



Public Health
England

Protecting and improving the nation's health

Management and prevention of bacterial wound infections in prescribed places of detention

Guidelines for healthcare, custodial staff and responding health protection services

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Glossary

A+E	Accident and Emergency
GAS	Group A streptococcus
iGAS	Invasive group A streptococcus
IRC	Immigration removal centre
GP	General practitioner
HPT	Health protection team
HMPPS	Her Majesty's Prison and Probation Service
OCT	Outbreak control team
PHE	Public Health England
PPD	Prescribed place of detention
PPE	Personal protective equipment
PWID	People who inject drugs

Introduction

An increase in cases of bacterial infections caused by Group A streptococci (GAS) among people in prisons has been reported across England in early 2019. Clusters of infection, primarily wound infections, were initially reported in prisons in Yorkshire and Humber, the North West, the East and West Midlands and the South West. Typing of samples collected from patients in affected prisons has indicated shared strain types (predominantly *emm* 108.1 and 66.0). *emm* 108.1 has been associated with infections in people who inject drugs (PWID) and homeless people in recent community clusters and there are links between prison cases and these risk groups.

Wound infections are not uncommon among people in prison and often associated with injecting drug use and/or tattooing or other causes of skin injury, including violence and self-harm. Not all wound infections are caused by GAS, so infected wounds should be swabbed to identify further cases linked to prison-associated clusters as part of the wider public health response in the English prison estate.

Invasive GAS (iGAS) infection is a serious infection associated with a high case fatality rate. Clinical presentations are varied and include skin/soft tissue (cellulitis, necrotising fasciitis), joint (septic arthritis), respiratory (pneumonia) and non-focal bacteraemia. Cases are defined through the isolation of GAS from a normally sterile body site. Prompt recognition and early treatment are essential given the potentially rapid progression of infection.

Available resources

As infection can be spread through close personal contact and also through environmental contamination, especially in areas like gyms and showers/bathing facilities, it is important to consider reviewing current infection control practices to ensure they follow national guidance for prescribed places of detention (PPD): www.gov.uk/government/publications/infection-control-in-prisons-and-places-of-detention.

Wound infection information pamphlets for prisoners have also been co-produced by PHE and HM Prison and Probation Service (HMPPS) for distribution in affected prisons: www.gov.uk/government/publications/group-a-streptococcal-disease-information-for-people-in-prison. A similar pamphlet aimed at prison staff has also been produced and can be obtained on request from HMPPS Occupational Health services.

Guidance for managing close community contacts can also be applied, with appropriate considerations, for people in PPDs. More general information on the characteristics, diagnosis and management of GAS infection can be found at:

www.gov.uk/government/collections/group-a-streptococcal-infections-guidance-and-data#contents.

Confirmed or probable cases of GAS wound infections or invasive GAS infection should be notified by prison or immigration removal centre (IRC) healthcare teams as soon as possible to local health protection teams (HPT). Your local team contact details can be found at: www.gov.uk/government/collections/contacts-public-health-england-regions-local-centres-and-emergency.

How to use this document

Public health action is required when cases of GAS infection are reported in PPDs and this document is divided into 3 sections detailing specific actions recommended for:

- healthcare staff
- the custodial service (prison and immigration detention settings)
- the wider public health response system, such as local HPTs, PHE field epidemiology services, microbiology services, etc

Controlling the spread of infection in PPDs will be contingent on the coordinated efforts of both health and custodial staff working with PHE HPTs to apply the general approach summarised below:

- 1 Healthcare teams to ensure that swabs are taken from all patients with skin and soft tissue infections in PPDs and sent for analysis to local microbiology services.
- 2 Clusters of GAS infection identified in PPDs should be promptly notified to local HPTs by Healthcare and samples forwarded for typing to the designated reference laboratory by local microbiology teams
- 3 HPTs may declare a formal incident or outbreak control response required to enable and support coordinated, collaborative efforts across organisations to achieve infection control, following national guidance¹.
- 4 Custodial/detention staff should work together with healthcare teams in PPDs to enable the identification of new cases and their subsequent isolation, clinical assessment and treatment.
- 5 Any cell/room sharers of identified cases should be encouraged to contact healthcare in the event they develop signs of infection for assessment and swabbing (nose and throat swabs if no skin lesions but any wounds should be swabbed on finding).

