

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health and social care directorate

Quality standards and indicators

Briefing paper

Quality standard topic: Infection control

Output: Prioritised quality improvement areas for development.

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1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for infection control. It provides the Committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

1.1 Structure

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

If relevant, recommendations selected from the key development sources below are included to help the Committee in considering potential statements and measures.

1.2 Development sources

The key development sources referenced in this briefing paper are:

[Infection: prevention and control of healthcare-associated infections in primary and community care](#). NICE clinical guideline 139 (2012).

[Prevention and control of healthcare-associated infections](#). NICE public health guidance 36 (2011).

Pratt RJ et al. (2007) [epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England](#). Journal of Hospital Infection 65 (supplement 1):S1–64.

2 Overview

2.1 Focus of quality standard

This quality standard will cover the prevention and control of infection for people receiving healthcare in primary, community and secondary care settings.

2.2 Definition

Healthcare-associated infections arise across a wide range of clinical conditions and can affect patients of all ages. Healthcare workers, family members and carers are also at risk of acquiring infections when caring for patients.

Healthcare-associated infections can occur in otherwise healthy individuals, especially if invasive procedures or devices are used. For example, indwelling urinary catheters are the most common cause of urinary tract infections, and bloodstream infections are associated with vascular access devices.

Healthcare-associated infections are caused by a wide range of microorganisms. These are often carried by the patients themselves, and have taken advantage of a route into the body provided by an invasive device or procedure. Healthcare-associated infections can exacerbate existing or underlying conditions, delay recovery and adversely affect quality of life.

Healthcare-associated infections are commonly linked with invasive procedures or devices. For example:

- Indwelling urinary catheters are the most common cause of urinary tract infections
- Bloodstream infections are often associated with vascular access devices.

Patient safety has become a cornerstone of care, and preventing health-associated infections remains a priority. A no-tolerance attitude is now prevalent in relation to avoidable healthcare-associated infections.

2.3 Incidence and prevalence

In 2010, in England, infectious diseases accounted for 7% of all deaths, 4% of all potential years of life lost (to age 75) and were also the primary cause of admission for 8% of all hospital bed days, and they are responsible for a large proportion of sickness absence from work.¹

It is estimated that 300,000 patients a year in England acquire a healthcare-associated infection as a result of care within the NHS, a prevalence rate of 8.2%². In 2007, methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections and *Clostridium difficile* infections were recorded as the underlying cause of, or a contributory factor in, approximately 9000 deaths in hospital and primary care in England.

Healthcare-associated infections are estimated to cost the NHS approximately £1 billion a year. In addition to increased costs, each one of these infections means additional use of NHS resources, greater patient discomfort and a decrease in patient safety. Healthcare associated infections in hospitals are caused by a wide

¹ Annual Report of the Chief Medical Officer (2011) Volume Two Infections and the Rise of Antimicrobial Resistance

² Hospital Infection Society (2007) Patient safety and healthcare-associated infection

variety of organisms and cause a range of symptoms from minor discomfort to serious disability and in some cases death³.

2.4 National Outcome Frameworks

Tables 1 and 2 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 [NHS Outcomes Framework 2013/14](#)

Domain	Overarching indicators and improvement areas
1 Preventing people from dying prematurely	<p>Overarching indicator</p> <p>1a Potential Years of Life Lost (PYLL) from causes considered amenable to healthcare</p> <p>1ai Adults</p> <p>1aai Children and young people</p>
5 Treating and caring for people in a safe environment and protect them from avoidable harm	<p>Improvement areas</p> <p>Reducing the incidence of avoidable harm</p> <p>5.2 Incidence of healthcare associated infection (HCAI)</p> <p>5.2i MRSA</p> <p>5.2ii C. difficile</p>

Table 2 [Public health outcomes framework for England, 2013–2016](#)

Domain	Objectives and indicators
3 Health protection	<p>Objective</p> <p>The population's health is protected from major incidents and other threats, while reducing health inequalities</p> <p>Indicators</p> <p>3.3 Population vaccination coverage</p> <p>3.7 Comprehensive, agreed inter-agency plans for responding to public health incidents and emergencies (Placeholder)</p>
4 Healthcare public health and preventing premature mortality	<p>Objective</p> <p>Reduced numbers of people living with preventable ill health and people dying prematurely, while reducing the gap between communities</p> <p>Indicators</p> <p>4.3 Mortality rate from causes considered preventable</p>

³ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

3 Summary of suggestions

3.1 Responses

In total 18 stakeholders responded to the 2-week engagement exercise 19/07/2013 – 02/08/2013.

Stakeholders were asked to suggest up to 5 areas for quality improvement. Specialist committee members were also invited to provide suggestions. The responses have been merged and summarised in table 3 for further consideration by the Committee.

Full details on the suggestions provided are given in appendix 3 for information.

Table 3 Summary of suggested quality improvement areas

Primary and community care settings <ul style="list-style-type: none"> • GPs • Care home/social care staff • Community nurses • Dentists • Non-traditional healthcare providers 	Dudley MBC, Stockport MBC, HIS, RCR and BSIR, PHE.
Management of patients with urinary catheters <ul style="list-style-type: none"> • Documentation of indication • Daily assessment of continuing need • Planning for catheter removal • Procedures for insertion and maintenance • Promoting use of intermittent self-catheterisation for patients requiring long-term catheterisation • Improved patient choice 	DH, UUGC, Coloplast, UTA, KMPT, SCM-2, ASAP
Organisational structure <ul style="list-style-type: none"> • Collaborative working across the health economy • Minimum infection prevention and control capacity levels • Board Leadership and Surveillance systems • Outbreak management planning 	Dudley MBC, PHE, SCM-1, RCN, SCM-2, SCM-3, RDASH FT.
Environmental and equipment cleanliness <ul style="list-style-type: none"> • Clean water supplies • Building and maintenance of facilities • Use of medical devices 	RDASH FT, PHE, HIS, SCM-1, SCM-4.
Asepsis <ul style="list-style-type: none"> • Techniques for medical device insertion • Techniques for administration of enteral feeds 	ASAP, RCA, Nutritia, DH.
Antimicrobial stewardship <ul style="list-style-type: none"> • Preventing overuse, misuse and abuse of antibiotics • Educating GPs • Implementing electronic prescribing and administration systems to monitor prescribing practice 	Dudley MBC, RDASH FT, DH, Pfizer, RCN, SCM-2, SCM-1.

Education <ul style="list-style-type: none"> • Patients and carers • Standard principles • Healthcare workers caring for patients with intravascular catheters 	UUGC, Dudley MBC, SCM-2, RDASH FT, DH
Standard principles <ul style="list-style-type: none"> • PPE • Hand decontamination 	SCM-2
Ventilator-associated pneumonia in adults <ul style="list-style-type: none"> • Generally, and specifically in the ICU 	PSF, RCA.
Vaccination <ul style="list-style-type: none"> • Vaccination 	Pfizer
Diagnostics <ul style="list-style-type: none"> • Access to timely laboratory testing and advice No relevant recommendations identified	Pfizer, NHSE, RCA.
Hand hygiene audits <ul style="list-style-type: none"> • Include glove use, use multiple sources of data, undertake across 24 hour periods and train staff No relevant recommendations identified	RCN
Suggestions outside of quality standard scope <ul style="list-style-type: none"> • Surgical site infection (QS in development) • Chronic wounds (QS on pressure ulcers referred) • Identification of sepsis (QS on sepsis referred) 	DH DH DH
Dudley MBC, Dudley MBC Stockport MBC, Stockport MBC RDASH FT, Rotherham Doncaster and South Humber NHS Foundation Trust ASAP, The Association for Safe Aseptic Practice HIS, Healthcare Infection Society Nutricia, Nutricia DH, Department of Health Pfizer, Pfizer Ltd NHSE, NHS England RCR and BSIR, The Royal College of Radiologists in collaboration with The British Society of Interventional Radiology PHE, Public Health England UUGC, Urology User Group Coalition Coloplast, Coloplast Limited RCN, Royal College of Nursing UTA, Urology Trade Association KMPT, Kent and Medway NHS and Social Care Partnership Trust RCA, The Faculty of Intensive Care Medicine – The Royal College of Anaesthetists PSF, NHS England patient safety function SCM, Specialist Committee Member	

The areas presented above are a broad cross section of suggestions and some may be considered outside the scope of the quality standard referral if they do not meet

the criteria for quality statement development or are not covered by the available development sources.

