



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte



National Standards for the prevention and control of healthcare-associated infections in acute healthcare services

2017

Safer Better Care

Note on terms and abbreviations used in these standards

A full range of terms and abbreviations used in these standards is contained in a glossary at the end of this report.

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is an independent authority established to drive high-quality and safe care for people using our health and social care services in Ireland. HIQA's role is to develop standards, inspect and review health and social care services and support informed decisions on how services are delivered.

HIQA aims to safeguard people and improve the safety and quality of health and social care services across its full range of functions.

HIQA's mandate to date extends across a specified range of public, private and voluntary sector services. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, HIQA has statutory responsibility for:

- **Setting Standards for Health and Social Services** — Developing person-centred standards, based on evidence and best international practice, for health and social care services in Ireland.
- **Regulation** — Registering and inspecting designated centres.
- **Monitoring Children's Services** — Monitoring and inspecting children's social services.
- **Monitoring Healthcare Safety and Quality** — Monitoring the safety and quality of health services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** — Providing advice that enables the best outcome for people who use our health service and the best use of resources by evaluating the clinical effectiveness and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion and protection activities.
- **Health Information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

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Introduction

1. Overview

Preventing and controlling healthcare-associated infections continues to be a significant challenge to healthcare systems throughout the world, including Ireland. These infections affect on average 1 in 20 people in the acute healthcare service setting, rising in patient care areas with high numbers of vulnerable patients and complex activity.[‡]

In addition, antimicrobial resistance presents a serious threat to patients, with an increasing amount of outbreaks related to multidrug-resistant organisms reported in Irish hospitals. In particular, resistant enterobacteriaceae and enterococci have emerged as important causes of healthcare-associated infection. In 2014, Ireland had the highest proportion of vancomycin-resistant *Enterococci* blood-stream infection in Europe.[♦] The potential risk of transmission and spread of healthcare-associated infection has been observed with increased patient transfer occurring between hospitals in Ireland.[‡] Healthcare-associated infections can have a huge impact on patients and their families, causing serious illness, long-term disability and death. There are also significant impacts on acute healthcare services due to the cost implications of such infections, including prolonged patient stays, isolation requirements and ward closures.

However, a significant proportion of healthcare-associated infection is known to be avoidable, if effective structures, systems and processes are in place to manage the potential risks arising from the environment and activities within the hospital. This is best achieved through a well-organised, planned and managed infection prevention and control programme which is integrated with an antimicrobial stewardship programme to effectively coordinate efforts within an acute healthcare service.

Measures that prevent infection in the first instance and reduce the spread of micro-organisms are essential. Effective prevention and control of healthcare-associated infections requires a multi-targeted approach, as no single practice is responsible for reducing the risk of infection. This depends on everyone working within the service understanding their responsibilities and engaging in behaviours that are well known to reduce the risk of infection, such as effective hand hygiene and providing a clean environment. Hospitals must have the necessary resources in place to meet their infection prevention and control needs and priorities.

[‡] HSE Health Protection Surveillance Centre. *Point Prevalence Survey of Hospital-Acquired Infections & Antimicrobial Use in European Acute Care Hospitals: May 2012*. Republic of Ireland National Report; 2012.

[♦] HSE Health Protection Surveillance Centre. *Annual Epidemiological Report*. 2014; (9): pp156-170.

Healthcare-associated infections and antimicrobial resistance are also a significant problem in the wider community. Hospitals need to engage in more strategic efforts with primary and community health and social care services, in order to reduce these infections locally. The timely sharing of information about healthcare-associated infection incidents and outbreaks is critical for all services to manage their risk of infection effectively.

Acute service providers also have an opportunity to work with their primary and community care colleagues to collectively target common reoccurring infection prevention and control problems. There is significant scope for improved integrated efforts between all healthcare services, but this needs the necessary national operational structures in place to prevent and control healthcare-associated infections across the entire healthcare system.

2. Background

These draft standards are a revision of the previously published *National Standards for the Prevention and Control of Healthcare Associated Infections* (2009) and provide a framework for service providers to assess and improve infection prevention and control practices.

The general content of the 2009 standards is retained, updated and streamlined within the document. Previously stated criteria within those 2009 standards have been developed into stand-alone standards in relation to:

- incident identification and management
- monitoring
- occupational health services
- externally contracted service providers
- resources
- information governance.

Certain standards have been strengthened, including communication with the patient; local, regional and national governance structures; and workforce training. New standards include those covering:

- cleaning and decontamination of equipment
- decontamination of reusable invasive medical devices
- risk management
- quality improvement
- health and wellbeing of patients
- procurement of medical devices and equipment
- management of information.

The standards are presented in the new format that has been adopted by HIQA for all standards that it develops for health and social care services.

The revised standards have eight themes:

- Person-centred Care and Support
- Effective Care and Support
- Safe Care and Support
- Better Health and Wellbeing
- Leadership, Governance and Management
- Workforce
- Use of Resources
- Use of Information.

The 2009 standards had 12 standards, each with an accompanying standard statement, rationale and criteria list, describing how a service can demonstrate how the standard is being met or not. In these revised standards, there are now 29 standards, each with a set of features that services meeting the standard are likely to have in place. The above eight themes will be described further in section 4 of this document.

3. Purpose of the National Standards

The revised National Standards are designed to promote a safe and effective infection prevention and control environment within acute healthcare services. Importantly, they aim to encourage a culture of patient safety through the efforts of all staff working together to reduce healthcare-associated infections. In particular, the standards are intended to:

- create a person-centred approach to the prevention and control of healthcare-associated infections
- promote practice that is up to date, effective and based on best practice
- enhance infection prevention and control efforts by regularly checking the service's performance by identifying strengths and highlighting areas for improvement
- encourage a multidisciplinary team-based approach within acute healthcare services to prevent and control healthcare-associated infections.

4. Scope of the National Standards

- These National Standards apply to all acute healthcare services provided or funded by the Health Service Executive (HSE). While HIQA's current remit does not cover private acute healthcare services, representatives of the Private Hospitals Association participated in developing these revised National Standards. The revised standards will apply to all public acute healthcare services. It is hoped that private healthcare providers will adopt these National Standards voluntarily in advance of any expansion of HIQA's functions into private healthcare.
- Primary and community health and social care services are outside the scope of these National Standards. A phased approach has been taken towards developing these Standards, with an initial focus on standards for acute hospitals under HIQA's remit. Further standards will be developed to support a consistent national approach for the prevention and control of healthcare-associated infections in primary and community care services. Service providers in these settings should continue to use the 2009 *National Standards for the Prevention and Control of Healthcare Associated Infections* in the interim. HIQA supports shared efforts between acute, primary and community health and social care services to prevent and control healthcare-associated infections and antimicrobial resistance.
- The National Standards do not set out specific clinical practice detail, which is best described in clinical guidelines. Such guidelines that apply in Ireland include guidelines from the HSE, the Health Protection Surveillance Centre (HPSC), the Royal College of Physicians of Ireland (RCPI), the relevant suite of National Clinical Guidelines from the National Clinical Effectiveness Committee (NCEC) and so on. The relevant guidelines are listed in the Resources section of this document.

5. Themes in the National Standards

Since the publication in 2009 of the *National Standards for the Prevention and Control of Healthcare Associated Infections*, HIQA has devised a framework for developing standards. This framework was developed following a review of international and national evidence, engagement with international and national experts and applying HIQA's knowledge and experience of the Irish health and social care context.

Based on this framework, the revised National Standards are presented under eight themes, as demonstrated in Figure 1. The four themes on the upper half of the circle relate to the dimensions of quality and safety in a service, while the four on the lower portion of the circle relate to the key areas of a service's capacity and capability.

Figure 1. Themes for quality and safety



The four dimensions of quality and safety are:

- **Person-centred Care and Support** — how acute healthcare services communicate with patients to ensure they are well informed, involved and supported in the prevention, control and management of healthcare-associated infections throughout their care pathway.
- **Effective Care and Support** — how acute healthcare services effectively plan, organise and manage infection prevention and control efforts to achieve best possible outcomes for patients.
- **Safe Care and Support** — how acute healthcare services support a culture of patient safety through effective management of risks and healthcare-associated infection incidents and by promoting change and improvement in infection prevention and control practices.

- **Better Health and Wellbeing** — how acute healthcare services work in partnership with patients, families and visitors to promote and enable safe infection prevention and control practices.

Delivering improvements within these quality dimensions depends on service providers having capacity and capability in four key areas, as follows:

- **Leadership, Governance and Management** — the arrangements put in place by a service for accountability, strategic decision-making and performance assurance, underpinned by integrated communication and reporting networks among staff.
- **Workforce** — how acute healthcare services ensure enough staff are available at the right time with the right skills and expertise to meet the service's infection prevention and control needs.
- **Use of Resources** — how acute healthcare services plan, manage and prioritise their resources to meet the service's infection prevention and control needs.
- **Use of Information** — how acute healthcare services ensure the integration, availability and protection of all information sources necessary to provide safe and effective infection prevention and control practices.

6. Structure of the National Standards

These Standards are outcome-based which means that each standard provides a specific outcome for the service to meet. This outcome is described in the 'standard statement'. The standard statement describes the high-level outcome required to safely and effectively prevent and control healthcare-associated infections. While each Standard is presented under a specific theme, HIQA recognises that certain standards could feature under a number of different themes.

The list of features provided under each of the standard statement headings is not an exhaustive list, and service providers may meet the requirements of the Standards in different ways.

7. Monitoring compliance with the National Standards

The Health Act 2007 gives HIQA the statutory responsibility for monitoring compliance with the National Standards. Since 2012, HIQA has engaged in a rolling programme of inspections against the 2009 Standards in order to promote improvement in infection prevention and control practices across Irish hospitals. These inspections are publicly reported on HIQA's website to allow and enable transparent sharing of the findings and provide assurances to the public that service providers have implemented and are meeting the National Standards.

Previous HIQA inspections of acute hospitals against the 2009 Standards have identified many good areas of practice such as hand hygiene. However, these inspections have also highlighted areas for improvement including cleaning performance, maintenance of the physical environment and reducing medical-device-related infection.

It is critically important that all hospitals continue their best efforts to fully comply with the revised Standards in line with relevant legislation and that they prioritise areas for improvement. Senior management in the hospitals and in the HSE are accountable for implementing the National Standards.

8. Key terms used in the National Standards

Key term	Meaning
Acute healthcare services	Hospital-based healthcare services for inpatients, outpatients and people having day-case treatments.
Antimicrobial resistance	Resistance of a micro-organism to an antimicrobial drug that had been originally effective for treating infections caused by it.
Antimicrobial stewardship	A systematic approach to promoting and monitoring the judicious use of antimicrobials to preserve their future effectiveness.
Clinical team	Clinical staff at the point of care including but not limited to medical and nursing healthcare professionals.
Features of the standard	These elements, taken together, will enable progress towards achieving the standard.
Healthcare-associated infections	Infections that are acquired after contact with a healthcare service.
Healthcare services	All acute, primary and community care services that provide healthcare.
Infection	The invasion and reproduction of pathogenic or disease-causing micro-organisms inside the body that may cause tissue injury and disease.
Infection prevention and control	The discipline and practice of preventing and controlling the spread of infection and infectious diseases in a healthcare service.
Infection prevention and control programme	Structures, systems and processes a service has in place to prevent and control healthcare-associated infections.

Key term	Meaning
National Standards	Refers to the 2017 <i>National Standards for the prevention and control of healthcare-associated infections in acute healthcare services</i>
Patient	A person who is receiving healthcare or treatment.
Service provider	Refers to any person, organisation or part of an organisation delivering health and social care services as described in the Health Act 2007 section 8(1)(b)(i)–(ii).
Staff	The people who work in the acute service, including clinical and non-clinical staff.
Standard	Describes the high-level outcome required to contribute to quality and safety of the service.

9. How the National Standards were developed

A focused review of international and national literature was undertaken and used to inform the development of the initial draft revised national standards. This review took account of international standards, international guidelines, national guidelines, HIQA inspection reports, investigations and national surveys. A number of the key recommendations and learning from the above literature has been taken into consideration and integrated into the revised standards. A summary of this literature review will be published on www.hiqa.ie.

To help develop these revised National Standards, HIQA convened a Standards Advisory Group made up of a diverse range of interested and informed parties, including patient advocates, healthcare professionals, representatives from the State Claims Agency, the Private Hospitals Association, Department of Health and the HSE. The function of the group was to advise HIQA, support consultation and information exchange, and advise on further steps. HIQA would like to acknowledge with gratitude the effort and commitment of the Standards Advisory Group. The members of this Group are listed in Appendix 1.

HIQA also organised a series of focus groups with patients, patient advocates, healthcare professional representative organisations, members of the HIQA Healthcare team and front-line staff from a range of disciplines working in hospitals. This was to discuss their experience of implementing the National Standards to date and to obtain their opinion on what the revised Standards should address. HIQA would like to acknowledge and thank those who participated for taking the time to attend the focus group sessions and for contributing to the development of the revised Standards in such a meaningful way.

A national public consultation on a published draft of the revised standards was carried out during an eight-week period from 10 October to 2 December 2016. During the public consultation, 34 submissions were received. Following the conclusion of the consultation, HIQA analysed the feedback received and revised the draft standards as appropriate. HIQA would like to thank all who took the time to contribute to the public consultation. A summary of these submissions will be presented in a Statement of Outcomes document on www.hiqa.ie.

