Public Health England

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Guidance on Infection Control for Chickenpox and Shingles in Prisons, Immigration Removal Centres and other Prescribed Places of Detention

October 2014 (third edition)

About Public Health England

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1. Scope of guidance

This document provides guidance to healthcare and other staff in prisons, immigration removal centres and other places of detention in England and Wales in managing individual cases or outbreaks of chickenpox or shingles among both staff and prisoners.

This guidance is based on a review of the international published literature of chickenpox outbreaks in prisons[i,ii,iii,iv] as well as a review of individual cases and outbreaks reported through the Public Health Intelligence for Prisons and Secure Settings Service (PHIPS) surveillance system in England. The purpose of developing this specific guidance is to account for:

1. Features of infection prevention and control particular to prisons and other places of detention
2. Higher susceptibility to chickenpox among foreign-born prisoners and detainee populations because:

    - persons from rural tropical and subtropical regions are less likely than those from temperate zones to be infected as children, resulting in susceptibility in adulthood (6-fold higher susceptibility than Western European adults[iv])
    - infants and children, the group most likely to be infected with chickenpox, are located in some prisons and places of detention
    - increased prevalence of vulnerability to serious illness resulting from chickenpox in some detention populations (eg people living with HIV or AIDS, pregnant women, immunosuppressed people)

The information in this document is collated from the current guidelines (see Section 8.2) available to health care practitioners. The aim here is to translate this into a document that is operationally relevant to prison and detention settings in the situation of chickenpox or shingles cases and chickenpox outbreaks. In addition, this document also provides guidance on the protection of vulnerable contacts.

2. Signs and symptoms of infection

2.1 Chickenpox

Chickenpox is an infectious disease caused by the varicella virus, a member of the *herpes virus* family. Symptoms usually begin with one or two days of fever, flu-like symptoms and general malaise, although this may be absent. The classical sign of infection is the appearance of crops of blisters (vesicles) on the face and scalp, which spread to the trunk and eventually the limbs. The blisters are often intensely itchy. After three or four days, the blisters dry out and scab over (see Figures 1 and 2). At any time there will be vesicles at different stages of formation.

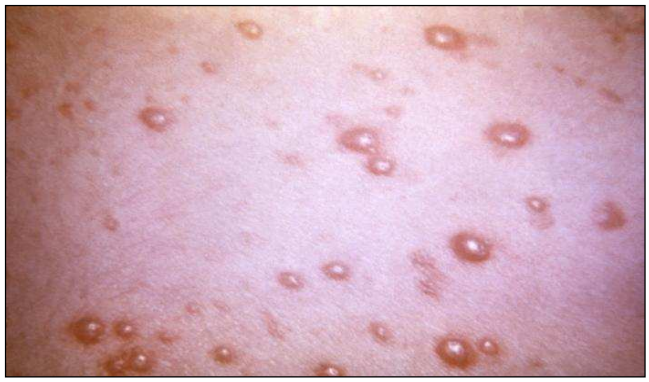


Figure 1: Classic chickenpox rash
Source: Center for Disease Control and Prevention, Dr. K.L. Hermann, ID 5047.

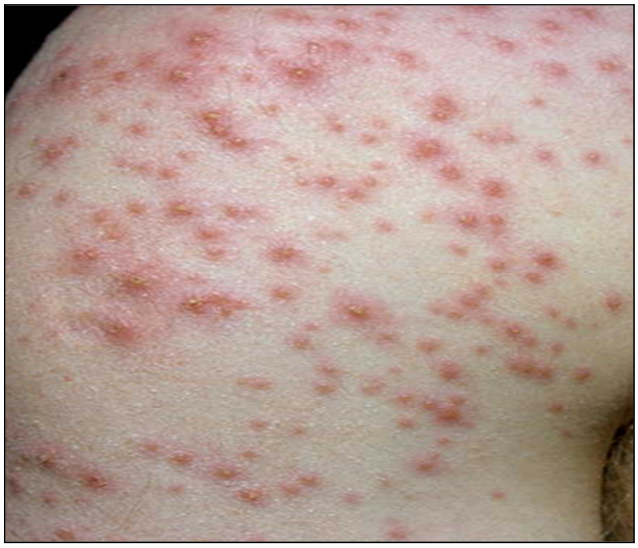


Figure 2: Resolving chickenpox rash with encrusted lesions in resolution phase
Source: Department of Dermatology, University of Erlangen, Germany.

Chickenpox is a relatively common infection in children in the UK and although it is sometimes troublesome, it is rarely a cause of significant illness. However, the disease can be more serious in adults, particularly in pregnant women, those who smoke or who are immunosuppressed. Such individuals may be at increased risk of severe varicella pneumonia. In pregnancy, the foetus is at risk, particularly before 20 weeks of gestation, when congenital varicella syndrome may occur in about two per cent of those exposed.

2.2 Shingles

Shingles or herpes zoster is caused by reactivation of previous chickenpox virus infection, which can lie dormant in nerve cells. Shingles is more common in the elderly and the immunosuppressed, and presents with blisters in a localised area of skin supplied by the nerve in which the virus has been dormant (see Figure 3). The affected area may be very painful. In some patients with advanced HIV infection, or other causes of immunosuppression, shingles may affect more than one area of the skin (multi-dermatomal herpes zoster).

