficient information to take it and not be acting under duress.

Due Regard: Having due regard for advancing equality involves:

- Removing or minimising disadvantages suffered by people due to their protected characteristics.
- Taking steps to meet the needs of people from protected groups where these are different from the needs of other people. Encouraging people from protected groups to participate in public life or in other activities where their participation is disproportionately low.

Chronic disease	A disease that is long-lasting or recurrent, which may be controlled but not cured.
Consultant in Public Health	A consultant who is knowledgeable in infectious diseases
Gestational age/gestation	The period of development of the young from the time of conception until birth
Health care premises	Where care or services are delivered to a person related to the health of that individual
Immuno-compromised	An immune system that is impaired by disease or treatment where an individual's ability to fight infection is decreased.
Incubation period	The time from the moment of exposure to an infectious agent until signs and symptoms of the disease appear.
Infection	An organism presents at a site can causes an inflammatory response or where an organism is present in a normally sterile site.
Isolation	When a patient is cared for in a separate area or room due to them having an infection that may be detrimental to other individual's health. Or when the patient may be vulnerable to infection.
Neonate	New-born baby (until 4 weeks old – in relation to this guideline)
Obstetrics	The art and science of managing pregnancy, labour, and the time after delivery
Personal protective equipment	Specialised clothing or equipment worn by employees for protection against health and safety hazards. Gloves, aprons, gowns, masks, and eye protection.
Source isolation	Isolation for the control of infection is used to prevent infected patients from infecting others.
Vesicle	A fluid filled blister
Vesicular rash	A group or cluster of blisters on one or more areas of the body

2.0 Purpose and Introduction/Why we need this policy.

The purpose of this policy is to inform all healthcare staff within Leicestershire Partnership Trust (LPT) who are involved in the care of patients that develop or suffer from symptoms of chickenpox or shingles, the process and management of the infection.

Chickenpox, also known as Varicella, is a very contagious disease caused by the varicella-zoster virus. Because chickenpox is very contagious, it is possible for people who have never had chickenpox nor been vaccinated against it to become infected just by being in a room with someone who has the disease. However, transient exposure is not likely to result in infection. It is important therefore that staff working within healthcare are aware of how to manage or prevent the spread of infection and the treatments available.

The aim of this policy is to provide trust-wide guidance for the management of a patient with suspected or confirmed chickenpox and shingles. It is intended to provide infection prevention and control guidance to minimise the risk of transmission of the organism from the patient to other patients, staff, or members of the public.

3.0 Policy Requirements

3.1 Introduction

The Varicella-Zoster Virus (VZV) Is the cause of the 2 common clinical conditions chickenpox (Varicella) and Shingles (Herpes zoster). Chickenpox and shingles are **not** notifiable diseases in England and Wales (HPA 2006). Chickenpox is an acute infectious disease and is most commonly seen in children less than 10 years old, chickenpox is usually much worse in adults.

Following an infection of chickenpox, the virus remains dormant in dorsal root and cranial nerve ganglia and may be reactivated at a later date causing shingles, shingles tend to be more prevalent in adults.

It is not possible to develop shingles from exposure to a person with chickenpox, a person without immunity can develop chickenpox as a result of exposure to a person with shingles.

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

3.2 Transmission

3.2:1 Chickenpox

Chickenpox Is an acute infectious disease. The virus is shed from both the nasal pharynx and vesicles on the skin leading to transmission from person to person by:

- Direct contact, droplet, or aerosol from vesicular fluid of skin lesions
- Airborne spread of secretions from the respiratory tract.
- Contact with contaminated articles, for example equipment, clothing and bedding contaminated with respiratory secretions or vesicular fluid.

The incubation period is between 10-21 days. The virus enters the individual through the upper-respiratory tract. The infectious period is 2 days before the onset of rash and until the vesicles (blisters) are dry, which is usually 5 days after the onset of rash. This may be prolonged in immunosuppressed patients.

Significant exposure to Chickenpox is assessed as:

- Face to face contact with a case of chickenpox (e.g., having a conversation).
- Being in the same room or bay for 15 minutes or longer with a case of chickenpox.
- Direct contact with a case of chickenpox at any point in the period of time 48 hours before the rash appears until all vesicles have crusted over.

In healthy individuals, clinical illness after re-exposure is rare; such illness is more likely to occur among immuno-compromised persons.

If susceptible individuals are exposed, they should be considered infective for 8 - 21 days after exposure.

3:2:2 Shingles

Shingles is caused through the reactivation of the varicella virus and cannot be transmitted from person to person, however as varicella Zooster virus is shed from the vesicles a person without immunity can develop chickenpox.

The route of transmission is via direct contact with vesicles or vesicular fluid, the infectious period is from the appearance of the rash and until the vesicles (Blisters) are dry which is usually around 7 days after the onset of the rash.