Summary of the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services*

Theme 1: Person-centred Care and Support

Standard 1.1	Service providers effectively communicate with their patients about prevention, control and management of healthcare-associated infections.
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Theme 2: Effective Care and Support

Standard 2.1	An infection prevention and control programme is in place to ensure a well-organised and integrated approach to the prevention and control of healthcare-associated infections.
Standard 2.2	A microbiological service is in place to support the service to prevent and control healthcare-associated infections.
Standard 2.3	An infection surveillance programme is in place to ensure a rapid and effective response to healthcare-associated infections and antimicrobial resistance trends.
Standard 2.4	A monitoring programme is in place to measure and report on the effectiveness of infection prevention and control practices.
Standard 2.5	Service providers identify and manage a patient's infection prevention and control healthcare needs in a timely and effective manner.
Standard 2.6	Healthcare is provided in a clean and safe physical environment that minimises the risk of transmitting a healthcare-associated infection.
Standard 2.7	Equipment is cleaned and maintained to minimise the risk of transmitting a healthcare-associated infection.
Standard 2.8	Reusable invasive medical devices are decontaminated and maintained to minimise the risk of transmitting a healthcare-associated infection.

Theme 3: Safe Care and Support

Standard 3.1	Service providers integrate risk management practices into daily work routine to improve the prevention and control of healthcare-associated infections.
Standard 3.2	Service providers effectively identify, manage, report and investigate any healthcare-associated infection incidents.
Standard 3.3	Service providers support initiatives to promote and encourage quality improvement in infection prevention and control practice.
Standard 3.4	Service providers adhere to hand hygiene practices to minimise the risk of acquiring or transmitting infection.
Standard 3.5	Service providers ensure minimal healthcare-associated infection and antimicrobial resistance risks to patients when deciding on care options.
Standard 3.6	An antimicrobial stewardship programme is in place to ensure safe antimicrobial prescribing for patients.
Standard 3.7	An occupational health service is in place to prevent and decrease the risk of infection to staff and patients.
Standard 3.8	Services have a system in place to manage and control infection outbreaks in a timely and effective manner.

Theme 4: Better Health and Wellbeing

Standard 4.1

Service providers work with patients, families and visitors to promote and enable safe infection prevention and control practices.

Theme 5: Leadership, Governance and Management

Standard 5.1

There are clear national governance arrangements in place to ensure the sustainable delivery of safe and effective infection prevention and control across the entire healthcare system.

Standard 5.2

Service providers have clear accountability arrangements in place for the prevention and control of healthcare-associated infections.

Standard 5.3

Service providers have formalised governance arrangements in place to ensure the delivery of safe and effective infection prevention and control across the service.

Standard 5.4

Staff are empowered to exercise their professional and personal responsibility for safe and effective infection prevention and control practices.

Standard 5.5

Service providers ensure that externally contracted services adhere to safe and effective infection prevention and control practices.

Theme 6: Workforce

Standard 6.1	Service providers plan, organise and manage their workforce to meet the services' infection prevention and control needs.
Standard 6.2	Service providers ensure their workforce has the competencies and training required to provide safe and effective infection prevention and control practices.

Theme 7: Use of Resources

Standard 7.1	Service providers plan and manage the use of resources to meet the services' infection prevention and control needs.
Standard 7.2	Service providers ensure that medical devices and equipment that are purchased, loaned, borrowed, serviced or repaired are safe to use.

Theme 8: Use of Information

Standard 8.1	Service providers have an information management system in place to meet the services' infection prevention and control needs.
Standard 8.2	Service providers have effective arrangements in place for information governance for infection prevention and control-related data.

Theme 1. Person-centred Care and Support



Theme1

Person-centred Care and Support

Person-centred care ensures that patients are well informed, involved and supported in the prevention and control of healthcare-associated infections throughout their care pathway.

Clinical staff at the point of care who communicate well ensure that patients are empowered to participate in their own care and are aware of the potential infection-related risks in a hospital setting. It is important that patients understand any proposed treatment or interventions being offered to them, particularly those with a known associated risk of infection or antimicrobial resistance. Any patient who develops colonisation with a multidrug-resistant micro-organism or a healthcare-associated infection must be informed by an appropriate member of the clinical team in a timely manner.

Clinical staff at the point of care need to give patients the opportunity to express any concerns or worries they may have and provide answers on their healthcare-associated infection and care plan. Patients who leave the hospital with ongoing care needs, such as using a medical device or following surgery or if multidrug-resistant micro-organism positive, must be well informed, prepared and supported in the ongoing and safe management of their care needs in order to avoid future infection.

Patients have the right to have an advocate of their choice present during discussions about their colonisation or healthcare-associated infection status and their care plan. It is important that staff recognise and acknowledge the impact that a patient's diagnosis can have on their family, especially in serious or complex cases.

Finally, it is essential that an acute service clearly communicates with patients, families, visitors and the wider public about its overall performance in the prevention and control of healthcare-associated infections and antimicrobial stewardship. A patient-centred service seeks and responds to all types of feedback, including complaints, to improve the service provided.

Standard 1.1

Service providers effectively communicate with their patients about prevention, control and management of healthcare-associated infections.

Features of a service meeting this standard are likely to include the following:

- 1.1.1 The importance of the prevention, control and management of infection, including healthcare-associated infections, is discussed with patients at appropriate points in their care pathway or when clinically indicated.
- 1.1.2 Patients are informed about any healthcare-associated infection risks identified and any infection prevention and control precautions that need to be taken to protect them or others.
- 1.1.3 Patients are provided with clear, easy-to-understand written information based on best available evidence that provides answers to general queries raised by patients about healthcare-associated infections.
- 1.1.4 Patients are involved in making informed, shared decisions about their care. They are provided with evidence-based information outlining the risks, benefits or alternatives of any proposed treatments or interventions with a known associated risk of healthcare-associated infections or antimicrobial resistance. The patient's informed consent to any such treatments or interventions is then obtained and documented in line with legislation and national policy.
- 1.1.5 An appropriate member of the clinical team communicates directly with the patient whenever colonisation with a multidrug-resistant organism or any healthcare-associated infection occurs, in a timely and appropriate manner. The patient is informed about how he or she will be affected and is provided with information about treatment options where appropriate.
- 1.1.6 Patients are actively listened to and communicated with in an open and sensitive manner throughout their care pathway, including on ward rounds. The clinical team answer any queries raised by patients on their specific healthcare-associated infections.

- 1.1.7 All discussions with patients occur at a time when they are best able to understand and retain the information. Any patient with a sensory impairment or language difficulty receives information in a way that they can understand.
- 1.1.8 Patients are supported and encouraged to ask questions, raise concerns and provide feedback about their care.
- 1.1.9 Future care needs are discussed with patients during their in-patient stay where there is a need for ongoing care at home following discharge. Specific information and instruction is provided to patients on safe infection prevention and control precautions including but not limited to the following situations:
- managing a healthcare-associated infection, including those arising from multidrug-resistant micro-organisms
 - managing medical devices
 - caring for surgical wounds
 - giving medication injections or infusions
 - preparing and administering enteral tube feeding*
 - performing home-based dialysis.
- 1.1.10 All communication with patients about their infectious status or changes in their care plan is recorded in the patient's healthcare record.
- 1.1.11 The participation and inclusion of a patient's family should be at the discretion and expressed wish of the patient. Patients have the right to have an advocate of their choice present during discussions about their colonisation or infection status or treatment plan. The patient's family may need to be supplied with any relevant information or training on infection prevention and control precautions for the patient's ongoing care needs.
- 1.1.12 A formalised structure is in place for patients, families, visitors and the public to provide feedback, including concerns, regarding the prevention and control of healthcare-associated infections. This information is used to improve the service provided.

* **Enteral tube feeding:** refers to a type of feeding used for people who cannot eat normally, in which liquid food is given through a tube directly into the gut.

Theme 2. Effective Care and Support



Theme 2

Effective Care and Support

Effective infection prevention and control practice can significantly reduce the rate of healthcare-associated infections. A well-planned, organised and managed infection prevention and control programme:

- is led by a multidisciplinary team
- adheres to best practice
- operates within an agreed scope of activities
- has the required resources in place to achieve its outcomes.

The microbiological service is essential to support the hospital in its infection prevention and control efforts. This includes investigating the causes of healthcare-associated infections, supporting healthcare professionals with effective clinical management of infections and providing healthcare-associated infection data to support surveillance activities.

An effective infection surveillance system detects and responds to any significant new and emerging healthcare-associated infection and antimicrobial resistance trends. Each hospital needs to be particularly vigilant for locally emerging antimicrobial resistance problems, especially with multidrug-resistant micro-organisms.

The monitoring programme evaluates the safety and quality of the service's performance in the prevention and control of healthcare-associated infections. Monitoring and measurement is best achieved using multiple methods, as no single indicator can determine if infection prevention and control practice is safe and effective. Existing data already collected by the service should be used to its maximum effect in monitoring performance. The monitoring activities selected by a service should be meaningful to staff and reflect the local service provided in order to help identify the relevant areas for improvement.

Identifying patients that are vulnerable to infection is a critical step during admission, discharge or transfers within or between healthcare services to ensure seamless integrated care. Patient care is a dynamic process that involves regular assessment of any potential risks of a patient either acquiring or transmitting a healthcare-associated infection throughout their care pathway.

It is important that the physical healthcare infrastructure is fit for purpose and provides adequate bed spacing, isolation and single room capacity that minimises the spread of healthcare-associated infections, including multidrug-resistant micro-organisms. A clean, clutter-free healthcare environment is a fundamental expectation of patients, families and visitors. It is essential that the service complies with all aspects of maintaining cleanliness and safety of the physical environment in line with relevant legislation and best practice for the prevention and control of healthcare-associated infections. Hospitals need to maintain and refurbish their infrastructure in order to facilitate effective cleaning and to comply with the National Standards.

It is important that all equipment is cleaned and decontaminated appropriately so as to avoid transmitting micro-organisms between equipment and patients. Similarly, reusable invasive medical devices need to be correctly reprocessed and decontaminated to ensure safe use on a patient and minimise the risk of transmitting a healthcare-associated infection.

Standard 2.1

An infection prevention and control programme is in place to ensure a well-organised and integrated approach to the prevention and control of healthcare-associated infections.

Features of a service meeting this standard are likely to include the following:

- 2.1.1 An infection prevention and control programme that is in line with best practice, evidence-based guidelines, National Clinical Effectiveness Committee's National Clinical Guidelines, other national clinical guidelines, national recommendations, National Standards and relevant legislation, and reflects the size, complexities and specialities of the service with the required resources to implement it.
- 2.1.2 An infection prevention and control committee, which is chaired by a designated member of the senior management team with a multidisciplinary membership as outlined in the glossary of these Standards to direct, support and oversee the implementation of the programme.
- 2.1.3 An infection prevention and control team to monitor and advise on implementing the programme. The team is led by a consultant clinical microbiologist with dedicated time to lead the infection prevention and control programme. The team reports to the infection prevention and control committee.
- 2.1.4 An agreed infection prevention and control programme plan that sets clear strategic direction for the delivery of the objectives of the programme in the short, medium and long term as appropriate to the needs of the service. The plan should be signed off by the infection prevention and control committee.
- 2.1.5 Infection prevention and control programme activities provided by the infection prevention and control team and relevant designated staff include, but are not limited to, the following:
 - providing staff with ready access to expert clinical advice and information on a 24-hour basis seven-days-a-week

- developing, reviewing and updating, as appropriate, infection prevention and control clinical practice guidance, including policies and procedures
- implementing strategies for infection prevention and control clinical practice guidance
- training and education of staff
- coordinating surveillance of healthcare-associated infections and antimicrobial resistance data
- setting up a monitoring programme
- conducting regular service-wide risk assessment and implementing a risk management plan
- investigating and managing healthcare-associated infection incidents and outbreaks
- supporting quality improvement initiatives
- giving advice on use of resources.

2.1.6 Integration of the infection prevention and control programme with the antimicrobial stewardship programme to ensure that the infection control improvement efforts and antimicrobial stewardship activities are aligned.

2.1.7 Regular review of the infection prevention and control programme to determine any gaps that could affect the safe delivery of the service, and prioritisation of actions to mitigate any viability risks to the service. This review should include:

- assessed needs and casemix of the local population served
- size, complexity and specialities of the service being provided
- number of staff required to deliver the service
- skill-mix and competencies of staff required to deliver the service
- interdependencies of internal and external services
- findings from consultation with patients and staff
- resources and facilities available
- changes in workload including chronic overcrowding, high levels of activity, understaffing
- relevant legislation and regulation.

2.1.8 A planned and organised programme of audit that regularly:

- monitors healthcare-associated infections and antimicrobial resistance rates
- collects key performance indicator and other relevant indicator data
- assesses the effectiveness of the infection prevention and control activities
- monitors implementation of clinical practice guidelines.

The relevant findings are fed back to staff and senior management. Effective line-management arrangements are in place to ensure action is taken to address any areas identified for improvement.

Standard 2.2

A microbiological service is in place to support the service to prevent and control healthcare-associated infections.

Features of a service meeting this standard are likely to include the following:

- 2.2.1 A microbiological service that is in line with best practice, evidence-based guidelines, national recommendations and legislation. The selection of microbiological activities reflects the size, complexities and specialities of the service with the required resources to implement the service.
- 2.2.2 The microbiological service provides 24-hour seven-days-a-week access to:
 - an accredited diagnostic microbiology laboratory with appropriately trained and qualified staff
 - expert advice by a consultant medical microbiologist
 - complete and up-to-date accurate laboratory data.
- 2.2.3 Microbiological laboratory results include information with interpretive comments to aid clinical decision-making.
- 2.2.4 A system for the rapid reporting of alert organisms[‡] to the treating clinical team and the infection prevention and control team, which is accompanied by expert microbiological advice.
- 2.2.5 The diagnostic microbiology laboratory has the ability or has formal arrangements in place for the molecular typing of alert organisms or micro-organisms that are epidemiologically associated with a known or potential outbreak.
- 2.2.6 Diagnostic microbiological laboratories participate in local, national and international surveillance activities.

[‡] **Alert organism:** micro-organisms that pose a significant risk of transmission to non-infected patients or staff, resulting in colonisation or healthcare-associated infection, or that pose a significant risk of transmission to non-infected people in the wider population or community.