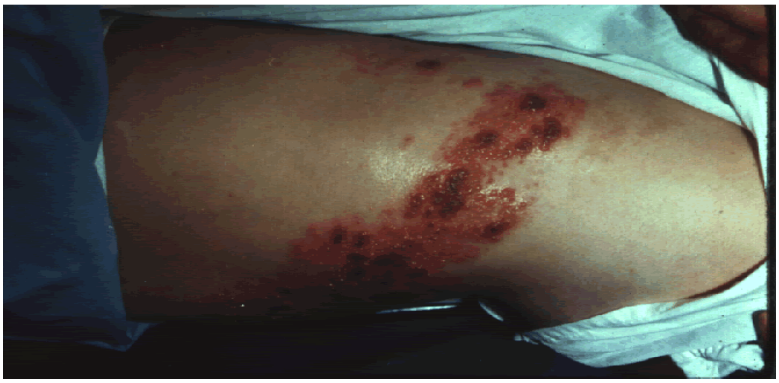


Figure 3: Shingles rash
Source: Centre for Disease Control and Prevention.

2.3 Incubation period, mode of transmission and period of communicability

The incubation period (ie the time from infection with the virus to the appearance of symptoms) is 7-21 days. The average time is about 15-18 days. Humans are the only reservoir of infection. Chickenpox is highly infectious. Shingles is also infectious, but less so. Chickenpox can be transmitted directly by person-to-person contact or by airborne droplet spread from a case. Spread can also occur from a shingles case if the lesion is on an exposed site and there is direct contact with a susceptible person. Articles of clothing, bed linen or furniture recently contaminated with discharges from vesicles or mucous membranes may also spread infection. About 9 out of 10 susceptible children will become infected if they are exposed to a case during the infectious period[v].

The infectious period for chickenpox is between 48 hours prior to the onset of the rash until crusting of lesions. For shingles (where the rash is on an exposed site), the infectious period is from the onset of the rash until crusting of lesions.

2.4 Significant exposure definition[vi]

Where all of the following three criteria are met exposure to varicella virus is considered to be significant:

1. Type of infection in the case

The case must be clinically assessed by a doctor and chickenpox or shingles must be a probable diagnosis.

2. Timing of the exposure in relation to the onset of rash in the case

The exposure must take place during the period of communicability ie from 48 hours before the development of the rash until it has crusted over for chickenpox, or from rash onset to crusting of lesions for shingles.

3. Closeness and duration of contact with the case

Being in the same room for 15 minutes or more with a case of chickenpox, or face-to-face contact with a case of chickenpox, or direct contact with a shingles rash on an exposed part of the body when the lesions have not yet crusted over.

3. Staff immune status and immunisation

Non-immune staff are at risk of both contracting and transmitting infection in environments such as prisons or immigration removal centres. The higher than average risk in these environments is due to the closeness of the population and the fact that, particularly in immigration removal centres, there are likely to be many individuals who are naïve to varicella especially if they are adults from tropical areas [vii].

Cases of chickenpox and shingles and outbreaks of chickenpox continue to be reported from prisons in England (3 cases of chickenpox, 5 outbreaks in 2012, 3 cases and 12 outbreaks in 2013 and 1 case and 3 outbreaks in 2014 (up to September) (*personal communication from the PHIPS team surveillance system)*. These figures confirm that this disease is not uncommon and it needs to be managed appropriately to avoid closure of units and disruption to core business.

As stated above, chickenpox can be more serious in adults, particularly pregnant women and those who smoke. In cases of high-risk vulnerable[viii] staff being exposed to varicella, advice from a doctor should be sought. The risk to staff is dependent on their immune status and 90% of adults raised in the UK are immune. In most situations, a definite history of chickenpox is usually sufficient evidence that a staff member is immune, with history of chickenpox having a positive predictive value of 90%[iv]. The history may be less reliable, however, in people raised in tropical countries where chickenpox is less common and other causes of rash more numerous. When chickenpox occurs in a detention setting only those staff who have a reliable history of chickenpox, have been confirmed to be immune, or have been vaccinated should attend cases or staff units with more than one case. It is therefore advisable that staff with an uncertain history of chickenpox have a blood test to determine the varicella immune status, ideally prior to commencing employment. This is highly desirable for pregnant women and staff who are immunosuppressed.

Non-immune staff who are exposed to chickenpox and themselves become infectious, risk spreading the disease to others. Thus, staff without a definite history of chickenpox who have inadvertently had significant exposure (see above) will need to be identified and have their immune status checked, as part of the management of any incident. If then found to be non-immune appropriate action to prevent further spread should be taken, such as exclusion from work for the duration of the incubation period.

The above risks can be reduced if non-immune staff are identified *before* their employment in such centres and offered vaccination. This can be provided either by their GP or, if a service exists, an occupational health doctor/nurse in accordance with Control of Substances Hazardous to Health (COSHH) Regulations.

4. Case and contact management

Any infectious disease incident in a prison or immigration removal centre or other prescribed place of detention must be immediately reported to the Consultant in Communicable Disease Control (CCDC) by contacting the Health Protection Duty Team of the local Public Health Centre (PHE) (contact details are available from https://www.gov.uk/contacts-phe-regions-and-local-centres.)

An incident may be an outbreak (two or more connected cases of varicella and/or zoster) or a single case of varicella or zoster that has implications for infection control.

