

Trust Guideline for the Management of Varicella–Zoster Infection for Health Care Workers

A Clinical Guideline recommended

For use in:	Workplace Health and Wellbeing
By:	Occupational Health Nursing and Medical staff
For:	All Health Care Staff, other agency / contracted workers and students
Key words:	VZV, Vaccination, Occupational Health
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If Yes - does the strategy/ policy deviate from the recommendations of NICE? If so, why?	N/A

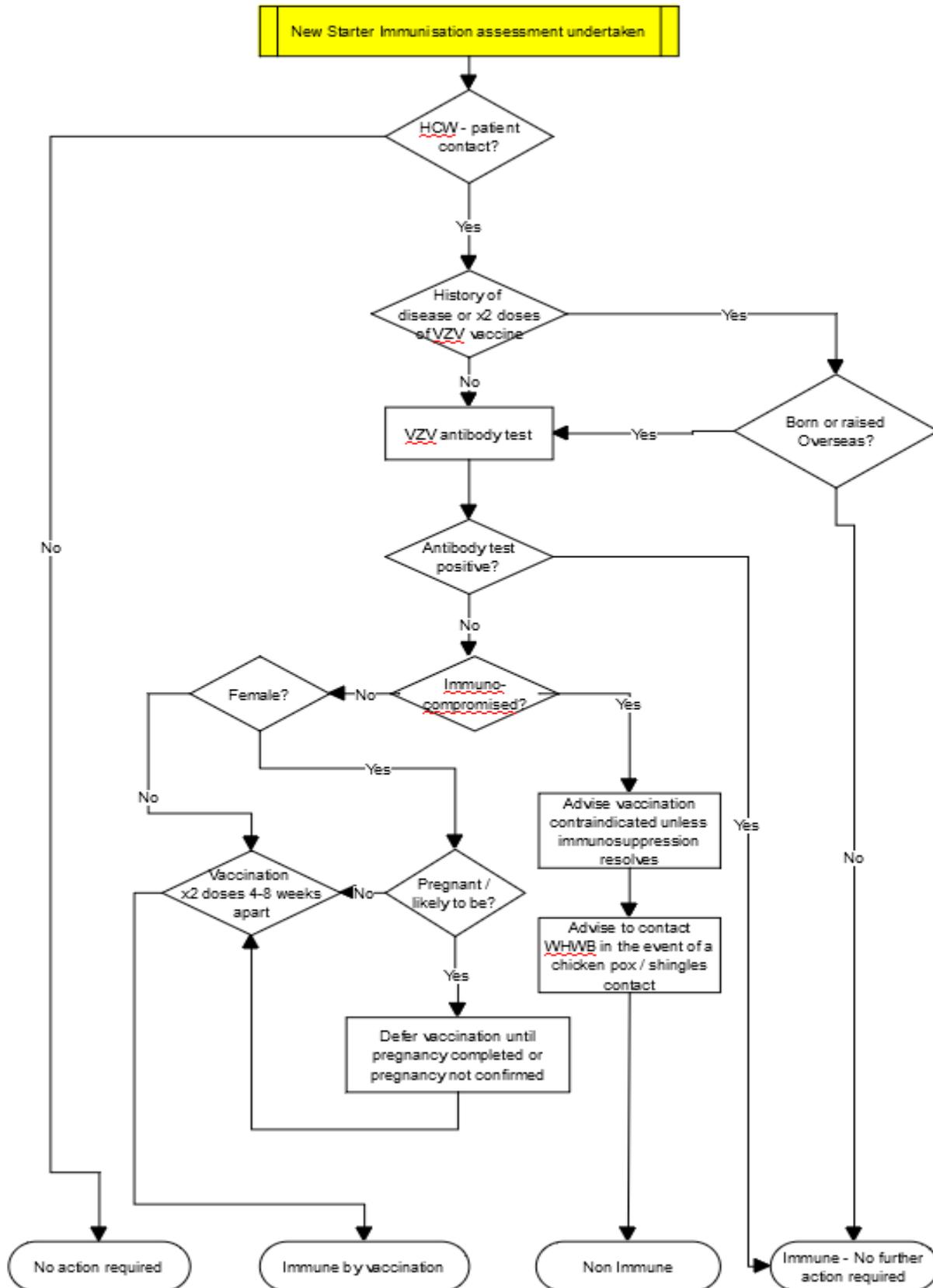
Version No.	Date of Update	Change Description	Author
4.1	19/02/2020	Addition of version control box due to updated Trust template. No clinical changes, but short review date given as Public Health England is updating the Green Book section.	Hilary Winch
5	23/08/2021	Updated to reflect PHE Guidance on post exposure prophylaxis (PEP) for Varicella / Shingles	Hilary Winch