¹ Multi-agency contingency plan for disease outbreaks in prisons: www.gov.uk/government/publications/multi-agency-contingency-plan-for-disease-outbreaks-in-prisons

- 6 A detailed risk-assessment should be undertaken by Healthcare or health protection staff for all new cases identified in PPDs. A prison specific questionnaire, available from local HPTs, should be administered to collect information related to patients' engagement in PPD activities, particularly gym and work and other associated risk factors.
- 7 Management and healthcare staff should work alongside regional HPTs and PHE's national Health and Justice team to implement the infection control recommendations described herein while balancing public health risk against any operational pressures on the PDD and the wider secure and detained estate in England.

Recommendations for healthcare staff

Case identification and assessment in PPDs

All staff should be alert to the enhanced risk of wound infections in groups including people who inject drugs (PWID) or those using other illicit drugs, people with mental health issues at risk of self-harm, homeless people admitted from the community and transfers from other PPDs with declared clusters of GAS infection.

Cases may be identified by notifications received from custodial/detention staff, other prisoners/detainees, self-referral, at reception screening or through other means. The general approach outlined below can be followed to assess all potential cases in PPDs with additional information provided for specific groups (for example, transfers from establishments with reported clusters of infection) and for different stages of reception health screening.

Clinical assessment and management:

Any prisoners/detainees manifesting signs or symptoms consistent with invasive infection should be urgently reviewed by a doctor and/or arrangements made for referral to A&E for assessment if signs of sepsis present².

For the purposes of managing this type of incident in PPDs, the definition of a wound may include acute or chronic breaks in the skin, recent tattoo or injecting sites or sites of self-harm or injury.

A short clinical history should be taken to determine whether wounds are recent, if any associated systemic symptoms present, as well as to identify any possible risk factors (risk behaviours, environmental [including participation in specific PPD regime activities], close contact with other known cases, etc.). The management of the wound should be in line with normal clinical practice, including the decision to prescribe antibiotics at time of presentation, guided by the local microbiology department's antibiotic treatment protocols.

All wounds identified should have a sample of fluid taken from the wound bed using a moist swab, then cleaned and covered with a semi-permeable dressing. Nose and throat swabs should also be taken.

² NICE guideline [NG51]. Sepsis: recognition, diagnosis and early management
www.nice.org.uk/guidance/NG51/chapter/Recommendations#managing-suspected-sepsis-outside-acute-hospital-settings

Samples must be sent to local microbiology services for testing with information indicating if part of a confirmed or suspected outbreak (including HPZone number if available). Microbiology results should be followed up to ensure that patients with positive culture results receive treatment without delay as guided by the local microbiology department's antibiotic and treatment protocols.

Epidemiological information gathering:

Details of cases, including date of onset, location within the PPD, symptoms of illness and if cell/room-sharing with another case should be recorded by the prison healthcare team and reported to the responding HPT.

A questionnaire developed by PHE and available from local HPTs (see *Available resources* for contact details) can be used to facilitate this process. The assessment should consider:

- the patient's movements in the 7 days prior to symptom onset; if new reception, note pre-admission residential history (for example, hostel, homeless, fixed address) or name of previous PPD; if current resident note cell/room movements and any cell/room sharers
- participation in PPD activities; in particular participation in high-risk activities for transmission of infection such as exercise (for example, use of gym/sports facilities), employment (for example, kitchen or laundry staff), religious/cultural (for example, use of prayer rooms), education/training and others (for example, peer mentoring)
- associated risk factors; intravenous drug use or other illicit drug use, engagement in tattooing while resident in the PPD, self-harming, contact with other infected or high-risk persons

Clusters of GAS wound infections and/or incidents of invasive GAS infection identified in PPDs should be notified to local HPTs and PHE Centre Health and Justice leads (see *Available resources*) as soon as possible.

Transfers from establishments with reported clusters of GAS infection

PPDs admitting persons without infection from establishments with declared outbreaks should be notified to this effect. Healthcare in the receiving establishment should be made aware of these individuals to enable appropriate assessment of any wounds if needed.

1. First-stage health assessment at reception

Persons should be assessed for any signs of wound infection on first entry to the establishment and before allocation to a cell/room.