Infectious disease incidents are managed by CsCDC (see Prison Outbreak plan[ix]) in their local community, which includes prisons and other detention settings. Benefits to a prison or centre when involving their local CCDC include expert advice on infection prevention and control and facilitating outside laboratory testing and hospitalisation, where necessary.

This guidance refers specifically to Chickenpox and Shingles, both *Single Case Situations* (Section 4.1 on page 4) and *Outbreak Situations* (Section 4.2 on page 6). In addition, there is a further section on *Case Management of HIV-Infected Individuals* (section 4.3 on page 7) relating both to detainees and staff.

Additionally, information on chickenpox and shingles, like other communicable diseases, and their prevention and control, can be found in the manual 'Prevention of infection and communicable disease control in prisons and places of detention' *https://www.gov.uk/government/publications/infection-control-in-prisons-and-places-of-detention*

4.1 Single case situation

There is no need to close detention settings to new admissions based on a single case of chickenpox or shingles being identified.

Rapid consultation with the local CCDC and adherence to advice given is necessary to avoid onward transmission of infection and the development of new cases.

Recommended actions for managing a single chickenpox case in prison or other detention settings are:

1. When a diagnosis is suspected (**possible** case), the doctor providing health care to the centre should assess the individual as soon as possible to establish whether chickenpox is the most likely diagnosis, ie whether this is **a probable** case. The centre doctor might discuss the diagnosis but more specifically infection control related issues with the CCDC at the local HPT, who may seek expert clinical guidance from the local infectious disease unit, if necessary (CCDC contact details are available at https://www.gov.uk/contacts-phe-regions-and-local-centres).

2. **A possible case should be isolated in a separate room within the prison or detention setting.**

3. Following clinical confirmation of diagnosis as probable or confirmed by the doctor. Isolation should continue until the lesions have crusted over.

4. Usually clinical diagnosis is sufficient to confirm chickenpox; a careful history and/or close observation of the progression of the rash will usually allow the doctor to be confident of the diagnosis. A probable diagnosis can be assisted by discussion with the local CCDC, and additional information (such as a history of chicken pox in childhood) may be helpful. However, in some circumstances, especially in Immigration Removal Centres where there might be higher numbers of susceptible individuals amongst detainees, it might be advisable to request laboratory confirmation, if the treating physician has reservations about the certainty of diagnosis based purely on clinical picture (atypical presentations; few lesions) This will allow the reviewing of control measures following exclusion of laboratory diagnosis of chickenpox, with earlier resumption of normal activity in the centre.

5. For laboratory diagnosis of chickenpox a PCR (Polymerase Chain Reaction) test for varicella-zoster virus DNA should be requested. For the PCR test, cells and fluid from the base of a vesicle are required. Using a sterile needle gently lift the edge of one of the larger vesicles (ie un-roof the vesicle) and rub the base of the lesion using a dry virus swab. The swab should then be put into a sterile container (this will require cutting the shaft with scissors), such as urine container, and sent to nearest laboratory requesting varicella-zoster DNA PCR. The correct execution of the sample taking is key to a reliable result. (*See attached instructions for PCR testing)* VZV antibody test (IgG/IgM) on a blood sample are not recommended for diagnosis of chickenpox because of the timing of appearance of the antibody and the difficulty in interpreting results if test is not done at the correct time. Saliva testing for VZV is being developed and might be available in the near future.

6. While in isolation the case should take all their meals in this room and not in communal dining areas during this period. Only confirmed immune/immunised healthcare workers, prison/ centre staff or family members (unless the case is a child - see point 7 below) should enter this room to administer treatment, bring food and beverages, change linen etc.

7. Where the isolation room does not have adjacent bathing facilities, the case should use the nearest facilities separately *before* or *after* the block/ wing prisoners or detainees have showered.

8. If the isolation room does not have adjacent toilet facilities, a toilet should be designated for sole use by the case. Contact with other prisoners/ detainees and susceptible staff en route to the toilet should be avoided.

9. No special measures are necessary for cleaning or disposal of linen and laundry or dishes, glasses and eating utensils used by the case, assuming a reasonable level of hygiene is maintained in the prison or centre, comparable with community hospitals.

10. Where the case is an infant or a child, parent/s should be accommodated in the same room as their child for the same duration as their child is isolated, regardless of the parental immune status. Parents without a reliable history of chickenpox should be offered testing to ascertain their *varicella* immune status. If they are confirmed to be immune by history or

blood test, it is reasonable for them to leave the isolation room as necessary eg to eat, make phone calls, meet visitors etc. If the parent/s are tested and shown to be non-immune, then they should stay in isolation with the child as per points 2-5 (they may share the designated toilet facility with their child). In addition non-immune parents have a high chance of developing varicella and should remain in isolation until the incubation period for acquiring infection from their child has passed (21 days from the date of onset of the child's illness). Note that persons from tropical and subtropical regions are more likely to be susceptible to chickenpox in adulthood, and particular care should be taken to establish their immune status.