4 Suggested improvement areas

4.1 Primary and community care settings

4.1.1 Summary of suggestions

Stakeholders noted that more health care is now being provided in settings outside of hospital with increasing numbers of complex procedures being undertaken in primary and community settings, but that infection prevention and control measures have so far focussed largely on secondary care. They highlighted that these 'non-traditional' settings outside of hospital lacked clear infection prevention and control guidance, and often the appropriate equipment, resulting in variable compliance with standard principles. Smaller organisations, such as care homes, often have limited resources with which to implement infection prevention and control practices. However, no precise areas for quality improvement within primary and community care settings were specified.

4.1.2 Selected recommendations from development sources

As no precise areas for quality improvement were identified, no specific recommendations have been identified. Table 4 below highlights guidance that may support potential statement development.

Table 4 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Primary and community care settings	NICE Clinical Guideline 139: Infection prevention and control of healthcare-associated infections in primary and community care

4.1.3 Current UK practice

Infections acquired outside of hospital

The 2009 report on Reducing Healthcare Associated Infections in Hospitals in England produced by the National Audit Office⁴ notes that around a third of MRSA bloodstream infections and 45% of C. difficile infections appear to be acquired outside of hospital or as a result of a previous hospital stay.

Compliance with standard principles in care homes

⁴ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

A cluster investigation following 2 fatal cases of streptococcus pyogenes in a care home in 2010⁵ identified issues relating to the correct use of personal protective equipment, hand hygiene, clinical waste and laundry, with knowledge and understanding varying among staff. A study into how diarrhoea is managed in care homes⁶ showed that many homes are not fully compliant with current infection prevention and control guidance. Of homes in East and West Sussex and Brighton and Hove who responded to a survey, 78.2% reported wearing appropriate PPE and over a fifth of homes reported not always using gloves and aprons when caring for patients with diarrhoea. Most homes reported that all staff had received training on hand hygiene, although 3.2% of residential homes reported that none of their staff had been trained. In 11.2% of residential homes and 9.9% of nursing homes it was reported that 'some' staff had received training. It should be noted however that a response rate of 41% may not be sufficient to generalise from these findings.

Commissioning for infection control in primary and community care

A conference publication⁷ identified through a focussed literature review notes the difficulties in commissioning for HCAI reduction in primary and community settings where the contract arrangements are different and there is less infection prevention resource and activity to drive improvement.

Compliance with standard principles in other community settings

An audit of hand hygiene at Broadmoor⁸, a high secure psychiatric hospital, showed that there were significant deficits in the supply of hand hygiene equipment on the wards. The survey identified a need to increase awareness of the hand hygiene policy and the appropriate timing of hand decontamination procedures. Although this relates to a very specific setting, it may be indicative of the situation in more remote community settings.

A small study of occupational therapists working in 12 randomly selected English healthcare trusts⁹ showed a discrepancy between respondents' knowledge and practice of infection control procedures. Respondents acknowledged the importance of infection control but did not always take the necessary precautions, reporting some difficulty in judging the latter.

⁵ Milne LM, Lamagni T, Efstratiou A et al (2011) Streptococcus pyogenes cluster in a care home in England April to June 2010

⁶ Henderson HJ, Maddock L, Andrews S et al (2010) How is diarrhoea managed in UK care homes? A survey with implications for recognition and control of Clostridium difficile infection

⁷ Loveday H, Steiner J (2011) Reducing infections through commissioning

⁸ Ahmed K (2010) Audit of hand hygiene at Broadmoor, a high secure psychiatric hospital

⁹ Snaith L, Rugg S (2006) Occupational therapists' knowledge and practice of infection control procedures: A preliminary study

4.2 *Management of patients with urinary catheters*

4.2.1 Summary of suggestions

Stakeholders highlighted the strong association between duration of catheterisation and risk of infection, noting that catheter associated urinary tract infections (CAUTIs) comprise a large proportion of healthcare-associated infections. It was suggested that current practice is sub-optimal, with catheters being inserted inappropriately and the reason for catheterisation rarely being documented, making it difficult to know when it can be removed and therefore reducing the chances of the catheter being removed as soon as possible.

4.2.2 Selected recommendations from development sources

Table 5 below highlights recommendations that have been provisionally selected from the development sources that may support potential statement development. These are presented in full after table 5 to help inform the Committee's discussion.

Table 5 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Documentation of indication	Assessing the need for catheterisation NICE CG139 Recommendation 1.2.2.3 EPIC2 Recommendation UC2
Daily assessment of continuing need	Assessing the need for catheterisation NICE CG139 Recommendation 1.2.2.2 EPIC2 Recommendation UC3
Planning for catheter removal	No relevant recommendations
Procedures for insertion and maintenance	Catheter insertion NICE CG139 Recommendations 1.2.4.1 (KPI), 1.2.4.2, 1.2.4.3, 1.2.4.4 EPIC2 Recommendations UC6, UC7, UC8 Catheter maintenance NICE CG139 Recommendations 1.2.5.1, 1.2.5.2, 1.2.5.3, 1.2.5.6, 1.2.5.7, 1.2.5.8, 1.2.5.9 EPIC2 Recommendations UC9, UC10, UC11, UC13, UC14, UC17.
Promoting use of intermittent self-catheterisation for patients requiring long-term catheterisation	Catheter drainage options NICE CG139 Recommendation 1.2.3.2

Improved patient choice	Catheter drainage options NICE CG139 Recommendation 1.2.3.3
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Assessing the need for catheterisation

NICE CG139 Recommendation 1.2.2.2

The patient's clinical need for catheterisation should be reviewed regularly and the urinary catheter removed as soon as possible.

EPIC2 Recommendation UC3

Review regularly the patient's clinical need for continuing urinary catheterisation and remove the catheter as soon as possible.

NICE CG139 Recommendation 1.2.2.3

Catheter insertion, changes and care should be documented.

EPIC2 Recommendation UC2

Document the need for catheterisation, catheter insertion and care.

Catheter drainage options

NICE CG139 Recommendation 1.2.3.2

Intermittent catheterisation should be used in preference to an indwelling catheter if it is clinically appropriate and a practical option for the patient.

NICE CG139 Recommendation 1.2.3.3

Offer a choice of either single-use hydrophilic or gel reservoir catheters for intermittent self-catheterisation.

Catheter insertion

NICE CG139 Recommendation 1.2.4.1 (key priority for implementation)

All catheterisations carried out by healthcare workers should be aseptic procedures. After training, healthcare workers should be assessed for their competence to carry out these types of procedures.

EPIC2 Recommendation UC6

Catheterisation is an aseptic procedure. Ensure that health care workers are trained and competent to carry out urethral catheterisation.

NICE CG139 Recommendation 1.2.4.2

Intermittent self-catheterisation is a clean procedure. A lubricant for single-patient use is required for non-lubricated catheters.

EPIC2 Recommendation UC8

Use an appropriate lubricant from a sterile single use container to minimise urethral trauma and infection.

NICE CG139 Recommendation 1.2.4.3

For urethral catheterisation, the meatus should be cleaned before insertion of the catheter, in accordance with local guidelines/policy.

EPIC2 Recommendation UC7

Clean the urethral meatus with sterile normal saline prior to the insertion of the catheter.

NICE CG139 Recommendation 1.2.4.4

An appropriate lubricant from a single-use container should be used during catheter insertion to minimise urethral trauma and infection.

Catheter maintenance

NICE CG139 Recommendation 1.2.5.1

Indwelling catheters should be connected to a sterile closed urinary drainage system or catheter valve.

EPIC2 Recommendation UC9

Connect indwelling urethral catheters to a sterile closed urinary drainage system.