At first reception screening, undertake assessment for any wounds, skin lesions or sore throat and swab accordingly as described above before allocation to a cell/room. Ideally, patients presenting with wounds could be allocated to single cell/room accommodation if available and if first night isolation poses no risk to their mental wellbeing.

If no signs of systemic infection then isolation is not necessary unless swab results returned as positive. If found to have symptoms of wound infection or systemic symptoms, proceed as per clinical management advice in section above.

See section *Clinical assessment and management* above for further actions.

2. Second-stage health assessment (up to 7 days from reception)

Follow-up on any skin or soft tissue wounds identified at first-stage health assessment checking for signs of new or worsening infection and reviewing microbiology results for patients who were swabbed.

GAS clusters identified in prisons should be promptly notified to the local HPT.

Plan a follow-up healthcare review at a suitable time based on clinical judgement, taking into account the length of sentence.

Isolation and cohorting of symptomatic persons

It is advisable that cases are isolated in single cell accommodation until 48 hours of compliance with antibiotic treatment. The complexity of symptoms and treatment will inform duration of isolation and an individual risk assessment should be undertaken with input from custodial/detention staff to account for safeguarding and security considerations.

Ideally, isolation of cases in single accommodation is advised given the high likelihood of cross-transmission of infection to asymptomatic cellmates. If such accommodation is not available cases should be held alone in higher occupancy accommodation, or, if this is not possible, cohorted with other cases with wound infections (cases with GAS infection can be cohorted in the same cells/rooms even if they don't have the same *emm* type).

Asymptomatic cell/room sharers of cases should be assessed and monitored for any signs of infection and isolated/cohorted if necessary. Cell/room sharers should be swabbed at the earliest clinical opportunity; nose and throat swabs should be taken if no evidence of superficial wounds.

Treatment

Cases with infected wounds should be isolated in a single cell/room until 48 hours of compliance with antibiotic treatment plus/minus topical treatment as advised by local microbiology department.

More complex presentation (for example, *Staphylococcus* coinfection) may necessitate extended isolation/treatment periods as per individualised treatment plan advised by Healthcare.

Infection control measures in PPDs

All staff should be familiar with proper hand hygiene protocol as described in national guidance for PPDs (see section '*Available resources*') and make use of available liquid soap dispensers, paper towels and foot-operated pedal bins.

Any cuts should be kept clean and covered and healthcare staff should be mindful that patients may require support with wound management particularly for very deep lesions. Advice around personal hygiene and wound care will be a priority for infected patients and security staff should be made aware of the importance of regular access to shower blocks (see access to showers in *Isolation and cohorting of symptomatic patients of Recommendations for PPD staff*).

Consideration should be given to the need for dressing wounds and administering medications in the PPD healthcare facility. Where the infected prisoner needs to attend the healthcare facility to do this, they should be seen as 'last on the list' and appropriate cleaning of the treatment room should be undertaken straight after.

Restrictions on movement of prisoners/detainees

It is advisable that cases are not transferred to other prison establishments until 48 hours of compliance with antibiotic treatment. Medical holds are discouraged and will require individual risk assessment and agreement from both the PPD governor/director and population management unit before they can be enacted.

No regime restrictions normally necessary for individuals post 48 hours antibiotic treatment with appropriately dressed wounds.

Recommendations for PPD custodial staff

All reception custodial staff should be alert to the enhanced risk of wound infections in people who inject drugs (PWID) or those using other illicit drugs, people with mental health issues at risk of self-harming, homeless people admitted from the community and transfers from other PPDs with declared clusters of GAS infection.

Reception screening

Persons presenting to reception staff with signs of wound infection must be referred to Healthcare immediately for appropriate follow up at the next clinical opportunity; all information relating to prisoners'/detainees' health is confidential and must be dealt with in the strictest confidence.

Isolation and cohorting of symptomatic persons

Isolated cases should take all their meals in their cell/room and not in communal dining areas during the isolation period (48 hours for most cases as per directions received from Healthcare). Healthcare workers or prison/centre staff should enter the room to administer treatment, bring food and beverages, change linen etc.

Regular access to shower facilities by isolated cases will be important to manage infection. Where the isolation cell/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. If the isolation room does not have adjacent toilet facilities, a toilet should be designated for sole use by the case, wherever possible. Contact with other prisoners/detainees en route to the toilet should be avoided.