- 2.2.7 Safe and effective systems in place for microbiological specimen collection and transportation within the service and between external sites.
- 2.2.8 Regular review of microbiology services with documented findings reported to senior management. This includes, but is not limited to:
- identifying gaps in current services
 - reviewing turnaround times
 - checking efficiency and safety of transportation services
 - assessing new technologies.

Standard 2.3

An infection surveillance programme is in place to ensure a rapid and effective response to healthcare-associated infections and antimicrobial resistance trends.

Features of a service meeting this standard are likely to include the following:

- 2.3.1 An infection surveillance programme that is in line with best practice, evidence-based guidelines, national recommendations and legislation. The selection of surveillance activities reflects the size, complexities and specialities of the service with the required resources to implement the programme.
- 2.3.2 The infection surveillance programme is coordinated and implemented by the infection prevention and control team and led by a consultant microbiologist.
- 2.3.3 The programme includes a designated surveillance scientist in the diagnostic microbiology laboratory with the required training and competencies to deliver microbiological and infection surveillance requirements, including investigation and managing healthcare-associated infection incidents and outbreaks for the service.
- 2.3.4 A clear description of how the surveillance programme will be delivered with well-defined aims, objectives and priorities which are reviewed on an annual basis.
- 2.3.5 The local surveillance programme provides healthcare-associated infections and antimicrobial resistance data to national and international surveillance programmes. This includes the use of standardised case definitions and clearly defined and documented surveillance data collection methods.
- 2.3.6 Staff have the required ongoing training and competencies to perform surveillance activities appropriate to their role. Protected time is allocated to designated members of staff in order to deliver surveillance requirements.

- 2.3.7 A comprehensive surveillance programme to ensure that data is collected, analysed, interpreted and reported in order to promptly respond to any emerging healthcare-associated infections or antimicrobial resistance threats or outbreaks.
- 2.3.8 Relevant, useful and real-time healthcare-associated infection and antimicrobial resistance surveillance data is collected. This includes but is not limited to standardised incidence rates of:
- alert organisms
 - multidrug-resistant organisms
 - invasive medical device-related infections
 - surgical site infections, including caesarean sections and prosthetic surgeries
 - bloodstream infections
 - intensive care unit-acquired infections
 - neonatal infections.
- 2.3.9 Analysis of the data including regular benchmarking with other local, national and international data over time.
- 2.3.10 Infectious diseases, unusual clusters or changing patterns of illness are notified to the medical officer of health in the local Departments of Public Health, in line with infectious diseases legislation.
- 2.3.11 Enhanced[‡] and sentinel^{*} data are submitted to the Health Protection Surveillance Centre (HPSC) for national and international surveillance programmes as requested.
- 2.3.12 Regular reports on the findings of surveillance activities, with feedback of meaningful data with interpretations and recommendations to staff and senior management to promote learning and improvement. Action is taken to address any areas identified for improvement.
- 2.3.13 Regular review of the surveillance programme to identify any gaps in current surveillance activities appropriate to the service that may need to be addressed.

[‡] Enhanced data refers to additional information that is sought, following the notification of an infection, including relevant clinical, microbiological and epidemiological information, which is used to guide prevention and control efforts.

^{*} Sentinel data refers to information collected from a limited number of selected reporting sites that can be used to signal trends, identify outbreaks and monitor the burden of disease, providing a rapid, economical alternative to other surveillance methods.

Standard 2.4

A monitoring programme is in place to measure and report on the effectiveness of infection prevention and control practices.

Features of a service meeting this standard are likely to include the following:

- 2.4.1 A monitoring programme that is in line with best practice, guidelines, national recommendations and legislation. The selection of monitoring activities reflects the size, complexities and specialities of the service with the required resources to implement the programme.
- 2.4.2 Inclusion of multiple-outcome measures to ensure complete evaluation of the effectiveness of infection prevention and control best practice including, but not limited to:
- surveillance data
 - key performance indicator and other relevant indicator data
 - audit findings
 - outbreak control learning points
 - patient safety incident reports
 - HIQA monitoring reports
 - surveys, including patients' experiences of care
 - patients' concerns and complaints
 - feedback from staff experiences.
- 2.4.3 An agreed annual plan for audit that uses a standardised evidence-based monitoring approach. This includes participating in international and national audit programmes and locally targeted audits which are conducted in line with the service's infection prevention and control priorities and service plan requirements.
- 2.4.4 Arrangements are in place to measure and report on the service's overall performance in infection prevention and control, using a comprehensive set of performance indicators. This includes national key performance indicators and the service's local infection prevention and control indicators, which are developed in line with best practice. These are regularly reviewed and reflect the service provided.

- 2.4.5 Defined escalation procedures to ensure an immediate response to any serious infection risks identified during monitoring.
- 2.4.6 Staff are provided with an opportunity to feed back on any monitoring report findings and input into decisions to change or improve infection prevention and control practices.
- 2.4.7 Regular reports from the monitoring programme on the performance and impact of infection prevention and control activities, with feedback of the relevant findings to staff and senior management to promote learning and improvement. Action is taken to address any areas identified for improvement.
- 2.4.8 Regular review of the monitoring programme to identify any gaps in current monitoring activities appropriate to the service that may need to be addressed.

Standard 2.5

Service providers identify and manage a patient's infection prevention and control healthcare needs in a timely and effective manner.

Features of a service meeting this standard are likely to include the following:

- 2.5.1 The assessment of patients on admission or on first presentation takes into consideration the patient's risk of either acquiring or transmitting an infection. This includes screening for multidrug-resistant micro-organisms, where appropriate, according to national recommendations, which is clearly documented in the patient's healthcare record.
- 2.5.2 All information necessary to provide effective care is readily available, at the point of clinical decision-making, including any microbiological screening or diagnostic results.
- 2.5.3 The clinical team is supported in making clinical decisions based on best practice that will maximise benefits and minimise healthcare-associated infection risks to patients. This includes having ready access to easy-to-reference clinical practice guidance, in line with national guidelines.
- 2.5.4 The patient's care plan is regularly reviewed and revised by the clinical team in response to the patient's evolving needs and preferences. Any concerns raised by patients or their families inform the care plan, such as any new onset signs and symptoms of potential infection.
- 2.5.5 Patients with suspected or confirmed cases of colonisation or infection are managed in a person-centred, timely and effective manner.
- 2.5.6 Arrangements are in place to facilitate isolation of patients with suspected or confirmed communicable disease, including healthcare-associated infection and colonisation with a multidrug-resistant micro-organism. This includes appropriate placement in a suitable and clearly identifiable isolation room, single room or cohort area, in line with best practice. The expertise of the infection prevention and control team is sought regarding isolation prioritisation whenever suitable rooms are not readily available.

- 2.5.7 The patient's status is reassessed at every clinical review and handover of care to another member of the clinical team, in line with the National Clinical Effectiveness Committee's National Clinical Guidelines.
- 2.5.8 Arrangements are in place to aid the early recognition and treatment of clinical deterioration, including sepsis, in any patient with a healthcare-associated infection, in line with the National Clinical Effectiveness Committee's National Clinical Guidelines.
- 2.5.9 Healthcare professionals share necessary information about the patient's colonisation or infection status on admission, discharge and transfer within and between healthcare services.
- 2.5.10 Staff ensure that the dignity, privacy and autonomy of patients who have a healthcare-associated infection are maintained and respected at all times.

Standard 2.6

Healthcare is provided in a clean and safe physical environment that minimises the risk of transmitting a healthcare-associated infection.

Features of a service meeting this standard are likely to include the following:

Design and layout

- 2.6.1 A physical healthcare environment that is planned, designed, developed and maintained to facilitate effective cleaning and compliance with infection prevention and control best practice.
- 2.6.2 The size, complexity and specialities of the service are considered when planning the design and layout of the facility.
- 2.6.3 The service complies with the relevant legislation and national and international best practice recommendations for the infrastructure of the facility including the building, water supply, mechanical ventilation and waste disposal.
- 2.6.4 Patient accommodation is planned and managed in a way that minimises the spread of healthcare-associated infections and maintains the patient's dignity and privacy in line with national guidelines.

Physical environmental hygiene and safety

- 2.6.5 Arrangements and documented specifications are in place for cleaning and disinfection of the physical environment, in line with best practice guidance. This includes clearly defined responsibilities for staff involved in cleaning.
- 2.6.6 Arrangements and specifications are in place for linen and laundry management including cleaning, decontamination, collection, transport and storage, in line with best practice.
- 2.6.7 Arrangements and specifications are in place for the management of reusable cleaning textiles in line with best practice.

- 2.6.8 Arrangements and specifications are in place for waste management including arrangements for safe handling, segregation, storage, transportation and disposal, in line with national waste management guidelines and legislation.
- 2.6.9 The water system is planned, designed, maintained and monitored to mitigate the spread of healthcare-associated infections, in line with national guidelines and relevant legislation.
- 2.6.10 The ventilation system is planned, designed, maintained and monitored to mitigate the spread of healthcare-associated infections, in line with best practice and relevant legislation.

Proactive maintenance and refurbishment programme

- 2.6.11 Appropriate arrangements for maintaining and refurbishing the infrastructure are in place in order to achieve sustained compliance with National Standards, within the specified time frames outlined in the work plan. The refurbishment plan outlines the number of isolation and single rooms with en-suite facilities required. Action is taken to ensure that facilities are appropriate for the needs of patients and in line with best practice recommendations.

Environmental risk management

- 2.6.12 A site-specific safety statement includes a description of the facility, the hazards, risks, existing control measures and staff responsibilities for environmental risk management. It is reviewed at regular intervals to ensure it remains up to date, or sooner if any significant problems with infection prevention and control or capacity issues are detected.
- 2.6.13 Measures are in place to control the risk to the microbiological safety of water in the facility in line with relevant national guidelines.
- 2.6.14 A mechanism is in place to ensure that an invasive Aspergillosis risk assessment is performed and that control measures are implemented as required during construction, renovation, demolition, repair and maintenance activities, in consultation with the infection prevention and control team and in line with national guidelines.

Monitoring

- 2.6.15 Formalised arrangements are in place to monitor and inspect the physical infrastructure, maintenance and environmental cleanliness to ensure the service complies with National Standards. A quality improvement plan is implemented if any areas for improvement are identified.

Standard 2.7

Equipment is cleaned and maintained to minimise the risk of transmitting a healthcare-associated infection.

Features of a service meeting this standard are likely to include the following:

- 2.7.1 All equipment is safely and effectively cleaned, decontaminated, maintained and managed in accordance with legislation, the manufacturer's instructions, national medical devices and equipment standards policy, standards and best practice guidance.
- 2.7.2 Arrangements and documented specifications are in place for cleaning, disinfecting and sterilising equipment. This includes clearly defined responsibilities for staff.
- 2.7.3 Equipment designated 'single use' is not re-used under any circumstances.
- 2.7.4 Dedicated equipment in rooms designated for isolation is appropriately decontaminated prior to use on another patient.
- 2.7.5 Reusable non-invasive equipment or medical devices is decontaminated, as appropriate for the level of infection risk, between each patient use.
- 2.7.6 Designated storage areas for large items of equipment such as beds, mattresses, hoists, wheelchairs and trolleys which are clean but not in use.
- 2.7.7 Regular monitoring and inspection of the cleanliness of equipment. Action is taken to address any areas identified for improvement.

Standard 2.8

Reusable invasive medical devices are decontaminated and maintained to minimise the risk of transmitting a healthcare-associated infection.

Features of a service meeting this standard are likely to include the following:

- 2.8.1 All reusable invasive medical devices are safely and effectively decontaminated, maintained and managed in accordance with legislation, manufacturers' instructions, the National Decontamination Safety Programme, national decontamination standards and best practice recommendations.
- 2.8.2 A medical device equipment decontamination committee, which is chaired by a designated member of the senior management team with a multidisciplinary membership as outlined in the glossary of these Standards, to direct, support and oversee the decontamination of reusable invasive medical devices in the service.
- 2.8.3 A designated member of staff to coordinate the decontamination of reusable invasive medical devices in the service and report to the medical device decontamination committee.
- 2.8.4 Arrangements and documented specifications are in place for decontaminating and reprocessing reusable invasive medical devices.
- 2.8.5 Staff with responsibility for decontaminating reusable invasive medical devices have the necessary training and competencies to do so.
- 2.8.6 Staffing arrangements are in place to support out-of-hours decontamination.
- 2.8.7 Use of an equipment management system that supports and enables maintenance of an up-to-date track-and-trace record for reusable invasive medical devices, and reporting in the case of a healthcare-associated infection incident.

- 2.8.8 The service regularly reviews all the relevant stages of the decontamination life cycle of reusable invasive medical devices to ensure compliance with best practice. This includes reviews during any healthcare-associated infection incident or outbreak involving reusable invasive medical devices. Action is taken to address any areas identified for improvement.
- 2.8.9 The service provides an annual decontamination quality assurance report. This report identifies the risks, near misses and measures put in place to minimise the risk of reoccurrence, which is made available to staff and senior management within and between services in order to share the learning from such events.

Theme 3. Safe Care and Support



Theme 3

Safe Care and Support

Infection prevention and control is an integral part of ensuring patient safety. Effective risk management, as part of a service's overall quality and patient safety strategy, supports better decision-making by providing all staff with a greater insight into potential risks arising from the environment and activities within the hospital. It depends on everyone understanding their responsibilities and working together to reduce healthcare-associated infections.

While it is unlikely that risks can never be totally eliminated, they can be minimised to help reduce the number of healthcare-associated infection incidents that occur in a service. A safe and effective service learns from all incidents when they do happen, especially potentially preventable infections. Actively involving staff in improvement initiatives allows the service to respond to identified risks through positive changes to infection prevention and control practice.