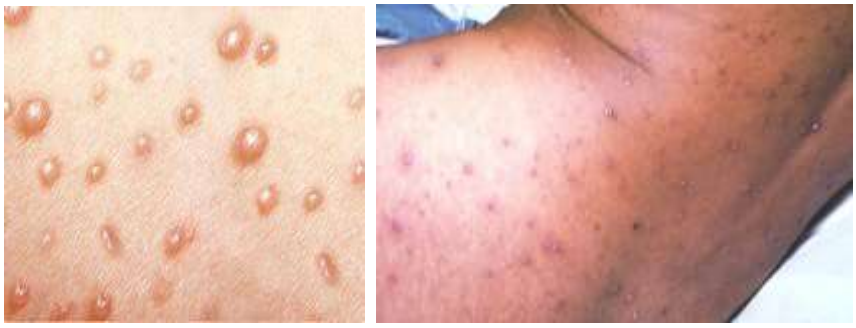
Significant exposure to shingles is assessed as:

- Contact with a case of disseminated shingles.
- Contact with immunocompetent individuals with exposed vesicles (e.g. ophthalmic shingles).
- Contact with immunocompromised individuals. With shingles on any part of the body (Viral shedding will be greater in these individuals).
- Direct contact with a case of shingles at any point in the period from the onset of the rash until all vesicles have crusted over.

3.3 Symptoms of Chickenpox and Shingles

Chickenpox may initially begin with cold-like symptoms followed by a high temperature above 38^{o}, loss of appetite, which is followed by a maculopapular rash progressing to vesicle formation which is intensely itchy. Clusters of vesicular spots appear over 3-5 days, which start on the face and scalp, spreads to the trunk, abdomen, and limbs.

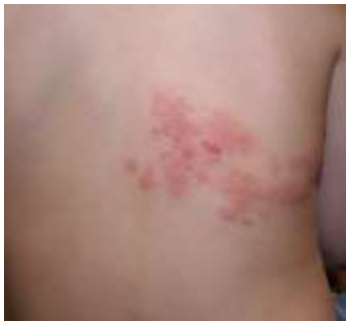
The severity of infection varies, and it is possible to be infected but show no symptoms.



Example of a Chicken pox vesicular rash-May appear differently depending on the skin tone of the patient.

Shingles may appear following the reactivation of the chickenpox virus, which can lay dormant in the nervous tissue for several years. It is not known what causes the virus to reactivate but reactivation is usually associated with conditions that depress the immune system such as age (over 50), immunosuppressive therapy and HIV infection. (Miller et al 1993)

The first sign of shingles is usually pain in the area of the affected nerve. A rash of fluid-filled blisters then appears in the affected area, typically only on one side of the body. This rash is usually present for about seven days, but the pain may. persist. 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.



Example of a Shingles Rash

4.0 Infection Control Precautions and Prevention of Spread

4.1 Patient management

The diagnosis of chickenpox and shingles can generally be reliably made on clinical grounds. Therefore, swabs or specimens do not need to be sent for laboratory analysis unless specifically requested.

All patients in In-patient facilities with suspected or known chickenpox or shingles will require source isolation precautions to be implemented in a single room until all lesions have dried, or the 5-day infectious period has expired. The Infection prevention and control team must be informed at the earliest opportunity. Immunocompromised patients may require a longer period of isolation. (Refer to LPT Policy for the Management of Patients Requiring Source Isolation).

Patients may return to nursery, school, or work once they are well and once their lesions have scabbed over. If unsure, please seek advice from UK Health Security Agency (UKHSA) East Midlands health protection team Telephone: 0344 225 4524 (option 1).

Patients with chickenpox or shingles should receive their care from staff that are immune. (All staff in direct patient contact should have their immunity to VZV checked by Occupational Health, and those not immune who work with high-risk patients should be offered immunisation).

High-risk groups are pregnant women, neonates, and immunosuppressed patients. The immune status of any member of staff who has had contact with VZV can be checked with Occupational Health. (Refer to LPT Infection Prevention and Control policy for Staff Health Relating to Communicable Infections for Staff working in Community Health Services, Inpatient Facilities and Primary Care). In the unlikely event of staff who are immunocompromised working with potentially infective patients then that staff member should seek advice immediately from the Occupational Health Department.

Patients with source isolation precautions in place should only attend appointments in other departments if clinically essential with the following precautions in place.

- Transport staff and the receiving department made aware of the infection.
- Trolleys or wheelchairs to be decontaminated after use.

Patients with chickenpox must wear a fluid repellent surgical mask.

4.1.2 Staff Management

Staff who have been in contact with chickenpox and who work with immunocompromised, obstetric, or neonatal patients should inform occupational health and advice will be given on appropriate contact arrangements.

Staff diagnosed or suspected to have chickenpox should be advised to stay off work until all the lesions have scabbed over. Occupational health must be informed when chickenpox is suspected and before the staff member returns to work.

Staff working in close contact with patients and diagnosed or suspected as having shingles, which presents in exposed areas i.e., extremities should be excluded from work until all the lesions have scabbed over (Please refer to the LPT 'The management of staff Health Relating to communicable disease policy).