This is a Controlled Document

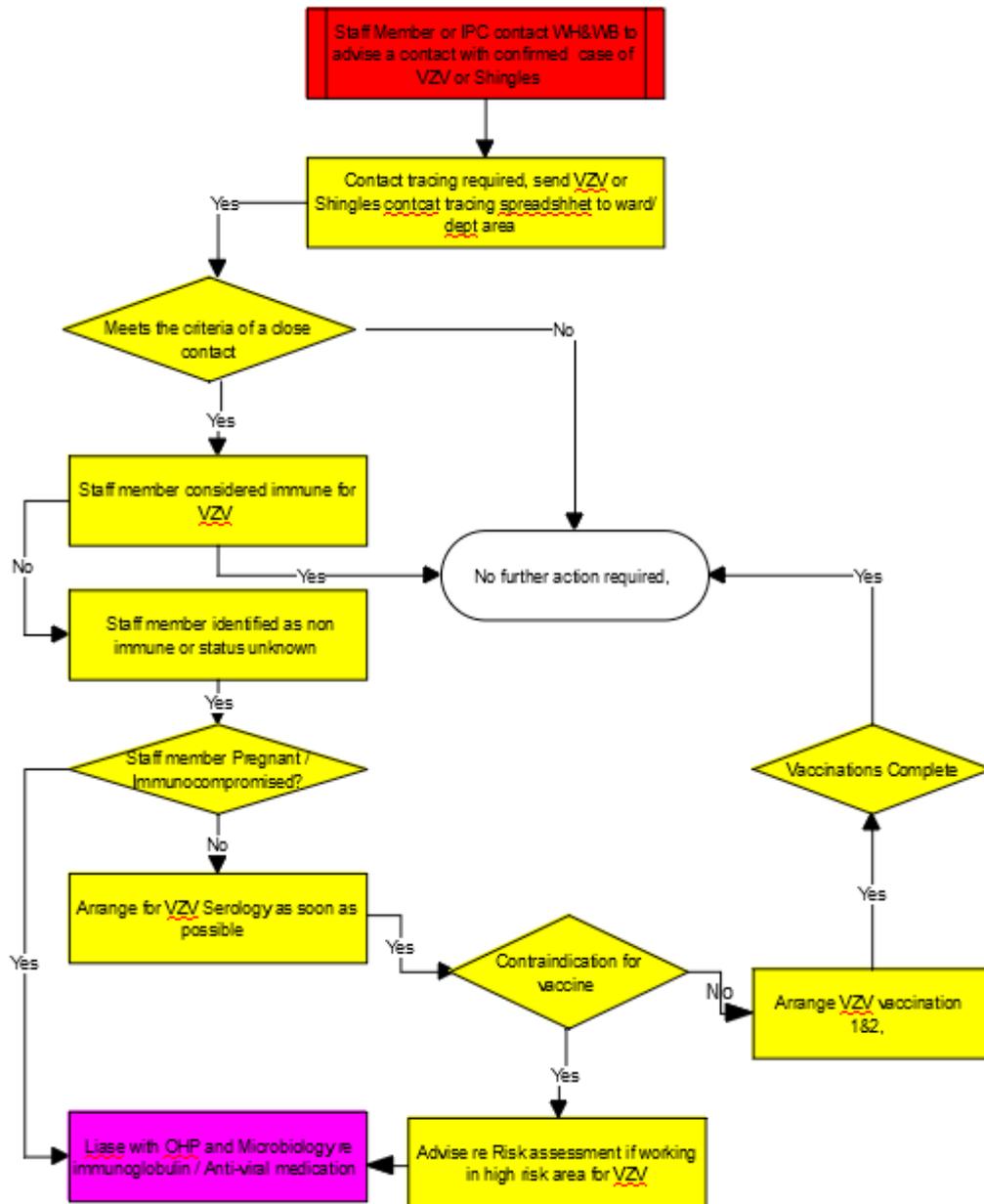
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Quick reference guideline A – Initial Screening process



Quick Reference Guide B – Contact Screening



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1.0 Objective/s

- 1.1 To ensure compliance with the Green book, Chapter 12 - Immunisation of Healthcare and Laboratory Staff and Chapter 34 - Varicella
<https://www.gov.uk/government/publications/varicella-the-green-book-chapter-12/34>
- 1.2 To provide guidance on the management of staff when in contact with a case of Chickenpox or shingles.
- 1.3 To support and advise the Trust in its commitment to protecting the health of its employees and protecting patients.