Staff need to focus on good basic care principles as most transmitted infectious agents comes from human sources. Hand hygiene is the single most important intervention to prevent transmission of healthcare-associated infections. The principles of excellent hand hygiene and use of personal protective equipment underpins most standard- and transmission-based precautions.

Choosing the patient care option with the least infection risk can prevent avoidable infection in the first instance and minimise the risk of harm that is associated with specific aspects of patient care. Staff should be empowered to stop, think and consider all options, including those with the lowest infection risk, before deciding on the best course of action for their patients.

Prudent and effective antimicrobial prescribing can contain the spread of antimicrobial resistance. Antimicrobial stewardship programmes aim to ensure that every patient receives the right antimicrobial therapy at the right dose, route and duration, and for the right infection type at the right time.

All those working in acute services must be provided with a safe working environment. The service has a duty of care to decrease the occupational risk of healthcare-associated infections to staff. However, it is also the responsibility of all

staff to actively take steps to protect themselves and their patients and colleagues from infection. Immunisation is one such essential component in preventing transmission of infection.

A service's preparedness for outbreak situations is critical, particularly common seasonal pathogens. While it may be impossible to prevent an outbreak, careful management can mitigate spread of infectious agents and limit the impact of such infection on the delivery of normal healthcare services.

Standard 3.1

Service providers integrate risk management practices into daily work routine to improve the prevention and control of healthcare-associated infections.

Features of a service meeting this standard are likely to include the following:

- 3.1.1** Systems for the proactive identification, assessment, mitigation, monitoring and reporting of infection risks are in place and in line with the service's risk management policy.
- 3.1.2** The service regularly reviews any significant infection risks to patients by conducting service-wide infection prevention and control risk assessments. This includes reviews during periods of service reorganisation or when demand and resources change such as overcrowding, infection outbreaks and understaffing. Arrangements are in place to minimise the impact on infection prevention and control activities.
- 3.1.3** The service develops and implements a risk management plan that is effectively communicated to all staff to ensure everyone understands who is responsible for identifying risk, reporting risk and how risks will be managed.
- 3.1.4** Any risks that cannot be adequately mitigated at the point of care are escalated to the next level of management for action, and to the national service provider if necessary.
- 3.1.5** Necessary action is taken to mitigate the risk and produce quality improvement plans, as required, with structured timely feedback to staff on the progress of the proposed plan.
- 3.1.6** Staff are trained and assisted to integrate risk management techniques into their daily tasks and duties that involve infection prevention and control. This includes assessing patients for risk of infection, assessing the environment for risk of infection and implementing standard precautions and transmission-based precautions, in line with best practice.

- 3.1.7 Staff adhere to the service's infection prevention and control policies and procedures, guidelines and standards in order to effectively anticipate and mitigate healthcare-associated infections and antimicrobial resistance risks.
- 3.1.8 The service's risk management process is monitored for effectiveness. Action is taken to address any areas identified for improvement.

Standard 3.2

Service providers effectively identify, manage, report and investigate any healthcare-associated infection incidents.

Features of a service meeting this standard are likely to include the following:

- 3.2.1 Arrangements are in place to identify, manage, report and investigate healthcare-associated infection incidents in a timely manner in line with national legislation, policy, guidelines and standards.
- 3.2.2 Open disclosure by an appropriate member of the clinical team in charge of the patient's care to the patient after a healthcare-associated infection incident becomes known, in a timely and appropriate manner.
- 3.2.3 The patient receives immediate care and support following a healthcare-associated infection incident, which is coordinated by their lead healthcare professional.
- 3.2.4 All healthcare-associated infection incidents are formally reported using the service's incident management process.
- 3.2.5 An assessment process is in place to decide on the appropriate level of review and review type required for different healthcare-associated infection incidents. Serious incidents are reported to higher levels of management in line with the service's policy and national requirements.
- 3.2.6 Arrangements are in place to collect all relevant healthcare-associated infection incident data, track and trend the incidents, communicate the findings to the relevant governing committees and senior management and mitigate any preventable risks promptly.
- 3.2.7 All healthcare professionals receive training on how to communicate and provide support to patients following a healthcare-associated infection incident and how to report an incident.
- 3.2.8 Arrangements are in place to publish and implement the recommendations from reviews of healthcare-associated infection incidents, and to share the learning among staff and senior management to try to prevent similar incidents happening again.

Standard 3.3

Service providers support initiatives to promote and encourage quality improvement in infection prevention and control practice.

Features of a service meeting this standard are likely to include the following:

- 3.3.1 The results of the infection prevention and control risk assessment are used to help determine the priorities for improvement activities that reflect the size, complexities and specialities of the service.
- 3.3.2 A designated member of staff is assigned responsibility and accountability for leading, coordinating and reporting on the quality improvement programme and for its associated outcomes.
- 3.3.3 All staff are encouraged and supported to initiate improvement projects that can lead to an improved infection prevention and control environment.
- 3.3.4 All staff are encouraged and supported to work collaboratively within and between healthcare services on joint improvement initiatives.
- 3.3.5 Any training needs in quality improvement methods are identified, with protected time allocated to allow staff to participate in learning activities and improvement initiatives.
- 3.3.6 The service incorporates national and international initiatives to improve safety and quality and minimise the risk of healthcare-associated infections to patients, especially those that target common reoccurring infection prevention and control challenges across all healthcare services.
- 3.3.7 Regular review of how effective the improvement initiatives have been, with feedback of relevant learning points to staff. Action is taken to address any identified areas for improvement in the service.

Standard 3.4

Service providers adhere to hand hygiene practices to minimise the risk of acquiring or transmitting infection.

Features of a service meeting this standard are likely to include the following:

- 3.4.1 Service providers implement up-to-date national and international guidelines to promote and encourage effective hand hygiene practice.
- 3.4.2 Staff adhere to the World Health Organization's (WHO's) 'five moments of hand hygiene'[‡] principles' or any emerging best practice.
- 3.4.3 Staff adhere to the national 'bare wrist'[‡] recommendations in order to achieve effective hand hygiene practice when providing clinical care.
- 3.4.4 Leaders at all levels support and encourage colleagues to adhere to good hand hygiene practices by leading by good example.
- 3.4.5 Patients and visitors are provided with information about the importance of hand hygiene and how to keep their hands clean. Assistance is provided to patients to facilitate effective hand hygiene when required.
- 3.4.6 Patients and their families are encouraged to ask staff if they have performed hand hygiene before attending to them and also request staff to practice hand hygiene.
- 3.4.7 Hand hygiene facilities are provided in line with best practice and national guidelines.
- 3.4.8 Hand hygiene compliance is measured using validated methods in line with national requirements.
- 3.4.9 Regular monitoring and documentation of overall hand hygiene compliance rates with feedback of the relevant findings to staff and senior management. An effective line management system ensures that action is taken to address any areas identified for improvement.

[‡] The WHO five moments for hand hygiene are: before touching a patient, before clean/aseptic procedure, after bodily fluid exposure risk, after touching a patient, and after touching a patient's surroundings.

[‡] 'Bare wrists' includes turned up sleeves, removal of hand and wrist jewellery and short nails without nail polish.

Standard 3.5

Service providers ensure minimal healthcare-associated infection and antimicrobial resistance risks to patients when deciding on care options.

Features of a service meeting this standard are likely to include the following:

- 3.5.1** The clinical team considers if the planned treatment or intervention is necessary. It takes into account if it could be avoided or if there are any alternative options that would more effectively minimise potential healthcare-associated infection and antimicrobial resistance risk. Members of the clinical team are encouraged to ask for advice from senior colleagues if uncertain about the best course of action.
- 3.5.2** Systems are in place to support members of the clinical team in performing any tests or starting any treatment or intervention associated with possible increased risk of healthcare-associated infection and antimicrobial resistance, in line with best practice. These tests, treatments or interventions include, but are not limited to:
- performing point-of-care testing
 - collecting blood cultures
 - prescribing antimicrobials, including empirical, prophylactic, prolonged or multiple courses
 - giving immunosuppressive treatment
 - administering medication through injection
 - inserting and maintaining invasive medical devices
 - performing surgical procedures.
- 3.5.3** Systems are in place to support members of the clinical team in reassessing the treatment plan or intervention on an ongoing basis. This includes changing or discontinuing a course of treatment and maintaining, replacing or removing an invasive medical device, as appropriate, in order to minimise potential risk of a healthcare-associated infection or antimicrobial resistance.
- 3.5.4** Regular monitoring of healthcare-associated infection rates related to tests, treatments or interventions, with feedback of findings to members of the clinical team and senior management. Action is taken to address any areas identified for improvement.

Standard 3.6

An antimicrobial stewardship programme is in place to ensure safe antimicrobial prescribing for patients.

Features of service meeting this standard are likely to include the following.

- 3.6.1** An antimicrobial stewardship programme that is in line with best practice, evidence-based guidelines and reflects the size, complexities and specialities of the service with the required resources to implement it.
- 3.6.2** A drugs and therapeutics committee and or a designated antimicrobial stewardship subcommittee, which is chaired by a designated member of the senior management team with a multidisciplinary membership as outlined in the glossary of these Standards to direct, support and oversee the implementation of the programme.
- 3.6.3** An antimicrobial stewardship team to monitor and advise on the implementation of the programme. The team is led by a consultant clinical microbiologist or an infectious diseases consultant with dedicated time to lead and direct the programme. The team includes an antimicrobial pharmacist with time dedicated to antimicrobial stewardship activities.
- 3.6.4** Integration of the antimicrobial stewardship programme with the infection prevention and control, medication safety and risk management programmes and collaboration with the wider clinical pharmacy service.
- 3.6.5** Antimicrobial stewardship programme activities provided by the team include but are not limited to:
 - developing, reviewing and updating, as appropriate, evidence-based antimicrobial guidelines, including empirical antimicrobial prescribing guidelines, that are compatible with local microbiological resistance patterns and reflect antimicrobial resistance trends
 - developing, reviewing and updating, as appropriate, antimicrobial prescribing policies and procedures

- training and education of all clinical staff who administer and prescribe antimicrobials
- identifying patients most likely to benefit from an antimicrobial stewardship intervention
- implementing antimicrobial stewardship interventions, including a system of control and restriction over key strategic antimicrobials
- setting up a monitoring system for antimicrobial use and resistance.

3.6.6 Patients are provided with clear, easy-to-understand information based on best available evidence when prescribed an antimicrobial, about when, how and for how long to take them, as well as potential side effects.

3.6.7 Patients are referred, where appropriate and available, to an outpatient parenteral antimicrobial therapy (OPAT) service that adheres to antimicrobial stewardship principles with the required resources and governance arrangements in place.

3.6.8 The service provides a planned and ongoing programme of audit that regularly:

- monitors overall antimicrobial use
- tracks patterns of resistance to antimicrobial agents
- assesses the effectiveness of the antimicrobial stewardship activities.
- monitors implementation of antimicrobial guidelines.

The relevant findings are fed back to staff and senior management. Action is taken to respond to antimicrobial resistance and address any areas of the antimicrobial stewardship programme identified for improvement.

Standard 3.7

An occupational health service is in place to prevent and decrease the risk of infection to staff and patients.

Features of a service meeting this standard are likely to include the following:

- 3.7.1 An occupational health service that is in line with best practice, evidence-based guidelines, relevant legislation, occupational safety, health and welfare requirements and reflects the size, complexities and specialities of the service with the required resources to implement it.
- 3.7.2 All staff have access to an occupational health service.
- 3.7.3 An immunisation programme is available to all staff that is based on work activities and level of patient contact. Staff are informed of the risks and benefits of vaccination and the potential consequences of not availing of vaccination. An annual record is maintained of all staff uptake of influenza vaccination.
- 3.7.4 Systems are in place to identify and mitigate, where possible, any potential risk factors associated with staff acquiring or transmitting an infection. These include but are not limited to:
 - a break in skin integrity, or skin conditions such as dermatitis
 - allergies to products such as latex and hand hygiene products
 - receiving immunosuppressive treatment
 - travel from an endemic area of infection
 - performing exposure-prone procedures
 - current infection
 - vaccine non-responder (where there is a lack of an immune response to a vaccine).
- 3.7.5 Arrangements are in place to decrease the risk of healthcare-associated infections due to sharps injury by implementing control measures that provide for safer equipment and safer work practices.

- 3.7.6 Staff must report any incident or injury[‡] resulting from an exposure to the risk of healthcare-associated infection.
- 3.7.7 Arrangements are in place to assess and manage[±] staff following any incident or injury involving an exposure to the risk of healthcare-associated infection, in line with national guidelines.
- 3.7.8 Arrangements are in place in all emergency departments and occupational health departments for timely access to starter packs of post-exposure prophylaxis[¥] with occupational health service follow up.
- 3.7.9 Regular monitoring of immunisation compliance rates, rates of occupational injury involving an exposure to the risk of healthcare-associated infections and time lost due to an exposure or infection, with feedback of the relevant findings to staff and senior management. Suitable control measures are introduced, where necessary, to achieve a safe working environment.

[‡] Injury includes needle-stick or other sharps injury, human bite, exposure of broken skin or of mucous membranes.

[±] Management includes first aid, risk assessment, testing, treatment, counselling and follow-up, records and documentation.

[¥] Post-exposure prophylaxis is the administration of a drug to prevent the development of an infection after the staff member or patient has been exposed to the infection, such as hepatitis B and human immunodeficiency virus (HIV) infection.

Standard 3.8

Services have a system in place to manage and control infection outbreaks in a timely and effective manner.

