Shropshire Community Health
NHS Trust

Document Details	
Title	Management of Chickenpox and Shingles Policy
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Local Ref (optional)	
Main points the document covers	This policy details guidance on the management of Chickenpox (Varicella - zoster) and Shingles (Herpes zoster) within Shropshire Community Health Trust
Who is the document aimed at?	All staff who undertake direct patient care within Shropshire Community Health Trust
Author	Deputy Director of Infection Prevention and Control
Approval process	
Who has been consulted in the development of this policy?	This policy has been developed by the IPC team in consultation with appropriate senior Operations and Quality managers, Locality Clinical Managers, Specialist Nurses, Medicine Management and Public Health England
Approved by (Committee/Director)	Infection Prevention and Control Operational Meeting – notified to Infection Prevention and Control Committee and Quality and Safety Committee
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Amendments History		
No	**Date**	**Amendment**
1	June 2021	General review and update
2	November 2024	General review and update
3		

Contents

1 Introduction

Chickenpox is an acute, infectious disease caused by the varicella-zoster virus (VZV).

Chickenpox is most common in children under the age of 10 years and in the UK, 90% of adults are immune to the condition. Most chickenpox is mild to moderate and self-limiting but serious complications can occur in adulthood and in pregnant women.

Reactivation of VZV causes shingles (herpes zoster) which tends to be more common in adults.

2 Purpose

This policy details guidance on the management of chickenpox and shingles. All services directly provided by the Shropshire Community Health NHS Trust (SCHT) and all clinical staff should familiarise themselves with the policy.

3 Definitions

Term / Abbreviation	Explanation / Definition
Chickenpox	Chickenpox is an acute, infectious disease caused by the varicella-zoster virus
Encephalitis	Inflammation of brain tissue
Herpes-Zoster	Also referred to as Shingles
HIV	Human Immunodeficiency Virus
IPC	Infection Prevention and Control
Lesion	A lesion is a break or wound to the skin
Nasopharynx	Upper part of throat behind the nose
OHS	Occupational Health Service
Papular	Acute generalised skin eruption
SaTH	Shrewsbury and Telford Hospitals
SCHT	Shropshire Community Health NHS Trust
Shingles	Herpes zoster is caused by reactivation of varicella virus
Varicella-Zoster	Scientific name for Chickenpox
Vesicle	Small fluid filled blister
VZIG	Varicella-zoster Immunoglobulin
VZV IgG	Varicella-zoster Virus Antibodies
VZV	Varicella-zoster Virus

4 Duties

4.1 Responsibility for Infection Prevention and Control (IPC) outside the immediate scope of this policy

For duties and responsibilities for IPC practices outside the specific scope of this policy, please refer to the IPC Arrangements and Responsibilities Policy on the Staff Zone SCHT Staff Zone (shropcom.nhs.uk).

4.2 IPC duties specific to this policy

4.2.1 Occupational Health Service is responsible for:

- screening and assessing newly recruited staff for immunity to varicella zoster virus and administering the vaccine when indicated.
- Identifying the immune status of staff if unknown
- Liaising with IPC and clinical teams in the event of exposure to VZV

5 Clinical Features

5.1 Chickenpox (Varicella-zoster)

Chickenpox is an acute, generalised viral disease resulting from primary infection with the varicella-zoster virus (VZV) and is highly contagious. It is endemic within the UK, with most infections occurring in children under 10 years old.

The symptoms are fever and malaise prior to onset of the itchy vesicular (fluid-filled blister) rash. In children the rash is often the first sign of disease. Successive crops of lesions can appear, drying to a granular scab five or six days after the rash began. Clusters of vesicular spots appear over 3 to 5 days, mostly over the trunk and face, and more sparsely over the limbs.

Chickenpox is not a notifiable disease in England and Wales.

5.1.1 Transmission

Transmission is through direct person to person contact, airborne or droplet routes or through contact with contaminated articles such as clothing and bedding. The incubation period (the time from acquiring the virus until the symptoms first appear) is from 7 to 21 days. This can be prolonged if the patient is on steroids, is immuno-suppressed or has received varicella zoster immunoglobulin (VZIG), a specialised preparation of antibodies taken from the plasma of blood donors, which may prevent severe illness developing.

5.1.2 Infectious Period

The virus is shed from the nasopharynx for up to 5 days before the rash appears. A person is at their most infectious 48 hours before the rash appears. The infectivity continues until all the lesions have crusted over and have dried to form scabs (commonly about 5 to 6 days after onset of illness).

The severity of infection varies with each individual and it is possible to be infected and show no symptoms.