2.0 Rationale

- 2.1 Varicella (Chickenpox) is an acute, highly infectious disease caused by the Varicella Zoster Virus (VZV). In hospitals, Varicella infected persons have transmitted the illness to susceptible persons through airborne routes and without having direct contact.
- 2.2 Groups most at risk of serious illness if infected include:
 - Patients with leukaemia and other haematological and non- haematological malignancies.
 - Transplant recipients.
 - Patients with AIDS.
 - Patients on high dose steroids.
 - Neonates.
 - Pregnant women.
- 2.3 The Green Book Chapter 12 recommended that Health Care Workers with a negative or uncertain history of chicken pox should be serologically tested and vaccine offered to those without Varicella zoster antibody. This would not only reduce the exposure of vulnerable patients to staff with varicella but would also avoid the need to exclude susceptible staff and the significant costs that are incurred following a VZV exposure.

3.0 Definitions of Terms Used

3.1 Varicella - Zoster Virus (VZV)

(VZV) is a herpes virus which causes 2 distinct clinical syndromes - chickenpox and shingles. Susceptible individuals may develop chickenpox following contact with a case of chickenpox or shingles. Shingles is due to reactivation of the virus and can develop only in those who have already had chickenpox.

3.2 Chickenpox

In the UK, chickenpox occurs most commonly during childhood and over 90% of adults are already protected. Chickenpox is the primary infection and is predominantly an infection of childhood. It may begin with a flu-like illness for 1-2 days before onset of the rash. Skin lesions develop in crops and progress from macules through papules and vesicles to scabs over several days. Virus can be isolated from vesicle fluid and the base of fresh lesions.

The incubation period is 7 - 21 days, usually about 14 days, but may be prolonged in immunocompromised patients. Infectivity commences for 1-2 days, but may be as long as 4 days before onset of rash, and persists until crusts have formed, usually about 5 days after rash appears.

3.3 Shingles

Shingles is due to the reactivation of latent VZV. It can occur at any age but most patients are over 50 years. The disease often begins with paraesthesia in the involved segment for 2-3 days. Erythematous maculopapular lesions develop which rapidly evolve into vesicles and may coalesce to form bullae. Infectivity persists for 5-7 days after onset of rash although immuno-compromised patients may be infectious for longer.

4.0 Responsibility of Trust

- 4.1 To ensure the Health & Safety of patients is not compromised by their exposure to HCWs who are infected with VZV.
- 4.2 To manage and contain the impact on staff and other patients if an outbreak occurs.

5.0 Responsibility of Employee

- 5.1 HCWs who are uncertain regarding their history of chicken pox should attend Workplace Health & Wellbeing for serological testing.
- 5.2 HCWs who are not immune and have had a contact with VZV (either work based or socially) should advise Workplace Health & Wellbeing as soon as possible so that any necessary contact tracing can be implemented.
- 5.3 HCWs who develop a rash after having the vaccine should report to Workplace Health & Wellbeing before having patient contact.

6.0 Responsibility of Managers

- 6.1 To ensure all staff within their environments attend immunisation appointments and updates when commencing employment within the trust.
- 6.2 To inform Infection Prevention & Control and Workplace Health and Wellbeing if a member of staff or patient is diagnosed / exposed to VZV.
- 6.3 To provide information to Workplace Health and Wellbeing / Control of Infection team when contact tracing programmes are required.
- 6.4 To implement exclusion from work policies if staff members are identified through Workplace Health and Wellbeing as being 'at risk' of incubating Varicella.

7.0 Role of Workplace Health & Wellbeing

- 7.1 To assess (see Quick Reference Guide A) HCWs evidence as to whether they are immune to VZV. Acceptable evidence is suggested as:
 - Confirmation of a definite history of chickenpox or shingles on the health questionnaire.
 - Documented evidence of two doses of Varicella vaccine.
 - Documented serology evidence of immunity to Varicella.

