

(work in progress [Antimicrobial resistance \(AMR\) and healthcare-associated infections \(HCAIs\) | HSC Public Health Agency](#))

HCAIs are infections that develop while receiving medical care in hospitals, care homes, or other health settings. These can include C.difficile, MRSA, and bloodstream infections.

Although the real global burden of healthcare-associated infections (HCAIs) is unknown because of the difficulty in gathering surveillance data, according to the recent [WHO Report](#), it is estimated that on average, out of every 100 patients in acute-care hospitals, 7 patients in high-income countries and 15 patients in low—and middle-income countries will acquire at least one HCAI during their hospital stay.^[1]

Each year, 4.3 million patients in hospitals in the EU/EEA acquire at least one HCAI during their stay, leading to more than 90,000 deaths.

According to the [third point prevalence survey](#) of HCAIs and antimicrobial use in acute care hospitals, HCAIs constitute 71% of infections with antibiotic-resistant bacteria, including bacteria resistant to last-resort antibiotics, such as carbapenem-resistant Enterobacterales.

The PHA and Strategic planning and performance group (SPPG) in collaboration with colleagues in wider HSCNI have been working to act against antimicrobial resistance in Northern Ireland and a number of key groups have been established. As a part of the UK AMR National Action Plan, the Human Health

Antimicrobial Resistance Strategy Implementation Group has established 5 key workstreams which are working towards a series of initiatives to improve and reduce unnecessary antibiotic use and antimicrobial resistance.

Examples of recent steps taken by Health and Social Care Northern Ireland (HSCNI) to reduce antimicrobial resistance include:

- The PHA undertook a [point prevalence survey](#) of hospital-acquired infections and antimicrobial use in all Northern Ireland acute hospitals in 2017.
 - The PHA organised a regional symposium on antimicrobial resistance and the built environment on 5 March 2025. These events raise the profile of HCAI and AMR among health professionals and allow networking among HSCNI and wider stakeholders interested in antimicrobial resistance, antimicrobial stewardship, and infection prevention & control.
 - The PHA organised an Improvement Projects Workshop to enable shared learning across HSCNI.
 - [The Northern Ireland Regional Infection Prevention and Control Manual](#) has been revised and updated to provide up-to-date information for reducing HCAI and AMR. The Deputy CMO launched the manual on 11th April 2024. The manual is regularly updated.
 - [e-Bug](#) was launched within Northern Ireland on 12th March 2025. e-Bug is a free, online educational science resource covering the topics of microbiology, hygiene and health. It teaches children and young adults in Key Stage 1 to Key Stage 5 about microorganisms and the spread, prevention and treatment of infection.
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Key resources and healthcare associated infections monitored and reported on by the Surveillance team:

Key resources

Infection prevention and control (IPC) is a practical, evidence-based approach to prevent patients and health workers from harm caused by avoidable infections.

- [The Northern Ireland Regional Infection Prevention and Control Manual](#) - the manual is revised and updated regularly to ensure all guidelines are based on current evidence and best practices. Please refer to the New Guidelines section regularly, as they are updated as soon as they are available. Healthcare organisations may adopt this advice and guidance in Health and Social Care Trusts, Primary Care, Private Clinics and Voluntary sectors, Independent sectors, Care Homes, and Hospices to achieve IPC standardisation across all healthcare providers and professional groups. The Manual has open access, and no passwords or usernames are required.
- [The Northern Ireland Formulary - self-care resources](#)
- [e-Bug - free online resources for children and young people](#)
- [Treat Antibiotics Responsibly, Guidance, Education, Tools \(TARGET\) - resources for GPs](#)
- [Start Smart Then Focus - guidance for treating sepsis and reviewing antibiotic treatment](#)
- [British Society for Antimicrobial Chemotherapy resources](#)

Clostridioides difficile (C.difficile)

Clostridioides difficile (also known as Clostridium difficile, C. difficile or C. diff) is a bacterium (germ) that can infect the bowel and cause diarrhoea. It is also known as C. difficile or C. diff. The infection most commonly affects people who have recently been treated with antibiotics and can spread by spores found within faeces. Infections can occur where many people take antibiotics and are in close contact with each other, such as hospitals and care homes.

Key resources:

- [Access information on clostridium difficile on nidirect website.](#)
- [C.difficile and S.aureus surveillance quarterly reports 2022-2025 | HSC Public Health Agency](#)
- [Summary CDI, MRSA and GNB Incidence Tables, 1 April 2011 to 31 March 2025 | HSC Public Health Agency](#)

Staphylococcus aureus (S. aureus)

Staphylococcus aureus (S. aureus) is a round shaped bacterium which commonly colonises the nose, respiratory tract, gut mucosa and the skin usually without causing any problems. It can also cause disease, particularly if there is an opportunity for the bacteria to enter the body, for example through broken skin or a medical procedure (including operations and intravenous lines). If these bacteria enter the body, illnesses which range from mild to life threatening may develop.

Key resources:

- Follow the link for more [information about Staphylococcus aureus.](#)
- [C.difficile and S.aureus surveillance quarterly reports 2022-2025 | HSC Public Health Agency](#)

Surgical site infections (SSIs)

The Surveillance team is committed to working in collaborative partnerships with Trusts, hospitals and key stakeholders to reduce the risk of surgical site infection (SSI). Surgical Site Infections (SSIs) include:

- Orthopaedics
- Caesarean section
- Breast
- Cardiac

Monitoring of SSIs is important for patient health (prevention and early intervention) and cost containment associated with hospital stay and treatments. The integration

of SSI surveillance with strategic planning and continuous quality improvement systems aims to facilitate infection prevention within hospitals.

Key resources:

- Access the latest report published in 2024 on [Surgical site infections \(SSIs\) surveillance in Northern Ireland, annual report 2022 here](#).

Device-associated infections (DAIs)

In conjunction with the mandatory surveillance of orthopaedic and caesarean section related SSIs, the SSI team also produce a monthly mandatory report for device-associated infections (DAIs) that outlines the rolling average from critical care units in hospitals across Northern Ireland. This report provides information on adult critical care units involving patients who lines in place such as:

- Ventilators and are infected with ventilator-associated pneumonia (VAP)
- Catheters and are infected with catheter-associated urinary tract infections (CAUTI)
- Central lines and are infected with central line-associated blood stream infections (CLABSI)

Mycobacterium chimaera infections associated with cardiopulmonary bypass

Access guidance for GPs on [mycobacterium chimaera infections associated with cardiopulmonary bypass](#) here

Mycobacterium chimaera infections associated with cardiopulmonary bypass

Guidance for General Practice

[Print](#)