Isolated prisoners/detainees with infections will need to receive regular changes of their bed linen and towels: laundry arrangements are addressed later in this guidance.

Infection control measures in PPDs

All staff should be familiar with proper hand hygiene protocol as described in national guidance for PPDs (see section *Available resources*) and all people (including staff, prisoners/detainees, visitors, etc.) should be encouraged to wash hands often and every time they use the toilet and before eating.

Wall-mounted liquid soap dispensers, paper towels and foot-operated pedal bins should be made available and accessible in key areas such as toilets, showers, the

gym, the canteen and any other 'high traffic' communal areas to facilitate regular hand hygiene. Security staff should assess whether these fixtures don't pose a self-harm risk to residents prior to their installation.

Simple gym 'instructions for use' should be in place and visible to all gym users advising:

- not to use the gym with open wounds/sores unless covered with a water-proof dressing
- to wash hands with warm water and liquid soap and dry with paper towels before entering the gym or using any gym equipment
- wearing of clean cotton clothes for gym/sports workouts
- not to share gym clothes, towels and personal items including t-shirts, socks, etc.
- to wipe surfaces of shared equipment before and after use with detergent wipes or detergent spray (wall-mounted dispensers in gyms are recommended) and disposable paper; focus should be on surfaces which are in contact with skin for example, handles, benches, seating pads, etc
- to shower and wash with liquid soap and water after training
- to wash personal items such as towels, underwear and sports clothing after every session at the highest possible temperature (refer to '*Laundry*' section above)

Laundry or food handing orderlies with proven infections should be transferred to other duties until their wounds have healed.

Staff are advised that the risk of infection to themselves from contact with cases is very low, as is the risk of carrying the bacteria from prison to home, as long as general hygiene precautions are in place. This includes:

- regular hand hygiene with soap and water or alcohol hand-rub
- keeping any cuts clean and covered
- seeking advice from occupational health services on proper wound management if they have any doubts (see Occupational Health pamphlets produced for prisons in '*Available resources*')

Should a staff member come into contact with someone who has an infected wound, for example by touching an infected site or being exposed to any exudate (ooze) that it produces, they should wash their hands thoroughly using warm water and soap or alcohol hand gel if soap and water is not available. Gloves can transfer infection from one person to another and if custodial staff are wearing gloves for prisoner/detainee movement/handling, gloves should be changed between case contacts.

Any staff presenting with signs or symptoms of wound infection, or throat infection, should seek medical attention immediately and be excluded from work until no longer

infectious. They should advise their general practitioner (GP) of occupational risk and appropriate swabs should be carried out to determine if GAS is the cause of the symptoms.

Environmental cleaning

Staff and other persons, particularly those with cleaning/washing duties, should familiarise themselves with the general environmental cleaning protocols as outlined in national infection prevention and control guidance for PPDs (see section *Available resources*).

Thorough and regular (at least twice daily) cleaning of surfaces in communal areas must be undertaken with hot water, detergent and chlorine-based disinfectant agents; this will include 'high-touch' surfaces such as handrails, cell door handles, communal chairs and tables etc., and should extend to any communal bathrooms and showers.

Titan-Chlor® tablets are the only chlorine-based disinfectant product authorised for use in the prison estate in England and guidelines on its use in PPDs can be found in existing health protection guidance³ issued by PHE's Health and Justice team.

A 'deep clean' of cells occupied by any occupant diagnosed as having a wound infection once they have moved from the cell or after the decolonisation period is over, is necessary. This should be undertaken by specially trained prisoners or cleaning staff and is defined as follows:

- cleaning of surfaces using hot water and detergent
- disinfection of these surfaces using a chlorine-based disinfectant such as Titan-Chlor® or Titan-Chlor® plus (includes disinfectant *plus* detergent)
- allowing surfaces to dry before use
- checking that mattress and pillow covers are intact and, if not, ensuring that the damaged items are replaced

Ideally, orderlies cleaning affected areas should not visit other parts of the PPD so as to avoid cross-contamination. If this is not possible, cleaning orderlies must ensure the appropriate use of personal protective equipment (PPE) and be aware of the importance of washing their hands with warm water and liquid soap after removal of PPE and before returning to their own cells/rooms.