11. Vulnerable contacts who are susceptible and have had significant exposure (see 2.4 Significant Exposure Definition on page 3) should be offered varicella zoster immunoglobulin (VZIG) prophylaxis (see 5.1 Varicella Zoster Immunoglobulin Dosage and Schedules on page 8). Vulnerable contacts include:

- pregnant women
- neonates
- immunocompromised individuals, including HIV-infected persons

Immune status of vulnerable contacts in relation to *varicella* should be determined by blood test. For those who are non-immune, VZIG should be administered within seven days of initial significant exposure to a case (within ten days for pregnant women). Guidelines on use of VZIG among different contacts are available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/148515/Green-Book-Chapter-34-v2_0.pdf

Advice on VZIG administration should be sought from the local CCDC, who may liaise with the Centre for Infections for case by case advice.

4.1.1 Management of staff with chickenpox or shingles

All prison / centre staff without a history of chickenpox, should ideally have their varicella immune status tested, and in immigration removal centres those who are non-immune should ideally be offered vaccine, as an occupational health measure (see Section 3). Non-immune and un-immunised staff who develop symptoms of chickenpox infection must inform their employer of their illness **and stay away from work until crusting over of lesions**. Vulnerable non-immune contacts with significant exposure (see *2.4 Significant Exposure Definition* on page 3) to chickenpox-infected staff in the prison or centre should be identified and offered VZIG prophylaxis (see *5.1 Varicella Zoster Immunoglobulin Dosage and Schedules* on page 8).

4.1.2 Prisoner and detainee transfer and release arrangements

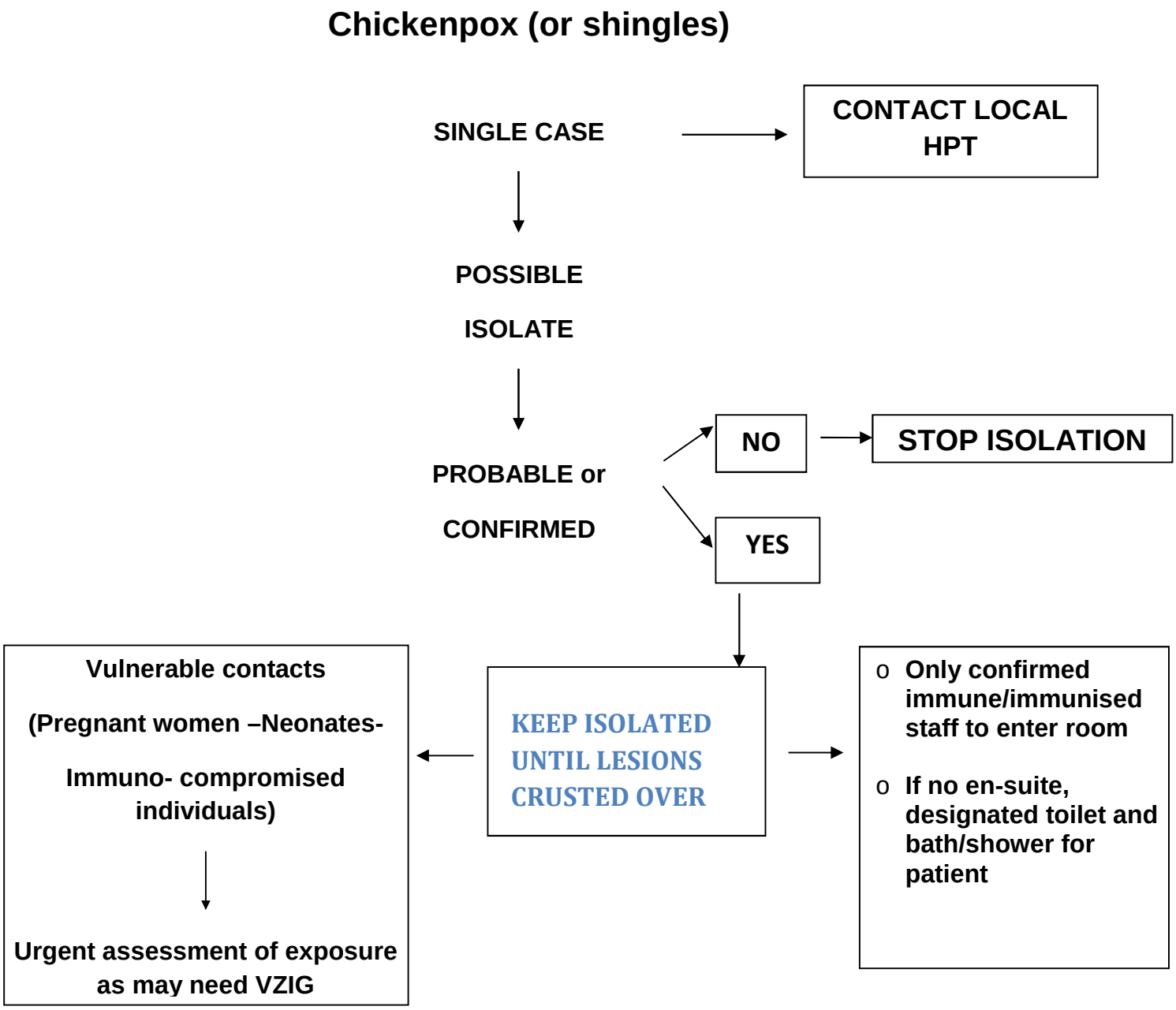
Case

For chickenpox-infected cases, court appearance, transfer to another institution or a flight abroad must be delayed until crusting of lesions. It is essential for the prison doctor or attending physician to put cases on medical hold, including informing the governor or director. Cases being released into the community should be advised they are infectious until crusting of lesions and that they should stay at home during this period.