4.1.3 Hand hygiene

Contaminated hands are also common routes of transmission of infection. Hands must be decontaminated after contact with a patient, after completing any task, following the use of any equipment, or removing personal protective equipment (PPE).

This must be done using liquid soap and water following the six-step hand washing technique. Ensure hands are thoroughly rinsed and then dried using disposable paper towels. Where soap and water are not available hand sanitiser can be substituted. (Refer to LPT Infection Prevention and Control Policy for Hand Hygiene in Community Health Services, Inpatient Facilities and Primary Care).

4.1.4 Personal Protective Equipment (PPE).

Disposable gloves and a disposable plastic apron and FRSM must be worn

whenever there is contact with a patient, or within the patient's environment, known or suspected of having chickenpox or shingles. (Refer to LPT Personal Protective Equipment for use in Healthcare Policy).

Visitors should be advised not to visit unless they have known immunity, they are not required to wear PPE but should be given clear advice regarding effective hand washing and hand sanitiser use when leaving the room.

4.1.5 Cleaning and Decontamination

All equipment that has come into contact with the patient or their environment must be cleaned and disinfected. (Refer to LPT Infection Prevention and Control: Infection Prevention and Control Policy for the Management of a Patient requiring source isolation in Community Health Services, Inpatient Facilities and Primary Care).

In any healthcare setting, thorough and rigorous cleaning and decontamination of the environment is essential to prevent transmission of organisms that can cause infection.

Chlor-clean disinfectant solution or wipes must be used to clean all equipment.

Increased daily cleaning of the environment should be undertaken and a post. infection clean of the patient's room or bed space, including a curtain change, must be undertaken when a patient with a known or suspected case of chickenpox or shingles has either recovered or has been discharged.

A red alginate bag must be used for soiled linen, this then being placed in a white linen bag (refer to the LPT Management of linen and laundry in community health services inpatient services and primary care policy).

4.1.6 Treatment

Not all cases require specific treatment but, in some cases, Aciclovir or Valaciclovir may be used to treat chickenpox. It is a viral infection that will not respond to antibiotics. Treatment should be based on reducing symptoms such as fever and itchiness.

Oral or IV Aciclovir and oral Valaciclovir are now commonly used to treat chickenpox in adults and occasionally severe chickenpox in both young and older children (however due to licensing, advice must be sought prior to this prescribing from the virologist/medical practitioner)

Shingles is the reactivation of an original chicken pox infection, and it is infectious

only to those who have no immunity to chicken pox. Shingles can be treated with oral antiviral drugs such as Aciclovir.

People at higher risk of developing serious complications from chickenpox or shingles may be given antiviral drugs such as Aciclovir and/or Immunoglobulin, which may prevent severe illness developing. In these circumstances seek advice either from a pediatrician or Infectious Diseases specialist

Chickenpox infection in immunosuppressed individuals, susceptible pregnant individuals and neonates can result in severe or even life-threatening varicella disease. Post exposure prophylaxis (PEP) is recommended to attenuate disease and reduce the risk of complications such as pneumonitis, rather than to prevent infection in these at-risk groups.

Historically this was achieved through timely administration of intramuscular (IM) Varicella Zoster immunoglobulin (VZIG) to those at risk. However, in response to a national shortage of VZIG the immunisation division at Public Health England (Now known as UK Health Security Agency (UKHSA) set up a working group to review evidence on the safety and efficacy of antiviral agents as an alternative for Post Exposure Prophylaxis (PEP).

Following this review, it has been recommended that antivirals are used for post exposure prophylaxis for all of the at-risk groups with the inclusion of susceptible neonates.

IVIG can also be offered as an alternative for Group 1 neonates (Please see section 5.2.4) if there are likely to be delays in sourcing varicella-specific immunoglobulin preparations.

IVIG should ideally be administered within 10 days (preferably 7 days for neonates and immunosuppressed contacts), of the first contact, but can be given later if necessary.

Supplies of IVIG, if indicated, should be available from the local hospital pharmacy or from the manufacturers. IVIG is not issued by UKHSA.

In addition, for neonates designated in group 1. I.e., those that are exposed to their mothers within 1 week of delivery (either inutero or post-delivery) the antiviral treatment should be supplemented with intravenous (IV) varicella immunoglobulin.

Contacts who cannot receive antivirals should also be given IVIG as per guidance as. this will produce serum VZV antibody levels equivalent to those that were achieved with VZIG.

This should be assessed and discussed with the following:

- Virology at UHL 01162586542
- UK health Security Agency (UKHSA), East Midlands Health Protection Team 03442254524 (option 1).

Please refer to the latest guidance on Post exposure prophylaxis for Varicella (Chickenpox) or shingles sept 2024.
https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles

5.0 Assessing susceptibility.

VZ Post exposure Prophylaxis is unlikely to give any additional benefit for patients who already have Varicella antibody (VZG IgG) and therefore prophylaxis is not recommended for individuals with adequate levels of VZV IgG, Assessment of susceptibility will depend upon the history of previous infection or vaccination and the underlying clinical condition and the individual's current treatment.