³ See Appendix 3 of: www.gov.uk/government/publications/seasonal-flu-in-prisons-and-detention-centres-in-england-guidance-for-prison-staff-and-healthcare-professionals

Laundry

All laundry staff should be familiar with washing protocols as outlined in national infection prevention and control guidance for PPDs (see section '*Available resources*').

To limit the possibility of re-infection in prisoners/detainees with infected skin lesions, it is recommended that linen (for example, bedsheets and towels) is changed daily during the infectious period. Used linen must be placed into a soluble bag and then into a linen bag and tied promptly, half full bags should never be left lying about. The linen bag must be highlighted as 'infected'. The linen that is contained in the soluble bag can be placed straight into an industrial washing machine. All linen should be washed and dried at the highest temperature setting possible.

Infected prisoners/detainees should be encouraged to send their clothing to laundry services for regular washing and made aware of the potential risks of doing their own laundry. Advice on the appropriate use of on-wing washing facilities (where applicable), including the importance of using high heat wash/dry cycles, should be given. PPDs should ensure appropriate maintenance of all on-wing laundry facilities is being undertaken to meet manufacturers' guidance.

Where on-wing washing is necessary, laundry from infected prisoners/detainees should be done at the end of the day (N.B. consider risks to laundry orderly, wounds/cuts must be covered at all times), with high-temperature wash of empty machine after potentially infected laundry is processed. Articles of clothing should be placed in a soluble bag and tied in cell for transportation to the laundry facility by the prisoner/detainee or for collection by the laundry orderly, as appropriate. The entire laundry bag should be placed in the washing machine and washed at the highest temperature possible for the clothing; advisable that temperature settings above 60°C are used but lower temperatures may be suitable if the washed clothing is appropriately dried. After placing laundry in the washing machine, it is important that the handler (for example, prisoner/detainee, laundry orderly, etc.) wash their hands with soap and water and dry them at the first opportunity to prevent potential cross-transmission of infection.

Restrictions on movement of prisoners/detainees

On recommendation of the outbreak control team (OCT), it may be advisable to restrict social mixing of prisoners/detainees between wings with high and low numbers of cases so as to limit cross-transmission of infection. This could entail limiting association activities for example, education, training and exercise; but practicability of implementation is dependent on both operational and security risk assessments.

Given the high risk for the cross-transmission of infection, patients should not participate in gym activities or sports where there is prolonged skin-to skin contact unless their wounds are covered adequately (seek advice from Healthcare if in doubt).

It is advisable that cases are not transferred to other prison establishments until 48 hours of compliance with antibiotic treatment.

No regime restrictions necessary for non-infected individuals with appropriately dressed wounds.

Restrictions on visits

Consistent with patient welfare, visitor access to symptomatic prisoners/detainees should be kept to a minimum and any visitors should be provided with hygiene advice whilst ensuring patient confidentiality is maintained. Symptomatic visitors should avoid visiting the PPD. If practicable, non-urgent visits should be rescheduled until 48 hours after patient compliance with antibiotic treatment and following an individual risk assessment by Healthcare. Legal visits may be a requirement if preparing for court and alternatives to face-to-face meetings (for example, via tele-/video-conferencing) should be explored wherever possible.

Prisoners with effectively dressed wounds but no signs of infection can continue to receive visitors.

Recommendations for local health protection services

Case identification and assessment

Local health protection teams may receive notifications of suspected cases of GAS in PPDs from Healthcare units and microbiology laboratories. HPTs are asked to ensure appropriate samples are taken and isolates sent to PHE Colindale for typing as per existing national recommendations.

Clusters identified in prisons should be notified to the HPT including the PHE Centre prison leads for onward transmission to the national incident lead via PHE Health and Justice (Health-Justice@phe.gov.uk). Prison leads are asked to raise awareness with prison healthcare to inform clinical investigation, and ensure prompt reporting to HPTs.

Implications for microbiology services

Microbiologists should be alert to the increase in GAS in prisons and ensure that all iGAS isolates are referred to PHE Colindale for emm typing and notify the local HPT. Non-invasive GAS isolates from clusters in prison settings should also be sent to the Streptococcal Reference Laboratory in Colindale. Referral forms for these isolates clearly labelled with details such as prison name and the prison postcode to prioritise testing. Typing of these isolates will be free to NHS users. Microbiologists should alert their local HPT when they become aware of an apparent increase in non-invasive GAS or other bacterial disease.