Contact/s

For a single case of chickenpox in a prison / centre, there are no restrictions on the movements of their asymptomatic contacts. Court appearance, transfer to another institution, release into the community or a flight abroad can proceed as usual. Note that in an outbreak situation however this advice may change.

Algorithm 1: Chickenpox or shingles single case



NO NEED FOR CLOSURE TO ADMISSIONS FOR A SINGLE CASE OF CHICKENPOX OR SHINGLES

4.2.1 Prisoner and detainee management

The management of any outbreak will vary depending upon the particular circumstances eg who is affected, how many individuals, where they are located, the vulnerability of other detainees, and the domestic arrangements in the prison / centre. The CCDC must be involved to advise on infection control where one case has occurred, and must be informed immediately when there is more than one case.

In addition to *Single Case Situation* recommendations 2 to 8 (Section 4.1 on page 5) and *Management of Staff with Chickenpox or Shingles* (section 4.1.1 on page 6), actions advised to manage a chickenpox outbreak in a prison or other detention setting ***may*** include any or all of the following depending upon the particular circumstances:

- closure of part of the prison / centre to admissions for 21 days (the maximum incubation period) from the onset of symptoms in the most recent case
- admission only to detainees confirmed to be immune to *varicella* by blood test for 21 days from the onset of symptoms in the most recent case
- access to affected parts of the prison / centre restricted to staff confirmed to be immune/immunised for 21 days from the onset of symptoms in the most recent case.
- staffing an empty wing with confirmed immune staff for new admissions, providing there is no mixing of staff, prisoners or detainees with other wings
- restriction of transfers of contacts of cases for 21 days from the onset of symptoms in the case/s they contacted
- quarantine of the whole prison / centre for 21 days from the onset of symptoms in the most recent case

The Outbreak Control Team (OCT), led by the CCDC, will assess the risk associated with the outbreak, in consultation with other experts as necessary, and will advise the Governing Governor or IRC Manager. Decisions to close all or part of a prison or an IRC cannot be made by the OCT alone. Governors or IRC managers will consult with appropriate persons in their respective chains of command, if advised by the OCT to take this action.

Role of vaccination in outbreaks

Varicella vaccination in a prison or centre outbreak is one of a number of possible control measures which may be implemented. In most outbreak situations, mass vaccination will not be required, but rather selected vaccination of non-immune individuals who have been in contact with the case(s)[x]. There are often logistical difficulties in assessing immune status and completing the course prior to a prisoner or detainee being transferred / released / deported. In some situations, the local CCDC and prison or centre healthcare team may opt for vaccination as an outbreak management measure, following a carefully documented assessment of the situation specific risk. Decision-making on varicella vaccination should consider the following:

- current and likely extent of the spread of infection in the prison
- likely impact of mass vaccination (based on likely susceptibility of prison population / prevalence of vulnerable contacts)
- feasibility of implementing timely vaccination including:
    - time necessary to establish individual/s' immune status against *varicella* prior to vaccination
    - availability of trained prison or centre healthcare staff to administer vaccine
    - availability of a varicella vaccine Patient Group Direction

- feasibility of administering 2 doses in individuals aged 13 years and over in the prison / centre or destination if the prisoner or detainee may be transferred / released/ deported before the course is complete
- availability of local NHS England funding

4.3 Case management of adult HIV-infected detainees and staff

This section is based on the British HIV Association *Immunisation Guidelines for HIV-Infected Adults*[xi], to address the specific clinical practice appropriate for immunisation among HIV-infected individuals. Whenever possible the guidelines are consistent with recommendations from the Department of Health *Immunisation Against Infectious Disease – 'Green Book'.* HIV-infected individuals are at risk of developing severe illness from either varicella or zoster, which may be life-threatening. HIV-infected detainees and staff may conceal their HIV status or not know they are infected.

4.3.1 HIV-infected case

The British National Formulary (BNF) recommends a dose of 800mg acyclovir 5 times daily for 7 days. Treatment may need to be continued longer than 7 days if new lesions appear during treatment or if healing is incomplete. In HIV infected children, a dose of acyclovir of 20mg/kg (maximum 800mg) 4 times daily for 5 days should be used. Alternatives to acyclovir exist and the British National Formulary should be consulted.

HIV-infected individuals and contacts

Varicella vaccination is recommended for all susceptible HIV-infected adults, and this is of particular importance in a detention setting where there may be an increased risk of exposure to the virus. A 2 dose varicella pre-exposure vaccination course is recommended for all susceptible HIV infected adults, even for individuals with a current CD4 count of less than 400 cells/mm^3, and may be considered among those with a count of less than 200 cells/mm^3. Even where a known HIV-infected individual has been vaccinated, contact with a varicella case should be avoided.

Post-exposure prophylaxis

Recommendation for post-exposure prophylaxis in HIV-infected persons following a significant exposure of an HIV-infected patient to varicella or zoster, their VZV IgG status should be ascertained if possible. Seronegative patients should be considered for post-exposure prophylaxis and closely monitored for symptoms of varicella. Prophylaxis should be tailored to the patient's clinical status and the following approach is recommended:

Symptomatic HIV infection and/or CD4 <400 cell/mm^3 (with or without HAART) (C, IV)

- VZIG must be given as soon as possible, preferably within 7 days and not later than 10 days after exposure. Prophylaxis should not be delayed beyond 7 days pending availability of test results. The patient should be observed closely for signs or symptoms of varicella for 28 days following exposure.