For immunocompetent individuals including pregnant individuals, a history of previous chickenpox, shingles or 2 doses of varicella vaccine is sufficient evidence of immunity. In those without such a history, antibody testing can help to identify those individuals that would benefit from VZ PEP.

Outcome of the assessment of the patient for susceptibility will need to be clearly documented in the patients record and any treatment that has been prescribed for the patient.

Please refer to the latest guidance on Post exposure prophylaxis for Varicella (Chickenpox) or shingles sept 2024. https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles

5.1 Post exposure risk assessment

Post exposure risk assessment must be carried out to establish if the person who has been exposed to the chickenpox virus (Varicella) or Shingles (Zoster) needs to receive post exposure prophylaxis (PEP) treatment.

Post exposure prophylaxis treatment is recommended for individuals who fulfil the following 3 criteria:

- Significant exposure to chickenpox (Varicella) or Shingles (Zoster) during the infectious period.
- The individual is at increased risk of severe chickenpox such as immunosuppressed individuals, Neonates, and susceptible pregnant women.

- The individual has no antibodies to varicella zoster virus (VZV).

There are 3 aspects of exposure to VZV during the infectious period for consideration when considering the need for PEP for a susceptible high-risk patient.

(A) Type of VZV infection in contact case - PEP should be issued only for those in contact with chickenpox or those in contact with the following:

- disseminated shingles.
- immunocompetent individuals with exposed shingles lesions (for example, ophthalmic shingles)
- immunosuppressed individuals with localised shingles on any part of the body in whom viral shedding may be greater.

The risk of acquiring infection from contact with an immunocompetent individual with non-exposed shingles lesions (for example thoraco-lumbar) is remote and therefore would not be an indication for PEP.

(B) Timing of the exposure- PEP should be offered to contacts in a specified risk group (see section D for definitions):

- where there is continuous exposure to a case of chickenpox or shingles (see definitions in 'Type of VZV infection in index case' above), for example household member or care worker.
- where there has been more than one exposure to a case of chickenpox or shingles (for example family friend who visited on more than one occasion during the infectious period)
- where there has been a single exposure to an immunocompetent case of chickenpox during the infectious period from 24 hours before onset of rash until 5 days after rash appearance or an immunosuppressed index case until all lesions have crusted over
- where there has been a single exposure to a case of shingles (see definitions in 'Type of VZV infection in index case' above) during the infectious period from onset of rash until the lesions have crusted over (in immunocompetent individuals, this is usually 5 days after rash appearance)

c) In addition to continuous contacts, (see above) the following contacts in the risk group should also be assessed for PEP:

- those in the same small room (for example in a house or classroom or a 2 to 4 bed hospital bay) for a significant period of time (15 minutes or more)
- face to face contact, for example while having a conversation.
- immunosuppressed contacts on large open wards, where air-borne transmission at a distance has occasionally been reported, particularly in paediatric wards where the degree of contact may be difficult to define.

Outcome of the Post exposure risk assessment for the patient will need to be clearly documented in the patients record and any treatment planned for the patient.

Please refer to the latest guidance on Post exposure prophylaxis for Varicella (Chickenpox) or shingles sept 2024.
https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles

5.2 High risk groups

5.2.1 Potentially High-Risk Patients

Certain groups of people as mentioned previously such as neonates (Infants within the first four weeks of life), pregnant women and those who are immunocompromised due to illness or treatments such as chemotherapy or high dose steroids, may experience more serious complications. These include viral pneumonia, secondary bacterial infections, and encephalitis (Miller et al 1993).

5.2.2 Pregnancy

Exposure to chickenpox or shingles poses no risk to pregnant women who have immunity to chickenpox.

Pregnant women who have never had chickenpox should avoid exposure to anyone with chickenpox or shingles.

Although most women of childbearing age are immune to VZV chickenpox in pregnant women is associated with a risk of transmission to the foetus or the newborn. The risk of infection to the foetus and the neonate is related to the time of infection in the mother.

- **Gestational age: Less than 20 weeks**- Transmission of infection can result in congenital varicella syndrome (around 1%), which includes limb hypoplasia, microcephaly, cataract, growth retardation, cutaneous scarring, and other congenital anomalies. Mortality associated with this syndrome has been reported (Enders et al 1994).
- **Gestational age:20-37 weeks**-Transmission of infection during this stage can result in shingles in an otherwise healthy infant. Shingles can occur in an infant up to 1 year of age.
- **A week before to a week after delivery**- Transmission of infection during this stage can result in severe and even fatal diseases in the neonate. These

infants are exposed to VZV without sufficient maternal antibody to lessen the severity of disease. The highest period of risk appears to be 5 das before to 2 days after delivery.

Shingles infection in a pregnant woman does not pose a risk to the mother or unborn baby.