NICE CG139 Recommendation 1.2.5.2

Healthcare workers should ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reasons (for example changing the bag in line with the manufacturer's recommendations).

EPIC2 Recommendation UC10

Ensure that the connection between the catheter and the urinary drainage system is not broken except for good clinical reasons, e.g., changing the bag in line with manufacturer's recommendation.

NICE CG139 Recommendation 1.2.5.3

Healthcare workers must decontaminate their hands and wear a new pair of clean, non-sterile gloves before manipulating a patient's catheter, and must decontaminate their hands after removing gloves.

EPIC2 Recommendation UC11

Decontaminate hands and wear a new pair of clean, non-sterile gloves before manipulating a patient's catheter and decontaminate hands after removing gloves.

NICE CG139 Recommendation 1.2.5.6

Urinary drainage bags should be positioned below the level of the bladder, and should not be in contact with the floor.

EPIC2 Recommendation UC13

Position urinary drainage bags below the level of the bladder on a stand that prevents contact with the floor.

NICE CG139 Recommendation 1.2.5.7

A link system should be used to facilitate overnight drainage, to keep the original system intact.

NICE CG139 Recommendation 1.2.5.8

The urinary drainage bag should be emptied frequently enough to maintain urine flow and prevent reflux, and should be changed when clinically indicated.

EPIC2 Recommendation UC14

Empty the urinary drainage bag frequently enough to maintain urine flow and prevent reflux. Use a separate and clean container for each patient and avoid contact between the urinary drainage tap and container.

NICE CG139 Recommendation 1.2.5.9

The meatus should be washed daily with soap and water.

EPIC2 Recommendation UC17

Routine daily personal hygiene is all that is needed to maintain meatal¹⁰ hygiene.

¹⁰ Refers to the opening of the urethra

4.2.3 Current UK practice

The literature search identified an audit conducted in a Hampshire hospital in 2009¹¹ which showed poor compliance with the use of aprons, poor compliance with documentation on catheter insertion and ongoing care, delayed removal of catheters and confusion over responsibility for their removal. 85% of urinary catheter insertions had all the key elements of the urinary catheter care bundle¹² performed. Areas of poor compliance were:

- Not wearing an apron because some staff did not anticipate their uniform being contaminated.
- Using chlorhexidine and cetrimide solution instead of sodium chloride for meatal cleaning.
- Not always using a lubricant when catheterising a female patient.
- Breaking the catheter's closed system prematurely.

For ongoing catheter care, 58% received all aspects of care. The main areas of non-compliance were:

- Not wearing an apron
- No documentation that daily meatal hygiene was being carried out.

The reason for catheter insertion was recorded on average for 80% of patients, but documentation was often incomplete, and not detailed enough to show whether or not the *Saving Lives* care bundle had been complied with. In most cases there was no mention of catheter hygiene being carried out or indication of whether the bag was positioned off the floor or had been changed.

Stakeholders noted that increasing numbers of patients are being discharged earlier from hospital with catheters in situ but rarely is the reason for catheterisation documented, or a plan in place for removal.

¹¹ Dailly S (2012) Auditing urinary catheter care

¹² DH (2007) Saving Lives

4.3 Organisational structure

4.3.1 Summary of suggestions

Stakeholders highlighted the many advantages of working across organisational barriers when implementing infection prevention and control strategies, and the importance of sharing information across organisations to support surveillance and prevent spread of infection, as well as the importance of leadership in driving continuous improvement.

4.3.2 Selected recommendations from development source

Table 6 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 6 to help inform the Committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Collaborative working across the health economy	Multi-agency working to reduce HCAs NICE PH36 Quality Improvement Statement 6
Minimum infection prevention and control capacity levels	Workforce capacity and capability NICE PH36 Quality Improvement Statement 4
Board Leadership and Surveillance systems	Board-level leadership to prevent HCAs NICE PH36 Quality Improvement Statement 1 HCAI surveillance NICE PH36 Quality Improvement Statement 3
Outbreak management planning	No relevant recommendations

Board-level leadership to prevent HCAs

NICE PH36 Quality improvement statement 1

Trust boards demonstrate leadership in infection prevention and control to ensure a culture of continuous quality improvement and to minimise risk to patients.

HCAI surveillance

NICE PH36 Quality improvement statement 3

Trusts have a surveillance system in place to routinely gather data and to carry out mandatory monitoring of HCAs and other infections of local relevance to inform the local response to HCAs.

Workforce capacity and capability

NICE PH36 Quality improvement statement 4

Trusts prioritise the need for a skilled, knowledgeable and healthy workforce that delivers continuous quality improvement to minimise the risk from infections. This includes support staff, volunteers, agency/locum staff and those employed by contractors.

Multi-agency working to reduce HCAs

NICE PH36 Quality improvement statement 6

Trusts work proactively in multi-agency collaborations with other local health and social care providers to reduce risk from infection.

4.3.3 Current UK practice

Board leadership and collaborative working

In 2009 the National Audit Office reported¹³ a cultural change in the way that organisations tackle infection prevention and control and the priority that it is afforded, with strong board leadership and ward management underpinned by robust performance management. It did note, however, that there remains a lack of clarity on the roles and responsibilities of local and national organisations in relation to healthcare associated infections and a need for a whole system approach to achieve further reductions.

An article in the British Journal of Nursing¹⁴ suggests that although much progress has been made in making infection control a corporate responsibility that is prioritised by organisational managers and leaders, it is not the type of paradigm shift that creates lasting cultural change.

Infection prevention and control capacity

The audit report showed an improvement in the ratio of infection control nurses to beds, with 83% of trusts exceeding the international benchmark of 1 infection control

¹³ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

¹⁴ Cole M (2011) Patient safety and healthcare-associated infection

nurse per 250 beds (average ratio increased from 1:524 in 2000 to 1:315 in 2004 to 1:189 in 2008). It should be noted, however, that these figures may have changed since reorganisation.

A conference publication¹⁵ identified through the literature review notes that there is less infection prevention and control resource in primary and community settings. This is supported by stakeholder comments that community infection prevention and control services are patchy or non-existent in some areas since reorganisation.

¹⁵ Loveday H, Steiner J (2011) Reducing infections through commissioning

4.4 Environmental and equipment cleanliness

4.4.1 Summary of suggestions

Stakeholders highlighted that the cleanliness of health care buildings and equipment, including medical devices, plays an important role in lowering rates of infection and in terms of patient expectations. It was also noted that individual healthcare trust infection control policies differ in terms of the environmental cleaning protocols used.

4.4.2 Selected recommendations from development sources

Table 7 below highlights recommendations that have been provisionally selected from the development sources that may support potential statement development. These are presented in full after table 7 to help inform the Committee's discussion.

Table 7 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Clean water supplies	No relevant recommendations
Building and maintenance of facilities	Environmental cleanliness NICE PH36 Quality Improvement Statement 5 Trust estate management NICE PH36 Quality Improvement Statement 10 Hospital environmental hygiene EPIC2 Recommendations SP1, SP2, SP3, SP5
Use of medical devices	Hospital environmental hygiene EPIC2 Recommendations SP4

Environmental cleanliness

[NICE PH36 Quality improvement statement 5](#)

Trusts ensure standards of environmental cleanliness are maintained and improved beyond current national guidance.

Trust estate management

[NICE PH36 Quality improvement statement 10](#)

Trusts consider infection prevention and control when procuring, commissioning, planning, designing and completing new and refurbished hospital services and facilities (and during subsequent routine maintenance).

Hospital environmental hygiene

EPIC2 Recommendation SP1

The hospital environment must be visibly clean, free from dust and soilage and acceptable to patients, their visitors and staff.

EPIC2 Recommendation SP2

Increased levels of cleaning should be considered in outbreaks of infection where the pathogen concerned survives in the environment and environmental contamination may be contributing to spread.

EPIC2 Recommendation SP3

The use of hypochlorite and detergent should be considered in outbreaks of infection where the pathogen concerned survives in the environment and environmental contamination may be contributing to spread.

EPIC2 Recommendation SP4

Shared equipment used in the clinical environment must be decontaminated appropriately after each use.