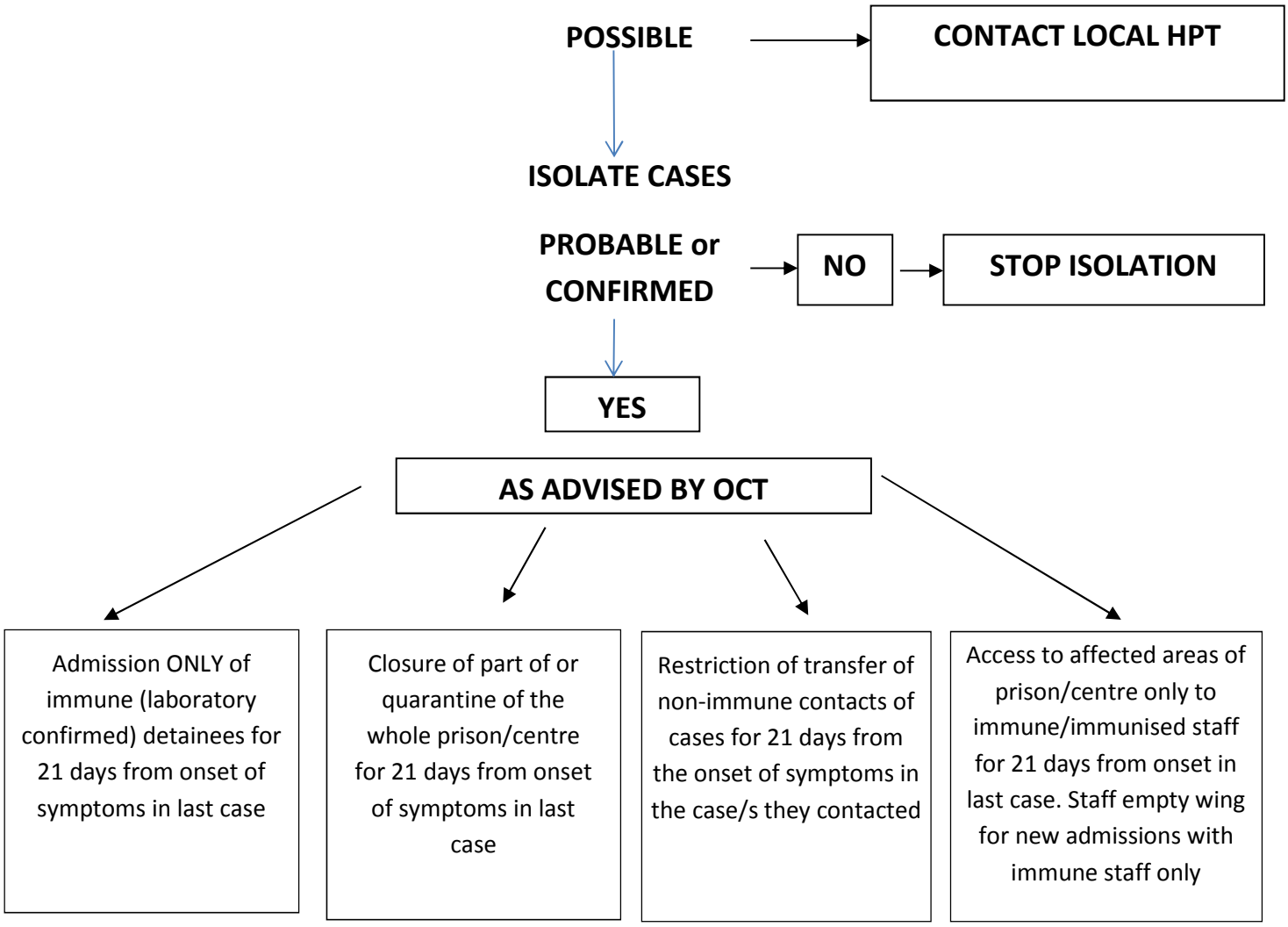
- Antiviral post-exposure chemoprophylaxis with oral acyclovir (800 mg four times daily or equivalent) may be considered if VZIG is not available, or given in conjunction with VZIG in profoundly immunocompromised patients (C, IV).

Asymptomatic HIV infection and CD4> 400 cell/mm^3 with or without HAART (C, IV)

- Consider post-exposure prophylaxis with Varivax (Varilrix is not licensed for prophylaxis) within three days of exposure. Varicella vaccinees should be warned to report post-vaccine rashes or other symptoms and be evaluated promptly for antiviral therapy. The second dose should normally be scheduled after three months with subsequent serological testing to confirm VZV IgG seroconversion. There are currently no data supporting this recommendation and the risk of vaccine-related adverse events must be balanced against the risk of severe complications resulting from natural infection in these patients.