5.2.3 Risk assessment for pregnant women

Pregnant women who are identified as contacts who have a positive history of chickenpox or shingles or have had 2 recorded doses of varicella vaccine do not require testing or PEP. In those without such a history, urgent antibody testing can help to identify if those individuals would benefit from VZ PEP. Antibody responses following vaccination may not be detectable and therefore results of VZV IgG testing in patients known to be vaccinated cannot be used to determine susceptibility. The history of vaccination should be used instead to determine need for post-exposure prophylaxis.

Antibody testing can be undertaken on a recent blood sample (booking blood samples are acceptable for pregnant women if available). Where testing is undertaken, antiviral PEP is recommended if VZV IgG is <100 mIU/ml. Antibody testing should be undertaken for individuals who may require IVIG (e.g., contraindicated to receive antivirals).

Outcome of the risk assessment of the patient will need to be clearly documented in the patients record and any treatment that has been prescribed for the patient.

5.2.4 Infants and Neonates

Although infants under the age of 1 year old may be at an increased risk of developing severe chickenpox infection the risk of life-threatening complications are more prone in neonates in the 1st week of their life. Undertaking a risk assessment in view of this is recommended considering a number of factors:

- Prescence of maternal antibodies
- Prematurity of the baby
- Timing of the exposure
- Whether the infant is hospitalised

It is advised that post exposure prophylaxis (PEP) is not usually required for neonates that are born more than 7 days after the onset of maternal chickenpox or those whose mothers develop shingles before or after delivery of the infant as the neonate will have some maternal antibodies.

Guidance also suggests that Post exposure prophylaxis (PEP) is not indicated for neonates (Under 7 days old) whose mothers have been identified as having exposure during pregnancy and are found to be VZV IgG negative unless the mother then goes on to develop chickenpox.

In this particular circumstance the mother should be assessed and considered for PEP, However PEP is only indicated for the neonate if they have been exposed to intrauterine infection around the time of their delivery manifesting as maternal infection within 1 week of delivery.

Post-exposure prophylaxis is recommended for the following infant/ neonate groups:

Group 1

Neonates whose mothers develop chickenpox (but not shingles) in the period 7 days before to 7 days after delivery: VZV IgG antibody testing of the neonate or mother is not needed. Treatment with prophylactic intravenous (i.v.) acyclovir (AZV) (10 mg/kg every 8 hours for 10 days) should be initiated as soon as possible and is the mainstay of treatment. Intravenous ACV should be administered for a minimum of 48 hours, with treatment converted to oral antivirals if preferred, to complete 14 days of prophylactic therapy. In addition to the antivirals treatment should be supplemented with i.v. varicella zoster immunoglobulin, either as a hyperimmune product (Varitect CP), or if not available, IVIG.

Varitect or IVIG should be started as soon as possible and preferably within 7 days of exposure. Where Varitect cannot be obtained within 96 hours of the onset then offer IVIG immediately, rather than waiting to offer Varitect.

Group 2

Post-exposure prophylaxis with oral antivirals (ACV, VACV or equivalent) is recommended for:

Group 2a

VZV antibody-negative infants under one year who have remained in hospital since birth who are born before 28 weeks gestation or weighed less than 1,000g at birth

or

VZV antibody-negative infants who have a severe congenital or other underlying condition that requires prolonged intensive or special care during the first year of life.

Group 2b

VZV susceptible neonates exposed to chickenpox or shingles (other than in the mother) in the first 7 days of life.

For Group 2a and 2b infants and neonates' oral antivirals (ACV, VACV or equivalent) dosing should be started from day 7 post-exposure and should be continued for 14 days.

PEP is recommended for VZV antibody-negative neonates or infants in the special groups in table 2 as defined as:

- infants whose mothers are VZV antibody-negative by a qualitative assay or <150 mIU/ml by a quantitative assay.
- infants who are themselves tested and found to be VZV antibody-negative by a qualitative assay or <150 mIU/ml by a quantitative assay.

See table 2 below.

Table 2. Risk assessment for neonates or infants with a confirmed significant exposure to chickenpox or shingles

Group	Criteria	Testing	Action
1	Neonates whose mothers develop chickenpox (but not shingles) in the period 7 days before to 7 days after delivery	Not required for mother or infant	Commence i.v. acyclovir as soon as possible following exposure and for a minimum of 48 hours; thereafter an oral switch can be considered. A full course of 14 days is recommended. In addition, treatment should be supplemented with i.v. varicella immunoglobulin or IVIG)

Group	Criteria	Testing	Action
2a	Infants (under 1 year) who have remained in hospital since birth with any one of the following: – born before 28 weeks gestational age or – weighed less than 1,000g at birth or – infants who have severe congenital or other underlying condition that require prolonged intensive or special care during the first year of life.	Test for VZV antibody status in the infant only	If found to be VZV antibody-negative by a qualitative assay or <150 mIU/ml by a quantitative assay, oral acyclovir or valaciclovir should be started from day 7 post-exposure and continued for 14 days
2b	Neonates exposed to chickenpox or shingles (other than in the mother) in the first 7 days of life	For infants whose mothers have a history of chickenpox or shingles or two doses of varicella vaccine, assume immune. Otherwise test either mother (preferred) or neonate	If found to be VZV antibody-negative by a qualitative assay or <150 mIU/ml by a quantitative assay, oral acyclovir or valaciclovir (or equivalent) should be started from day 7 post-exposure and continued for 14 days,

6.0 Immunocompromised patients

Immunosuppressed individuals presenting with chickenpox.

