

The Management of Chickenpox/Shingles, including Screening Processes Policy

This policy describes the processes and procedures for
management of chickenpox and shingles

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Which Relevant CQC Fundamental Standards?	Person centred care, premises and equipment, care and treatment must be provided in a safe way.	

Contents

Version control and summary of changes	3
Definitions that apply to this policy	4
1. Purpose of the policy	5
2. Summary and key point	5
3. Introduction	5
4. The management of chickenpox and shingles, including screening processes ..	6
4.1 Transmission	6
4.2 Symptoms of chickenpox and shingles	7
4.3 Patient management	7
4.4 Staff management	8
4.5 Hand hygiene	8
4.6 Personal protective equipment	9
4.7 Cleaning and decontamination	9
4.8 Treatment	9
4.9 High risk groups	10
4.10 Immunocompromised patients	12
References and bibliography	14
Contribution list	16

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
3	January 2010	Amendments following consultation process
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.

For further information contact:

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Definitions that apply to this Policy

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 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

1 Purpose of the 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.

2 Summary and Key Points

This policy provides Trust-wide guidance for 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 Introduction

The Varicella-zoster virus (VZV) is the cause of the two 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 tends 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 it is most common in winter and spring. The majority of people are infected in childhood and remain immune for life.

4 Infection Prevention and Control Policy for Chickenpox/Shingles Screening and Control

4.1 Transmission

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:

- a) Direct contact, droplet, or aerosol from vesicular fluid of skin lesions
- b) Airborne spread of secretions from the respiratory tract.
- c) 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.

Shingles

Reactivation of the varicella virus. Shingles cannot be transferred from person to person, however as varicella zoster 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 7 days after the onset of 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 on the rash until all vesicles have crusted over.

4.2 Symptoms of Chickenpox and Shingles

Chickenpox may initially begin with cold-like symptoms followed by a high temperature above 38°, 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.

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.

Infection Control Precautions and Prevention of Spread

4.3 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 Public Health, England 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.

4.4 Staff Management

Staff who have been in contact with chickenpox and who work with, immuno-compromised, obstetric or neonatal patients, should Inform Occupational Health, advice will be given on appropriate contact arrangements.

Staff diagnosed or suspected of having chickenpox should stay off work until 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 present in exposed areas i.e. extremities, should be excluded from work until the lesions have scabbed over (see LPT The Management of Staff Health Relating to Communicable Disease Policy).

4.5 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 Policy for Hand Hygiene in Community Health Services, Inpatient Facilities and Primary Care)

4.6 Personal Protective Equipment (PPE)

Disposable gloves and a disposable plastic apron must be worn whenever there is contact with a patient, or within the patients 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.

4.7 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 biohazard 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 LPT Infection Prevention and Control Policy for the Management of Linen and Laundry in Community Health Services, Inpatient Services and Primary Care).

4.8 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 paediatrician or Infectious Diseases specialist

For Varicella Zoster Immunoglobulin (VZIG) advice please contact:

- Virology at UHL on 0116 2586542
- Public Health England , East Midlands Health Protection Team on 0344 2254524 (option 1)

(See High Risk Groups category for patients who are likely to need VZIG)

4.9 High Risk Groups

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 such chemotherapy or high dose steroids, may experience more serious complications. These include viral pneumonia, secondary bacterial infections and encephalitis. (Miller et al 1993).

Pregnancy

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

i) 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).

ii) 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.

iii) A week before to a week after delivery

Transmission of infection during this stage can result in severe and even fatal disease 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 days before to 2 days after delivery.

VZIG may be required for the mother a few days prior to giving birth, if she is exposed to a household contact when pregnant and is non-immune. Management of a pregnant woman exposed to chickenpox or shingles should be discussed with:

- Virology at UHL on 0116 2586542
- Public Health England , East Midlands Health Protection Team on 0344 2254524 (option 1)

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

Neonates

VZIG should be given to:

- New born babies of mothers developing a chickenpox rash (but **not** shingles), 5 days or less before delivery and up to 7 days after delivery, the greatest risk being up to 2 days after delivery. The new born lacks the benefit of maternal antibody and is at risk of developing chickenpox, usually between 5 - 10 days of age with a mortality rate of 20 - 30%.
- Neonates born to seronegative mothers, who have been exposed to chickenpox or shingles in the first month of the baby's life, have an increased risk of severe chickenpox infection. The maximum benefit of VZIG occurs if given within the first 7 days of life with rapidly decreasing effect thereafter. The decision to give VZIG is dependent on most current advice and should (as for all other cases) be discussed with the virologist.
- Babies being discharged home where there is a household member with chickenpox or shingles should also be considered for VZIG.
- Babies less than 28 weeks gestation or less than 1 kg in weight at the time of exposure to chickenpox should receive VZIG regardless of maternal VZV antibody status. Mother and baby can remain together in isolation on the ward. If the infant develops infection, acyclovir should be commenced 10 mg/kg dose given 8 hourly.
- Neonatal chickenpox can still develop in infants who have received VZIG. In up to two thirds of these infants infection is mild, but rare fatal cases have occurred.

VZIG is not required (since maternal antibody will be present) for:

- a) Infants aged less than 1 month with a positive maternal history of varicella and/or positive maternal antibody result.
- b) Infants whose mothers develop zoster before or after delivery.

Maternal antibody in the baby starts to wane after 2 months of age.

4.10 Immunocompromised Patients

Patients on systemic steroids

All patients taking systemic corticosteroids should be regarded at risk unless they have undetectable levels of VZV IgG.

VZIG should be given to non-immune exposed patients as follows:

- a) Children who within the previous 3 months have received prednisolone, orally or rectally, at a daily dose of 2 mg/kg/day for at least one week or 1 mg/kg/day for one month.
- b) Adults who have received a dose of around 40 mg prednisolone per day for more than one week in the previous 3 months.

There is no evidence that topical or inhaled corticosteroid preparations are associated with an increased risk of severe chickenpox.

VZIG should be given to non-immune patients exposed to chickenpox or shingles who have had a bone marrow transplant within the previous 6 months.

VZIG should also be given to the following non-immune patients on exposure to chickenpox or shingles.

- a) Symptomatic HIV positive patients
- b) Patients on cytotoxic drugs
- c) Patients who have received an organ transplant and are on immunosuppressive treatment.
- d) Other immunocompromised patients

Patients VZV IgG status should be checked for all patients identified above to ensure the patient has a negative status prior to giving VZV IgG

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.

Practicalities of Issuing VZIG

VZIG will be issued by the on call virologist on confirmation of a lack of immunity (i.e. a negative VZV IgG test) in a contact of varicella infection. This will need to be issued on discussion with pharmacy.

VZIG will be detectable in the blood for 3 months. But if a second exposure occurs after 3 weeks, a further dose will be required.

Patients who receive VZIG are potentially incubating the illness and therefore may become infective. Giving VZIG extends the incubation period up to 28 days.

Therefore such patients should avoid contact with susceptible others from day 10 to day 28 following their own exposure.

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LPT documents

Infection Prevention and Control Policy Policy for Hand Hygiene in Community Health Services, Inpatient Facilities and Primary Care

Infection Prevention and Control Policy for the Management of Linen and Laundry in Community Health Services, Inpatient Services and Primary Care

Personal Protective Equipment for use in Healthcare Policy

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

Infection Prevention and Control Policy for Cleaning and Decontamination for Community Health Services, Inpatient Facilities and Primary Care

Infection Prevention and Control policy for Staff Health Relating to Communicable Infections for Staff working in Community Health Services, Inpatient Facilities and Primary Care

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PRIVACY IMPACT ASSESSMENT SCREENING

<p>Privacy impact assessment (PIAs) 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 first step in the PIA process is identifying the need for an assessment.</p> <p>The following screening questions will help decide whether a PIA is necessary. Answering 'yes' to any of these questions is an indication that a PIA would be a useful exercise and requires senior management support, at this stage the Head of Data Privacy must be involved.</p>			
Name of Document:	The Management of Chickenpox/shingles including screening process policy		
Completed by:	Mel Hutchings		
Job title	Infection Prevention and Control Nurse	Date	26/6/18
			Yes / No
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 themselves? 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
<p>If the answer to any of these questions is 'Yes' please contact the Head of Data Privacy Tel: 0116 2950997 Mobile: 07825 947786 Lpt-dataprivacy@leicspart.secure.nhs.uk In this case, ratification of a procedural document will not take place until approved by the Head of Data Privacy.</p>			
IG Manager approval name:			
Date of approval			

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