Algorithm 2: Chickenpox outbreak

CHICKENPOX OUTBREAK (2 or more linked cases)



5. Varicella zoster immunoglobulin (VZIG)

5.1 Dosage and schedules[xii]

The VZIG preparation licensed for use in England and Wales is made by Bio Products Laboratory (BPL), Elstree. The 'Green Book' prophylaxis dose and schedule guidelines are as follows:

- **0-5 years old:** 250mg (1 vial)
- **6-10 years old:** 500mg (2 vials)
- **11-14 years old:** 750mg (3 vials)
- **15 years old and over:** 1,000mg (4 vials)

VZIG is administered by intra-muscular injection in the upper outer quadrant of the buttock or the anterolateral thigh. If a second exposure occurs after three weeks, a further dose may be required (depending on Ab testing as individual may have seroconverted after first exposure). VZIG is available from the Regional Laboratories (see *8.1 Regional Contacts for Varicella Zoster Immunoglobulin*).

Box 1: Guidance on use of VZIG as post-exposure prophylaxis

Is the contact at risk of severe disease?

- Immunocompromised patients
- Infants whose mothers develop chickenpox (but not *zoster*) in the period 7 days before to 7 days after delivery
- Non-immune infants exposed to chickenpox or zoster (other than via mother) in the first 7 days of life
- Pregnant women exposed at any time during pregnancy

Is the exposure significant?

- VZIG is only indicated for exposure to chickenpox, disseminated herpes zoster, exposed herpes zoster lesions or immune suppressed patients with herpes zoster
- VZIG is only indicated for exposure between 2 days before onset of rash to crusting of lesions
- Closeness and duration of the contact eg contact in same room for 15 minutes or more, face-to-face contact, contact on same wing/ cell

Is the contact already immune?

- If a person has a good history of chickenpox then they are immune
- Those without a history of chickenpox may still have had the disease and so should be tested for immunity

Is the contact HIV-infected?

- If the person has a CD4 count above 400 cells/mm^3 VZIG is recommended within 7 days and up to 10 days after exposure

- If the person has a CD4 count below 400 cells/mm^3 VZIG is recommended within 3 days, and vaccination should be considered (see section 4.3 *Case Management of HIV-Infected Staff and Detainees*)

5.2 Contraindications to VZIG and adverse effects

Contacts with bleeding disorders who cannot be given intramuscular injections should instead be given intravenous normal immunoglobulin at a dose of 0.2g per kg body weight.

VZIG is generally well tolerated. Very rarely anaphylactic reactions may occur in some individuals with specific immunological conditions or in those who have had atypical reactions to blood transfusions.

Note that where VZIG has been given this may interfere with development of active immunity from live vaccines and three months should elapse before live vaccines (other than yellow fever) are given. If VZIG is given within three weeks of administering a live vaccine (other than yellow fever) then the vaccine should be repeated three months later.

6. Aciclovir prophylaxis

Where VZIG is not indicated oral aciclovir might be used to attenuate an attack of chickenpox (when started within 24 hours of symptoms), for example in otherwise immuno-competent children with conditions that might make them more susceptible to severe disease eg cystic fibrosis. The dose used in this circumstance is 40mg/kg/day in divided doses given from days 7 to 14 after exposure. There is no evidence of effectiveness of this regime in the immuno-compromised and adults. *See* 'Rash in pregnancy guidance':

https://www.gov.uk/government/publications/viral-rash-in-pregnancy

7. Varicella zoster vaccination

7.1 Dosage and schedules[xiii]

- New green book chapter recommends all children over 1 year of age and adults should receive 2 doses of vaccine 4-8 weeks apart

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/148515/Green-Book-Chapter-34-v2_0.pdf

7.2 Contraindications to varicella zoster vaccination

The vaccine should *not* be given to:

- Immune suppressed individuals but see section on HIV in 4.3
- Women who are pregnant. Pregnancy should be avoided for three months following the last dose of *varicella* vaccine.
- Individuals with a confirmed anaphylactic reaction to a previous dose of the vaccine
- Individuals with a confirmed anaphylactic reaction to any component of the vaccine, including neomycin or gelatine.

8. Further information and useful contacts

8.1 Contacts for varicella zoster immunoglobulin

For list of VZIG holding centres in England and Wales and relevant contacts within centres, follow the link:

https://maps.google.com/maps/ms?ie=UTF&msa=0&msid=110155481786585273569.000465ca748c189b9d13e

Further information

Green Book Chapter - *Varicella*
https://www.gov.uk/government/publications/varicella-the-green-book-chapter-34

Immunoglobulin Handbook - *Chickenpox*
https://www.gov.uk/government/publications/immunoglobulin-when-to-use

Public Health England - Prevention of Infection and Communicable Disease Control in Prisons and Places of Detention
https://www.gov.uk/government/collections/public-health-in-prisons#infection-control-in-prisons-and-secure-settings

Public Health England – Immunisation: Information for health professionals and immunisation practitioners
https://www.gov.uk/government/collections/immunisation

Public Health England - Contacts: PHE regions and local centres
https://www.gov.uk/contacts-phe-regions-and-local-centres

Public Health England Public health in prisons and secure settings
https://www.gov.uk/government/collections/public-health-in-prisons