Features of a service meeting this standard are likely to include the following:

- 3.8.1 Arrangements are in place to assist staff in promptly recognising and responding to any symptoms or signs in patients which are suggestive of an outbreak. The infection prevention and control team is informed of any confirmed, probable or suspected cases.
- 3.8.2 A surveillance system that can detect and respond to any emerging critical data that meet the case definition criteria for an outbreak.
- 3.8.3 Staff clearly communicate and support patients affected by an outbreak in a timely and effective manner.
- 3.8.4 Up-to-date outbreak management policies and procedures are available that outline staffing arrangements, leadership roles and responsibilities, communication strategy, outbreak control measures[‡] and surveillance activities during any outbreaks.
- 3.8.5 Any suspected or confirmed outbreaks are promptly notified to the medical officer of health in the Departments of Public Health, in line with legislation.
- 3.8.6 Everyone who needs to know about the status of an outbreak within and between healthcare services is informed and updated. Staff are supported during an outbreak.
- 3.8.7 A mechanism is in place for an out-of-hours response to an outbreak that outlines staffing, reporting and patient placement arrangements.
- 3.8.8 A multidisciplinary outbreak control team is convened in the event of suspected or confirmed outbreak in line with best practice that is chaired by a designated member of the senior management team.

[‡] Control measures include patient placement decisions, equipment and environmental cleaning and decontamination, standard- and transmission-based precautions, vaccination, medical treatments with antivirals or chemoprophylaxis as appropriate.

- 3.8.9 An outbreak management plan is implemented that outlines the steps for managing, containing and monitoring the outbreak. An escalation plan is put into place if the situation deteriorates.
- 3.8.10 The outbreak is immediately investigated by the infection prevention and control team, supported by senior management, risk management and patient safety and quality specialists, which includes identifying the responsible micro-organism, the route of transmission and groups of patients at risk.
- 3.8.11 A report outlining the outcome of the investigation of the outbreak is presented to senior management within and between all healthcare services, with feedback of outbreak control learning points provided to staff to identify any areas for improvement.

Theme 4. Better Health and Wellbeing



Theme 4

Better Health and Wellbeing

Health promotion is about making the most of every contact with patients, families and visitors to promote a culture of better health and wellbeing. Hospitals have an opportunity to inform, educate and empower people on how to protect themselves from the risk of healthcare-associated infections.

This includes the service providing hand hygiene facilities, outlining visiting rules and advising on precautions during any outbreaks. Everyone has a personal responsibility to cooperate with hospitals' infection prevention and control efforts where requested. While family and friends are an important source of support for patients, it is important that they consider the welfare of the patient when considering whether or not to visit them in hospital.

Self-care is a key component of better health and wellbeing. The service can better inform people about the important choices they can make to lower their risk of healthcare-associated infection and antimicrobial resistance. These choices include using antimicrobials wisely, receiving recommended vaccines and engaging in protective lifestyle behaviours.

Patients also need to be supported to improve their health and wellbeing and overcome any potential infection prevention challenges along their care pathway. This can be achieved through effectively managing preventable lifestyle risk factors and nutritional status.

Acute services can work with patients, families, visitors, the public and other healthcare services to improve infection prevention and control awareness of the local population.

Standard 4.1

Service providers work with patients, families and visitors to promote and enable safe infection prevention and control practices.

Features of a service meeting this standard are likely to include the following:

4.1.1 Opportunities are identified within the hospital to promote better health and wellbeing by avoiding or minimising risk of healthcare-associated infections, including but not limited to:

- accessible hand hygiene facilities
- educational material on general and specific healthcare-associated infections that is easy to read and understand
- visible information that outlines visiting rules which is easy to read and understand, including recommendations on the number of visitors, visiting times and duration of visits
- specific guidance for visitors outlining restrictions when unwell themselves
- timely information and notices on control measures during outbreaks.

4.1.2 The service educates patients on their role in preventing and controlling healthcare-associated infections, including but not limited to:

- the importance of hand hygiene[‡]
- recognising the signs and symptoms of infection[‡]
- using antimicrobials appropriately
- being aware of the benefits of immunisation
- promoting protective lifestyle factors.[±]

[‡] Hand hygiene is the most effective way of reducing infection risk and is recommended before and after visiting a hospital.

[‡] Signs and symptoms of an infection may include fever, redness, pain, drainage at a catheter or surgery site or new onset diarrhoea, especially if taking an antibiotic.

[±] Protective lifestyle factors include healthy body weight/ controlled body weight, good nutrition, being physically active, not smoking, and only drinking alcohol within recommended weekly allowances.

- 4.1.3 On admission, patients are assessed for preventable lifestyle risk factors for non-communicable diseases and are offered intervention and support as appropriate.
- 4.1.4 On admission, patients' nutrition and hydration care needs are assessed and managed as appropriate.
- 4.1.5 The service works with people who use, work in, visit or impact on the service to promote health and wellbeing efforts and improve the service to prevent and control healthcare-associated infection and antimicrobial resistance.

Theme 5. Leadership, Governance and Management



Theme 5

Leadership, Governance and Management

Leadership and accountability are fundamentally important criteria for the delivery of a safe system of care. Successful national leadership and governance arrangements are essential in assuring that strategic investment decisions reflect infection prevention and control risks across the entire healthcare system. A nationally coordinated approach would allow for better planning to address these current and future risks. Those who hold overall executive accountability and responsibility at national, group and local level must continually ensure that the service remains focused on infection prevention and control and antimicrobial stewardship efforts at the point of care.

Strong and effective leadership, governance and management arrangements at group and service-delivery level are required to create and sustain a safe infection prevention and control environment within the hospital. Overall corporate responsibility for infection prevention and control, implementation of the National Standards and provision of adequate resources rests with senior management of the hospital. Any gaps or serious risks identified in the service's ability to prevent and control healthcare-associated infections must be addressed in a timely manner. Infection prevention and control and antimicrobial stewardship are key responsibilities for managers and clinical leaders at all levels of the healthcare system, not just the responsibility of infection prevention and control and antimicrobial stewardship teams.

The senior management team needs to actively obtain assurances that personnel are functioning effectively and the hospitals' infection prevention and control needs and priorities are being met. Effective reporting systems ensure that any emerging infection prevention and control risks can be identified and managed early through a reporting-up-and-down process at all levels of staff throughout the hospital. An integrated approach between staff with clinical expertise and staff with corporate responsibility is essential. Staff with clinical specialist expertise who can evaluate and advise on infection prevention risks must be able to report directly to those with the operational capacity to address them.

An effective workforce that is accountable for its individual and collective infection prevention and control practice must be supported and managed within a strong corporate and clinical governance system. This means that the infection prevention

and control and stewardship teams are enabled to promote the programme objectives and provide assistance to staff at all levels. It is essential that staff at the point of care are supported and empowered to do the right thing or make the right decision at the right time to prevent and control healthcare-associated infections.

It is also important that there is clear oversight of and accountability for externally contracted services that the hospital uses. The infection prevention and control team needs to be involved in the procurement decision for external contracts, such as infrastructural works, hospital supplies, cleaning and decontamination services.

Standard 5.1

There are clear national governance arrangements in place to ensure the sustainable delivery of safe and effective infection prevention and control across the entire healthcare system.

Features of a service meeting this standard are likely to include the following:

- 5.1.1** A permanent national operational and oversight group with the authority to ensure delivery of safe and effective infection prevention and control and antimicrobial stewardship across all healthcare services.
- 5.1.2** A national action plan to prevent and control healthcare-associated infections and antimicrobial resistance is in place with clearly stated SMART (specific, measurable, achievable, realistic, time-bound) objectives and with the necessary funding in place.
- 5.1.3** The availability of an up-to-date, publicly available, organisational chart detailing the roles and responsibilities of individuals and groups, including national contributory groups involved in infection prevention and control.
- 5.1.4** A mechanism is in place to assess service-wide performance, surveillance and audit data in order to actively address any identified infection and prevention and control risks in a timely manner.
- 5.1.5** A national risk register is in place to address infection prevention and control risks, including those that are reported by individual hospitals.
- 5.1.6** Formalised arrangements are in place to ensure that those with specialist expertise, who can evaluate and advise on the management of infection prevention and control and antimicrobial resistance risk, report directly to those with the operational management responsibility and authority to actively address these risks.

- 5.1.7 National governance arrangements are in place to support collaborative working between all healthcare services to target healthcare-associated infections and antimicrobial resistance in a collective manner. This includes linkages between infection prevention and control personnel in both the acute and primary and community health and social care services.
- 5.1.8 A national surveillance programme that integrates and coordinates surveillance data from all healthcare services using a standardised approach based on a single national definitions protocol. This will enable regular benchmarking with local and national data. This includes data that reflects known and emerging healthcare-associated infection risks to healthcare services. Acute hospitals have access to this national database.
- 5.1.9 A national laboratory-based alert reporting system that allows real-time analysis of data from local laboratory and national information systems to identify emerging national microbial threats, including multidrug-resistant organisms, in a timely manner. Arrangements are in place for the timely communication of findings from the alert system and clear lines of accountability for acting on such findings.
- 5.1.10 A national network of appropriately and accredited reference and environmental laboratories with the capacity to support local service diagnostic microbiological laboratories in the detection of key micro-organisms implicated in healthcare-associated infection.
- 5.1.11 National arrangements are in place with the necessary operational capacity to provide active support to those healthcare services that underperform or have to deal with specific antimicrobial resistance problems which are beyond their individual capacity to deal with in isolation.
- 5.1.12 Specific workforce recommendations that outline what staff, including specialist infection prevention and control personnel, need to be in place to meet service-wide infection prevention and control needs.
- 5.1.13 Strategic investment decisions that reflect infection prevention and control risks across the entire healthcare system. The national service plan takes into consideration both new service development and

investment in upgrading existing infrastructure and equipment, including information and communication technology (ICT), required over the short, medium and long term.

- 5.1.14 Nationally-led tenders include an infection prevention and control framework for the tender specification.
- 5.1.15 A national infrastructure and building replacement plan is in place to ensure timely replacement of outdated buildings and environments.
- 5.1.16 A national asset management system is in place to ensure maintenance of an up-to-date track-and-trace record of the medical devices and equipment in use and in storage.
- 5.1.17 A national equipment replacement programme to ensure timely replacement of outdated equipment. Transparent and accessible information is available about the decision taken for replacement.
- 5.1.18 A mechanism is in place to assess and invest in new equipment that contributes to safe and effective infection prevention and control.
- 5.1.19 A mechanism is in place to assess and invest in relevant new emerging technologies that contributes to safe and effective infection prevention and control.
- 5.1.20 A national repository for policies, procedures and guidelines is in place to ensure a one-point source for up-to-date healthcare-associated infection and antimicrobial stewardship guidance. A process is in place to resource, develop and revise national guidance of relevance to infection prevention and control in response to the service's needs.
- 5.1.21 A system is in place to oversee the delivery and implementation of the national *Core Infection Prevention and Control Knowledge and Skills* competency framework in all acute hospitals.

Standard 5.2

Service providers have clear accountability arrangements in place for the prevention and control of healthcare-associated infections.

Features of a service meeting this standard are likely to include the following:

5.2.1 A senior identified individual whose role includes:

- having overall executive accountability, responsibility and authority for infection prevention and control and for implementing the National Standards
- leading a governance framework that clearly specifies, delegates and integrates corporate and clinical governance for infection prevention and control activities
- reviewing and formally reporting on the hospital's performance, surveillance and audit activities through the relevant governance structures
- addressing any gaps that could affect the service's ability to prevent and control healthcare-associated infections
- addressing any deficiencies identified with complying with National Standards
- ensuring that patients' dignity and privacy are appropriately safeguarded during the prevention, control, and management of infections
- escalating any identified serious or difficult to resolve infection prevention and control risks to the attention of the national oversight group through established risk management reporting structures.

5.2.2 When a service is located on more than one site, the identified individual delegates accountability and responsibility for safe and effective infection prevention and control to an identified person who is involved in managing and delivering the service. This identified person is at an appropriate level within the governance structure.

5.2.3 The availability of an up-to-date, publicly available, organisational chart detailing individuals and their roles and responsibility in relation to infection prevention and control at all levels within the governance structure.

Standard 5.3

Service providers have formalised governance arrangements in place to ensure the delivery of safe and effective infection prevention and control across the service.

Features of a service meeting this standard are likely to include the following:

- 5.3.1 Corporate and clinical governance arrangements that outline clear roles, responsibilities and reporting-up-and-down processes for the prevention and control of healthcare-associated infections at all levels of staff throughout the service.
- 5.3.2 Governance arrangements ensure that the strategic direction for infection prevention and control and antimicrobial stewardship efforts reflects the needs and priorities of the service.
- 5.3.3 Governance arrangements ensure that effective infection prevention and control and antimicrobial stewardship programmes are in place, with the required resources to implement them.
- 5.3.4 Corporate and clinical governance arrangements are integrated to ensure that those staff with specialist expertise, who can evaluate and advise on the management of infection prevention and control risk, report directly to those with operational management responsibility and authority to actively address these risks.
- 5.3.5 A mechanism is in place to ensure that the indicators selected to assess the service's performance in the prevention and control of healthcare-associated infections and antimicrobial stewardship provides an accurate level of assurance.
- 5.3.6 The people involved in the governance of the service have the capacity, skills and competencies necessary to effectively meet the requirements of their leadership and managerial roles.
- 5.3.7 Regular safety walk-rounds by senior management, including meeting with staff, listening to their insights on infection prevention and control, identifying examples of good practice and areas for

improvement, with documentation of the conclusions and actions to be taken.

- 5.3.8 Clinical leaders ensure oversight and coordination of infection prevention and control activities at the point of care.
- 5.3.9 Arrangements are in place for the timely sharing of information about healthcare-associated infection incidents and outbreaks within the service.
- 5.3.10 A mechanism is in place to share and learn from the collective knowledge and experience gained from a range of sources including healthcare-associated infection incidents and quality improvement initiatives within the service.
- 5.3.11 Local governance arrangements are in place to help share resources between hospitals where appropriate.
- 5.3.12 Transparent and accessible information is available to patients, families and visitors about the service's performance in the prevention and control of healthcare-associated infections and antimicrobial stewardship and with the progress of quality improvement plans taken to address any areas identified for improvement.