5.1.3 Treatment

Antiviral treatment is usually not required in children. Treatment should be based on reducing symptoms such as fever and itchiness.

5.1.4 Risk Groups

Chickenpox is usually a mild illness and most healthy children recover without complications. However, certain groups of people may experience more serious complications such as viral pneumonia, secondary bacterial infections and encephalitis. Groups at increased risk include:

- Pregnant women
- New-born babies
- Immunocompromised patients
- Those who have received oral or parenteral steroids in the past 3 months
- Patients with leukaemia, lymphoma, or bone marrow transplant recipients

- Patients who have had solid organ transplants
- Patients who have had radiotherapy in the last 3 months
- Human Immunodeficiency Virus (HIV) positive patients
- Patients with severe lung or cardiovascular disease
- Patients with chronic skin conditions

Evidence suggests that chickenpox is the most common risk factor for Group A Streptococcus disease (scarlet fever) in children. Please refer to the SCHT Management of Group A Streptococcus Policy.

5.2 Shingles (Herpes zoster)

The varicella-zoster virus establishes latency within nerve cells after initial infection and may be re-activated, usually in later life, as herpes zoster. i It is not known what causes reactivation but, it is usually associated with immune system depression that can occur, for example, in older age, following therapy with immuno-suppressant drugs or from HIV infection.

The first sign of herpes zoster is usually pain in the area of the affected nerve, most commonly involving the trunk. 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 7 days but the pain may persist for longer. Persistent pain is more common in elderly people and is termed 'post herpetic neuralgia' (PHN). On average this lasts for 3 to 6 months although it can continue for years in some cases. Ophthalmic zoster develops when the viral infection is localised in or around the eyes. This condition is also often associated with long-term pain.

5.2.1 Transmission

Shingles is much less infectious than chickenpox; however transmission can occur through direct contact with exudate from wet lesions or airborne transmission via vesicle fluid in disseminated shingles.

People with shingles are contagious to those people who have not had chickenpox. However, it is not possible to catch shingles from a person who has chickenpox.

5.2.2 Infectious Period

Shingles is potentially infectious from when the vesicles appear to when they dry (usually around a week). Facial shingles is thought to be more infectious than that affecting the rest of the body where clothing may reduce the virus dispersal.

5.2.3 Treatment

Treatment with an antiviral decreases viral shedding thus reducing risk of transmission; promotes rapid healing of the skin eruptions and prevents formation of new lesions. It also reduces the severity and pain associated with the acute neuritis.

5.3 Pregnant Staff

Staff who may be pregnant and have previously had chickenpox are considered to be immune. Staff who may be pregnant who have no history of VZV infection or are VZV antibody negative must avoid all contact with staff or patients with VZV disease. Exclusion is not recommended for pregnant women susceptible to chickenpox from settings that may suggest a higher rate of exposure (e.g. hospitals) because exposure to chickenpox is as likely to occur in the wider community. However, should there be a case or an outbreak of chickenpox in their working environment an individual risk assessment should be undertaken and the pregnant woman’s GP or midwife should be contacted for advice.

5.4 Healthcare Workers

SCHT's OHD must assess all staff that have contact with patients on commencing employment in SCHT for VZV immune status.

People with a history of chickenpox or shingles are considered VZV immune. A history of chickenpox is a less reliable predictor of immunity in individuals born and raised overseas and routine testing should be considered.

If an individual has no history of chickenpox or shingles antibody testing should be performed.

Varicella vaccine is recommended for non-immune healthcare workers who have direct patient contact. This is to protect vulnerable patients from acquiring chickenpox from an infected member of staff.

Staff who are found not to be VZV immune **must not** care for patients with chickenpox or shingles.

Pregnant staff of any gestation who have no history of chickenpox or shingles, and who have not received two doses of a varicella-containing vaccine **must** avoid contact with patients with chickenpox or shingles.

5.5 Prevention

5.5.1 Pre-Exposure Vaccination (Varicella Vaccine)

The aim of varicella vaccination is to protect those who are at risk of contracting VZV infection by immunising individuals who are in regular or close contact with those at risk. These include healthcare workers and healthy susceptible contacts of immunocompromised patients where continuing close contact is unavoidable.

Post-vaccination serological testing is not routinely recommended but is advisable for healthcare workers in units dealing with highly vulnerable patients e.g. transplant units. Healthcare workers should be informed at the time of vaccination that they may experience a local rash around the site of injection or a more generalised rash during the month after vaccination. In either case, they should report to the OHD for assessment before commencing work.

