

6 Other congregate community settings

Clustering of invasive Group A Streptococcus (iGAS) cases in other congregate community settings present distinct challenges for public health response. Community settings fall into two categories: those that involve healthcare services, for example, community or public health nursing, and those that do not, which can include a wide variety of settings and contexts such as congregate settings for people within the international protection process, people who experience homelessness (PEH), people who inject drugs (PWID) and residential settings such as for third level institutions (108-111).

Several international studies have found that marginalised populations such as PEH and PWID are disproportionately affected by iGAS (108-111). These populations often overlap with each other and with those in prison settings. A number of factors are thought to place PWID at increased risk of iGAS including their injecting practices, for example engagement in sharing of injecting equipment and/or groin injection, and their increased risk of skin lesions (108, 112-114). In addition, poor access to hygiene facilities, malnutrition and comorbidities increase risk for PWID and PEH alike (115).

Globally there have been several instances of periodic increases in iGAS in recent years, with a number of outbreaks in Canada (116-119), the United States (109, 110, 120), and the United Kingdom (108, 121). Recent investigations into a Canadian outbreak where iGAS cases more than quadrupled between 2015 and 2017 found that over half of the cases reported drug injection or homelessness risk factors (116). This is supported through an analysis of US surveillance data (109) which found PEH were over 50% more likely to have an iGAS infection than the general population. Increased skin breakdown among PWID and PEH was noted through an analysis of US hospitalisation data (110), where the proportion of cases with injection drug use and homeless risk factors more than doubled between 2013 and 2017 and over 80% of cases with these risk factors reported skin breakdown in the last month. This is of concern as skin breakdown could offer an entry point for Group A Streptococcus (GAS) infection (108) with a recent study into an outbreak in a homeless shelter in Canada finding residents with a diagnosed skin condition had 56 times the odds of acquiring GAS (119).

In England, there has been a general increase in iGAS infection notifications among PWID, PEH and individuals in prison since 2018 (108). Surveillance data (122) for England and Wales indicate that the number of iGAS isolates with a PWID risk factor has increased from 4 cases to 234 cases over the period 2013 to 2019. An investigation into a recent outbreak in Northwest England (108) found PWID and PWID experiencing homelessness carried a significant burden of these cases and noted differences in the *emm* type distribution between PWID and PEH groups when compared with non-risk groups.

Stigma, marginalisation, and criminalisation of people who inject drugs are a challenge to effective engagement with PWID and presents challenges for outbreak control team. It is important to keep this in mind when responding to any increase in cases among this population. Information on the epidemiology of iGAS cases in Ireland can be found on the HPSC website [here](#).

6.1 Risk assessment

For iGAS cases in community settings involving health and social care services, use the home support services guidance found in [Section 6.4](#) in conjunction with hospital guidance to inform staff risk assessment.

For iGAS cases in other community settings not involving healthcare services, follow the guidance detailed in [Chapter 2](#) for recommendations on risk assessment and identification of contacts. Among homeless and injecting populations, it is important to identify contacts with open wounds or lesions, as they present a higher risk for transmission. Contact tracing may be challenging among some groups who inject drugs as individuals may not be willing to provide contact information for their peers. It is important to stress that you are asking for contact details for healthcare purposes and that their details, and those of their contacts, will remain confidential to the outbreak control team. It is also important to identify whether each case has been linked to sheltered accommodation, a drug service or specific injecting network, military base, prison setting in the 7 days prior to onset of symptoms. When giving advice to contacts of cases with injecting risk factors, work with addiction services to provide advice and information on wound care and safer injecting practices.

6.2 Public Health Actions: single case of iGAS

6.2.1 Source of infection

Consider if the source of iGAS infection is likely to be from close contact through living in close proximity (on a military base, sheltered accommodation, prison etc.), through employment, social contact or injecting related behaviours (peer networks etc.).

6.2.2 Control measures

If an iGAS case is linked to a setting which is not a private residential setting or RCF (for example, sheltered accommodation, military base, or prison) or is part of an organised group, the Area Public Health Team should:

- follow the household setting guidance in [Chapter 3](#) of this document
- contact the setting or group to conduct a risk assessment
- follow the additional actions outlined below

a) Prospective surveillance

Initiate surveillance for 30 days to identify any further probable or confirmed cases of iGAS. All probable and confirmed cases should be notified urgently in and out of hours so that public health actions can be taken as soon as possible and ideally within 24 hours.

b) Environmental cleaning

Any bedding, sleeping bags, blankets, pillows, curtains, towels and/or clothing used by the case should be washed at a high temperature (at least 60° Celsius) using detergent. Clean all hard surfaces and touch points in rooms regularly used by the case (that is, bedrooms, bathrooms etc.) using a detergent followed by disinfection with solution containing hypochlorite at 1,000ppm of available chlorine (88). Ensure thorough cleaning and disinfection of rooms used by the case after they have vacated a room and/ or between residents.