Standard 5.4

Staff are empowered to exercise their professional and personal responsibility for safe and effective infection prevention and control practices.

Features of a service meeting this standard are likely to include the following:

- 5.4.1 Infection prevention and control and antimicrobial stewardship teams are supported by their governing committees to effectively exercise their professional and personal responsibility to prevent and control healthcare-associated infections. This includes reporting on any identified risks and recommending actions to address them.
- 5.4.2 All staff are supported by the infection prevention and control and antimicrobial stewardship teams in their infection prevention and control practices, where required, including assistance with patient risk assessments, environmental risk assessments, audits and surveillance data collection.
- 5.4.3 All staff are empowered to take decisive action to immediately address any infection prevention and control risks in line with local policies and procedures and as appropriate to their level, competency and scope of practice.
- 5.4.4 A mechanism is in place for staff to provide feedback to the service provider in order to identify and propose areas for improvement in the delivery of services.
- 5.4.5 Promotion of a culture of openness and accountability throughout the service, so that the staff can exercise their professional and personal responsibility to report in good faith any concerns that they have about the delivery of safe and effective infection prevention and control practices in their service.

Standard 5.5

Service providers ensure that externally contracted services adhere to safe and effective infection prevention and control practices.

Features of a service meeting this standard are likely to include the following:

- 5.5.1** Effective governance arrangements are in place to ensure that externally contracted services adhere to safe and effective infection prevention and control practices, through setting up, managing and monitoring contracts of agreement.
- 5.5.2** The contracts of agreement include the scope of service provided, audit requirements and governance arrangements for the quality and safety of services delivered. It includes complying with infection prevention and control best practice and relevant legislation.
- 5.5.3** Regular monitoring of the formalised arrangements is in place with external recruitment agencies to assure their service complies with National Standards and relevant legislation. These arrangements include the agency's role, responsibility and area of accountability in the recruitment process.
- 5.5.4** The infection prevention and control team is involved in the procurement decision for externally contracted services.

Theme 6. Workforce



Theme 6

Workforce

Everyone working in the service is responsible for the prevention and control of healthcare-associated infections and should have the relevant knowledge, skills and competencies appropriate to their role. Effective workforce planning helps to ensure enough staff are available at the right time with the right skills and expertise to meet the service's infection prevention and control needs. Patients with healthcare-associated infections often have specific healthcare needs, including isolation requirements, which place additional demands on staff resources.

The successful implementation and progress of a well-managed infection prevention and control and antimicrobial stewardship programme depends on having appropriately trained specialist multidisciplinary teams in place. Staff at the point of care need easy access to these teams in order to effectively support their own efforts in providing safe and effective infection prevention and control practices.

Senior management need to continually review their workforce requirements, taking into consideration evolving infection prevention and antimicrobial resistance challenges such as:

- an increasingly susceptible older population
- advances in invasive healthcare interventions
- the level of expertise required to perform a diverse range of infection prevention activities.

Service providers ensure that staffing arrangements are responsive and flexible to respond promptly to changes in workload or resources.

An essential aspect of infection prevention and control is the education and training of all staff. Induction is an important time for newly appointed staff to learn the infection prevention and control core principles. Staff also need to be supported to attend education and training updates to retain their competencies. The service should encourage staff at all levels to become champions in infection prevention and to start improvement projects in their own service areas.

Standard 6.1

Service providers plan, organise and manage their workforce to meet the services' infection prevention and control needs.

Features of a service meeting this standard are likely to include the following:

- 6.1.1 Staffing, including infection prevention and control personnel, is maintained at levels that are recognised as appropriate by international evidence to safely meet the service's infection prevention and control needs and activities, including appropriate staffing levels for out-of-hours arrangements.
- 6.1.2 Each hospital has a multidisciplinary infection prevention and control committee, a drugs and therapeutics committee and an antimicrobial stewardship subcommittee as deemed appropriate by the hospital, with established formal linkages with other relevant committees within the service.
- 6.1.3 Infection prevention and control and antimicrobial stewardship teams have core members and can request additional members when required. The infection prevention and control and antimicrobial stewardship workforce is organised and managed to work in multidisciplinary teams.
- 6.1.4 Patient care areas have appropriate numbers of staff to ensure infection prevention and control needs are met.
- 6.1.5 The number of infection prevention and control and antimicrobial stewardship staff is determined by a defined, documented and regularly reviewed methodology, which includes, but is not limited to:
 - assessed needs and casemix of local population served
 - size, complexity and specialities of the services being provided
 - national and international best practice about the infection prevention and control and antimicrobial stewardship service model provided
 - skill-mix and competencies required to deliver the service
 - the time needed to carry out the required duties of the teams
 - resources available
 - changes in workload
 - risk analysis.

- 6.1.6 The workforce plan includes a training needs analysis for all grades of staff in order to deliver safe and effective infection prevention and control practices.
- 6.1.7 Service providers implement workforce contingency and succession planning for all staff, including trained specialist staff in infection prevention and control, to seamlessly continue to deliver a safe, effective, and sustainable service as staff leave or transfer to other parts of the service.
- 6.1.8 Regular review and evaluation of the management of the workforce, and the service's response to changes in workload and the resources available, to ensure the consistent delivery of safe and effective infection prevention and control in the service.
- 6.1.9 Workload distribution is regularly reviewed with protected time being allocated to staff for surveillance, monitoring or quality improvement activities.
- 6.1.10 Arrangements are in place to support sharing of expertise and resources across the relevant staff disciplines within the service.

Standard 6.2

Service providers ensure their workforce has the competencies and training required to provide safe and effective infection prevention and control practices.

Features of a service meeting this standard are likely to include the following:

- 6.2.1. The selection and recruitment of infection prevention and control staff is conducted in line with best practice and current legislation.
- 6.2.2. Service providers have a competency framework in place which details the skills, competencies and training requirements for all grades of staff to fulfil their roles and responsibilities to prevent and control healthcare-associated infections.
- 6.2.3. Agreements exist with associated colleges, universities, institutions and recruitment agencies to ensure that students, trainees, visiting and agency staff are trained and competent in the infection prevention and control core principles, before being placed or starting work.
- 6.2.4. Staff are encouraged and supported to seek advice, including advice from senior colleagues, on any aspects of infection prevention and control practice.
- 6.2.5. All staff receive theoretical and practical training in infection prevention and control practice that is appropriate to their specific roles and responsibilities, in line with the national *Core Infection Prevention and Control Knowledge and Skills* competency framework guideline.
- 6.2.6. Service providers have a standardised induction and ongoing comprehensive educational programme in infection prevention and control core principles and antimicrobial usage for all staff.
- 6.2.7. All staff are supported and facilitated to attend the induction programme and training updates through the allocation of designated protected training time.

- 6.2.8. All staff are given opportunities to train as local champions to improve the delivery of safe and effective infection prevention and control practices within their own settings.
- 6.2.9. Service providers develop and deliver a specialist educational programme including continuing professional development for the infection prevention and control team, antimicrobial stewardship team and staff working in specialist areas or roles.
- 6.2.10. All staff have access to educational resources necessary for education, training and continuing professional development, appropriate to their specific roles and responsibilities, including national e-learning programmes.
- 6.2.11. Agreements exist with external contractors who service patient equipment and reusable invasive medical devices to ensure their staff are trained and competent in infection prevention and control core principles.
- 6.2.12. Agreements exist with external companies that provide education and training to ensure the content is consistent with the service's educational programme.
- 6.2.13. Regular reviews on providing infection prevention and control training and its uptake. Action is taken to address any gaps in the provision of educational needs.

Theme 7. Use of Resources



Theme 7

Use of Resources

Service providers need to effectively and efficiently plan and manage their resources in order to meet the service's infection prevention and control needs. A strategic financial plan allows for targeted investment in areas that are essential to the provision of safe, effective and sustainable infection prevention and control, on a prioritised basis. These investments may include:

- new buildings including provision for adequate isolation or single room capacity
- maintenance and refurbishment of existing infrastructure
- replacement of equipment
- acquiring new services
- adopting new technologies, such as rapid microbiology testing
- training.

The involvement of the infection prevention and control team in the planning and allocation of resources is critical. Infections impact on the ability of hospitals to deliver services, so addressing these infection prevention and control issues and risks at an early stage can minimise the consequences of infections in the first instance. Acute healthcare services need to report up to the national service provider any deficiencies in resources that have been identified as a barrier to fully implementing infection prevention and control best practice and the National Standards.

An asset management system ensures an up-to-date track-and-trace record is maintained for medical devices and equipment, allowing for the disposal of any unfit-for-purpose equipment that can no longer be effectively cleaned.

It is important that the infection prevention and control team is involved in procurement decisions for new medical devices and equipment, in particular reusable invasive medical devices. This is to ensure the service only invests in medical devices and equipment that can be effectively decontaminated. Ideally, the loaning or borrowing of reusable invasive medical devices should be avoided as it increases potential infection risks. However, in cases where it is deemed necessary, procedures must be in place to ensure safe and effective decontamination.

Standard 7.1

Service providers plan and manage the use of resources to meet the services' infection prevention and control needs.

Features of a service meeting this standard are likely to include the following:

- 7.1.1 An agreed strategic financial plan is in place that takes account of the funding and resources required to ensure viability of the infection prevention and control and antimicrobial stewardship programmes in the short, medium and long term.
- 7.1.2 Targeted investment in resources is prioritised on the basis of service-wide infection prevention and control risk assessments.
- 7.1.3 The infection prevention and control team is involved in planning and allocating resources to achieve a safe and effective infection prevention and control environment. This includes involving the team in all stages of the planning, design and development of new buildings and during refurbishment and maintenance of existing infrastructure.
- 7.1.4 Any deficiencies in resources are reported up to the national service provider.
- 7.1.5 An asset management system is in place to ensure maintenance of an up-to-date track-and-trace record of the medical devices and equipment in use and in storage.
- 7.1.6 A process is in place for the disposal of equipment when effective cleaning can no longer be achieved.

Standard 7.2

Service providers ensure that medical devices and equipment that are purchased, loaned, borrowed, serviced or repaired are safe to use.

Features of a service meeting this standard are likely to include the following:

- 7.2.1** Service providers have policies and procedures in place for medical devices and equipment that are purchased, loaned, borrowed, serviced or repaired. These are in line with legislation, national medical devices and equipment policy and guidance, and national decontamination standards, to minimise risk of healthcare-associated infections to patients and staff.
- 7.2.2** The infection prevention and control team or relevant professional is involved at an early stage in all purchasing decisions for medical devices and equipment to ensure the service only invests in equipment that can be effectively decontaminated.
- 7.2.3** All loaned, borrowed or trialled reusable invasive medical devices must have the relevant decontamination reprocessing instructions, list of contents and decontamination certificate. Enough time is provided to allow for safe reprocessing to occur. Procedures are in place to ensure traceability throughout the decontamination process.

Theme 8. Use of Information



Theme 8

Use of Information

An effective information management system supports the integration and availability of all information sources involved in the delivery of safe and effective infection prevention and control activities, including essential data at the point of care. High-quality data is important to assist in the timely provision of information and to effectively inform decision-making in all aspects of the prevention and control of healthcare-associated infections.

Infection prevention and control-related data needs to be transferrable across different information management systems both within and between services. Staff must be trained and supported in any changes or advances in the system, including information and communication technology (ICT) systems, with sufficient overlap provided between the new and existing system to allow staff time to adapt to upgrades and changes. It is important that ICT systems are simple to use and effectively support infection prevention and control delivery, including the laboratory, surveillance and monitoring requirements of the service.

The principles of good information governance ensures that patient information is handled legally, securely, efficiently and effectively in order to deliver the best possible care to patients. Service providers ensure appropriate safeguards are in place to protect patients' information. This supports the delivery of person-centred, safe and effective infection prevention and control and helps to ensure that when sharing information across services, service providers protect and manage personal information in a sensitive and responsible manner. Patients are advised of the need to report any notifiable infectious diseases, and are reassured that their information will be treated in a confidential manner.

Standard 8.1

Service providers have an information management system in place to meet the services' infection prevention and control needs.

Features of a service meeting this standard are likely to include the following:

- 8.1.1 An effective information management system is in place that supports the integration and availability of all information sources involved in the delivery of safe and effective infection prevention and control activities.
- 8.1.2 Arrangements are in place to ensure that staff have access to high-quality information and data to support effective decision-making in all aspects of infection prevention and control.
- 8.1.3 The service complies with national health information technical standards to facilitate the interoperability of systems and sharing of information within and between healthcare services.
- 8.1.4 An induction and ongoing training programme in the use of information management systems, including ICT systems, is provided to all staff in line with their roles and responsibilities.
- 8.1.5 Arrangements are in place to provide support to staff during any changes to information management systems, including upgrades to ICT systems.
- 8.1.6 Arrangements are in place to ensure necessary information is shared in a timely manner within and between services, in line with legislation, based on best practice guidance and national standards where available.
- 8.1.7 Information management systems are regularly evaluated in terms of the quality of information, software systems in place, resources allocated and workforce involved. Action is taken to address any issues identified and improve the service provided.

Standard 8.2

Service providers have effective arrangements in place for information governance for infection prevention and control-related data.

Features of a service meeting this standard are likely to include the following:

- 8.2.1 All data collected, analysed, used and shared complies with best practice guidance, national standards, or nationally agreed definitions, to enable comparability and sharing of information consistently within and between services, including national and international data exchange.
- 8.2.2 Patients are identified uniquely to avoid duplication and misidentification, in line with national standards and best practice.
- 8.2.3 Arrangements are in place for sharing information within and between service providers that protect the security, privacy and confidentiality of personal health information of the patient.
- 8.2.4 An induction and ongoing training programme in information governance is provided for all staff, in line with their specific needs and level of access to patients' information.
- 8.2.5 Regular information governance audits are conducted and appropriate action is taken to address areas for improvement.