If the rash is generalised and consistent with a vaccine-associated rash (papular or vesicular), the healthcare worker should avoid patient contact until all the lesions have crusted. Healthcare workers with localised vaccine rashes that can be covered with a bandage and/or clothing should be allowed to continue working unless in contact with immunocompromised or pregnant patients in which case, an individual risk assessment should be made.

The vaccine should not be given to:

- Immunosuppressed patients. For patients who require protection against chickenpox, seek advice from Consultant Microbiologist at Shrewsbury and Telford Hospitals on 01743 261000.
- Women who are pregnant.
- Pregnancy should be avoided for three months following the last dose of varicella vaccine. Those who have had a confirmed anaphylactic reaction to a previous dose of the vaccine or any component of the vaccine, including neomycin or gelatine.

5.6 Post Exposure Prophylaxis

The aim of post-exposure prophylaxis is to protect individuals at high risk of suffering from severe varicella infection. Post-exposure prophylaxis is recommended for individuals who fulfil **ALL** of the following three criteria:

1. Significant exposure to chickenpox or herpes zoster.

2. A clinical condition that increases the risk of severe varicella (this includes pregnant women, neonates and immunosuppressed individuals).
3. No antibodies to varicella virus.

Please liaise with the Consultant Microbiologist at SaTH on 01743 261000 for advice on whether the administration of antivirals including acyclovir/valaciclovir, varicella-zoster immunoglobulin (VZIG) is appropriate.

6 Assessing Immunity to VZV

6.1 Clinical Enquiry

If a reliable history of past chickenpox or shingles can be obtained from the patient or a close relative, the individual is considered to be VZV immune, with the exception of bone marrow transplant patients. A history of chickenpox is a less reliable predictor of immunity in individuals born and raised overseas.

6.2 Antibody Testing

The test for VZV antibody is performed on the serum of a clotted blood sample in the virology laboratory. The level of antibody required for immunity will be indicated by the virology laboratory and will depend on the assay method used.

6.3 Recent VZIG

An individual will have circulating antibodies, which may prevent infection or reduce the severity of the illness, for about 3 weeks after a dose.

7 Significant VZV Exposure

Any potential VZV within the community hospitals must be reported to the IPC team for advice about management of contacts and staff. For advice outside normal working hours please contact the on-call Consultant Microbiologist via the SaTH switchboard on 01743 261000.

Whenever exposure to VZV is suspected, the diagnosis of chickenpox or shingles must be confirmed either by the GP or a dermatologist.

An exposure to VZV is significant if:

- The patient has chickenpox, disseminated shingles or an exposed localised lesion e.g. ophthalmic zoster. If the patient is immunosuppressed then a local lesion anywhere may be significant as the risk of shedding is greater.
- Exposure occurs between 48 hours before onset of rash to crusting of all lesions (chickenpox) or from the day of onset of rash to crusting of all lesions in shingles.
- Contact is deemed to be when within the same room e.g. hospital bay for at least 15 minutes, or direct face to face contact e.g. while having a conversation, for more than about 5 minutes, during the infectious period of chicken pox or uncovered shingles.
- The susceptibility and immunosuppression of the contact must also be taken into account.

8 Management of Patients in a Hospital Setting

All patients clinically suspected to have chickenpox or shingles whilst an in-patient in a community hospital must be placed in a single room using airborne precautions in addition to standard precautions with the door closed, until they are non-infectious. Refer to the SCHT Standard Infection Control Precautions: Hand Hygiene and Personal Protective Equipment Policy, and Isolation Policy.

8.1 Discontinuing Isolation

Source isolation precautions for chickenpox can be discontinued when the lesions have crusted over and have dried to form scabs (commonly about 5 to 6 days after onset of illness) and for shingles when the vesicles have dried (usually around a week). Patients who are immunocompromised may require a longer period of isolation.

8.2 Terminal Cleaning

Isolation rooms or wards must be terminally cleaned following discontinuation of isolation precautions and/or discharge of patients with chickenpox or shingles and include curtain changes.

Please refer to the SCHT Cleaning and Disinfection policy.

8.3 Patients' Visitors

Visitors must be informed of the risks described earlier in the policy and non-immune visitors should be advised and excluded from visiting during the infective period.

9 Procedure for Dealing with Staff Contacts

9.1 Assessment of Immunity

- If there is a reliable past history of VZV infection, or the staff member knows that they have been tested for VZV antibody and they are antibody positive, no further action need be taken.
- In the absence of a history of VZV infection and a VZV antibody test, the staff member must be tested for VZV antibody.
- If the staff member is pregnant or immunosuppressed, see the procedure for management of susceptible at risk group of patients in section 6 and 8.2.