EPIC2 Recommendation SP5

All healthcare workers need to be aware of their individual responsibility for maintaining a safe care environment for patients and staff. Every healthcare worker needs to be clear about their specific responsibilities for cleaning equipment and clinical areas (especially those areas in close proximity to patients). They must be educated about the importance of ensuring that the hospital environment is clean and that opportunities for microbial contamination are minimised.

4.4.3 Current UK practice

Building facilities

The 2009 NAO¹⁶ report identified lack of isolation facilities as a common barrier to further improvement in reducing healthcare associated infections, cited by 23% of Infection Control Teams. However, infection control teams reported via the trust

¹⁶ National Audit Office, 2009 Reducing Healthcare Associated Infections in Hospitals in England

census that they are now involved in reviewing plans for alterations and additions to clinical buildings.

Cleaning standards

The NAO report also noted that standards of cleaning, measured through Patient Environment Action Team (PEAT) inspection scores, have improved since 2000 but cleaning is nevertheless the area where the Healthcare Commission has found the most breaches of the Hygiene Code to date. In an analysis of 51 unannounced inspections, 27 trusts did not comply with the duty that premises were suitable, clean and well maintained (2007 figures).

A stakeholder noted variable compliance with decontamination guidance in dental practices.

4.5 Asepsis

4.5.1 Summary of suggestions

Stakeholders highlighted that aseptic technique is variably defined and interpreted, despite being one of the most commonly performed clinical infection prevention procedures. Practice is variable, and the lack of a standard approach can mean that asepsis as a concept is poorly understood.

It was also noted that catheter-related bloodstream infections associated with insertion and maintenance of vascular access devices are potentially among the most dangerous complications associated with healthcare, but risk of infection declines with application of aseptic technique.

4.5.2 Selected recommendations from development source

Table 8 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 6 to help inform the Committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Techniques for medical device insertion	General asepsis NICE CG139 Recommendations 1.4.2.1 and 1.4.2.2
Techniques for administration of enteral feeds	Administration of feeds NICE CG139 Recommendation 1.3.3.1

Administration of feeds

NICE CG139 Recommendation 1.3.3.1

Use minimal handling and an aseptic technique to connect the administration system to the enteral feeding tube.

General asepsis

NICE CG139 Recommendation 1.4.2.1

Hands must be decontaminated (see section 1.1.2) before accessing or dressing a vascular access device.

NICE CG139 Recommendation 1.4.2.2

An aseptic technique must be used for vascular access device catheter site care and when accessing the system.

4.5.3 Current UK practice

A survey of medical and anaesthetic trainees undertaking lumbar puncture¹⁷ showed that all anaesthetic trainees complied with the components of aseptic technique. All medical trainees routinely cleaned the skin, decontaminated their hands and used a non-touch technique, but only 80.6% used sterile gloves, 38.7% used an apron, 77.4% used a dressing pack and 61.3% used a sterile trolley. It should be noted however that this was a small-scale study, with 40 anaesthetic and 31 medical trainees responding to the survey.

¹⁷ Malhotra R, Kelly S (2012) A survey of aseptic technique when performing lumbar puncture: A comparison of medical and anaesthetic trainees

4.6 *Antimicrobial stewardship*

4.6.1 Summary of suggestions

Stakeholders noted the worldwide threat of antimicrobial resistance and the variable implementation of strategies across the country to tackle this. Stakeholders considered that antimicrobial stewardship had the potential for a long-term reduction in multi-resistant bacteria.

4.6.2 Selected recommendations from development source

Table 9 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 9 to help inform the Committee's discussion.

Table 9 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Preventing overuse, misuse and abuse of antibiotics	The clinical effectiveness and cost effectiveness of antibiotic management strategies for respiratory tract infections (RTIs) NICE CG69 Recommendations 1.3 and 1.7 NICE GPG2 Recommendations 2.1.10 and 2.3.2
Educating GPs	No relevant recommendations
Implementing electronic prescribing and administration systems to monitor prescribing practice	No relevant recommendations

The clinical effectiveness and cost effectiveness of antibiotic management strategies for respiratory tract infections (RTIs)

NICE CG69 Recommendation 1.3

A no antibiotic prescribing strategy or a delayed antibiotic prescribing strategy should be agreed for patients with the following conditions:

- Acute otitis media
- Acute sore throat/acute pharyngitis/acute tonsillitis
- Common cold
- Acute rhinosinusitis

- Acute cough/acute bronchitis.

Depending on clinical assessment of severity, patients in the following subgroups can also be considered for an immediate antibiotic prescribing strategy (in addition to a no antibiotic or a delayed antibiotic prescribing strategy):

- Bilateral acute otitis media in children younger than 2 years
- Acute otitis media in children with otorrhoea
- Acute sore throat/acute pharyngitis/acute tonsillitis when three or more Centor criteria are present.

Identifying those patients with RTIs who are likely to be at risk of developing complications

NICE CG69 Recommendation 1.7

An immediate antibiotic prescription and/or further appropriate investigation and management should only be offered to patients (both adults and children) in the following situations:

- If the patient is systemically very unwell
- If the patient has symptoms and signs suggestive of serious illness and/or complications (particularly pneumonia, mastoiditis, peritonsillar abscess, peritonsillar cellulitis, intraorbital and intracranial complications)
- If the patient is at high risk of serious complications because of pre-existing comorbidity. This includes patients with significant heart, lung, renal, liver or neuromuscular disease, immunosuppression, cystic fibrosis, and young children who were born prematurely
- If the patient is older than 65 years with acute cough and two or more of the following criteria, or older than 80 years with acute cough and one or more of the following criteria:
 - Hospitalisation in previous year
 - Type 1 or type 2 diabetes
 - History of congestive heart failure
 - Current use of oral glucocorticoids

For these patients, the no antibiotic prescribing strategy and the delayed antibiotic prescribing strategy should not be considered.

Considering the need for a Patient Group Direction

NICE GPC2 Recommendation 2.1.10

Do not jeopardise local and national strategies to combat antimicrobial resistance and healthcare-associated infections. Ensure that an antimicrobial is included in a PGD only when:

- Clinically essential and clearly justified by best clinical practice, such as Public Health England guidance
- A local specialist in microbiology has agreed that a PGD is needed and this is clearly documented (see recommendation 2.3.2)
- Use of the PGD is monitored and reviewed regularly (see recommendations 2.6.4 and 2.8.6).

Developing Patient Group Directions

NICE GPC2 Recommendation 2.3.2

Liaise with a local specialist in microbiology when developing a PGD that includes an antimicrobial (see recommendation 2.1.10).

4.6.3 Current UK practice

The 2009 NAO report¹⁸ notes that the increase in antibiotic resistance is one of the biggest threats to infection control, although progress in improving information and tracking of hospital antibiotic prescribing has been limited, largely because of delays in developing electronic prescribing. All hospital trusts have antibiotic prescribing protocols which contribute to reducing risks from some healthcare associated infections and, in the majority, the pharmacist is actively involved in enforcing these policies. Antibiotic prescribing in hospitals can provide a marker of healthcare associated infection when linked to patient records, but as yet there is no system for doing so. Trusts are improving compliance with good practice on antimicrobial prescribing by developing trust wide policies, and default prescriptions for antibiotics. Over 90% of trusts are actively engaging their pharmacists to reinforce prescribing policy. The NAO survey indicated that 85% of doctors know and follow the prescribing guidance for their area, but that nearly a third of trusts do not have an effective system for reviewing prescriptions of antimicrobials after a defined period.

Stakeholders noted that implementation of the DH strategy *Start Smart then Focus*¹⁹ was patchy across the UK, in particular with regards to the setting up of MDTs and implementing clear plans of action for individual patients, and that there is variability

¹⁸ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

¹⁹ DH ARHAI (2011) Antimicrobial Stewardship: Start Smart then Focus

in the quality of data available in primary and secondary care on prescribing practices for antibiotics.

4.7 Education

4.7.1 Summary of suggestions

Stakeholders highlighted education of healthcare workers, patients and carers as having the potential to improve the quality of infection prevention and control practices.