Glossary of terms and abbreviations

This glossary details key terms and a description of their meaning within the context of this document.

Accountability: being answerable to another person or organisation for decisions, behaviour and any consequences.

Acute services: hospital-based healthcare services for inpatients, outpatients and people having day-case treatments.

Alert organism: micro-organisms that pose a significant risk of transmission to non-infected patients or staff, resulting in colonisation or healthcare-associated infection, or that pose a significant risk of transmission to non-infected people in the wider population or community.

Antimicrobial: a substance that kills or inhibits the growth of micro-organisms such as bacteria, viruses or fungi.

Antimicrobial pharmacist: a trained clinical pharmacist who has a defined remit to ensure the rational, safe and appropriate use of antimicrobial agents.

Antimicrobial resistance: resistance of a micro-organism to an antimicrobial drug that had been originally effective for treating infections caused by it.

Antimicrobial stewardship: a systematic approach to promoting and monitoring the judicious use of antimicrobials to preserve their future effectiveness.

Antimicrobial stewardship subcommittee: a multidisciplinary group of people from within and outside a hospital or groups of hospitals, which reports to senior management. The subcommittee is responsible for the review and oversight of antimicrobial stewardship activities in the hospital or hospitals in question. The membership of the subcommittee should be balanced between clinical and management staff. Below is an example of an antimicrobial stewardship committee and is for guidance purposes only:

- chief executive, general manager or designated member of the senior management team
- consultant medical microbiologist
- infectious diseases consultant
- consultants from other disciplines appropriate to the size, complexities and specialities of the service (such as medicine, surgery, emergency medicine)
- antimicrobial pharmacist
- surveillance scientist
- infection prevention and control nurse
- nursing administrator
- registered nurse prescriber (where established)
- outpatient parenteral antimicrobial therapy (OPAT) nurse specialist
- representatives from other specialist areas, as appropriate (such as intensive care, transplant unit)
- quality and risk managers
- information and communication technology (ICT) staff.

Antimicrobial stewardship programme: structures, systems and processes that a service has in place for safe and effective antimicrobial use.

Antimicrobial stewardship team: a group of people, from within and outside the service, with complementary knowledge and skills relating to antimicrobial stewardship. The structure of the team should be based on current accepted best practice. Below is an example of an antimicrobial stewardship team and is for guidance purpose only:

- consultant medical microbiologist
- infectious diseases consultant
- antimicrobial pharmacist
- clinical pharmacist
- surveillance scientist
- infection prevention and control nurse
- antimicrobial prescribers
- outpatient parenteral antimicrobial therapy (OPAT) nurse specialist

Assurance: is being sure or certain about systems, processes and procedures and standing over business objectives. It involves monitoring risk and implementing controls to mitigate that risk.

Audit: assessment of performance against any standards and criteria (clinical and non-clinical) in a health or social care service. The full audit cycle consists of five stages including planning for audit, standard and criteria selection, measuring performance, making improvements and sustaining those improvements.

Autonomy: freedom to determine one's own actions and behaviour.

Benchmarking: a continual process of measuring and comparing care and services with similar service providers.

Best practice: clinical, scientific or professional practices that are recognised by a majority of professionals in a particular field. These practices are typically evidence-based and consensus-driven.

Blood cultures: a blood test that is used to detect the presence of bacteria or yeasts in the blood which may have spread from another site in the body, to identify the micro-organisms present and to guide treatment.

Caesarean section: a surgical procedure used to deliver a baby through incisions created in the mother's abdomen and uterus.

Care pathway: a multidisciplinary care plan that outlines the main clinical interventions undertaken by different healthcare professionals, in the care of service users with a specific condition or set of symptoms.

Case definition: the set of clinical or microbiological characteristics by which a case of infectious disease is defined. The Health Protection Surveillance Centre (HPSC) is responsible for maintaining, updating and circulating the case definitions. An up-to-date list is available online from:

<http://www.hpsc.ie/NotifiableDiseases/CaseDefinitions>.

Casemix: the types of patients and complexity of their condition treated within a healthcare service, including diagnosis, treatments given and resources required for care.

Cleaning: the physical removal of foreign material such as bloody and bodily substances, rust, dust, dirt, debris, spillages, and so on. Cleaning physically removes rather than kills micro-organisms. It is achieved with water, detergents and mechanical action.

Clinical governance: a system through which service providers are accountable for continually improving the quality of their clinical practice and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish. This includes mechanisms for monitoring clinical quality and safety through structured programmes, for example, clinical audit.

Clinical guidelines: systematically developed statements, based on a thorough evaluation of the evidence, to assist healthcare professional and patient decisions about appropriate healthcare for specific circumstances, across the entire clinical spectrum.

Clinical practice guidance: systematically developed statements or processes to assist clinician and patient decisions about appropriate healthcare for specific clinical circumstances, with the type of clinical practice guidance determined by evidence-based criteria and clinical requirements. Such clinical guidance includes clinical policies, procedures, protocols and guidelines. Care pathways, clinical decision aids or tools, care bundles, flowcharts, checklists and algorithms can form components of policies, procedures, protocols or guidelines.

Clinical team: clinical staff at the point of care including but not limited to medical and nursing healthcare professionals.

Cohort area: a ward or a unit in which a group of patients (cohort) with the same infection are placed together. Cohorts are created based on clinical diagnosis, microbiological confirmation when available, epidemiology, and mode of transmission of the micro-organism.

Colonisation/colonised: when micro-organism or micro-organisms are living on or in a person without causing disease.

Communicable disease: infectious disease that can be passed from one person to another.

Competence: the knowledge, skills, abilities, behaviours and expertise sufficient to be able to perform a particular task and activity.

Complaint: an expression of dissatisfaction with any aspect of service provision.

Concern: a safety or quality issue regarding any aspect of service provision, raised by a service user, service provider, member of the workforce or general public.

Confidentiality: the right of individuals to keep information about themselves from being disclosed.

Consultant medical microbiologist: refers to consultant grade medical doctor who studies the science of the isolation and identification of micro-organisms that cause disease in humans and applies this knowledge to treat, control and prevent infections in humans.

Contract of agreement: document which explicitly describes the nature of the service being provided to the service provider by an external agency.

Corporate governance: the system by which services direct and control their functions in order to achieve organisational objectives, manage their business processes, meet required standards of accountability, integrity and propriety and relate to external stakeholders.

Culture: the shared attitudes, beliefs and values that define a group or groups of people and shape and influence perceptions and behaviours.

Decontamination: the removal of micro-organisms or foreign matter (or both) from contaminated materials or living tissue. Three processes for decontamination are commonly used: cleaning, disinfection and sterilisation.

Diagnosis: the process of identifying a disease or condition by carrying out tests or by studying the symptoms.

Diagnostic microbiology laboratory: refers to a laboratory where tests are performed on clinical specimens such as a blood sample, to determine the cause of infection and to identify suitable treatments.

Dignity: the right to be treated with respect, courtesy and consideration.

Disinfection: a process used to reduce the number of viable micro-organisms, but which may not necessarily inactivate some infectious agents.

Drug and therapeutics committee: a multidisciplinary group of people from within and outside a hospital or group of hospitals, which reports to senior management. The committee is responsible for expert governance oversight and review of the service to ensure safe and effective use of medicines in the hospital or hospitals in question.

Effective: a measure of the extent to which a specific intervention, procedure, treatment, or service, when delivered, does what it is intended to do for a specified population.

Efficient: use of resources to achieve best results with minimal waste.

Empirical antimicrobial therapy: antimicrobial therapy given for an anticipated and likely cause of infection based upon probability, but where the causative micro-organism has not yet been identified through microbiological testing.

Endemic: the constant presence of a disease or micro-organism within a given geographic area or population group; it may also refer to the usual prevalence of a given disease within such area or group.

Enhanced (surveillance) data: refers to additional information that is sought, following the notification of an infection, including relevant clinical, microbiological and epidemiological information, which is used to guide prevention and control efforts.

Enteral tube feeding: refers to a type of feeding used for people who cannot eat normally in which liquid food is given through a tube into the gut.

Environmental laboratory service: a specialist laboratory that tests for contaminants that affect the environment, including water supplies.

Epidemiology: the study of factors affecting the health and illness of populations.

Equipment: this consists of a large group of equipment, typically divided into four broad groups including single-use items, single patient-use items, reusable non-invasive communal patient care equipment and reusable invasive medical devices. The list of equipment includes, but is not limited to, commodes, beds and mattresses, portable patient monitoring equipment and intravenous stands.

Evaluation: a formal process to determine the extent to which the planned or desired outcomes of an intervention are achieved.

Exposure prone procedure: procedure where there is a risk that injury to the healthcare professional may result in exposure of patients' open tissues to the blood of the healthcare professional.

Facility: refers to the physical infrastructure where the health or social care service is provided.

Family: those closest to the patient in knowledge, care and affection and who are connected through their common biological, legal, cultural, and emotional history.

Features: these elements, taken together, will enable progress towards achieving the standard.

Governance: in healthcare, an integration of corporate and clinical governance; the systems, processes and behaviours by which services lead, direct and control their functions in order to achieve their objectives, including the quality and safety of services for service users. See also **Clinical governance** and **Corporate governance** above.

Hand hygiene: a general term referring to any action of hand cleansing.

Handover: the transfer of professional responsibility and accountability for some or all aspects of the care of a patient, or group of patients, to another person or professional group on a temporary or permanent basis.

Healthcare: services received by individuals or communities to promote, maintain, monitor or restore health.

Healthcare-associated infection: infections that are acquired after contact with a healthcare service.

Healthcare-associated infection incident: any incident with the potential to expose people to infection risk.

Healthcare record: all information in both paper and electronic formats relating to the care of a patient.

Healthcare services: all acute, primary and community care services that provide healthcare.

Health Protection Surveillance Centre (HPSC): specialist organisation which is responsible for surveillance of communicable disease and other functions in Ireland. It is part of the Health Service Executive (HSE).

Health Service Executive (HSE): provider and or funder of all of Ireland's public acute healthcare services or any subsequent agency that takes on the HSE's statutory functions.

Home-based dialysis: dialysis that is performed at home including peritoneal dialysis or home haemodialysis. Peritoneal dialysis is a treatment for kidney failure which uses the body's natural membrane in the abdominal cavity to clean the blood. Home haemodialysis is a treatment in which the blood is cleaned outside the body by a machine that passes blood across a filter.

Hygiene: the practice that serves to keep people and the environment clean. In a healthcare setting it incorporates the following key areas: environment and facilities, hand hygiene, management of laundry, waste and sharps, and equipment, specifically in the context of preventing and controlling infection.

Immunosuppressive treatment: treatment which lowers the body's immune response, therefore increasing the risk for infection. Examples include medications (such as steroids, biologics), procedures (chemotherapy/ haematopoietic stem cell transplantation) and surgeries (solid organ transplants).

Incidence (of infection): rate at which new cases occur.

Indicator: a statistic or marker that has been chosen to monitor health or service activity.

Infection: The invasion and reproduction of pathogenic or disease-causing micro-organisms inside the body that may cause tissue injury and disease.

Infection prevention and control: the discipline and practice of preventing and controlling healthcare-associated infection and the spread of infectious diseases in a healthcare service.

Infection prevention and control committee: a multidisciplinary group of people from within and outside a hospital or groups of hospitals, which reports to senior management. The committee is responsible for the review and oversight of the service to prevent and control infection in the hospital or hospitals in question. The membership of the committee should be balanced between clinical and management staff. Below is an example of an infection prevention and control committee and is for guidance purposes only:

- chief executive/general manager or designated member of the senior management team
- consultant medical microbiologist
- infectious disease consultant
- occupational health physician
- consultants from other disciplines appropriate to the size, complexities and specialities of the service (such as medicine, surgery, emergency medicine)
- infection prevention and control nurse
- surveillance scientist
- antimicrobial pharmacist
- senior medical scientist
- representatives from other specialist areas, as appropriate (such as intensive care, transplant unit)
- nursing administrator
- bed manager
- quality and risk managers
- support services as appropriate (such as hygiene and general services, waste management)
- information and communication technology (ICT) staff.

Infection prevention and control nurse (IPCN): a nurse with specialist postgraduate qualifications and expert knowledge in infection prevention and control. The IPCN acts as an advocate for the patient in quality improvement, safety and risk. IPCNs lead and implement the hospital or service infection prevention and

control annual plan. The IPCN engages in activities such as: act as an advisor in management of outbreaks; development of healthcare facilities; surveillance; audit; decontamination and the education of all healthcare workers and outside contractors.

Infection prevention and control programme: structures, systems and processes a service has in place to prevent and control healthcare-associated infections.

Infection prevention and control team: a group of people, from within and outside the service, with complementary knowledge and skills relating to infection prevention and control. The structure of the team should be based on current accepted best practice. Below is an example of an infection prevention and control team and is for guidance purpose only:

- consultant medical microbiologist
- infection prevention and control nurse
- antimicrobial pharmacist
- surveillance scientist
- occupational health physician
- senior medical scientist

Infectious disease: a disease that can be spread from one person to another, also called communicable disease.

Infectious diseases consultant: refers to a consultant grade medical doctor who specialises in the prevention, diagnosis and management of infectious disease.

Information governance: the arrangements that service providers have in place to manage information to support their immediate and future regulatory, legal, risk, environmental and operational requirements.

Informed consent: the giving of permission or agreement for an intervention, receipt or use of a service or participation in research following a process of communication in which the service user has received sufficient information to enable them to understand the nature, potential risks and benefits of the proposed intervention or service.

Integrated care: healthcare services working together, both internally and externally, to ensure service users receive continuous and coordinated care.