9.2 Management of Susceptible Staff Contacts

Non-immune staff who have had significant exposure to VZV must not work with immunosuppressed or obstetric patients for 7-21 days after the contact. Staff can work up until day 7 but then not until day 22 to allow for the incubation period to have passed. In all cases, staff must contact the OHD if they become unwell during this time and should be instructed to report sick at the first sign of illness.

10 Procedure for Dealing with Patient Contacts

10.1 Assessment of Immunity

If the patient is in one of the risk groups (see Section 5.1.4) and has not been tested for VZV antibody, they must be screened. Following discussion with the Consultant Microbiologist at SaTH (see section 10 for contact details), a clotted blood sample (red-topped tube) should be sent to the virology laboratory with a request form asking for a 'VZV antibody screen' and indicating 'close contact and risk group'. The test can usually be performed within 1 working day.

Patients not in the risk groups (see Section 5.1.4) must be assessed according to their history of past infection, or the patient has been tested for VZV antibody and they are antibody positive.

10.2 Management of Patient Contacts

All patients who are not in the risk group and have no immunity should be nursed in a single room in source isolation with door closed from 7-21 days after the contact, or for as long as they remain in hospital.

10.2.1 Management of at Risk Patient Contacts

Post-exposure prophylaxis may be required for non-immune pregnant women and immunosuppressed patients.

11 Management of Infected Healthcare Workers

Healthcare workers with chickenpox should not work until the lesions have crusted over and have dried.

Healthcare workers with localised shingles on a part of the body that can be covered with a bandage and/or clothing may continue to work if well enough to do so, unless they are in contact with the risk group of patients in which case an individual risk assessment must be carried out. This should be done with Occupational Health and Infection Prevention.

12 Consultation

This policy has been developed by the IPC team in consultation with appropriate Locality Clinical Managers, advisors/specialists (e.g., Medical Advisor, Specialist Nurses, Medicine Management) and IPC Operational Group members.

13 Approval Process

The IPC Operational Group will review this policy and it will then be tabled at the IPC Committee for approval and at the Quality and Safety Committee for information.

14 Dissemination and Implementation

This policy will be disseminated by the following methods:

- Managers informed who then confirm they have disseminated to staff as appropriate
- Staff – via Team Brief and IPC newsletters
- Awareness raising by the IPC team
- Published to the Staff Zone of the Trust website

The web version of this policy is the only version that is maintained. Any printed copies should therefore be viewed as 'uncontrolled' and as such, may not necessarily contain the latest updates and amendments. When superseded by another version, it will be archived for evidence in the electronic document library.

14.1 Advice

Individual Services' IPC Link Staff act as a resource, role model and are a link between the IPC team and their own clinical area and should be contacted in the first instance if appropriate.

Further advice is available from the IPC team or the Consultant Microbiologist at SaTH on (01743) 261000.

14.2 Training

Managers and service leads must ensure that all staff are familiar with this policy through IPC induction and update undertaken in their area of practice.

In accordance with the Trust's mandatory training policy and procedure the IPC team will support/deliver training associated with this policy. IPC training detailed in the core mandatory training programme includes standard precautions and details regarding key IPC policies. Other staff may require additional role specific essential IPC training, as identified between staff, their managers and / or the IPC team as appropriate. The systems for planning, advertising and ensuring staff attend are detailed in the Mandatory Training Policy and procedure. Staff who fail to attend training will be followed up according to the policy.

Further training needs may be identified through other management routes following an incident/infection outbreak or audit findings. By agreement additional ad hoc targeted training sessions will be provided by the IPC team.

15 Monitoring Compliance

Compliance with this policy will be monitored as follows:

- Monitoring incident reports associated with chicken pox or shingles
- Auditing isolation practices on the ward.
- Numbers of staff undertaking IPC training, which includes Standard Precautions, will be monitored by the managers

The IPC team will monitor IPC related incidents reported on the Trust incident reporting system and, liaising with the Risk Manager, advise on appropriate remedial actions to be taken.

16 References

Department of Health. (2019) https://www.nhs.uk/conditions/vaccinations/chickenpox-vaccine

UKHSA. 2024. Guidelines on post exposure prophylaxis (PEP) for varicella or shingles (October 2024)

Public Health England. (2013) (Updated 2018) Immunisation against infectious disease: The Green Book, Chapter 34 – Varicella, PHE.

17 Associated Documents

This policy should be read in conjunction with:

- Standard Infection Control Precautions: Hand Hygiene and Personal Protective Equipment Policy
- Isolation Policy
- Cleaning and Disinfection Policy
- Management of Group A Streptococcus Policy