For more information, please refer to [National Clinical Guideline No. 30: Infection Prevention and Control \(IPC\)](#).

c) Communication

It is important to provide educational resources on, and stress the importance of, good hygiene, wound care, and safer injecting practices, as applicable, to all close contacts. Translation of resources may be required.

6.3 Public health actions: Generalised rise or outbreak of iGAS cases

If the risk assessment conducted by the Area Public Health Team suggests evidence of ongoing GAS transmission in the community an investigation should be started promptly. An investigation should also be initiated where *emm* typing suggests a possible cluster or genomic assessment has confirmed an outbreak. An outbreak control team (OCT) should be formed, and key facts established to inform future action.

6.3.1 Source of infection

Undertake epidemiological investigations, including review of microbiology and surveillance records for further GAS/ iGAS cases that have occurred over the previous 6 months. This aims to identify any common source or link between cases in situations where there are 2 or more iGAS cases. Investigate symptomatic contacts or contacts with wounds or lesions through contact tracing. Consider investigation of carriage in people and the environment through swabbing. Define the risk group or setting and relevant case definitions.

6.3.2 Control measures

a) Convene an OCT

Convene an OCT to coordinate the investigation and management of the outbreak. If the case is among PWID or PEH, consider including representatives from appropriate local social inclusion or addiction services and/or organisations working with PEH in the OCT. Refer to [National Social Inclusion office](#).

b) Surveillance

Establish enhanced surveillance for 30 days to identify those at risk, including health and care workers and prison staff where appropriate.

c) Seek expert advice

Seek advice from IMSRL and ensure microbiological assessment of all available isolates. Refer isolates for typing to the Irish Meningitis and Sepsis Reference Laboratory (IMSRL) clearly labelled with a unique ID. Consider requesting whole genome sequencing (WGS) to be conducted on all confirmed GAS cases.

d) Swabbing and chemoprophylaxis

Consider chemoprophylaxis, case by case based upon the Public Health Risk Assessment (PHRA) considering vulnerability and nature of contact, especially in situations where there is a defined group in a closed setting. The recommended antibiotic regimen is the same as for treatment (see [Table 4](#)). For individual service users where there is a risk of leaving before treatment completion or of low adherence to oral regimens (for example, PEH and PWID) discuss with a local microbiologist whether alternative regimens are available, such as a single oral, intravenous, or intramuscular dose. A number of studies indicate a reluctance to engage with healthcare and a low compliance to oral antibiotic regimens among these groups (118, 123-125). The HSE has established effective links with services as seen in the COVID-19 vaccine campaign. The importance of working with service providers across the HSE and non-HSE agencies needs to be reinforced. Area Public Health Teams should liaise with IPC teams within Prison services.

It is suggested that a single dose of intramuscular or oral chemoprophylaxis may be more effective among PEH and PWID since ensuring completion of an oral regimen may be difficult for these underserved groups (118, 126). During an outbreak of iGAS *emm26.3* among PEH in Alaska, a 1g single oral dose of azithromycin was administered to 391 persons. Baseline and post-intervention colonisation surveys showed a drop in the colonisation rate with this *emm* type, from 4% to 1% (127).

e) Personal hygiene

Good personal hygiene remains important in preventing infection. If the outbreak is in a closed setting (for example, prison, homeless shelter etc.), showers or washing facilities with clean towels should be available to everyone. Education on the importance of hand hygiene should be encouraged with liquid soap and paper towels provided. Individuals should be encouraged to cover their mouth and nose with a tissue when they cough and sneeze and to wash hands or use alcohol gel after sneezing and after using or disposing of tissues. Spitting should be discouraged. As skin breakdown increases the risk for GAS transmission (111), it is vitally important that all wounds are cleaned and covered hygienically. For service users who require assistance with wound care, clinics should be established. The service should engage with Public Health Nursing/HSE Social Inclusion services for support and advice regarding an appropriate wound care plan. Educational materials aimed at both PWID and those working with this population are essential to raise awareness of the importance of wound care and the increased risk of GAS infection among this group (110).

It is also important to investigate if there have been any prior infestations at the service location, i.e. lice, bedbugs, scabies, varicella as these infestations and any topical treatment may cause additional damage to the skin (119, 120).

f) Environmental cleaning, linen, and waste disposal

The environment can play a significant role in transmission as GAS can remain in dust as well as on furniture and equipment (81-86). During an outbreak in closed settings such as hostels, prisons or military establishments, cleaning of the environment should be carried out daily and a thorough terminal clean should be undertaken when the outbreak is declared over (88). For more information, please refer to [National Clinical Guideline No. 30: Infection Prevention and Control \(IPC\)](#).

g) Additional measures for prison settings

UKHSA have published guidance outlining the measures that should be taken in the event that incidents or outbreaks of iGAS are reported in prisons or prescribed places of detention (128).