If, despite having received IVIG or taken prophylactic aciclovir or valaciclovir, an immunosuppressed individual presents with a chickenpox rash, they should be changed onto an oral therapeutic dose of an antiviral drug, starting from the day of onset of the rash. If severe chickenpox develops, they will need an urgent assessment and may require to be hospitalised and given intravenous (i.v.) acyclovir.

Subsequent exposure to chickenpox or shingles

Immunosuppressed individuals who have a second or further exposures, should be risk assessed as above. Given that asymptomatic seroconversion with acyclovir may occur, ideally patients should have a repeat VZV antibody test prior to considering a course of aciclovir or valaciclovir. Given the short half-life of aciclovir or valaciclovir, if there is a second exposure immediately after a course of antivirals, a second risk assessment and course should be given in the same way starting 7 days after the subsequent exposure.

Please refer to the latest guidance on Post exposure prophylaxis for Varicella (Chickenpox) or shingles sept 2024. https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles

Staff on systemic steroids

Staff who may be receiving treatment or fall into any of the categories listed above should contact the occupational health department immediately if currently at work or prior to returning to work.

Occupational Health teams contact details are as follows:

Occupational Health Department Glenfield Hospital NHS Trust 01162585307

7.0 References and Bibliography

References and Bibliography

Davies EG, Elliman DAC, Hart CA, Nicoll A, Rudd PT. Manual of Childhood Infections 2nd edition Royal College of Paediatrics and Child Health China: WB Saunders,2001:240-4.

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NHS website information page chicken pox
https://www.nhs.uk/conditions/chickenpox Accessed November 2024

NHS website information page Shingles
https://www.nhs.uk/conditions/shingles Accessed November 2024

UK Health Security Agency UKHSA Guidelines on post exposure prophylaxis (PEP) for varicella or shingles (October 2024)
https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles/guidelines-on-post-exposure-prophylaxsis-for-varicella-or-shingles-January 2023.

Public Health England, (2013). Immunisation Against Infectious Disease (The Green Book).

Public Health England, (2008). Immunoglobulin Handbook.

Public Health England, (2019). Updated guidelines on post exposure prophylaxis (PEP) for varicella/shingles

Leicestershire Partnership Trust Infection Prevention and Control Policy Hand hygiene including Bare below the elbows policy (2024)

Leicestershire Partnership Trust Infection Prevention and Control Policy for the Management of Linen and Laundry (2023)

Leicestershire Partnership Trust Personal Protective Equipment for use in Healthcare Policy (2023)

Leicestershire Partnership Trust Infection Prevention and Control Policy The management of patients requiring source isolation (2024)

Leicestershire Partnership Trust Infection Prevention and Control Policy Cleaning and decontamination of Equipment, Medical Devices, and the Environment, including the management of blood and body fluid spillages (2022)

Leicestershire Partnership Trust Infection Prevention and Control policy for Staff Health Relating to Communicable diseases (2024).

8.0 Duties within the Organisation

Duties regarding this policy can be located in the LPT infection prevention and control assurance policy.

9.0 Consent

Clinical staff must ensure that consent has been sought and obtained before any care, intervention or treatment described in this policy is delivered. Consent can be given orally and/ or in writing. Someone could also give non-verbal consent if they understand the treatment or care about to take place. Consent must be voluntary and informed, and the person consenting must have the capacity to make the decision.

In the event that the patient's capacity to consent is in doubt, clinical staff must ensure that a mental capacity assessment is completed and recorded. Someone with an impairment of or a disturbance in the functioning of the mind or brain is thought to lack the mental capacity to give informed consent if they cannot do one of the following:

- Understand information about the decision.
- Remember that information.
- Use the information to make the decision.
- Communicate the decision.

10.0 Monitoring Compliance and Effectiveness

Compliance with this policy is outlined in the LPT Infection Prevention and Control Assurance policy.

11.0 Fraud, Bribery and Corruption consideration

The Trust has a zero-tolerance approach to fraud, bribery and corruption in all areas of our work and it is important that this is reflected through all policies and procedures to mitigate these risks.

Fraud relates to a dishonest representation, failure to disclose information or abuse of position in order to make a gain or cause a loss. Bribery involves the giving or receiving of gifts or money in return for improper performance. Corruption relates to dishonest or fraudulent conduct by those in power.