4.7.2 Selected recommendations from development sources

Table 10 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 10 to help inform the Committee's discussion.

Table 10 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Patients and carers	<p>General advice NICE CG139 Recommendation 1.1.1.3 (KPI)</p> <p>Education of patients, their carers and healthcare workers NICE CG139 Recommendations 1.2.1.1, 1.2.1.3, 1.3.1.1, 1.3.1.3, 1.4.1.1 (KPI) and 1.4.1.3</p> <p>Education of patients, relatives and healthcare workers EPIC2 Recommendation UC20</p> <p>Education of healthcare workers and patients EPIC2 Recommendation CVAD2</p>
Standard principles	<p>General advice NICE CG139 Recommendation 1.1.1.1 (KPI)</p> <p>EPIC2 Recommendation SP19</p>
Healthcare workers caring for patients with intravascular catheters	<p>Education of patients, their carers and healthcare workers NICE CG139 Recommendations 1.2.1.2, 1.2.4.1 (KPI), 1.4.1.2 (KPI)</p> <p>Education of patients, relatives and healthcare workers EPIC2 Recommendation UC19</p> <p>Education of healthcare workers and patients EPIC2 Recommendation CVAD1</p>

General advice

NICE CG139 Recommendation 1.1.1.1 (key priority for implementation)

Everyone involved in providing care should be:

- Educated about the standard principles of infection prevention and control **and**
- Trained in hand decontamination, the use of personal protective equipment, and the safe use and disposal of sharps.

EPIC2 Recommendation SP19

Everyone involved in providing care should be educated about standard principles and trained in the use of protective equipment.

NICE CG139 – Recommendation 1.1.1.3 (key priority for implementation)

Educate patients and carers about:

- The benefits of effective hand decontamination
- The correct techniques and timing of hand decontamination
- When it is appropriate to use liquid soap and water or handrub
- The availability of hand decontamination facilities
- Their role in maintaining standards of healthcare workers' hand decontamination.

Long-term urinary catheters – Education of patients, their carers and healthcare workers

NICE CG139 – Recommendation 1.2.1.1

Patients and carers should be educated about and trained in techniques of hand decontamination, insertion of intermittent catheters where applicable, and catheter management before discharge from hospital.

EPIC2 Recommendation (Education of patients, relatives and healthcare workers) UC20

Patients and relatives should be educated about their role in preventing urinary tract infection.

NICE CG139 – Recommendation 1.2.1.2

Community and primary healthcare workers must be trained in catheter insertion, including suprapubic catheter replacement and catheter maintenance.

EPIC2 Recommendation (Education of patients, relatives and healthcare workers) UC19

Healthcare workers must be trained in catheter insertion and maintenance.

NICE CG139 – Recommendation 1.2.1.3

Follow-up training and ongoing support of patients and carers should be available for the duration of long-term catheterisation.

NICE CG139 – Recommendation 1.2.4.1 (key priority for implementation)

All catheterisations carried out by healthcare workers should be aseptic procedures. After training, healthcare workers should be assessed for their competence to carry out these types of procedures.

Enteral feeding – Education of patients, their carers and healthcare workers

NICE CG139 – Recommendation 1.3.1.1

Patients and carers should be educated about and trained in the techniques of hand decontamination, enteral feeding and the management of the administration system before being discharged from hospital.

NICE CG139 – Recommendation 1.3.1.3

Follow-up training and ongoing support of patients and carers should be available for the duration of home enteral tube feeding.

Vascular access devices – Education of patients, their carers and healthcare workers

NICE CG139 – Recommendation 1.4.1.1 (key priority for implementation)

Before discharge from hospital, patients and their carers should be taught any techniques they may need to use to prevent infection and safely manage a vascular access device.

EPIC2 (Education of healthcare workers and patients) Recommendation CVAD2

Before discharge from hospital, patients with a central venous access device and their carers should be taught any techniques they may need to use to prevent infection and safely manage their device.

NICE CG139 – Recommendation 1.4.1.2 (key priority for implementation)

Healthcare workers caring for a patient with a vascular access device should be trained, and assessed as competent, in using and consistently adhering to the infection prevention practices described in this guideline.

EPIC2 (Education of healthcare workers and patients) Recommendation CVAD1

Healthcare workers caring for a patient with a central venous access device should be trained, and assessed as competent in using and consistently adhering to the infection prevention practices described in this guideline.

NICE CG139 – Recommendation 1.4.1.3

Follow-up training and support should be available to patients with a vascular access device and their carers.

4.7.3 Current UK practice

The NAO report in 2009²⁰ noted that 86% of nurses and 74% of doctors felt they had sufficient training and education on infection prevention and control in the last 12 months, although there were areas identified by both professions where they felt they would benefit from training in, such as isolation practices and management of invasive devices.

The National Patient Safety Agency surveyed the public, inpatients and healthcare workers in 5 acute hospitals in 2010²¹ about the patient's role in infection control. 57% of the public were unlikely to question doctors on the cleanliness of their hands as they assumed that they had already cleaned them. 43% of inpatients considered that healthcare workers should know to clean their hands and trusted them to do so and 20% would not want healthcare workers to think that they were questioning their professional ability to do their job correctly. 71% healthcare workers said that HCAI could be reduced to a greater or lesser degree if patients asked healthcare workers if they had cleaned their hands before touching them. The results suggested further work was required to refute the myth among healthcare workers that patient involvement undermines the doctor- or HCW-patient relationship.

An audit conducted in a Hampshire hospital in 2009²² which showed poor compliance with documentation on catheter insertion and ongoing care, noted staff reports that they had not received any formal training on catheter insertion and care for several years.

²⁰ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

²¹ Pittet D, Panesar SS, Wilson K et al. (2011) Involving the patient to ask about hospital hand hygiene: a National Patient Safety Agency feasibility study

²² Dailly S (2012) Auditing urinary catheter care

A study into how diarrhoea is managed in care homes²³ showed that 3.2% of residential homes responding to a survey in East and West Sussex and Brighton and Hove reported that none of their staff had been trained. In 11.2% of residential homes and 9.9% of nursing homes it was reported that 'some' staff had received training. It should be noted however that a response rate of 41% may not be sufficient to generalise from these findings.

Stakeholders suggested that there are still some misconceptions around basic principles of prevention of infections. The Guideline Development Group for the NICE guidance on infection prevention and control in primary and community care settings noted that knowledge gaps exist in relation to infection prevention and control practice for healthcare professionals in these settings, in particular around aseptic techniques, wound care and device/line care.

²³ Henderson HJ, Maddock L, Andrews S et al. (2010) How is diarrhoea managed in UK care homes? A survey with implications for recognition and control of *Clostridium difficile* infection

4.8 *Standard principles*

4.8.1 **Summary of suggestions**

Stakeholders suggested that there are still some misconceptions around the basic principles of infection prevention and control practices.

4.8.2 **Selected recommendations from development sources**

Table 11 below highlights recommendations that have been provisionally selected from the development sources that may support potential statement development. These are presented in full after table 11 to help inform the Committee's discussion.

Table 11 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Personal protective equipment	Use of personal protective equipment NICE CG139 Recommendations 1.1.3.1, 1.1.3.2, 1.1.3.3, 1.1.3.4, 1.1.3.5, 1.1.3.6, 1.1.3.7, 1.1.3.8, 1.1.3.9, 1.1.3.10, 1.1.3.11. The use of personal protection equipment EPIC2 Recommendations SP18, SP21, SP22, SP23, SP25, SP26, SP27, SP28, SP29, SP30, and SP31
Hand decontamination	Hand decontamination NICE CG139 Recommendations 1.1.2.1 (KPI), 1.1.2.2, 1.1.2.3, 1.1.2.4, 1.1.2.5, 1.1.2.6. Hand hygiene EPIC2 Recommendations SP6, SP7, SP8, SP9, SP10, SP11, SP12, SP13, SP14, SP15, SP16, SP17

Use of personal protective equipment

NICE CG139 Recommendation 1.1.3.1

Selection of protective equipment must be based on an assessment of the risk of transmission of microorganisms to the patient, and the risk of contamination of the healthcare worker's clothing and skin by patients' blood, body fluids, secretions or excretions.