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- 7.2 To undertake serological testing on all new HCWs who have an uncertain or negative history to VZV.
- 7.3 To undertake serological testing on all HCWs who are born or raised overseas regardless of whether they give a positive history of VZV.
- 7.4 To undertake serological testing in immunocompromised HCWs, as exposure and development of Varicella in these individuals could have more severe consequences.
- 7.5 To offer the Varicella vaccine to those HCWs who have direct patient contact and test negative to serological testing, providing no contra-indications for the vaccine administration are identified. This will protect susceptible HCWs as well as vulnerable patients from acquiring chickenpox from an infected member of staff.
- 7.6 The vaccine can be offered after a potential contact with chickenpox irrespective of the interval since exposure, to reduce the risk of HCWs exposing patients to VZV in the future (DOH, 2006). If a staff member is pregnant or immunosuppressed alternative post exposure prophylaxis can be considered (Immunoglobulin or oral antiviral therapy)
- 7.7 Where a Health Care worker declines vaccination, the Occupational Health professional should explore their reasons for declining, explaining the benefits of vaccination and the individuals professional duty to protect their patients from infection and encourage them to take up the vaccination. If they still decline, this will be documented in their occupational health file and their manager will be informed of their non- immune status.
- 7.8 To advise both the HCW and their manager if a period of exclusion from work is required due to a contact with the virus in the seronegative and unvaccinated individual. It is recommended that a HCW diagnosed with chickenpox to remain away from the workplace until there are no new lesions and all lesions have crusted over. It is recommended that a HCW diagnosed with localised herpes zoster on a part of the body that can be covered with a bandage and/or clothing, and who does not work with high-risk patients, should be allowed to continue working. If the HCW is in contact with high-risk patients, then an individual risk assessment should be carried out.
- 7.9 To liaise with Microbiology if consideration of VZV immunoglobulin or oral antiviral medication is required in the event that a HCW has been exposed and due to either being pregnant or Immunosuppressed cannot receive the VZV vaccine post contact.
- 7.10 To implement Contact Tracing programmes with Infection Prevention & Control for areas where staff or patients have been diagnosed with VZV accordingly within appropriate time scales (see Quick reference Guide B) and keep managers informed regarding the outcome of the programmes.

8.0 Role of Infection Prevention & Control

- 8.1 To inform Workplace Health and Wellbeing of any cases of VZV as soon as possible so that staff contact tracing can be commenced if required.
- 8.2 To initiate Contact tracing of any patient contacts from an inpatient case.

9.0 Clinical audit standards

- 9.1 To ensure all staff who have an uncertain history of VZV have serology testing.

9.2 To ensure all staff who are VZV negative are offered the VZV vaccination and if refused that this is clearly documented in their OH record.

10.0 **References / source documents**

Department of Health: Immunisation against Infectious disease
<https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book>

The Green Book, Chapter 12 - Immunisation of Healthcare and Laboratory Staff and Chapter 34 – Varicella
<https://www.gov.uk/government/publications/varicella-the-green-book-chapter-12/34>

Department of Health (2007) Health Clearance for tuberculosis, hepatitis B, hepatitis C and HIV: New healthcare workers
http://www.ambition24hours.co.uk/pdfs/Occ_Health_Current_requirements.pdf

Public Health England (2019) Updated Guideline on post exposure prophylaxis (PEP) for varicella / shingles
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/812526/PHE_PEP_VZIG_guidance_for_health_professionals.pdf

<i>Element to be monitored</i>	<i>Lead Responsible for monitoring</i>	<i>Monitoring Tool / Method of monitoring</i>	<i>Frequency of monitoring</i>	<i>Lead Responsible for developing action plan & acting on recommendations</i>	<i>Reporting arrangements</i>
To ensure all staff who have an uncertain history of VZV have serology testing	Head of Workplace Health, Safety & Wellbeing	MoHaWK report	6 monthly	Head of Workplace Health, Safety & Wellbeing	Clinical Safety Executive Board
To ensure all staff who are VZV negative are offered the VZV vaccination and if refused that this is clearly documented in their OH record	Head of Workplace Health, Safety & Wellbeing	Audit following MoHaWK report	6 monthly	Head of Workplace Health, Safety & Wellbeing	Clinical Safety Executive Board