Any procedure incurring costs or fees or involving the procurement or provision of goods or service, may be susceptible to fraud, bribery, or corruption so provision should be made within the policy to safeguard against these.

If there is a potential that the policy being written, amended or updated controls a procedure for which there is a potential of fraud, bribery, or corruption to occur you should contact the Trusts Local Counter Fraud Specialist (LCFS) for assistance.

Appendix 1 Immunosuppression definitions

Individuals with primary or acquired immunodeficiency states due to conditions including:

- acute and chronic leukaemia's, and clinically aggressive lymphomas (including Hodgkin's lymphoma) who are less than 12 months since achieving cure.
- individuals under follow up for a chronic lymphoproliferative disorder including haematological malignancies such as indolent lymphoma, chronic lymphoid leukaemia, myeloma, Waldenstrom's macroglobulinemia and other plasma cell dyscrasias (note: this list not exhaustive)
- immunosuppression due to HIV/AIDS with a current CD4 count of below 200 cells/µl (aged 5 years or less, with a CD4 count below 500 cells/µl)
- primary or acquired cellular and combined immune deficiencies – those with lymphopenia (under 1,000 lymphocytes/µl), including aplastic anaemia, or with a functional lymphocyte disorder.
- those who have received an allogeneic (cells from a donor) or an autologous (using their own cells) stem cell transplant in the previous 24 months.
- those who have received a stem cell transplant more than 24 months ago but have ongoing immunosuppression or graft versus host disease (GVHD)
- persistent agammaglobulinaemia (IgG under 3g/L) due to primary immunodeficiency (for example common variable immunodeficiency) or secondary to disease or therapy

Individuals on immunosuppressive or immunomodulating therapy including:

- those who are receiving or have received in the previous 6 months immunosuppressive therapy for a solid organ transplant.
- those who are receiving or have received in the previous 3 months targeted therapy for autoimmune disease, such as JAK inhibitors or biologic immune modulators including B-cell targeted therapies (including rituximab but for which a 6 month period should be considered immunosuppressive), monoclonal tumour necrosis factor inhibitors (TNFi), T-cell co-stimulation modulators, soluble TNF receptors, interleukin (IL)-6 receptor inhibitors, IL-17 inhibitors, IL 12 of 23 inhibitors, IL 23 inhibitors (note: this list is not exhaustive)
- those who are receiving or have received in the past 6 months immunosuppressive chemotherapy or radiotherapy for any indication.

Individuals with chronic immune mediated inflammatory disease who are receiving or have received immunosuppressive therapy:

- moderate to high dose corticosteroids (equivalent to 20mg or more prednisolone per day; children 1 mg/kg/day) for more than 10 days in the previous month
- long term moderate dose corticosteroids (equivalent to 10mg or more prednisolone per day or children 0.5 mg/kg/day for more than 4 weeks) in the previous 3 months Guidelines on post exposure prophylaxis (PEP) for varicella or shingles (January 2023) 25
- adults on non-biological oral immune modulating drugs for example methotrexate under 20mg per week (oral and subcutaneous), azathioprine >3.0mg/kg/day; 6- mercaptopurine under1.5mg/kg/day, mycophenolate under 1 g/day, in the previous 3 months
- children on any dose of non-biological oral immune modulating drugs
- certain combination therapies at individual doses lower than stated above, including those on at least 7.5mg prednisolone per day in combination with other immunosuppressants (other than hydroxychloroquine or sulfasalazine) and those receiving methotrexate (any dose) with leflunomide in the previous 3 months.

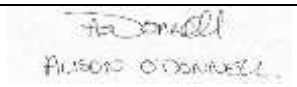
Individuals who have received a short course of high dose steroids (equivalent to more than 40mg prednisolone per day or children 2 mg/kg/day for more than a week) for any reason in the previous month.

Individuals who had received brief immunosuppression (40mg or less of prednisolone per day) for an acute episode (for example, asthma, chronic obstructive pulmonary disease (COPD) or coronavirus (COVID-19)) and individuals on replacement corticosteroids for adrenal insufficiency are not considered severely immunosuppressed and can be treated with the standard post exposure treatment.

Appendix 2 Training Needs Analysis

Training required to meet the policy requirements must be approved prior to policy approval. Learning and Development manage the approval of training. Send this form to lpt.tel@nhs.net for review.

Training topic/title:	No training identified as part of delivering this policy		
Type of training: (see Mandatory and Role Essential Training policy for descriptions)	X Not required ☐ Mandatory (must be on mandatory training register) ☐ Role Essential (must be on the role essential training register) ☐ Desirable or Developmental		
Directorate to which the training is applicable:	☐ Directorate of Mental Health ☐ Community Health Services ☐ Enabling Services ☐ Estates and Facilities ☐ Families, Young People, Children, Learning Disability and Autism ☐ Hosted Services		
Staff groups who require the training: (consider bank /agency/volunteers/medical)			
Governance group who has approved this training:		Date approved:	
Named lead or team who is responsible for this training:			
Delivery mode of training: elearning/virtual/classroom/ informal/adhoc			
Has a training plan been agreed?			
Where will completion of this training be recorded?	☐ uLearn ☐ Other (please specify)		

How is this training going to be quality assured and completions monitored?		
Signed by Learning and Development Approval name and date		Date: 24.1.25

Appendix 3 The NHS Constitution

- The NHS will provide a universal service for all based on clinical need, not ability to pay.
- The NHS will provide a comprehensive range of services.