6.3.3 Communication

In the event of an outbreak of iGAS infection in other congregate community settings, an information leaflet should be circulated to staff and those residing at the setting to raise awareness of the signs and symptoms of GAS/iGAS, particularly in vulnerable contacts (immunocompromised, high-risk contacts). Any additional control measures instigated (for example, antibiotic chemoprophylaxis) also need to be included here. Posters highlighting the symptoms of iGAS and the importance of wound care and good hygiene may also be displayed to further raise awareness (129).

For community outbreaks among PEH and PWID, targeted communications and educational resources can be supplied via needle exchanges, drug and alcohol services and services for the underhoused to raise awareness.

The OCT should also consider alerting local health professionals of the iGAS outbreak or case increase to ensure prompt identification and treatment of cases.

6.4 Home support (including personal care and home help services)

Home support services refers to the provision of medical or nursing care within a patient's home, including community and public health nursing, general practitioners, podiatry (chiroprody), community midwifery, hospital outreach and palliative care. For cases and outbreaks associated with home support services, use this guidance in conjunction with [acute hospital and maternity settings guidance](#) to inform staff risk assessment.

Identification of outbreaks associated with home support services is difficult for several reasons:

- patients receiving homecare usually have many points of healthcare contact
- it was previously not routine for area public health teams to ask about healthcare exposures when undertaking routine follow-up of community-acquired iGAS infection
- care networks are often complex and links between cases may be difficult to ascertain (32).

Published data on infections associated with home support services is scarce but an international secondary data analysis study of homecare patients in the United States reported that 3.2% of patients become infected and require hospitalisation or emergency care, with wound infections being the most reported (130).

However, in Ireland, infection control in the home environment has improved. All staff now have access to alcohol hand gels, equipment is not shared and is supplied directly to the patient.

6.4.1 Source and mode of transmission

Investigation of outbreaks associated with home support services are complex, making it difficult to definitively establish a source. Indeed, no definitive source was identified in any of the outbreaks associated with home support services in England, 2018 to 2019 (29, 131). The common hypothesis was that GAS was transmitted between colonised or infected patients and healthcare workers and that numerous transmission events caused each outbreak, following lapses in infection control. The complexity of outbreaks associated with home support services is illustrated by the finding that during outbreaks in England, homecare workers visited up to 20 patients per day and several homecare workers might see the same patient each week (131). While the role of fomites in transmission remains unclear, GAS are known to persist on inanimate surfaces for up to 4 months (132) and challenges with decontamination in the home environment may provide opportunities for contamination to occur. It is likely that transmission occurs via a combination of carriage, transient contamination of home healthcare workers, equipment, or other fomites.

6.4.2 Outbreak characteristics

A PHE led review of 10 iGAS outbreaks linked to homecare services from January 2018 to September 2019 found that delays in recognition are common; for 9 outbreaks where this data was available, a median of 4.5 iGAS cases (range 2 to 11) and 40 days (range 3 to 517) had occurred before the outbreaks were declared (29, 131). The reasons cited for the delays included those concerning *emm* typing: delays in *emm* typing results, no standardised recording and review of *emm* types and outbreaks being caused by common *emm* types.

Overlap with residential care also caused delays in outbreak identification because the residential care initially formed the focus of the investigation. Finally, long delays between cases and lack of routinely collected data on homecare exposures meant that epidemiological links were missed. The complex nature of care networks, together with the issues cited above around delays in recognition of outbreaks means that they can last a long time. For the 10 outbreaks studied in England, the median duration was 199 days (range 3 to 517) (29, 131).

As the cases are predominantly older people with limited mobility and complex healthcare needs, these outbreaks often have high mortality rates. The PHE led review of 10 homecare associated outbreaks reported a case fatality rate of 29% (131).

6.4.3 Recommendations

The guideline development group adopts the following recommendations, as outlined in the PHE review of iGAS outbreaks linked to homecare services (32):

1. All community iGAS cases, including those occurring in nursing or residential care facilities, should be investigated for links to home support services.
2. Any identified links to home support services should be recorded on a case and incident management system.
3. Area Public Health Teams should systematically record and regularly review the *emm* types of all iGAS cases in their locality to allow early detection of potential outbreaks.
4. The OCT (for membership of OCT, please refer to **Section 5.3.2**) should consider a site visit to the home support services base, both to identify breaches in infection control and to build a relationship with the home support services team. This may necessitate visits to private or voluntary agencies who provide home support services on behalf of HSE.
5. All screening swabs which culture GAS should be sent for typing, and WGS if they are of the same *emm* type as the related outbreak. A positive screening swab is highly suggestive of transmission.
6. A member of the OCT (or delegated professional) should visit the home support services site in person if antimicrobial prophylaxis is considered. They should explain the rationale for this, together with the limited risk of isolates developing antimicrobial resistance and H&CW should be given written information to promote compliance.

For the full reference list scan the QR code below:

