



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

National Standards for the Prevention and Control of Healthcare Associated Infections

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About the Health Information and Quality Authority

The Health Information and Quality Authority is the independent Authority which was established under the Health Act 2007 to drive continuous improvement in Ireland's health and social care services. The Authority was established as part of the Government's overall Health Service Reform Programme.

The Authority's mandate extends across the quality and safety of the public, private (within its social care function) and voluntary sectors. Reporting directly to the Minister for Health and Children, the Health Information and Quality Authority 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 (except mental health services)*
- **Monitoring Healthcare Quality** – *Monitoring standards of quality and safety in our health services and implementing continuous quality assurance programmes to promote improvements in quality and safety standards in health. As deemed necessary, undertaking investigations into suspected serious service failure in healthcare*
- **Health Technology Assessment** – *Ensuring the best outcome for the service user by evaluating the clinical and economic effectiveness of drugs, equipment, diagnostic techniques and health promotion activities*
- **Health Information** – *Advising on the collection and sharing of information across the services, evaluating, and publishing information about the delivery and performance of Ireland's health and social care services*
- **Social Services Inspectorate** – *Registration and inspection of residential homes for children, older people and people with disabilities. Monitoring day- and pre-school facilities and children's detention centres; inspecting foster care services.*

Foreword

I am delighted to present the *National Standards for the Prevention and Control of Healthcare Associated Infections*.

The Health Information and Quality Authority (the Authority) is the independent Authority established to drive high quality and safe care for people using our health and social services. These National Standards are a key component in maximising patient safety and improving the quality of health and social care services across Ireland.

The rise in Healthcare Associated Infections is presenting a significant challenge to health systems throughout the world and Ireland is no different. As an unintended result of seeking care, these infections can lead to more serious illness, prolonged hospital stays and can cause long term disability. Not only can they result in a high personal impact for patients and their families, they can also lead to an additional financial burden on health and social care systems and most seriously, contribute to unnecessary patient deaths.

Actively managing the reduction in Healthcare Associated Infections, and thereby seeking to minimise and eradicate the harm and trauma they cause for people who use our health and social services, is a duty for all staff working in those services. At the heart of driving down Healthcare Associated Infections in Ireland will be the willingness, commitment and behaviours of people – people providing the services and also people receiving them. Many of the components of these National Standards are about embedding behaviours that should be focused on driving a mindset of zero tolerance to Healthcare Associated Infections.

The principles and behaviours that prevent and control Healthcare Associated Infections are well known and apply to all health and social care services. Effective practices that prevent and control Healthcare Associated Infections such as hand hygiene, surveillance, antibiotic prescribing and the provision of a clean and safe environment, are fundamental building-blocks for safe, effective health and social care.

These principles must be delivered by staff who apply them as part of their daily routine, to eliminate the likelihood of a patient acquiring a Healthcare Associated Infection and patients should expect nothing less. It is therefore important that everyone, both users and providers of the services, realise and embrace the principle that they individually and collectively have a responsibility to ensure that the *National Standards for the Prevention and Control of Healthcare Associated Infections* are met and actively enforced across the country.

In order to know, and be able to demonstrate, that the level of Healthcare Associated Infections in hospitals is reducing, it is imperative that every hospital should be monitoring these infections and actively managing improvements – without monitoring how can an organisation effectively manage them?

In 2007, the Health Service Executive set five-year targets to reduce the occurrence of Healthcare Associated Infections such as Methicillin-Resistant *Staphylococcus aureus* (MRSA) in hospitals. A recent report published by the Health Protection Surveillance Centre indicated that the rate of MRSA has fallen by 25 per cent from 2006 to the latter half of 2008 which demonstrates that the Health Service Executive has made considerable progress in reducing Healthcare Associated Infections in hospitals. This is a welcome development. However, the Authority expects to see a national programme of sustainable improvement across all health and social care services – in acute care and primary and community care services. This sustainable improvement will be enhanced by the full implementation of the National Standards.

As the Authority responsible for driving continuous improvement in our health and social care services, we will be monitoring the implementation of these National Standards, key indicators and incorporating issues related to Healthcare Associated Infections, into our future quality assurance and licensing programmes. The Health Act 2007 gives the Authority the statutory responsibility for monitoring compliance with these National Standards and advising the Minister for Health and Children and the Health Service Executive accordingly.

Overcoming the challenge of Healthcare Associated Infections will not be achieved overnight and will require sustained and focused effort by all. Only by working together and taking active accountability and responsibility for reducing them will we succeed.

The Authority acknowledges and greatly appreciates the work and commitment that has underpinned the development of these Standards by its own staff, the Advisory Group and those individuals and many organisations who took the time to contribute to their development – thank you.



Dr Tracey Cooper
Chief Executive Officer

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1 Background

The Health Information and Quality Authority (the Authority) is the independent statutory body with responsibility for developing national standards for health and social care services* and monitoring compliance with those standards. The Authority's purpose is to drive improvements in safety, quality and accountability across health and social care.

One of the Authority's key objectives is to develop coherent person-centred standards for health and social care services, and given the current importance and the challenges in reducing Healthcare Associated Infections (HCAIs), the Authority identified the need to develop National Standards for the Prevention and Control of Healthcare Associated Infections as one of its priority areas.

Preventing and controlling HCAIs is not just a priority for Ireland, it is a global challenge. Considerable research and improvement initiatives have been undertaken nationally and internationally to reduce the level of HCAIs and contribute to the safety and quality of care for patients. Consequently, the importance of the development of *National Standards for the Prevention and Control of Healthcare Associated Infections* is supported by national and international research, some examples of which include:

- The Hospital Infection Society Healthcare Associated Infection Prevalence Survey (2006) found that 4.9% of patients in Ireland had a healthcare associated infection at the time of the survey⁽¹⁾
- In 2007 there were 1,335 cases of *Staphylococcus aureus* bloodstream infection reported in Ireland and 526 of these were caused by Methicillin-Resistant *Staphylococcus aureus* (MRSA)⁽²⁾
- The World Health Organization (WHO) estimates that at any given time, 1.4 million people worldwide suffer from infections acquired in hospitals⁽³⁾
- In 2006 regulatory impact assessments in the United Kingdom had shown that for every pound invested in programmes to prevent and control HCAIs two pounds was saved annually with a net overall saving of one pound⁽⁴⁾
- Internationally, infection prevention and control programmes have been shown to result in significant cost savings to healthcare systems. It has been estimated that the prevention of 7% of Healthcare Associated Infections can meet the cost of such a programme.⁽⁵⁾

* In this document the term service(s) refers to any service, facility or organisation that provides health or social care.

These *National Standards for the Prevention and Control of Healthcare Associated Infections* will be the national standards for use across the Irish health and social care system. They are consistent with current evidence and best practice both nationally and internationally. The aim of these National Standards is to provide a framework for health and social care providers to prevent or minimise the occurrence of HCAs in order to maximise the safety and quality of care delivered to all service users in Ireland.

The National Standards are designed to promote an environment that maximises safety, quality and accountability in health and social care services. Importantly, they drive a culture of responsibility and accountability among all staff involved in the management and delivery of health and social care services – all of whom must play their part in preventing and controlling HCAs.