EPIC2 Recommendation SP18

Selection of protective equipment must be based on an assessment of the risk of transmission of microorganisms to the patient or to the carer, and the risk of

contamination of the healthcare practitioners' clothing and skin by patients' blood, body fluids, secretions and excretions.

NICE CG139 Recommendation 1.1.3.2

Gloves used for direct patient care:

- must conform to current EU legislation (CE marked as medical gloves for single use) and
- should be appropriate for the task.

NICE CG139 Recommendation 1.1.3.3

Gloves must be worn for invasive procedures, contact with sterile sites and non-intact skin or mucous membranes, and all activities that have been assessed as carrying a risk of exposure to blood, body fluids, secretions or excretions, or to sharp or contaminated instruments.

EPIC2 Recommendation SP21

Gloves must be worn for invasive procedures, contact with sterile sites, and non-intact skin or mucous membranes, and all activities that have been assessed as carrying a risk of exposure to blood, body fluids, secretions and excretions; and when handling sharp or contaminated instruments.

NICE CG139 Recommendation 1.1.3.4

Gloves must be worn as single-use items. They must be put on immediately before an episode of patient contact or treatment and removed as soon as the activity is completed. Gloves must be changed between caring for different patients, and between different care or treatment activities for the same patient.

EPIC2 Recommendation SP22

Gloves must be worn as single use items. They are put on immediately before an episode of patient contact or treatment and removed as soon as the activity is completed. Gloves are changed between caring for different patients, or between different care/treatment activities for the same patient.

NICE CG139 Recommendation 1.1.3.5

Ensure that gloves used for direct patient care that have been exposed to body fluids are disposed of correctly, in accordance with current national legislation or local policies (see section 1.1.5).

EPIC2 Recommendation SP23

Gloves must be disposed of as clinical waste and hands decontaminated, ideally by washing with liquid soap and water after the gloves have been removed.

NICE CG139 Recommendation 1.1.3.6

Alternatives to natural rubber latex gloves must be available for patients, carers and healthcare workers who have a documented sensitivity to natural rubber latex.

EPIC2 Recommendation SP25

Sensitivity to natural rubber latex in patients, carers and healthcare personnel must be documented and alternatives to natural rubber latex must be available.

NICE CG139 Recommendation 1.1.3.7

Do not use polythene gloves for clinical interventions.

EPIC2 Recommendation SP26

Neither powdered nor polythene gloves should be used in health care activities.

NICE CG139 Recommendation 1.1.3.8

When delivering direct patient care:

- wear a disposable plastic apron if there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions or
- wear a long-sleeved fluid-repellent gown if there is a risk of extensive splashing of blood, body fluids, secretions or excretions onto skin or clothing.

EPIC2 Recommendation SP27

Disposable plastic aprons must be worn when close contact with the patient, materials or equipment are anticipated and when there is a risk that clothing may become contaminated with pathogenic microorganisms or blood, body fluids, secretions or excretions, with the exception of perspiration.

EPIC2 Recommendation SP29

Full-body fluid-repellent gowns must be worn where there is a risk of extensive splashing of blood, body fluids, secretions or excretions, with the exception of perspiration, onto the skin or clothing of healthcare personnel (for example when assisting with childbirth).

NICE CG139 Recommendation 1.1.3.9

When using disposable plastic aprons or gowns:

- use them as single-use items, for one procedure or one episode of direct patient care and
- ensure they are disposed of correctly (see section 1.1.5).

EPIC2 Recommendation SP28

Plastic aprons/gowns should be worn as single-use items, for one procedure or episode of patient care, and then discarded and disposed of as clinical waste. Non-disposable protective clothing should be sent for laundering.

NICE CG139 Recommendation 1.1.3.10

Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.

EPIC2 Recommendation SP30

Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.

NICE CG139 Recommendation 1.1.3.11

Respiratory protective equipment, for example a particulate filter mask, must be used when clinically indicated.

EPIC2 Recommendation SP31

Respiratory protective equipment, i.e., a particulate filter mask, must be correctly fitted and used when recommended for the care of patients with respiratory infections transmitted by airborne particles.

Hand decontamination/hand hygiene

NICE CG139 Recommendation 1.1.2.1 (KPI)

Hands must be decontaminated in all of the following circumstances:

- immediately before every episode of direct patient contact or care, including aseptic procedures
- immediately after every episode of direct patient contact or care
- immediately after any exposure to body fluids
- immediately after any other activity or contact with a patient's surroundings that could potentially result in hands becoming contaminated
- immediately after removal of gloves.

EPIC2 Recommendation SP6

Hands must be decontaminated immediately before each and every episode of direct patient contact/care and after any activity or contact that potentially results in hands becoming contaminated.

NICE CG139 Recommendation 1.1.2.2

Decontaminate hands preferably with a handrub (conforming to current British standards), except in the following circumstances, when liquid soap and water must be used:

- when hands are visibly soiled or potentially contaminated with body fluids or
- in clinical situations where there is potential for the spread of alcohol-resistant organisms (such as *Clostridium difficile* or other organisms that cause diarrhoeal illness).

EPIC2 Recommendation SP7

Hands that are visibly soiled or potentially grossly contaminated with dirt or organic material (i.e. following the removal of gloves) must be washed with liquid soap and water.

EPIC2 Recommendation SP8

Hands should be decontaminated between caring for different patients or between different care activities for the same patient. For convenience and efficacy an alcohol-based handrub is preferable unless hands are visibly soiled. Local infection control guidelines may advise an alternative product in some outbreak situations.

EPIC2 Recommendation SP9

Hands should be washed with soap and water after several consecutive applications of alcohol handrub.

NICE CG139 Recommendation 1.1.2.3

Healthcare workers should ensure that their hands can be decontaminated throughout the duration of clinical work by:

- being bare below the elbow when delivering direct patient care
- removing wrist and hand jewellery
- making sure that fingernails are short, clean and free of nail polish
- covering cuts and abrasions with waterproof dressings.

EPIC2 Recommendation SP10

Before a shift of clinical work begins, all wrist and ideally hand jewellery should be removed. Cuts and abrasions must be covered with waterproof dressings.

Fingernails should be kept short, clean and free from nail polish. False nails and nail extensions must not be worn by clinical staff.

NICE CG139 Recommendation 1.1.2.4

An effective handwashing technique involves three stages: preparation, washing and rinsing, and drying. Preparation requires wetting hands under tepid running water before applying liquid soap or an antimicrobial preparation. The handwash solution must come into contact with all of the surfaces of the hand. The hands must be rubbed together vigorously for a minimum of 10-15 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers. Hands should be rinsed thoroughly before drying with good quality paper towels.

EPIC2 Recommendation SP11

An effective handwashing technique involves three stages: preparation, washing and rinsing, and drying. Preparation requires wetting hands under tepid running water before applying the recommended amount of liquid soap or an antimicrobial preparation. The handwash solution must come into contact with all of the surfaces of the hand. The hands must be rubbed together vigorously for a minimum of 10-15 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers. Hands should be rinsed thoroughly prior to drying with good quality paper towels.

NICE CG139 Recommendation 1.1.2.5

When decontaminating hands using an alcohol handrub, hands should be free from dirt and organic material. The handrub solution must come into contact with all surfaces of the hand. The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.

EPIC2 Recommendation SP12

When decontaminating hands using an alcohol-based handrub, hands should be free of dirt and organic material. The handrub solution must come into contact with all surfaces of the hand. The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.

NICE CG139 Recommendation 1.1.2.6

An emollient hand cream should be applied regularly to protect skin from the drying effects of regular hand decontamination. If a particular soap, antimicrobial hand was or alcohol product causes skin irritation an occupational health team should be consulted.

EPIC2 Recommendation SP13

Clinical staff should be aware of the potentially damaging effects of hand decontamination products. They should be encouraged to use an emollient hand cream regularly, for example, after washing hands before a break or going off duty and when off duty, to maintain the integrity of the skin.