NaTHNac (National Travel and Health Network and Centre)
www.nathnac.org/

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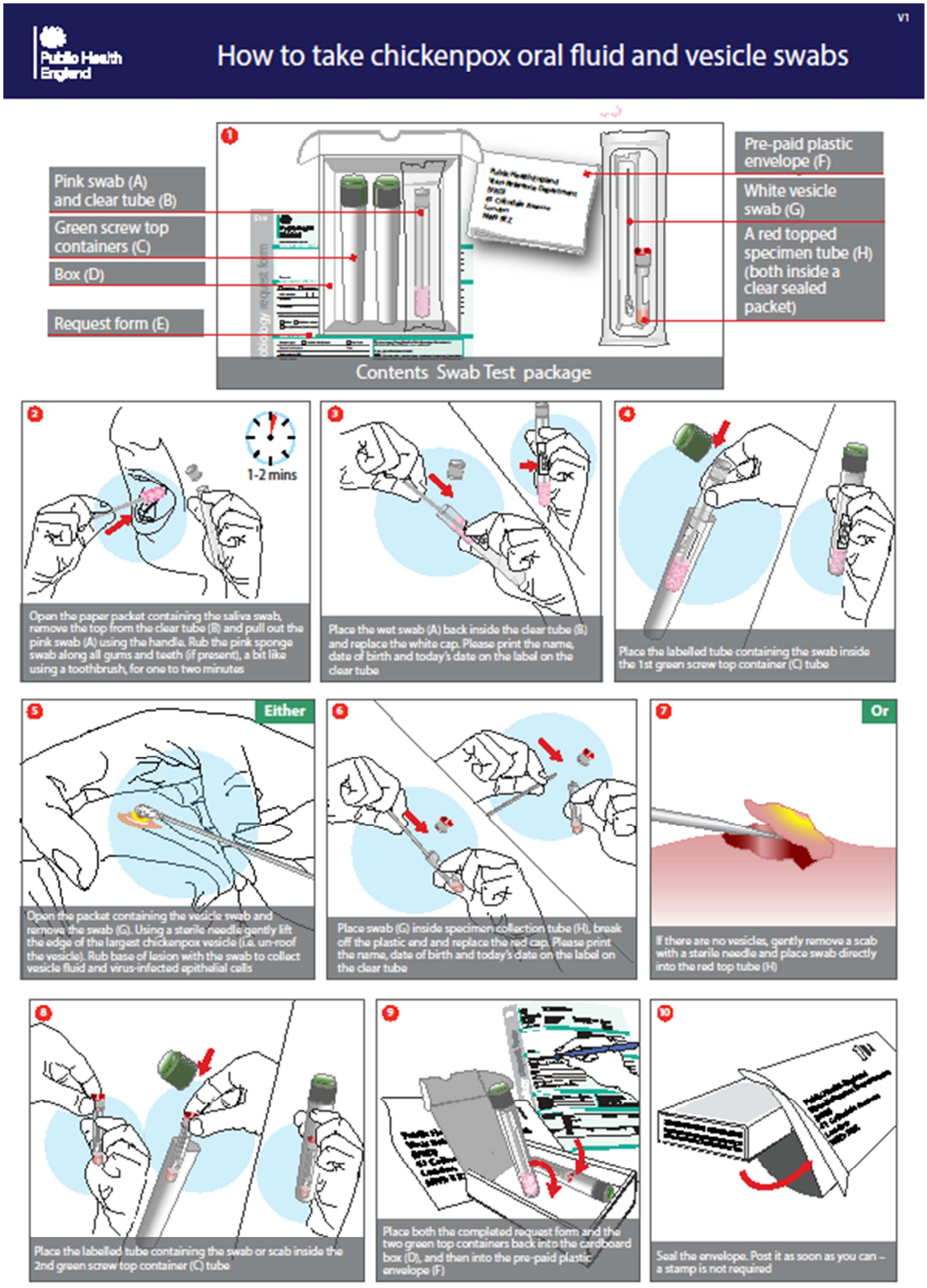
Appendix 1


V1
Public Health England
How to take chickenpox oral fluid and vesicle swabs
Pink swab (A) and clear tube (B)
Green screw top containers (C)
Box (D)
Request form (E)
Pre-paid plastic envelope (F)
White vesicle swab (G)
A red topped specimen tube (H) (both inside a clear sealed packet)
Contents Swab Test package
1-2 mins
Open the paper packet containing the saliva swab, remove the top from the clear tube (B) and pull out the pink swab (A) using the handle. Rub the pink sponge swab along all gums and teeth (if present), a bit like using a toothbrush, for one to two minutes
Place the wet swab (A) back inside the clear tube (B) and replace the white cap. Please print the name, date of birth and today's date on the label on the clear tube
Place the labelled tube containing the swab inside the 1st green screw top container (C) tube
Either
Open the packet containing the vesicle swab and remove the swab (G). Using a sterile needle gently lift the edge of the largest chickenpox vesicle (i.e. un-roof the vesicle). Rub base of lesion with the swab to collect vesicle fluid and virus-infected epithelial cells
Place swab (G) inside specimen collection tube (H), break off the plastic end and replace the red cap. Please print the name, date of birth and today's date on the label on the clear tube
Or
If there are no vesicles, gently remove a scab with a sterile needle and place swab directly into the red top tube (H)
Place the labelled tube containing the swab or scab inside the 2nd green screw top container (C) tube
Place both the completed request form and the two green top containers back into the cardboard box (D), and then into the pre-paid plastic envelope (F)
Seal the envelope. Post it as soon as you can – a stamp is not required

Appendix 2

Flowchart for post exposure prophylaxis for chickenpox in Immigration Removal Centres (IRCs)