In particular the National Standards are intended to:

- *Create a person-centred approach to the prevention and control of HCAs*
- *Promote a multidisciplinary and team-based approach within all health and social care services to the prevention and control of HCAs*
- *Provide an impetus for the attainment of evidence-based best practice in the prevention and control of HCAs*
- *Drive continuous quality improvement through effective management and regular performance monitoring and evaluation of services.*

This document builds on, complements, and is underpinned by, numerous legislative requirements, policy documents and national strategies. Of particular importance are the following (this is not intended to be an exhaustive list):

- *Building a Culture of Patient Safety: Report of the Commission on Patient Safety and Quality Assurance, Department of Health and Children, 2008⁽⁶⁾*
- *Say No to Infection, Infection Control Action Plan, Health Service Executive, 2007⁽⁷⁾*
- *Code of Practice for Decontamination of Reusable Invasive Medical Devices, Health Service Executive, 2007⁽⁸⁾*
- *Code of Practice for Healthcare Records Management, Health Service Executive, 2007⁽⁹⁾*

- *The Strategy for the Control of Antimicrobial Resistance in Ireland, National Disease Surveillance Centre, 2001*⁽¹⁰⁾
- *Guidelines for Hand Hygiene in Irish Health Care Settings, Health Protection Surveillance Centre, 2005*⁽¹¹⁾
- *The Control and Prevention of MRSA in Hospitals and in the Community, Health Protection Surveillance Centre, 2005*⁽¹²⁾
- *Surveillance, Diagnosis and Management of Clostridium difficile-associated disease in Ireland, Health Protection Surveillance Centre, 2008*⁽¹³⁾
- *National Hygiene Services Quality Review 2008: Standards and Criteria, Health Information and Quality Authority, 2008*⁽¹⁴⁾
- *Infectious Disease Regulations 1981, No. 390*⁽¹⁵⁾
- *Infectious Disease (Amended) Regulations 2000, No. 151*⁽¹⁶⁾
- *The Health Act 2007, No. 23*⁽¹⁷⁾
- *The Safety, Health and Welfare at Work Act 2005, No. 10*⁽⁷¹⁾
- *The Safety, Health and Welfare at Work (General Application) Regulations 2007 No. 299*⁽¹⁸⁾
- *The Dental Council Code of Practice Relating to Infection Control in Dentistry, 2005.*⁽¹⁹⁾

The existing *National Hygiene Services Quality Review 2008: Standards and Criteria* should continue to provide a useful framework for providers to plan and monitor their hygiene services. The *National Standards for the Prevention and Control of Healthcare Associated Infections* have been developed to incorporate the key safety and quality requirements for hygiene services. Therefore in the future, services will be monitored for compliance against the *National Standards for the Prevention and Control of Healthcare Associated Infections*.

It is important to note that in its 2006 public consultation document, the Health and Consumer Protection Directorate-General of the European Commission recommended the establishment of national surveillance systems on HCAs. A national surveillance system would establish national reference data for meaningful comparisons, monitor the prevalence of HCAs, and facilitate an effective response. Within Ireland, the Health Protection Surveillance Centre (HPSC) is the statutory national locus of expertise and responsibility for HCAs, and has the statutory remit for the surveillance of infectious disease at a national level under the Infectious Disease Regulations.⁽¹⁶⁾ There is a statutory requirement that all relevant surveillance data should be notified to the HPSC.

Building on existing national surveillance systems the Authority supports the further development of comprehensive standardised national surveillance systems for HCAs which comply with the national and European requirements, and intends to actively contribute to the development of such a system. A national surveillance system would establish national reference data for meaningful comparisons in order to monitor the prevalence of HCAs. Measuring standardised surveillance data, including HCAs, both at a local and national level, is a fundamental requirement in order to effectively manage the prevention and control of HCAs. However, it is imperative that national standardised surveillance data, attributable down to service level, is available to, and used by clinicians and managers locally to improve the quality and safety of patient care. This should complement, and be seamless with, the standardised surveillance data, including HCAs, that is collated, measured, monitored and managed by every health and social care service to prevent and control HCAs.

The Council of the European Union's proposed recommendation on the prevention and control of HCAI states that there should be a national dedicated multidisciplinary committee for the coordinated implementation of a national HCAI strategy. Such a committee could also coordinate the implementation of the *National Standards for the Prevention and Control of Healthcare Associated Infections* at a national level. This could be complementary to the work of the intersectoral mechanism on the prudent use of antimicrobial agents, i.e. the Strategy for the Control of Antimicrobial Resistance in Ireland (SARI) National Committee, as well as for the purpose of information exchange and coordination with the Commission, the European Centre for Disease Prevention and Control, and the other Member States.

2 Development of the National Standards

The development of these National Standards has consisted of a series of steps to ensure that they are person centred, evidence based, clear, valid, measurable and fit for purpose.

The Authority established an internal project team that was responsible for the overall development of the National Standards. The project team conducted a comprehensive review of the available Irish and international literature and held a series of meetings with key stakeholders.

In order to ensure that advice from the public and professionals contributed to the development of the National Standards, the Authority established an Advisory Group in August 2007 chaired by Professor Geraldine McCarthy, Dean and Head of Department of Nursing and Midwifery, University College Cork. The role of the Advisory Group was to provide technical advice, review draft standards and provide feedback to the Authority's project team. Membership of the Advisory Group consisted of a number of representatives from various backgrounds including experts in microbiology, front-line service professionals and service-user representatives (for a full listing see Appendix 1).

In order to gain structured feedback from key stakeholders and the wider public, the project team undertook an extensive process of consultation through:

- *Focus groups with service users were held, one in Dublin and one in Cork*
- *Regional workshops with service providers in Dublin, Monaghan, Sligo and Cork, attended by over 150 people in total*
- *Two international advisers reviewed draft standards and provided detailed feedback (see Appendix 1)*
- *Launching, in June 2008, the Authority's Draft Infection Prevention and Control Standards: A Consultation Document, for public consultation and for discussion and consideration by all relevant stakeholders*
- *A six-week public consultation process, which ran from the 3rd of June until 18th of July 2008. The consultation process was advertised in the national newspapers and the Draft Standards were sent to over 400 relevant stakeholders*
- *Submissions were received from a wide range of stakeholders including members of the public, advocacy groups, and both private and public service providers from community, primary care and the acute hospital sector. The total submissions received was 107*
- *The information received was reviewed in detail and used to inform the development of the National Standards.*

For full details of the consultation process, including details of the feedback received and a complete list of submissions, please see the summary of feedback from the public consultation document available at www.hiqa.ie.

3 Scope

The principles for the prevention and control of HCAs are applicable to all health and social care services, including:

- *acute care services*
- *community care services including dental services*
- *primary care services, and*
- *across all sectors – public, voluntary and independent.*

Each service is different in terms of scale, the nature of care provided, staffing levels, location and history. This means the specific measures needed to reduce HCAI will vary considerably, but the principles for the prevention and control of HCAs are applicable across all services.

Therefore these *National Standards for the Prevention and Control of Healthcare Associated Infections* are generic in nature and are designed to apply to **all** health and social care services in Ireland. The services include but are not limited to: acute hospitals, dentistry services, community hospitals, home care services, residential care, health centres and general practices. This will require imagination and adaptability from managers and clinicians providing services to successfully apply these principles into their setting.

It is recognised that the issues for independent practitioners, such as general practitioners and dentists, not working as part of a large service or organisation are different. Therefore, the Authority will issue further guidance on the application of these National Standards in relation to these areas in due course.

Where a health or social care service is being provided through a contract arrangement, for example with the Health Service Executive (HSE), the contract should require evidence of compliance with these Standards to the funding organisation. Contracts of service will need to stipulate compliance with these Standards and be performance-monitored and managed by the funding organisation to ensure appropriate arrangements are in place.

4 Structure of the Standards

The National Standards which apply to all health and social care services are person centred, evidence based and outcome focused.

There are 12 National Standards, each consists of three elements:

- **The rationale** outlines the reason for each standard
- **The standard statement** describes the intended purpose and outcome of the standard in plain language

- **The criteria** describe how a service can demonstrate how the Standard is being met or not. The application of criteria should reflect the clinical and service context – for example the criteria would have different implications in a large acute hospital compared to a small clinic or surgery.

The Standards and criteria do not reflect an order of priority. However, **the implementation of the Standards should reflect local challenges and priorities** as determined by the manager or lead clinician who is accountable for preventing and controlling HCAs in each service, in conjunction with the local expertise within the governance structure. This means a detailed, local plan will be necessary.

5 Implementation

A sustainable reduction in HCAI rates is one of the most important challenges facing health and social care services. This is not only vital for the quality and safety of care for people receiving the services, but also has an associated cost-benefit from reducing the associated additional care required for people who acquire HCAs. **This means that, within a resource constrained environment, the implementation of these National Standards must remain a top priority.**

In line with its statutory remit outlined in section 8 (1) (b) and (c) of the Health Act 2007,⁽¹⁷⁾ the Authority sets standards for safety and quality and monitors compliance against these standards. The Authority will, under Sections 8, 12, 73 and 75 of the Act, monitor and evaluate the performance of services against the *National Standards for the Prevention and Control of Healthcare Associated Infections*.

This will include monitoring progress against implementation plans for each facility. **The Authority will report publicly on its findings on a periodic basis and expects the HSE, and other providers, to regularly publish the results of their own monitoring activity.**

Timescales

Once implemented, these National Standards will represent a step change in the quality and safety of services in Ireland. They will have far reaching implications for health services and not all requirements will be met everywhere overnight. Some aspects of the health service have further to go than others – especially in bringing buildings and facilities up to modern requirements – and the time taken to achieve full compliance will vary. Nevertheless, the Authority will expect to see prioritised implementation plans taking every institution and service towards full compliance with the Standards.

The majority of the National Standards relate to practical, organisational or clinical practice factors which should be straightforward to implement with appropriate behaviours, planning, leadership and culture change. The implementation plan to meet these standards for each facility, should contain steps to immediately address and mitigate the risk of serious shortfalls in these areas.

Except where the standard has a specified timeframe (in particular, some parts of criterion 3.1 of Standard 3 have a specified timeframe of three years), implementation plans should encompass a programme of changes leading to full compliance with the National Standards in acute hospitals within **12 months** of the date of publication.

For HSE funded services outside the acute sector, the Authority will agree appropriate timescales for implementation with the HSE once a gap analysis has been completed by the HSE.

Planning implementation

All facilities should identify a named person responsible and accountable for leading the implementation of these standards. This person should be the chief executive/general manager/lead clinician and where relevant this person should report progress to the board or management committee of the facility/service on a regular basis.

For public services, this will need a nationally coordinated and prioritised programme incorporating clear institution and service-level implementation plans. These plans must be owned locally by healthcare staff responsible for providing and managing the services. The plans will be fundamental to the organised and effective implementation of the National Standards, but will be particularly important for those National Standards requiring diversion or refocusing of resources.

The Authority will expect the HSE to carry out national and local gap analyses for its directly managed services and to develop a nationally coordinated, prioritised implementation plan informed by these gap analyses. Progress against this plan should be reported to the Board of the HSE through the appropriate governance structures.

In the voluntary and independent sectors, and services led by independent practitioners, a local plan will be needed. These types of services should develop implementation plans within the same time period and these should be reported to, and monitored where relevant by, the board or governing body of the service. For such services funded by the HSE, its network or local health office management structure should ensure facilities have a local implementation plan, the progress against which should become part of the reporting requirements within any service level agreement between the provider and commissioner of the service.

6 Monitoring

There are a number of international and national audit/assessment tools^(11;20;21) available that can be adapted by all health and social care services to support the process of evaluating their compliance against the National Standards. The Authority will expect to see effective internal monitoring and reporting systems for the key aspects of the National Standards proportionate to the scale and complexity of the services. This does not mean measuring everything all the time, but rather developing a portfolio of qualitative and quantitative measures to provide adequate assurance of compliance for the board, governing body or responsible clinician for the service.

Given these standards are intended to set a direction of improvement in quality and safety for patients, an important aspect of monitoring will be assessing progress against planned implementation milestones.

From publication of the National Standards, there will be a six-month adjustment period to allow all services to consider the local implications of the National Standards and develop implementation plans. During this period, the Authority will engage with the HSE and other stakeholders to discuss the nature and scope of internal monitoring processes.

Following this period, the Authority will undertake a baseline assessment exercise that will focus on the findings of the internal gap analysis, the development of plans and how priority safety areas have been addressed. This exercise will be predominantly a self-assessment process. The self-assessments will be followed up in more detail in 2010. The detailed nature of the follow-up process will be communicated to services well in advance of any visits programme. However, unannounced visits will be part of the Authority's approach.

The Authority strongly encourages private and voluntary sector providers to take full account of these standards in implementing their own measures for preventing and controlling Healthcare Associated Infections. It also suggests insurers should consider whether the National Standards should be a factor in determining funding decisions.

7 Future developments

These National Standards are based on current evidence-based best practice and every attempt has been made to ensure they are fit for purpose and user friendly in order to further drive the reduction in Healthcare Associated Infections across Ireland. Given the evolving national and international research and development of new initiatives to prevent and control HCAs, the Authority will review these National Standards no later than three years after their publication date.

Finally, implementation of the recommendations of the Commission on Patient Safety and Quality Assurance will be an important factor in this process. In time, and subject to legislation, certain aspects of these National Standards will be incorporated into a licensing framework. The Authority will be liaising with providers from all sectors in agreeing how that happens.

8 The National Standards for the Prevention and Control of Healthcare Associated Infections

There are 12 National Standards for the Prevention and Control of Healthcare Associated Infections:

Standard 1:

The prevention and control of Healthcare Associated Infections is effectively and efficiently governed and managed.

Standard 2:

Structures, systems and processes are in place to effectively manage and implement the programme to prevent and control Healthcare Associated Infections.

Standard 3:

The physical environment, facilities and resources are developed and managed to minimise the risk of service users, staff and visitors acquiring a Healthcare Associated Infection.

Standard 4:

Human resources are effectively and efficiently managed in order to prevent and control the spread of Healthcare Associated Infections.

Standard 5:

A communication strategy is in place which ensures information relating to Healthcare Associated Infections is communicated and responded to in an efficient, timely, effective and accurate manner.

Standard 6:

Hand hygiene practices that prevent, control and reduce the risk of the spread of Healthcare Associated Infections are in place.

Standard 7:

The spread of communicable/transmissible diseases is prevented, managed and controlled.

Standard 8:

Invasive medical device related infections are prevented or reduced.

Standard 9:

Microbiological services are available in a timely and effective manner to support the service to prevent and control Healthcare Associated Infections.

Standard 10:

Healthcare Associated Infection and communicable/transmissible disease outbreaks are managed and controlled in a timely, efficient and effective manner in order to reduce and control the spread of Healthcare Associated Infections.

Standard 11:

Healthcare Associated Infections and antimicrobial resistance are monitored, audited and reported through a systematic surveillance programme.

Standard 12:

There are systems in place to reduce and control antimicrobial resistance.

9 Standards and Criteria

Governance and Management

Rationale:

Embedding safety and quality as core principles in health and social care requires, as a part of an effective governance structure, clear lines of accountability and responsibility at all levels, including at a strategic, corporate and individual level. These lines of accountability and responsibility should support the operational management of the prevention and control of HCAs. ⁽⁶⁾

Standard 1:

The prevention and control of Healthcare Associated Infections is effectively and efficiently governed and managed.

Criteria:

- 1.1** The organisational structure for the service outlines clear roles, responsibilities and reporting relationships for the prevention and control of HCAs at all levels of the service. ^(6;14;22-28)
- 1.2** The chief executive or equivalent of the service is accountable for the overall management and monitoring of the prevention and control of HCAs and the implementation of the *National Standards for the Prevention and Control of Healthcare Associated Infections*. The chief executive or equivalent reports regularly on the prevention and control of HCAs to the board of the service or to the appropriate management level continuing through to the area, regional and national levels and to the main board of the service.

For community and primary care services and smaller facilities there is a clear local designated senior manager or clinician with the appropriate authority to make decisions who is accountable and reports to the board, or equivalent, regularly on the prevention and control of HCAs and the implementation of the *National Standards for the Prevention and Control of Healthcare Associated Infections*. This responsibility is clearly defined within their job description. ^(6;11;14;24;26;27;29)

- 1.3** The board of the service, including the Board of the Health Service Executive (HSE), regularly receives information relating to the prevention and control of HCAs, including standardised surveillance data for HCAs across their respective services, in order to measure and monitor the management of the prevention and control of HCAs. This information is reported, where appropriate, to the designated and accountable senior manager or clinician, continuing through to area, regional and national levels and to the main board of the service. This information is responded to in a timely and efficient manner in order to prevent, control and reduce the risk of the spread of HCAs. ^(6;24-28)
- 1.4** The prevention and control of HCAs is underpinned by an annual business plan, which is in keeping with the overall corporate strategic plan and the quality and safety framework for the service, and which includes objectives for the prevention and control of HCAs. The annual business plan includes priorities based on identified risks and the demographic profile of the population it serves and will serve. ^(14;22;23;29-33)
- 1.5** There are integrated risk management structures and processes in place, as part of the quality and safety framework for the service, to identify, analyse, prioritise and eliminate or minimise risk relating to HCAs. This includes but is not limited to: ^(6;14;23;27;28;34;35)
- *the analysis of any incident that has compromised, or could compromise, the prevention and control of HCAs (see criterion 2.3)*
 - *the analysis of any HCAI related adverse events, incidents and complaints (see criterion 2.3).*
- 1.6** Resources are allocated to provide a safe, effective and efficient service to prevent and control HCAs. The resources allocated are based on a needs analysis and evidence-based best practice. The resources include but are not limited to: ^(6;23;29;31;36)
- *financial*
 - *designated human resources (including administrative staff) as determined by the documented methodology (see criterion 4.6)*
 - *information management system*
 - *facilities and accommodation.*
- 1.7** The prevention and control of HCAs is managed according to national and corporate policies and procedures and is in line with current legislation and evidence-based best practice. ^(14;31;37;38)

1.8 There are formalised linkages and partnerships with relevant disciplines to support the service to prevent and control HCAs. These include but are not limited to:^(8;14;22;25;37;39)

- *risk management*
- *quality and safety management*
- *decontamination management*
- *occupational health*
- *hygiene services*
- *waste management*
- *maintenance services.*

1.9 Contracted external services relating to the prevention and control of HCAs, including hygiene services, are effectively and efficiently governed, monitored and performance managed, through but not limited to:^(14;22;23;28;37;40)

- *a process for establishing contracts*
- *explicit contractual obligations on the contractor regarding compliance with the National Standards for the Prevention and Control of Healthcare Associated Infections, including penalties for non-adherence*
- *a formal service-level agreement*
- *a process for managing and monitoring contracts*
- *professional liability of the contractors*
- *involvement in quality improvement activities.*

1.10 All service-user data and information relating to the prevention and control of HCAs is maintained in a secure manner in line with legislation and evidence-based best practice.^(6;9;37)

1.11 Internal systems are in place to communicate any data or statistics, standardised surveillance data relating to the prevention and control of HCAs and any outbreaks to senior management and/or the board of the service using agreed protocols. All notifiable infectious diseases and outbreaks of infectious diseases, including HCAs, are reported to the Medical Officer of Health (HSE) and the Health Protection Surveillance Centre (HPSC).^(15;24;25)

Structures, Systems and Processes

Rationale:

To ensure a programme to prevent and control HCAs is effectively coordinated and implemented there should be defined structures, systems and processes in place which advise on the management and implementation of this programme.

Standard 2:

Structures, systems and processes are in place to effectively manage and implement the programme to prevent and control Healthcare Associated Infections.

Criteria:

- 2.1** A multidisciplinary Infection Prevention and Control committee is in place which reflects the size, complexity and specialties of the service. For community and primary care services and smaller facilities, the Infection Prevention and Control committee may function at the most appropriate area or regional level. The Infection Prevention and Control committee:^(11;14;23;28-32)
- *has a multidisciplinary membership (see Appendix 2) including a member of senior management*
 - *has responsibility for the development of the programme to prevent and control HCAs (see criterion 2.2)*
 - *has clearly defined terms of reference, lines of responsibility, and accountability and reports to the chief executive or equivalent of the service*
 - *has regular formal meetings which are minuted*
 - *has formal linkages with relevant committees/groups within the service, this includes but is not limited to committees/groups relating to service-user safety and quality, the board and other senior corporate management structures*
 - *provides a publicly available annual report to the chief executive or equivalent which includes the performance of the service in relation to the prevention and control of HCAs (see criterion 2.4)*
 - *advises and supports the Infection Prevention and Control team (see criterion 2.3)*

- *ensures that policies and procedures to prevent and control HCAs are reviewed and updated to reflect evidence-based information and guidance.*

2.2 There is a programme to prevent and control HCAs which reflects the size, complexity and specialties of the service. For community and primary care services and smaller facilities, the programme may be formulated at the most appropriate area or regional level. The programme: ^(22;23;28;31;32;39;41)

- *is developed by the Infection Prevention and Control committee (see criterion 2.1)*
- *has defined objectives*
- *is revised annually*
- *reflects evidence-based best practice and legislation.*

2.3 There is an Infection Prevention and Control team which reflects the size, complexity and specialties of the service. The team has the responsibility and authority to monitor and advise on the implementation of the programme to prevent and control HCAs. For community and primary care services and smaller facilities, the team may be formulated at the most appropriate area level. The Infection Prevention and Control team: ^(23;28;30;33;39;42-46)

- *is multidisciplinary (see Appendix 2) and clinically active and responsive as the need arises*
- *reports to the Infection Prevention and Control committee*
- *has regular formal meetings which are minuted*
- *provides an annual work plan which reflects the programme to prevent and control HCAs for approval by the Infection Prevention and Control committee*
- *leads surveillance in line with Standard 11.0, including reporting standardised HCAI rates and trends to the board or senior management on the minimum of a monthly basis*
- *informs staff of changes in evidence-based best practice for the prevention and control of HCAs*
- *ensures that advice and/or information which is in line with current evidence-based best practice and legislation is available to service providers on a 24-hour basis*

- *is consulted on the appropriateness of changes in practice (e.g. new medical equipment – see criterion 8.3) in relation to the prevention and control of HCAs*
- *monitors the training and education needs of the service's staff in relation to prevention and control of HCAs and provides or facilitates support and advice for any required training*
- *analyses any incident that has, or could, compromise the prevention and control of HCAs*
- *analyses any HCAI related adverse events, incidents and complaints*
- *audits the implementation of policies, procedures and guidelines to prevent and control HCAs.*

2.4 The performance of the service in relation to the prevention and control of HCAs is audited on an annual basis and is reported to the board and senior management. The findings of the reviews are published and are communicated to all relevant staff to promote learning. This includes but is not limited to:^(7;22;28;31;43-45;47)

- *the programme to prevent and control HCAs*
- *specific targets relating to the prevention and control of HCAs*
- *performance indicators, including the HSE Infection Prevention and Control indicators*
- *the resources made available to prevent and control HCAs.*

Environment and Facilities Management

Rationale:

The risk of the spread of HCAs is reduced when the design of the physical environment meets evidence-based best practice through the provision of single rooms, sufficient physical space in clinical areas, and an environment that can be readily cleaned and decontaminated. It is therefore important that the physical environment is planned, provided and maintained to maximise service-user safety and the needs of the community it serves.

Standard 3:

The physical environment, facilities and resources are developed and managed to minimise the risk of service users, staff and visitors acquiring a Healthcare Associated Infection.

Criteria:

- 3.1** The design and layout of the facility is based on a needs assessment which reflects the size, complexity and specialties of the service provided including facilities in the primary and community care setting. The design and layout complies with relevant legislation and evidence-based best practice for the prevention and control of HCAs, risk management and other specialised design specifications for health and social care services. This includes but is not limited to: (12-14;24;31;35;36;42;48-57)

- *the number of single rooms with ensuite shower and toilet facilities and clinical hand-washing facilities assigned to the prevention and control of HCAs*
- *the number of pressurised isolation rooms with engineering control and dedicated access lobbies*
- *newly built acute hospital inpatient wards or units should be made up of 100% single rooms with ensuite shower and toilet facilities*
- *newly built non-acute hospital inpatient wards should be made up of a minimum of 50% single rooms with ensuite shower and toilet facilities*
- *bed spacing is planned and managed in a way that minimises the risk of spread of HCAs*

- *when a facility does not conform to evidence-based best practice in the prevention and control of HCAs, risk management and other specialised design specifications for health and social care services, there should be a refurbishment programme to upgrade the facility. There should be specified implementation timeframes contained within the implementation plan to meet these Standards, and these should be signed off by the board, or equivalent, of the service. Specific measures to minimise the risk of the spread of HCAs in the interim period should be implemented and defined within the implementation plan*
 - *in the acute setting the refurbishment programme should provide the maximum number of single rooms with ensuite shower and toilet facilities within three years.*
- 3.2** Pressurised isolation rooms/systems have the appropriate monitors and alarms that are maintained according to evidence-based best practice.^(30;35)
- 3.3** The Infection Prevention and Control committee and team is consulted at all stages of the planning, design and implementation phases and during all new builds, environmental or systems repairs, refurbishments and maintenance.^(12;14;28;30;35;40;42)
- 3.4** The possible spread of HCAs is minimised during construction/renovation/demolition/repair/maintenance by having clear policies and procedures which reduce the risks to the health and welfare of service users. This includes but is not limited to:^(31;35;40)
- *a risk assessment when planning renovation, construction or demolition to determine potential HCAI transmission hazards/risks*
 - *a clear plan for managing interim arrangements for service users and staff to remove them from HCAI and other health and safety risks*
 - *surveillance for airborne environmental pathogens where necessary*
 - *measurement of the implementation and effectiveness of the measures to prevent and control HCAs during construction/renovation.*
- 3.5** All systems including water and ventilation systems are designed, maintained and audited in line with national and international guidelines to minimise the possible spread of HCAs, for example *Aspergillus* species and *Legionella* species.^(34;40;58)
- 3.6** The cleanliness of the physical environment is effectively managed and maintained according to relevant national guidelines and legislation; to protect service-user dignity and privacy and to reduce the risk of the spread of HCAs. This includes but is not limited to:^(8;13;14;20;22;25;26;28;40;49;59;60)

- *all equipment, medical and non-medical, including cleaning devices, are effectively managed, decontaminated and maintained*
- *the linen supply and soft furnishings used are in line with evidence-based best practice and are managed, decontaminated, maintained and stored.*

3.7 The inventory, handling, storage, use and disposal of hazardous material/equipment is in accordance with evidence-based codes of best practice and current legislation. ^(13;14;20;22;37;40;60-63)

3.8 The quality of hygiene services is regularly monitored and evaluated and this information is used to improve the service provided. ^(14;20;22;31;60)

Human Resource Management

Rationale:

Effective human resource management can impact on safety and quality within health and social care services. The provision of a continuous and ongoing education programme for all staff on the prevention and control of HCAs can contribute to a safer service.

Standard 4:

Human resources are effectively and efficiently managed in order to prevent and control the spread of Healthcare Associated Infections.

Criteria:

- 4.1** The number of infection prevention and control staff required to optimise the provision of a safe, effective, efficient and person-centred service to prevent and control HCAs is allocated. The number of infection prevention and control staff is determined by a defined, documented and regularly reviewed methodology which includes but is not limited to: ^(12;14;28;31;43;45;64;65)
- *the time and resources needed to carry out the required duties*
 - *the size, complexity and specialties of the service*
 - *national and international evidence-based best practice and guidelines*
 - *risk analysis*
 - *needs assessment*
 - *changes in workload.*
- 4.2** All infection prevention and control staff have the relevant skills, experience, competencies and recognised qualifications and training. ^(6;14;23;31)
- 4.3** The selection and recruitment of infection prevention and control staff is conducted in accordance with best practice and current legislation. ^(14;66)
- 4.4** Infection prevention and control staff undergo ongoing education and continuous professional development and are given the necessary time and support to attend. ^(6;12;14;23;25;28;31;32;36;67)

- 4.5** All staff receive mandatory theoretical and practical training in the prevention and control of HCAs. This training is delivered during orientation/induction, with regular updates, is job/role specific and attendance is audited. There is a system in place to flag non-attendees.^(6;11;14;24-26;28;31;32;47)
- 4.6** Agreements exist with associated colleges, institutions and recruitment agencies ensuring that visiting clinical staff, agency staff and students are trained and competent in all core principles for the prevention and control of HCAs, for example: hand hygiene, standard precautions and transmission-based precautions, prior to employment and/or placement.^(32;68;69)
- 4.7** There is access to resources and services for the provision of education, training and continuous professional development for all staff in the prevention and control of HCAs that is in keeping with the learning and development plan and the programme for the prevention and control of HCAs.^(6;14;31;47;70)
- 4.8** The service minimises the risks to the health and welfare of service users by providing services for staff in line with health and safety legislation. This includes but is not limited to:^(14;25;29;31;36;37;47;71-73)
- *structures, policies and procedures which include the prevention and management of communicable/transmissible diseases/organisms and a comprehensive staff screening and immunisation programme*
 - *procedures and policies for the management of an occupational exposure to blood or body fluids*
 - *access to an occupational health service.*

Communication Management

Rationale:

An effective communication strategy which helps to disseminate useful and important information, both internally and externally, can improve the quality of service users' care. It can also help to inform service users, visitors and staff on how they can prevent and control the spread of HCAs.⁽¹²⁹⁾

Standard 5:

A communication strategy is in place which ensures information relating to Healthcare Associated Infections is communicated and responded to in an efficient, timely, effective and accurate manner.

Criteria:

- 5.1** A communication strategy is in place to ensure all service users, relatives, carers, visitors and staff are made aware of the importance of the prevention, control and reduction of HCAs. This includes but is not limited to:^(12;14;26;28;29;37;39;74)
- *clear, understandable, easy to read written information and/or other educational material provided to every service user and their carers at the point of contact with the service*
 - *clear, easy to understand and effective signage relating to the prevention and control of HCAs*
 - *prompt reporting of concerns, incidents, adverse events, near misses and complaints*
 - *ongoing education campaigns on the prevention and control of HCAs and the reduction of antimicrobial resistance, which includes but is not limited to: hand hygiene, environmental hygiene, specific HCAs and appropriate antimicrobial usage.*
- 5.2** Service users who are found to be colonised and/or infected with a significant communicable/transmissible HCAI or organism are informed of their infection and/or colonisation status by the clinician, or clinical team, primarily responsible for their care as soon as the diagnosis is made, and are supplied with any relevant information. The service users' relatives/carers may also need to be informed, with the appropriate authorisation, of the service users' colonisation/infection status and be supplied with any relevant information and training.^(129, 6)

- 5.3** There are policies and procedures to ensure effective communication occurs when the service transfers a service user, who is colonised and/or infected with a communicable transmissible organism/infection, to another service. The referring service ensures that the receiving clinical staff are informed of the service user's colonisation and/or infection status before the service user arrives. (see criterion 7.4)
- 5.4** The service works in partnership with other services and stakeholders, including: service-user groups, members of the public, the Health Service Executive, the Department of Health and Children, and the Authority to improve the service to prevent and control HCAs. ^(6;14;39)
- 5.5** Mechanisms, for example a service-user survey, are in place for service users and the public to provide feedback regarding the prevention and control of HCAs. The information collected is reported to the infection prevention and control committee and is used to improve the service(s) provided. ^(6;14;39)

Hand Hygiene

Rationale:

Hand hygiene is recognised internationally as the single most important preventative measure in the transmission of HCAs, particularly in health and social care services.⁽²⁹⁾ It is essential that a culture of hand hygiene practice is embedded in every service at all levels.

Standard 6:

Hand hygiene practices that prevent, control and reduce the risk of the spread of Healthcare Associated Infections are in place.

Criteria:

- 6.1** There are evidence-based best practice policies, procedures and systems for hand hygiene practices to reduce the risk of the spread of HCAs. These include but are not limited to the following:^(11-14;25;29;63;74-76)
- *the implementation of the Guidelines for Hand Hygiene in Irish Health Care Settings, Health Protection Surveillance Centre, 2005*
 - *the number and location of hand-washing sinks*
 - *hand hygiene frequency and technique*
 - *the use of effective hand hygiene products for the level of decontamination needed*
 - *readily accessible hand-washing products in all areas with clear information circulated around the service*
 - *service users, their relatives, carers, and visitors are informed of the importance of practising hand hygiene.*
- 6.2** Service users and their relatives/carers/visitors are informed that they can ask staff if they have performed hand hygiene before attending to them and also request staff to practice hand hygiene.^(11;39;74)
- 6.3** Hand hygiene practices and policies are regularly monitored and audited. The results of any audit are fed back to the relevant front-line staff and are used to improve the service provided.^(2;11;12;14;20;68;75)

Communicable/Transmissible Disease Control

Rationale:

The effective implementation of policies, procedures and systems for the prevention and control of communicable/transmissible diseases (that is diseases or organisms that are passed from one person to another) are important in maximising the safety and quality of health and social care services.

Standard 7:

The spread of communicable/transmissible diseases is prevented, managed and controlled.

Criteria:

- 7.1** The admission process for service users/patients is managed in line with national guidelines and evidence-based best practice. This includes appropriate service user/patient screening according to agreed national guidelines, local policies and epidemiology.^(12;25;30;77;78)
- 7.2** Service users/patients presenting with a known or suspected communicable/transmissible disease, including a HCAI, are managed in a person-centred, prompt and efficient manner in line with national guidelines and evidence-based best practice.^(12;30;79)
- 7.3** All high risk departments reduce the spread of communicable/transmissible diseases, including HCAs, by adhering to relevant policies that have been developed in consultation with the Infection Prevention and Control team.^(31;80)
- 7.4** Suspected and/or confirmed cases of service users/patients infected and/or colonised with a communicable/transmissible disease/organism are effectively and efficiently managed according to specific policies and procedures for named communicable/transmissible diseases which are in line with evidence-based best practice and national guidelines. The policies and procedures include but are not limited to the following:^(10;12;13;15;16;19;24;25;30;31;37;47;63;77-79;81-91)
- *notification processes*
 - *standard and transmission-based precautions*
 - *service-user isolation and cohort policies and procedures*

- *service-user transportation and transfer*

- *post-mortem services.*

7.5 All areas and medical equipment contaminated or suspected of being contaminated with a communicable/transmissible organism undergo environmental decontamination in accordance with evidence-based best practice guidelines. ^(13;25;59;60;83;87)

7.6 Evidence-based best practice, including national guidelines, for the prevention, control and management of infectious diseases/organisms are implemented and audited. These include but are not limited to the:

- *The Control and Prevention of MRSA in Hospitals and in the Community, Health Protection Surveillance Centre, 2005⁽¹²⁾*

- *Code of Practice for Decontamination of Reusable Invasive Medical Devices, Health Service Executive, 2007⁽⁸⁾*

- *Guidelines on Minimising the Risk of Transmission of Transmissible Spongiform Encephalopathies in Healthcare Settings in Ireland, Department of Health and Children, 2004⁽⁹²⁾*

- *National Guidelines on the Management of Outbreaks of Norovirus Infection in Healthcare Settings, National Disease Surveillance Centre, 2003⁽⁹³⁾*

- *Surveillance, Diagnosis and Management of Clostridium difficile-associated disease in Ireland, Health Protection Surveillance Centre, 2008⁽¹³⁾*

- *The Prevention of the Transmission of Blood-Borne Diseases within the Health Care Setting, Department of Health and Children, 2005⁽⁹⁴⁾*

- *National Guidelines for the Prevention of Nosocomial Invasive Aspergillosis During Construction/Renovation Activities, National Disease Surveillance Centre, 2002⁽³⁴⁾*

- *The Management of Legionnaires Disease in Ireland, National Disease Surveillance Centre, 2002⁽⁵⁸⁾*

- *other agreed or updated national documents upon their release.*

7.7 Visitor, relative, carer and staff access within the service and within high risk departments and locations is controlled and managed. ^(35;48)

7.8 The use of single rooms and isolation rooms are prioritised for the prevention and control of communicable/transmissible disease, including HCAs. ^(13;25;29;50)

- 7.9** Policies and procedures are in place to ensure that the dignity of service users who are colonised and/or infected with a significant communicable/transmissible HCAI/organism, is maintained and respected and that they receive timely access to other services as required.^(6;14)
- 7.10** Compliance with national guidelines and the service's policies (isolation, screening etc.), procedures and guidelines for the prevention and control of communicable/transmissible diseases, including HCAs, are annually evaluated and reported and updated every two years and upon publication of relevant national documents.^(6;28;31)

Invasive Medical Device Related Infections

Rationale:

A quarter of all HCAs in acute hospitals are invasive medical device related.⁽¹⁾ Therefore, it is important that all health and social care services implement specific policies, procedures and systems which minimise the risks associated with acquiring an invasive medical device related infection.

Standard 8:

Invasive medical device related infections are prevented or reduced.

Criteria:

- 8.1** Invasive medical devices are managed in line with evidence-based best practice and national and international guidelines, including but not limited to:^(30;31;63;76;95-99)
- *the implementation of a structured set of processes that have been proven to improve service user outcomes, for example, bundles* for the prevention and control of invasive medical device related infections*
 - *the insertion and removal of invasive medical devices*
 - *upholding strict adherence to asepsis and hand hygiene before and after any invasive procedure, manipulation of the invasive medical device and dressing changes*
 - *daily inspection and review of the need for the invasive medical device*
 - *systems in place to track the management of the medical device from the date of insertion*
 - *single use invasive medical devices are not reused.*
- 8.2** Relevant staff are competently trained in invasive medical device insertion, maintenance, replacement and care, and this is documented.^(31;63;99)
- 8.3** The Infection Prevention and Control team are consulted regarding the introduction of all new invasive medical devices (see criterion 2.3).
- 8.4** The use and management of invasive medical devices is regularly audited, with quality improvement actions undertaken to improve service-user care.^(6;31;39;63;99)

* a structured way of improving the process of care and patient/service user outcomes

Microbiological Services

Rationale:

Effective and responsive microbiological services are required for safe clinical care and to support the functions of the service to prevent and control HCAs.

Standard 9:

Microbiological services are available in a timely and effective manner to support the service to prevent and control Healthcare Associated Infections.

Criteria:

- 9.1** There is access to an accredited clinical microbiology laboratory, with appropriately trained and qualified staff, on a 24-hour basis. There is also formalised access to reference laboratories. For community and primary care services and smaller facilities, the level of formalised access is based on the level of risk and service user/population needs. ^(25;32;100;101)
- 9.2** There is access to specialist advice relating to prevention and control of HCAs on a 24-hour basis and this is provided by a consultant clinical microbiologist or an infectious disease consultant. For community and primary care services and smaller facilities, there is formalised access to specialist advice on the prevention and control of HCAs and the level of access is based on the level of risk and service user/population needs. ^(24;31;64;102)
- 9.3** Timely access to laboratory results is available to relevant staff. ^(6;36;102)
- 9.4** There are systems in place for the rapid and safe transport of microbiological specimens and relevant clinical samples within the service and between external sites. ⁽¹⁰³⁻¹⁰⁵⁾
- 9.5** There are systems in place for the rapid reporting of epidemiologically important organisms to the treating clinician and the Infection Prevention and Control team. Clinicians and laboratory directors should notify individual cases of notifiable disease and outbreaks/unusual patterns of illness of infectious diseases to the Medical Officer of Health (HSE) and to the Health Protection Surveillance Centre. ^(15;16;23;25;31;102)

- 9.6** The clinical microbiology laboratory has the ability or has formal arrangements in place for the molecular typing of epidemiologically important strains (for example: *Clostridium difficile* 027).^(13;24;102;106)
- 9.7** Microbiological services are reviewed on a regular basis and all findings are reported to senior management with prompt actions taken to address the outcomes of the review. The review includes but is not limited to:⁽¹⁰²⁾
- *needs analysis of the microbiological service requirement*
 - *turn around times, efficiency and safety of transportation services*
 - *applicability of new technologies.*

Outbreak Management

Rationale:

The efficient management and control of outbreaks of communicable/transmissible diseases, including HCAs, is essential for minimising the impact of an outbreak on all service users, staff and the general public.^(31;107)

Standard 10:

Healthcare Associated Infection and communicable/transmissible disease outbreaks are managed and controlled in a timely, efficient and effective manner in order to reduce and control the spread of Healthcare Associated Infections.

Criteria:

- 10.1** Outbreak policies and procedures which are in line with evidence-based best practice are in place.^(13;15;24;28;31;36-38; 93;107-109)
- 10.2** Outbreaks are managed according to policies and procedures which include but are not limited to:^(13;15;24;31;36-38; 93;107-109)
- *the roles and responsibilities of management, the Infection Prevention and Control team, other clinical managers, local HSE public health department, and any other relevant staff are clearly outlined in the outbreak policies and procedures*
 - *convening a multidisciplinary outbreak management team/committee in the event of an outbreak or suspected outbreak. For community and primary care services and smaller facilities, the multidisciplinary outbreak management team/committee may operate at the most appropriate area or regional level*
 - *prompt communication of any suspected/confirmed outbreaks to the outbreak management team/committee, the Board, the appropriate area/regional level senior management, representatives from affected areas, admitting departments/bed management, local HSE public health department and the Medical Officer of Health (HSE) and on to the HPSC*
 - *redeployment of staff to manage any outbreaks*

- *the outbreak management team/committee or Infection Prevention and Control team liaises directly with the appropriate head of services. This should lead to the development of a clear, documented and well communicated operational plan including resource consequences and monitoring mechanisms for managing and containing the outbreak*
- *All service users, visitors and staff impacted by an outbreak are communicated with regarding the outbreak in a timely and effective manner.*

10.3 During an outbreak, an analysis, including a root cause analysis, is initiated by the Infection Prevention and Control team. The findings of the analysis are presented to senior management of the service and the board including the Board of the HSE. The findings of the investigation are used to improve the service(s) provided.^(6;31;37;38)

Surveillance Programme

Rationale:

Surveillance followed by action for improvement can have a significant impact on the prevention and control of HCAs. Studies have found that services with comprehensive surveillance programmes which feedback to clinical staff contribute to more effective programmes for preventing and controlling HCAs.^(110;111)

Standard 11:

Healthcare Associated Infections and antimicrobial resistance are monitored, audited and reported through a systematic surveillance programme.

Criteria:

- 11.1** There is a defined and documented surveillance programme which is in line with evidence-based best practice, agreed national guidelines, national and local policy and which is relevant to the service. For community and primary care services and smaller facilities, the programme may be formulated at the most appropriate area or regional level. The surveillance programme:^(6;23;25;28;31;36;39;107;112)
- *is coordinated by a named individual/s, for example a surveillance scientist*
 - *is developed by the Infection Prevention and Control team in collaboration with the relevant clinicians and departments and approved by the Infection Prevention and Control committee and senior management*
 - *has clear goals and objectives which are reviewed on an annual basis*
 - *uses internationally and nationally comparable HCAI definitions and denominators*
 - *has defined and documented surveillance methods*
 - *complies with the requirements of national surveillance programmes.*

11.2 Relevant, useful and standardised HCAI and antimicrobial resistance surveillance data is collected. This includes but is not limited to: ^(2;6;12;13;25;31;81;113-115)

- *epidemiologically important organisms/alert organisms (as determined by national public health policy)*
- *standardised incidence rates of HCAs*
- *antimicrobial resistant organisms*
- *invasive medical device related infections (for example: urinary catheters, central venous lines, arterial catheters, ventilator associated infections)*
- *surgical site infections*
- *high risk populations or locations, including screening of patients and staff.*

11.3 This surveillance data is collated and analysed and fed back in a clear and logical manner. This includes but is not limited to: ^(2;6;24;25;31;36;37;68;115)

- *collating the data monthly*
- *benchmarking the data both internally and externally with comparable services*
- *presenting/distributing the data with interpretations, recommendations and actions to clinicians, other relevant clinical staff and senior management*
- *reporting data to the HPSC.*

11.4 The information collected and analysed from the surveillance programme is used to evaluate and support the activities and effectiveness of the programme to prevent and control HCAs. This is reported monthly to senior management of the service and the board including the Board of the HSE. ^(6;23;31;37;39)

Antimicrobial Stewardship

Rationale:

The inappropriate use of antimicrobials is associated with the emergence and the rising levels of antimicrobial resistance. Antimicrobial resistance can be controlled with an effective antimicrobial stewardship programme. Studies have shown that antimicrobial prescription levels in primary care settings far exceed prescription levels in the acute setting, therefore, it is essential that all health and social care settings have systems in place to drive prudent antibiotic usage.⁽¹⁰⁾

Standard 12:

There are systems in place to reduce and control antimicrobial resistance.

Criteria:

12.1 There are policies, procedures, systems and outcomes for the evidence-based best usage of antimicrobials and the reduction of antimicrobial resistance. This includes but is not limited to:^(1;6;10;12;13;23-26;28;78;84;86;113;115-126)

- *implementation of a Strategy for the Control of Antimicrobial Resistance in Ireland, National Disease Surveillance Centre, 2001⁽¹⁰⁾*
- *an antimicrobial stewardship programme is in place, which is in line with evidence-based best practice and reflects the size, complexity and specialties of the service. This should be led by a consultant clinical microbiologist or an infectious disease consultant*
- *annually reviewed written evidence-based clinical guidelines and policies and procedures for antimicrobial prescription and usage*
- *information regarding the prevalence of resistance to antimicrobial agents*
- *the provision of an antimicrobial liaison pharmacist service.*

12.2 There is a multidisciplinary drugs and therapeutics committee or an antimicrobial stewardship committee/team in place which reflects the size, complexity and specialties of the service. The committee is responsible for the development and advising on the implementation and the monitoring of the antimicrobial stewardship programme.

For community and primary care services and smaller facilities, a multidisciplinary drugs and therapeutics committee or an antimicrobial stewardship committee/team may operate at the most appropriate area or regional level. ^(23;118;119)

- 12.3** There are clear lines of communication and cooperation between the service's drugs and therapeutics committee/antimicrobial stewardship team, the Infection Prevention and Control team, pharmacy, management, therapeutic committees and other committees/teams as appropriate. ^(23;32;115;118)
- 12.4** Local antibiograms which are in line with evidence-based best practice are available with pathogen-specific susceptibility data. The antibiograms are updated at least annually and trends in resistance are detected and reviewed. ^(24;115;127;128)
- 12.5** Overall antimicrobial use and specific target areas are audited annually and reported to the HPSC. This data collected is circulated to clinicians and management and is used to improve the quality of the service provided. ^(6;39;68;113;115;118;122)

Appendix 1

(a) Project Team

Brian Lee	Lead Project Manager
Jon Billings	Director of Healthcare Quality and Safety
Dr Deirdre Mulholland	Head of Standards and Methodology
Erik Koornneef	Development Programme Manager
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Prof Geraldine McCarthy, (Chair), Dean and Head of Department of Nursing and Midwifery, UCC

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Dr Paul Kavanagh*, National Hospitals Office, HSE

Tony Kavanagh, MRSA and Families

Dr Fiona Kenny, Irish Society of Clinical Microbiologists

Mags Moran, Infection Prevention Society

Stephen McMahon, Irish Patients' Association

Celine O'Carroll, Infection Prevention Society

Dr Brian O'Connell, CEO Representative, Dublin Academic Teaching Hospitals

Dr Niamh O'Sullivan, Irish Society of Clinical Microbiologists

Dr Anne Sheahan, Population Health Directorate, HSE

**Replaced Dr Mary Hynes*

(c) International Advisers

Prof Andreas Voss, Consultant Microbiologist, Netherlands

Sarah Cooper, Inspections Manager, Healthcare Inspectorate Wales

Appendix 2

Additional Information

(a) Glossary of terms and abbreviations

ACCOUNTABILITY	accountability is demonstrated by the service provider accepting responsibility for their decisions and behaviours as a service provider and for the consequences for service users, families and carers
ADVERSE EVENT	an incident which results in harm to a patient. Harm includes disease, injury, suffering, disability and death and may be physical or psychological
ANNUAL BUSINESS PLAN	a plan which outlines the annual corporate priorities, objectives and targets for the prevention and control of HCAIs. It should include the budgetary allocations for the prevention and control of HCAIs and is in keeping with the overall corporate plan of the service. It is produced by senior management in consultation with the infection prevention and control committee and team
ANTIOBIOGRAM	a record of the resistance or sensitivity of an organism to a list of different antibiotics
ANTIMICROBIAL STEWARDSHIP	this involves selecting an appropriate drug and optimising its dose and duration to cure an infection while minimising toxicity and conditions for selection of resistant bacterial strains
APPROPRIATE	the degree to which care/service is consistent with a service user's expressed requirements and is provided in accordance with current evidence-based best practice and risk analysis
AUDIT	a quality improvement process that seeks to improve service user care and outcomes through systematic review of care against explicit criteria and the implementation of change
BUNDLE	a structured way of improving the process of care and patient/service-user outcomes

CLEAN	free from dirt and harmful substances
CLINICIAN/CLINICAL STAFF	health professional engaged in the care of service users
CLINICAL TEAM	a team of healthcare professionals who manage the care of service users
COLONISATION/COLONISED:	when micro-organism(s) are living on or in a person without causing disease
COMMUNICABLE/ TRANSMISSIBLE DISEASE/ ORGANISM	disease/organism that can be passed from one person to another
EFFICIENT	resources are brought together to achieve optimal results with minimal waste
EFFECTIVE	a measure of the extent to which a specific intervention, procedure, regime, or service, when deployed in the field in routine circumstances, does what it is intended to do for the specified population
EPIDEMIOLOGY	the study of factors affecting the health and illness of populations
EPIDEMIOLOGICAL IMPORTANT ORGANISM(S)	organisms that can affect the health and wellbeing of service users/patients and that are of importance and relevance to the service or to the community
EVIDENCE-BASED BEST PRACTICE	the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual service users/patients. The practice of evidence-based best practice means integrating individual clinical expertise with the best available external clinical evidence from systematic research
FACILITY	refers to the physical infrastructure where the health or social care service is provided
GOVERNANCE	the function of determining the organisation's direction, setting objectives and developing policy to guide the organisation in achieving its mission
HCAIs	Healthcare Associated Infection(s) – are infections that are acquired as a result of healthcare interventions
HPSC	Health Protection Surveillance Centre

HSE	Health Service Executive
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, catering, management of laundry, waste and sharps, and equipment, specifically in the context of preventing and controlling infection
INCIDENCE	the number of episodes of a disease that occur in a specified period of time in a specified group of people
INCIDENT	an event or circumstance which could have resulted, or did result, in unnecessary harm to a patient. Incidents may arise from both unintended and intended acts
INFECTION	the process of infecting or the state of being infected
INFECTION PREVENTION AND CONTROL	the discipline and practice of preventing and controlling HCAs, infectious diseases etc.
INFECTION PREVENTION AND CONTROL COMMITTEE	<p>a multidisciplinary group of people from within and outside the service, which reports to senior management. The committee is responsible for the development and review of the service to prevent and control HCAs. Below is an example of an Infection Prevention and Control committee and is for guidance purposes only:</p> <ul style="list-style-type: none"> • Chief executive/general manager or representative (chair) • Service user/patient • Consultant clinical microbiologist • Infectious disease consultant • Infection prevention and control nurse • Chief medical scientist • Senior medical staff • Nursing.

<p>INFECTION PREVENTION AND CONTROL COMMITTEE</p>	<p>Senior representatives from the following departments/ areas:</p> <ul style="list-style-type: none"> • Quality and risk management • Occupational health • Public health medicine • Estates • Sterile services supply • Operating theatre • Other critical area representative(s) • Purchasing • Catering, food and nutrition • Pharmacy • Support services • Hygiene committee • Administration.
<p>INFECTION PREVENTION AND CONTROL STAFF</p>	<p>staff that have professional qualifications in relation to Infection Prevention and Control such as a clinical microbiologist, an infectious disease consultant, an Infection Prevention and Control nurse, pharmacist, surveillance scientist etc.</p>
<p>INFECTION PREVENTION AND CONTROL TEAM</p>	<p>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 purposes only:</p> <ul style="list-style-type: none"> • Consultant clinical microbiologist • Infectious disease consultant • Infection prevention and control nurse • Surveillance scientist/medical scientist • Antimicrobial liaison pharmacist • Occupational health physician
<p>INVASIVE MEDICAL DEVICE</p>	<p>is an object which is used for diagnostic or therapeutic purposes which penetrates or breaks the skin or a body cavity</p>

MEDICAL AND NON-MEDICAL EQUIPMENT	all products and consumables, except medicines, used in healthcare for the diagnosis, prevention, monitoring or treatment of illness or disability
MICROBIOLOGY	study of micro-organisms
MICROBIOLOGICAL SERVICES	these include testing, identification, and analysis
MONITORING	encompasses supervising, observing, and testing activities and appropriately reporting to responsible individuals. Monitoring provides an ongoing verification of progress toward achievement of objectives and goals
MRSA	Methicillin-Resistant <i>Staphylococcus aureus</i>
MULTIDISCIPLINARY	a group of people from various disciplines (both clinical and non-clinical) who work together to provide care/ service within a specified area, for example: doctor, nurse, administrative staff, allied health professional. Also interdisciplinary
ORIENTATION	the process by which service users, groups or communities become familiar with the programmes and services offered by the organisation; or the process by which staff become familiar with all aspects of the work environment and their responsibilities. Also induction
OUTBREAK	an increase in occurrence of a complication or a disease above the background rate
OUTBREAK MANAGEMENT TEAM/COMMITTEE	a multidisciplinary group of people from within and outside the service responsible for the management of outbreaks and which reports to senior management
PRESSURISED ISOLATION ROOM	refers to a pressurised room (positive, negative or neutral) that have dedicated engineering control and monitors for the purpose of preventing and controlling the spread of communicable/transmissible diseases
PREVALENCE	the number of instances of a particular disease or other condition at a particular time
PROGRAMME TO PREVENT AND CONTROL HCAs	the structures, policies and procedures, systems and processes a service has in order to reduce the acquisition/ spread of HCAs

SERVICE	anywhere health or social care is provided. Examples include but are not limited to: acute hospitals, community hospitals, nursing homes/hospitals, district hospitals, health centres, dental clinics, childcare residential services, GP surgeries, home care, etc.
SERVICE USER	users of health and social care services, this includes patients, clients and residents
SERVICE TO PREVENT AND CONTROL HCAs	the overall service provided by a health or social care service to reduce, prevent and control HCAs
SURVEILLANCE	surveillance is the ongoing systematic collection, collation, analysis and interpretation of data; and the dissemination of information to those who need to know in order that action may be taken
THE AUTHORITY	Health Information and Quality Authority
TURN AROUND TIME	a parameter of a laboratory's efficiency, defined as the time between ordering a test or submitting a specimen to the laboratory and reporting results

(b) Links to relevant organisations

Organisations	Websites
Association for Professionals in Infection Control and Epidemiology (APIC), USA	http://www.apic.org
Association of periOperative Registered Nurses (AORN), USA	http://www.aorn.org
Australian Infection Control Association	http://www.aica.org.au
Centers for Disease Control and Prevention (CDC), USA	http://www.cdc.gov
Communicable Disease Surveillance Centre, Northern Ireland	http://www.cdscni.org.uk
Community And Hospital Infection Control Association – Canada (CHICA)	http://www.chica.org
Department of Health, UK	http://www.dh.gov.uk/en/index.htm
Department of Health and Children, Republic of Ireland	http://www.dohc.ie
Dutch Workingparty on Infection Prevention	http://www.wip.nl/UK/
Epidemic and Pandemic Alert and Response (WHO)	http://www.who.int/emc
Health Canada Disease Prevention and Control Guidelines	www.hc-sc.gc.ca
Health Service Executive	http://www.hse.ie
Hospital in Europe Link for Infection Control through Surveillance (HELICS)	http://helics.univ-lyon1.fr/helicshome.htm
Hospital Infection Society, UK	http://www.his.org.uk
Hand Hygiene Resource Center (USA)	www.handhygiene.org
IDLINKS (infectious diseases societies worldwide)	http://www.idlinks.com
Infection Prevention Society (IPS), UK	http://www.ips.uk.net
Infectious Diseases Society of America	http://www.idsociety.org
International Federation of Infection Control (IFIC)	http://www.theific.org/
International Society for Infectious Diseases	www.isid.org

Johns Hopkins Medicine, Division of Infectious Diseases	http://www.hopkinsmedicine.org/medicine/id
The Joint Commission (accreditation of healthcare organisations)	http://www.jointcommission.org
Medicines and Healthcare products Regulatory Agency	http://www.mhra.gov.uk/index.htm
Health Protection Surveillance Centre, Ireland	http://www.hpsc.ie
National Foundation for Infectious Diseases, USA	www.nfid.org/
National Nosocomial Infections Surveillance System, CDC, USA	http://www.cdc.gov/ncidod/dhqp/nnis.html
Occupational Safety & Health Administration (OSHA), US Department of Labor, USA	http://www.osha.gov
Scottish Centre for Infection and Environmental Health (SCIEH), Health Protection Scotland	http://www.hps.scot.nhs.uk/scieh.asp
Society for Healthcare Epidemiology of America (SHEA), USA	http://www.shea-online.org
VICNISS Hospital Acquired Infection Surveillance System – Coordinating Centre, Australia	http://www.vicniss.org.au/
World Health Organization (WHO)	http://www.who.int/

(c) Links to relevant journals

Journals	Websites
American Journal of Infection Control	http://www.journals.elsevierhealth.com/periodicals/ymic
Emerging Infectious Diseases	http://www.cdc.gov/ncidod/EID/index.htm
Eurosurveillance	www.eurosurveillance.org
Health Canada Communicable Disease Report	http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/index-eng.php
Infection Control and Hospital Epidemiology	http://www.journals.uchicago.edu/toc/iche/current
Journal of Hospital Infection	http://www.his.org.uk
Morbidity and Mortality Weekly Report (MMWR)	http://www.cdc.gov/mmwr/
WHO Weekly Epidemiological Record (WER)	http://www.who.int/wer/

Appendix 3

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