EPIC2 Recommendation SP14

If a particular soap, antiseptic hand wash or alcohol-based product causes skin irritation, review methods as described in Recommendation SP11 and 12 before consulting the occupational health team.

EPIC2 Recommendation SP15

Near patient alcohol-based hand rub should be made available in all healthcare facilities.

EPIC2 Recommendation SP16

Hand hygiene resources and individual practice should be audited at regular intervals and the results fed back to healthcare workers.

EPIC Recommendation SP17

Education and training in risk assessment, effective hand hygiene and glove use should form part of all healthcare workers' annual updating.

4.8.3 Current UK practice

An evaluation of the national *Cleanyourhands* campaign to reduce infection in hospitals by improved hand hygiene²⁴ showed that increasing procurement of alcohol hand rub and soap (used as a proxy measure) was associated with each phase of the campaign. However, the 2009 National Audit Office report²⁵ noted that compliance with good infection control practice is still not universal.

The 2009 NAO report noted that compliance with good infection control practice is improving, but doctors remain less likely to comply, for example with basic hand hygiene procedures. The NAO reported strong survey results with regard to self-reported compliance in terms of understanding the importance of hand hygiene and when it was appropriate to use alcohol gel or soap and water, although there remained reasons for non-compliance, such as lack of time, skin irritation/dry skin,

²⁴ Stone SP, Fuller C, Savage J et al. (2012) Evaluation of the national Cleanyourhands campaign to reduce *Staphylococcus aureus* bacteraemia and *Clostridium difficile* infection in hospitals in England and Wales by improved hand hygiene: four year, prospective, ecological, interrupted time series study

²⁵ National Audit Office (2009) Reducing Healthcare Associated Infections in Hospitals in England

hand-washing products not available, lack of appropriate training/education on hand hygiene, and the perception that managers or colleagues do not comply.

A study of compliance with standard precautions in operating theatres in 6 Welsh NHS trusts between 2006 and 2008²⁶ reported that 10% respondents always complied with all available precautions, 21.8% always used safety devices, 45.5% eye protection, 23.2% double gloves, and 84.4% avoided passing sharps from hand to hand. The study results also suggested that nurses were more willing to follow protocols than surgeons.

An audit of sequential hand-touch events on a hospital ward in 2011²⁷ showed that hand-hygiene compliance remains poor during covert observation. Hand-hygiene compliance among clinical staff before and after entry was 25%, with higher compliance during summer periods.

An audit of a large district hospital in 2010²⁸ showed overall hand hygiene compliance of 35%, with little change from the 2009 figure, suggesting no significant change in hand hygiene culture.

The DH/HPA guidance on the prevention and control of *C.difficile* noted in 2008²⁹ that healthcare workers have become aware that alcohol handrubs are not as effective as soap and water for removal of *C.difficile* spores, and as a consequence there is confusion as to what is expected of healthcare workers with regard to hand decontamination in preventing spread of *C.difficile*.

²⁶ Cutter J, Jordan S (2012) Inter-professional differences in compliance with standard precautions in operating theatres: a multi-site, mixed methods study

²⁷ Smith SJ, Young V, Robertson C et al. (2012) Where do hands go? An audit of sequential hand-touch events on a hospital ward

²⁸ Przybylo M, Moorhouse L, Guleri A (2011) "Hand-hygiene champion junior doctor picks up the gauntlet": The hand hygiene re-audit conducted by junior doctors in a large district hospital of northwest England

²⁹ DH/HPA (2008) *Clostridium difficile* infection: How to deal with the problem

4.9 Vaccination

4.9.1 Summary of suggestions

A stakeholder suggested that vaccination will reduce the infectious disease burden and may decrease the use of antibiotics. The Chief Medical Officer's report highlights the impact of low levels of vaccine uptake.

4.9.2 Selected recommendations from development source

As no precise areas for quality improvement were identified, no specific recommendations have been identified. Table 13 below highlights relevant guidance that may support potential statement development.

Table 13 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Vaccination	NICE public health guidance 21

4.9.3 Current UK practice

No specific area for quality improvement was identified; therefore no specific current practice information is presented.

Appendix 1: Key priorities for implementation (CG139)

Recommendations that are key priorities for implementation in the source guideline and that have been referred to in the main body of this report are highlighted in grey.

Standard principles

General advice

Everyone involved in providing care should be:

- educated about the standard principles of infection prevention and control and
- trained in hand decontamination, the use of personal protective equipment, and the safe use and disposal of sharps. [recommendation 1.1.1.1]

Wherever care is delivered, healthcare workers must have available appropriate supplies of:

- materials for hand decontamination
- sharps containers
- personal protective equipment. [recommendation 1.1.1.2]

Educate patients and carers about:

- the benefits of effective hand decontamination
- the correct techniques and timing of hand decontamination
- when it is appropriate to use liquid soap and water or handrub
- the availability of hand decontamination facilities
- their role in maintaining standards of healthcare workers' hand decontamination. [recommendation 1.1.1.3]

Hand decontamination

Hands must be decontaminated in all of the following circumstances:

- immediately before every episode of direct patient contact or care, including aseptic procedures
- immediately after every episode of direct patient contact or care
- immediately after any exposure to body fluids
- immediately after any other activity or contact with a patient's surroundings that could potentially result in hands becoming contaminated
- immediately after removal of gloves. [recommendation 1.1.2.1]

Long-term urinary catheters

Catheter drainage options

Select the type and gauge of an indwelling urinary catheter based on an assessment of the patient's individual characteristics, including:

- age
- any allergy or sensitivity to catheter materials
- gender
- history of symptomatic urinary tract infection
- patient preference and comfort
- previous catheter history
- reason for catheterisation. [recommendation 1.2.3.4]

Catheter insertion

All catheterisations carried out by healthcare workers should be aseptic procedures.

After training, healthcare workers should be assessed for their competence to carry out these types of procedures. [recommendation 1.2.4.1]

Catheter maintenance

When changing catheters in patients with a long-term indwelling urinary catheter:

- do not offer antibiotic prophylaxis routinely
- consider antibiotic prophylaxis for patients:
 - have a history of symptomatic urinary tract infection after catheter change
 - or**
 - experience trauma during catheterisation. [recommendation 1.2.5.13]

Vascular access devices

Education of patients, their carers and healthcare workers

Before discharging from hospital, patients and their carers should be taught any techniques they may need to use to prevent infection and safely manage a vascular access device. [recommendation 1.4.1.1]

Healthcare workers caring for a patient with a vascular access device should be trained, and assessed as competent, in using and consistently adhering to the infection prevention practices described in this guideline. [recommendation 1.4.1.2]

Vascular access device site care

Decontaminate the skin at the insertion site with chlorhexidine gluconate in 70% alcohol before inserting a peripheral vascular access device or a peripherally inserted central catheter. [recommendation 1.4.3.1].

Appendix 2: Glossary

Aseptic technique An aseptic technique ensures that only uncontaminated equipment and fluids come into contact with susceptible body sites. It should be used during any clinical procedure that bypasses the body's natural defences. Using the principles of asepsis minimises the spread of organisms from one person to another.

Direct patient care 'Hands on' or face-to-face contact with patients. Any physical aspect of the healthcare of a patient, including treatments, self-care and administration of medication.

Hand decontamination The use of handrub or handwashing to reduce the number of bacteria on the hands. In this guideline this term is interchangeable with 'hand hygiene'.

Handrub A preparation applied to the hands to reduce the number of viable microorganisms. This guideline refers to handrubs compliant with British standards (BS EN1500; standard for efficacy of hygienic handrubs using a reference of 60% isopropyl alcohol).

Healthcare worker Any person employed by the health service, social services, a local authority or an agency to provide care for a sick, disabled or elderly person.

Healthcare waste In this guideline, healthcare waste refers to any waste produced by, and as a consequence of, healthcare activities.

Personal protective equipment Equipment that is intended to be worn or held by a person to protect them from risks to their health and safety while at work. Examples include gloves, aprons, and eye and face protection.