Shape its services around the needs and preferences of individual patients, their families and their carers Answer yes to all.

Respond to different needs of different sectors of the population yes.

Work continuously to improve quality services and to minimise errors yes.

Support and value its staff yes

Work together with others to ensure a seamless service for patients yes.

Help keep people healthy and work to reduce health inequalities yes.

Respect the confidentiality of individual patients and provide open access to information about services, treatment, and performance yes

Appendix 4 Due Regard Screening Template

Section 1	
Name of activity/proposal	Management of chickenpox/shingles, including screening processes policy
Date Screening commenced	02-01-2024
Directorate / Service carrying out the assessment	Enabling infection prevention and control team
Name and role of person undertaking. this Due Regard (Equality Analysis)	Claire King infection prevention and control nurse
Give an overview of the aims, objectives, and purpose of the proposal:	
AIMS: The aim of this policy is to provide trust-wide guidance for the management of a patient with suspected or confirmed chickenpox and shingles. It is intended to provide infection.	
OBJECTIVES: The intention of this policy is to provide staff employed by the Leicestershire Partnership Trust (LPT) with a clear and robust process for staff to follow in relation to the management of a patient with suspected or confirmed chickenpox or shingles to minimise the risk of transmission of the organism from patients to other patients, staff, or members of the public and applies to all staff working in LPT.	

Section 2	
Protected Characteristic	If the proposal/s have a positive or negative impact, please give brief details
Age	Non identified
Disability	Non identified
Gender reassignment	Non identified
Marriage & Civil Partnership	Non identified
Pregnancy & Maternity	Non identified
Race	Non identified
Religion and Belief	Non identified
Sex	Non identified
Sexual Orientation	Non identified
Other equality groups?	Non identified

Section 3	
Does this activity propose major changes in terms of scale or significance for LPT? For example, is there a clear indication that, although the proposal is minor it is likely to have a major affect for people from an equality group/s? Please tick appropriate box below.	
Yes	No
High risk: Complete a full EIA starting click here to proceed to Part B	Low risk: Go to Section 4.

Section 4			
If this proposal is low risk, please give evidence or justification for how you reached this decision:			
Signed by reviewer/assessor	Claire King	Date	02-01-2025
Sign off that this proposal is low risk and does not require a full Equality Analysis			
Head of Service Signed	Amanda Hemsley	Date	02-01-2025

Appendix 5 Data Privacy Impact Assessment Screening

Data Privacy impact assessment (DPIAs) are a tool which can help organisations identify the most effective way to comply with their data protection obligations and meet Individual's expectations of privacy.
The following screening questions will help the Trust determine if there are any privacy issues associated with the implementation of the Policy. Answering 'yes' to any of these questions is an indication that a DPIA may be a useful exercise. An explanation for the answers will assist with the determination as to whether a full DPIA is required which will require senior management support, at this stage the Head of Data Privacy must be involved.

Name of Document:	The Management of chickenpox/shingles, including screening processes policy	
Completed by:	Claire King	
Job title	Infection Prevention and Control Nurse	Date: 02-01-2025

Screening Questions	**Yes / No**	**Explanatory Note**
1. Will the process described in the document involve the collection of new information about individuals? This is information in excess of what is required to carry out the process described within the document.	NO	
2. Will the process described in the document compel individuals to provide information about them? This is information in excess of what is required to carry out the process described within the document.	NO	
3. Will information about individuals be disclosed to organisations or people who have not previously had routine access to the information as part of the process described in this document?	NO	
4. Are you using information about individuals for a purpose it is not currently used for, or in a way it is not currently used?	NO	
5. Does the process outlined in this document involve the use of new technology which might be perceived as being privacy intrusive? For example, the use of biometrics.	NO	
6. Will the process outlined in this document result in decisions being made or action taken against individuals in ways which can have a significant impact on them?	NO	
7. As part of the process outlined in this document, is the information about individuals of a kind particularly likely to raise privacy concerns or expectations? For examples, health records, criminal records or other information that people would consider to be particularly private.	NO	
8. Will the process require you to contact individuals in ways which they may find intrusive?	NO	

If the answer to any of these questions is 'Yes' please contact the Data Privacy Team via Lpt-dataprivacy@leicspart.secure.nhs.uk In this case, ratification of a procedural document will not take place until review by the Head of Data Privacy.	
Data Privacy approval name:	
Date of approval	

Acknowledgement: This is based on the work of Princess Alexandra Hospital NHS Trust