Invasive medical device: a device which, in whole or in part, penetrates inside the body, either through a body orifice or through the surface of the body.

Isolation: physically separating patients to prevent the spread of infection.

Isolation room: an enhanced single room with en-suite facilities and ventilated lobby. The pressure in the room is dependent on whether the patient needs source isolation (for infections spread by airborne route such as influenza or TB) or protective isolation (for the care of immunocompromised patients).

Key performance indicator: specific and measurable elements of practice that can be used to assess quality and safety of care.

Lead healthcare professional: an identifiable person in charge with overall responsibility for the patient's care.

Legislation: the set of laws of the Oireachtas (Ireland's national parliament)[◇] and statutory instruments or secondary legislation that have the force of law.

Lifestyle risk factor: any aspect of a person's lifestyle, environment or pre-existing health condition that may increase their risk of developing a specific disease or condition.

Medical device: a product, except medicines, used in healthcare to diagnose, prevent, monitor or treat illness or disability. For example, a device might be a blood pressure monitor, blood glucometer, or an infusion pump.

Medical device equipment decontamination committee: a multidisciplinary group of people from within and outside a hospital or groups of hospitals, which reports to senior management. The committee is responsible for the review and oversight of decontamination of medical devices and equipment in the hospital or hospitals in question. Membership of the infection prevention and control committee may include (where available):

- chief executive, general manager or designated member of senior management team
- infection prevention and control nurse
- central decontamination unit managers
- endoscopy unit managers

[◇] See: National Adult Literacy Agency (NALA). *Plain English Guide to Political Terms*. NALA; Dublin: 2016. Available online from: <https://www.nala.ie/news/election-2016-plain-english-guide-political-terms>.

- theatre managers
- clinical engineers
- authorising engineer for decontamination
- quality and risk managers
- procurement managers
- HSE estates.

Microbiological services: refers to services that carry out testing, identification, and analysis of micro-organisms.

Microbiology: a clinical specialty that focuses on the study of human diseases caused by micro-organisms including bacteria, viruses, fungi and parasites.

Micro-organism: Living organism, such as bacteria, viruses, fungi too small to be seen with naked eye, but visible under a microscope.

Monitoring: systematic process of gathering information and tracking change over time. Monitoring provides a verification of progress towards achievement of objectives and goals.

Multidisciplinary: an approach to the planning of treatment and the delivery of care for a service user by a team of healthcare professionals who work together to provide integrated care.

Multidrug-resistant organisms: micro-organisms (predominantly bacteria) that are resistant to one or more classes of antimicrobial agents. Examples include Meticillin-Resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococci* (VRE), *Enterobacteriaceae* which may produce enzymes such as extended spectrum beta lactamases (ESBL) or carbapenemases, whereby they may be called carbapenem resistant *Enterobacteriaceae* (CRE) or carbapenemase-producing *Enterobacteriaceae* (CPE).

National Clinical Effectiveness Committee (NCEC): a ministerial committee established by the Department of Health as part of the Patient Safety First initiative to provide oversight for the national clinical effectiveness agenda, which includes national clinical guidelines, national clinical audit and clinical practice guidance.

National clinical guidelines: a suite of guidelines that meet specific quality assurance criteria and have been mandated by the designated national body, the National Clinical Effectiveness Committee.

National Standards: refers in this document to the *National Standards for the prevention and control of healthcare-associated infections in acute healthcare services* (2017).

Needs assessment: systematic identification of the needs of an individual or population to determine the appropriate level of care or services required.

Non-communicable disease: chronic diseases that are not passed from person to person. The four main types of non-communicable diseases are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes.

Notification: all medical practitioners, including clinical directors of diagnostic laboratories are required to notify the medical officer of health in the local Departments of Public Health of certain infectious diseases. The list of diseases (and the respective causative micro-organisms) that are notifiable is contained in the Infectious Diseases Regulations 1981 and subsequent amendments. This information is used to investigate cases, facilitate the early identification of outbreaks, and monitor the burden and changing levels of diseases.

Open disclosure: a comprehensive and clear discussion of an incident that resulted or may have resulted in harm to a service user while receiving healthcare. Open disclosure is an ongoing communication process with service users and their families or carers following an adverse event.

Outbreak: when two or more people have the same infection, or more people than expected have the same infection. The cases will be linked by a place and a time period.

Outbreak management team or committee: a multidisciplinary group of people from within and outside the service responsible for the management of outbreaks and who reports to senior management.

Outcomes: the impact that a test, treatment, policy, programme or other intervention has on a person, group or population. Depending on the intervention, outcomes could include:

- changes in knowledge and behaviour related to health or in people's health and wellbeing
- the number of patients who fully recover from an illness or the number of hospital admissions
- an improvement or deterioration in someone's health, symptoms or situation.

Outpatient parenteral antimicrobial therapy (OPAT): delivery of intravenous antimicrobials in a non-inpatient setting.

Patient: a person who is receiving healthcare or treatment (sometimes referred to as a service user).

Personal protective equipment: equipment a person wears to protect themselves from risks to their health or safety, including exposure to infections, for instance, disposable gloves and disposable aprons.

Point-of-care testing: tests designed to be used at or near the site where the patient is located, which do not require permanent dedicated space and which are performed outside the physical facilities of the clinical laboratories.

Point of care: the place where the following three elements come together: the patient, the healthcare worker and the care or treatment involving contact with the patient or the patient's surroundings.

Policy: a written operational statement of intent which helps staff make appropriate decisions and take actions, consistent with the aims of the service provider, and in the best interests of service users.

Post-exposure prophylaxis: the administration of a drug to prevent the development of an infection after the patient has been exposed to the infection, for example, for hepatitis B and human immunodeficiency virus (HIV).

Procedure: a written set of instructions that describes the approved and recommended steps for a particular act or sequence of events.

Procurement: the acquisition, whether under formal contract or otherwise, of works, supplies or services.

Prophylactic antimicrobial therapy: the use of antimicrobials to prevent an infection in clinical situations where there is significant risk of infection occurring. For example, antimicrobials are sometimes given before surgery as a preventive measure against infection.

Prosthetic surgery: surgery that involves the placement of an artificial implant used to replace any part of the body.

Protective lifestyle factors: includes healthy body weight/controlled body weight, good nutrition, being physically active, not smoking, drinking alcohol within recommended weekly allowances.

Quality data: information that has been processed or analysed to produce something useful and is accurate, valid, reliable, timely, relevant, legible and complete.

Quality improvement: a systematic approach using specific methods to improve quality through achieving successful and sustained improvement.

Quality improvement plan: a plan that outlines each risk identified, the proposed action or actions intended to address that risk, a timeline to complete each action, and an identified person who will be responsible for ensuring each task is completed.

Quality improvement programme: a number of related projects and initiatives with a collective aim of minimising harm and improving outcomes for patients.

Reference laboratory: refers to a specialist laboratory that provides additional support and expertise to routine laboratories.

Reprocessing: all steps necessary to make a contaminated reusable invasive medical device ready for its intended use. These steps include cleaning, disinfecting, sterilising, functional testing, packaging and labelling.

Reusable invasive medical device: a device used for diagnostic or therapeutic purposes which, in whole or in part, penetrates inside the body, either through a body orifice or through the surface of the body and which can be reused after appropriate decontamination procedures have been carried out. The list of devices includes, but is not limited to, endoscopes, intracavity transducer probes, surgical equipment, and so on.

Risk: risk is the effect of uncertainty on objectives. It is measured in terms of consequences and likelihood.

Risk assessment: refers to the overall process of risk analysis and risk evaluation. Its purpose is to develop agreed priorities for the identified risks. It involves collecting information through observation, communication and investigation.

Risk factor: any aspect of a person's lifestyle, environment or pre-existing health condition that may increase their risk of developing a specific disease or condition.

Risk management: coordinated activities to direct and control an organisation with regard to risk.

Risk mitigation: this describes the appropriate management options for dealing with identified risk such as modifying procedures, protocols or work practices, or providing education.

Senior management team: usually includes chief executive officer, clinical director, director of nursing and board of the service.

Sentinel (surveillance) data: refers to information collected from a limited number of selected reporting sites that can be used to signal trends, identify outbreaks and monitor the burden of disease, providing a rapid, economical alternative to other surveillance methods.

Sepsis: the clinical syndrome defined by the presence of both infection and the systemic inflammatory response syndrome (SIRS). However, since infection cannot be always microbiologically confirmed, the diagnostic criteria are infection, suspected or confirmed and the presence of some of the SIRS criteria.

Serious incidents: the Health Service Executive (HSE) list of serious reportable events as it relates to infection prevention and control includes 'patient death or serious disability associated with the use of contaminated medications, medical devices or biologics provided by the healthcare service provider'. The national incident management system list of reportable incidents includes biological hazards from injury including exposure to needle-stick, bite, ingestion, skin contact, bodily fluids and sharps.

Service provider: any person, organisation, or part of an organisation delivering healthcare services [as described in the Health Act 2007 section 8(1)(b)(i)–(ii)].

Shared decision-making: patients and clinicians reach decisions about treatment together, with a shared understanding of the condition, the options available and the risks and benefits of each of those.

Sharps: any items that have the potential to puncture the skin and inoculate the recipient with infectious material.

Single room: a patient bedroom which accommodates one patient only. Single rooms should also have en-suite facilities. Isolation in a single room is effective in reducing transmission of infections spread by the contact or droplet routes, when combined with other infection prevention and control measures such as hand hygiene and personal protective equipment.

Single-use item: a medical device that is intended to be used on an individual patient during a single procedure and then discarded.

Skill-mix: the combination of competencies including skills needed in the workforce to accomplish the specific tasks or perform the given functions required for safe, high-quality care.

Staff: the people who work in the acute service, including clinical and non-clinical staff of the service.

Standard: in the context of this document, a standard is a statement which describes the high-level outcome required to contribute to quality and safety.

Standard precautions: the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. Standard precautions include, but are not limited to:

- hand hygiene
- use of personal protective equipment, such as gloves, gowns and masks
- decontamination of patient equipment and healthcare environment
- management of waste and laundry
- appropriate patient placement
- management of sharps and needle-stick injuries.

Statement of purpose: a description of the aims and objectives of the service including how resources are aligned to deliver these objectives. It also describes in detail the range, availability and scope of services provided by the overall service.

Sterilisation: the process to make an object free from viable micro-organisms.

Surveillance: the ongoing systematic collection, collation, analysis and interpretation of data; and the sharing of information to those who need to know in order that action may be taken.

Surveillance scientist: refers to a healthcare professional responsible for collating, analysing and disseminating healthcare-associated infection and antimicrobial resistance data to relevant healthcare professionals, senior management and external agencies at a local, national and international level.

Transmission-based precautions: these are additional precautions that staff need to take when standard precautions may be insufficient to prevent cross transmission of specific infectious agents. Transmission-based precautions are categorised by the route of transmission of infectious agents (some infectious agents can be transmitted by more than one route) including contact, droplet and airborne precautions.

Turnaround time: a parameter of a laboratory's efficiency, defined as the time between ordering a test or submitting a specimen to the laboratory and the reporting of results.

Vaccine non-responder: lack of an immune response to vaccines.

Workforce: the people who work in, for or with the service provider. This includes individuals that are employed, self-employed, temporary, volunteers, contracted or anyone who is responsible or accountable to the organisation when providing a service to the patient.

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Appendix 1 — Membership of the Standards Advisory Group convened by HIQA

Member	Representing
Anne Marie Oglesby	National Ambulance Service, Health Service Executive (HSE)
Caroline Conneely	National Decontamination Quality Lead, Health Service Executive (HSE)
Claire O'Regan	State Claims Agency (SCA)
Dr Deirdre O'Brien	Irish Society of Clinical Microbiologists (ISCM)
Emer Ward	Infection Prevention Control Ireland (IPCI)
Dr Fidelma Fitzpatrick	Senior Lecturer, Royal College of Surgeons in Ireland (RCSI)
Ger Flynn	National Clinical Head of Medical Devices, Health Service Executive (HSE)
Dr Karen Burns	Consultant Microbiologist, Health Protection Surveillance Centre (HPSC), HSE
Dr Kathleen Mac Lellan ¹	Director of Patient Safety and Clinical Effectiveness, Department of Health
Dr Keith Perdue	Irish Society of Occupational Medicine (ISOM)
Dr Kevin Kelleher	Assistant National Director, Health Protection, Population Health, HSE
Dr Louise Pomeroy	Irish Blood Transfusion Service (IBTS)
Margaret Dawson	MRSA and Families
Marie Kehoe-O'Sullivan	Health Information and Quality Authority (HIQA), (Chair)
Mary Mc Kenna	Lead Infection Prevention and Control ADON, Healthcare Associated Infection and Antimicrobial Resistance Clinical Programme, Quality Improvement Division, HSE and Royal College of Physicians of Ireland (RCPI)

¹Rosarie Lynch attended on behalf of Dr Kathleen Mac Lellan from June 2016.

Mary Shore ²	Private Hospitals Association
Nuala Scanlon	Hospital Pharmacist Association of Ireland
Regina Monahan	Surveillance Scientist Association of Ireland
Dr Robert Cunney	Clinical Lead, Healthcare Associated Infection and Antimicrobial Resistance Clinical Programme, Quality Improvement Division, HSE and Royal College of Physicians of Ireland (RCPI)
Sean Egan ³	Acting Head of Healthcare, HIQA
Tony McLoughlin	Irish Decontamination Institute (IDI)

HIQA Prevention and Control of healthcare-associated infections Standards Team

Name	Title
Dr Fiona Mc Kenna	Clinical Project Lead
Rachel Dardis ⁴	Project Research Officer

² Elaine Doherty attended on behalf of Mary Shore from June 2016.

³ Aileen O' Brien attended on behalf of Sean Egan in June and September 2016.

⁴ Since July 2016

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