Appendix 3: Suggestions from stakeholder engagement exercise

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
001	Dudley MBC	Management of Clostridium difficile in the community.	The drive for improvements in CDI management has primarily been focused on Secondary care, and CDI is often perceived as a Secondary care problem, it is clear from PHE data that CDI must be seen as a health & social care economy problem, requiring co ordinate approaches to reducing the burden of infection.	<p>The greater proportion of cases now identified in primary care.</p> <p>There is a need for improved education of</p> <ul style="list-style-type: none"> • GPs • Care home/Social care staff • Community nurses <p>Around the identification, management and treatment of the infection.</p> <p>Many care home staff in particular require support in small organisations due to increased pressure and lack of resources.</p> <p>In addition there is a need for a greater emphasis on Primary care prescribing of antibiotics and their impact on the infection.</p>	<p>http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/ClostridiumDifficile/EpidemiologicalData/MandatorySurveillance/cdiffMandatoryReportingScheme/</p> <p>http://www.rcn.org.uk/_data/assets/pdf_file/0006/314547/Policy_Report-Care_Homes_under_pressure_final_web.pdf</p> <p>http://www.gponline.com/News/article/1189950/Educational-talks-slash-GP-antibiotic-prescribing/</p>
001	Dudley MBC	The requirement to establish of a health economy infection prevention group. Including representatives from all stakeholders	The requirement to establish of a health economy infection prevention group. Including representatives from all stakeholders	<p>Following on from key area one. This gives the opportunity to monitor and comment on issues such as those above. And develop joint approaches to tackling infections. These act as:</p> <ul style="list-style-type: none"> • Manage infections across all sectors of the local health and social care economy. • Breakdown barriers between commissioners and providers. • Act as an opportunity to develop co- 	<i>No additional information provided by stakeholder</i>

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				<p>ordinated campaigns to reduce the risk of infection.</p> <ul style="list-style-type: none"> Act as a separate forum outside of the performance management arena, to discuss best practice (or poor) and share ideas for improvement. 	
002	Stockport MBC	Title of this quality standard – ‘Infection Control’	This quality standard needs to be renamed to ‘Infection Prevention and Control’	All guidance produced by NICE, DoH, IPS and evidence based guidance refers to Infection Prevention and Control	NICE clinical guidance, NICE public health guidance, ePIC 2, DoH guidance, Health & Social Care Act 2008
002	Stockport MBC	Social care needs to be included in this quality standard	There are a significant number of infections that occur in social care settings and the patient’s own home,	<p>Social care settings require guidance on how infections can be prevented and if they occur, managed in these settings. Some care home settings still do not have for example, washer disinfectors for the cleaning of commode pots or urinals. Staff clean these manually. There is no mandated need for these, however this is not only an infection prevention and control risk, but also a health and safety risk</p> <p>With the move of Public Health into Local Authorities and subsequently the Health Protection aspects of this role, then infection prevention and control and communicable disease control has become a local authority function</p>	<p>Health and Social care act 2008, CQC registration and inspection guidance</p> <p>Public Health Outcomes framework</p>
002	Stockport MBC	Other healthcare providers require	Healthcare is not only provided by traditional providers such as the	As individuals seek other providers of healthcare, and although these healthcare	Health and social care act 2008, CQC registration

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		consideration in this quality standard	primary and secondary care settings. It is also provided by dentists (NHS and private), private podiatrists, chiropractors, physiotherapists, community pharmacists etc	providers have to be registered with the CQC there needs to be guidance for these areas in respect of infection prevention and control	and inspection guidance
003	Rotherham Doncaster and South Humber NHS Foundation Trust	Antimicrobial prescribing	Worldwide evidence identifies that antimicrobial resistance is a very real threat. It is critical that existing antimicrobials are preserved and targeted appropriately.	New infectious diseases are emerging every year and older diseases which we managed to control are re-emerging as they become resistant to our antimicrobial drugs. The supply of new antimicrobial agents has slowed and levels of antimicrobial resistance are increasing, limiting our treatment options. This quality standard will help to: Optimise therapy for individual patients Prevent overuse, misuse and abuse Minimise development of resistance at inpatient and community levels.	Annual Report of the Chief Medical Officer. Volume Two, 2011 'Infections and the rise of antimicrobial resistance' Updated guidance on the management and treatment of Clostridium difficile infection. Public Health England 2013 The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance Investigation into outbreaks of Clostridium difficile at Maidstone and Tunbridge Wells NHS Trust October 2007

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003	Rotherham Doncaster and South Humber NHS Foundation Trust	Cleanliness of the environment and equipment	Evidence indicates that cleanliness plays an important role in lower rates of infection.	<p>Patients and visitors to Organisations are entitled to expect a high standard of general hygiene and cleanliness. This is important for the control of infection but also because clean surroundings give assurance to patients and public. The cleanliness of care surroundings positively affects patients perceptions of the care they will receive</p> <p>Numerous recent reports have highlighted poor standard of cleanliness</p> <p>This quality standard will help to maintain and improve cleanliness</p>	<p>The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance</p> <p>The Care Quality Commission (CQC). Independent regulator of health and social care in England. Outcome 8 reports</p> <p>Independent Inquiry into care provided by Mid Staffordshire NHS Foundation Trust January 2005 – March 2009 Volume I. Chaired by Robert Francis QC</p> <p>Reducing Healthcare Associated Infections in Hospitals in England. Report by the Controller and Auditor General HC 560 Session 2008-2009 12 June 2009</p> <p>The revised Healthcare</p>

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					<p>Cleaning Manual 2009</p> <p>Infection Control in the Built Environment 2013</p> <p>Investigation into outbreaks of Clostridium difficile at Maidstone and Tunbridge Wells NHS Trust October 2007</p> <p>Towards Cleaner Hospitals and Lower Rates of Infection (Department of Health, July 2004)</p> <p>A Matron's Charter: an Action Plan for Cleaner Hospitals (Department of Health, October 2004)</p>
003	Rotherham Doncaster and South Humber NHS Foundation Trust	<p>Information sharing</p> <p>For internal transfers and between Organisations</p> <p>For patient / carers / relatives</p>	<p>All inter-healthcare facility admissions, transfers and discharges should include information about infections or patient exposure to infections. This should include:</p> <ul style="list-style-type: none"> • all patients/clients admitted to hospital from a shared-living environment (eg a care home); • all ward-to-ward inter-hospital transfers or discharges; and 	<p>This will assist the receiving area to put appropriate infection control measures in place to prevent the potential spread of infection to other patients / staff / visitors.</p>	<p>Essential Steps to safe, clean care</p> <p>Inter-healthcare patient infection risk assessment form 2007</p> <p>The Health and Social Care Act 2008</p> <p>Code of Practice on the prevention and control of infections and related</p>

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			<ul style="list-style-type: none"> all discharges where healthcare may be involved <p>Patient / carers / relatives need to be aware of infections to reduce the spread of infection</p>	<p>The information will provide awareness and reduce the risks of cross infection</p> <p>This quality standard will reduce the risk of cross infection</p>	<p>guidance</p> <p>Independent Inquiry into care provided by Mid Staffordshire NHS Foundation Trust January 2005 – March 2009 Volume I. Chaired by Robert Francis QC</p>
004	The Association For Safe Aseptic Practice	Asepsis	NICE (2012) in the partial update of clinical guideline 2 (2012) stated that it considered asepsis as a priority for the update.	<p>Asepsis is a critical area of infection prevention because it addresses the processes and behaviours used to protect patients in healthcare environments – including aseptic technique. Despite its fundamental nature asepsis is variably defined and interpreted. This has contributed to well documented variable standards of clinical practice and a general acceptance that this has contributed significantly to HAI.</p> <p>NICE (2012) identifies four distinct methodologies for achieving asepsis in clinical interventions: ‘aseptic technique’, ‘non-touch technique’, aseptic non-touch technique’ and ‘clean technique’; however, none of these terms is adequately described in terms of practice and individuals are effectively left to themselves to determine how to perform each technique. This needs to be finally and fully defined using a</p>	<p>NICE (2012) Infection: prevention and control of healthcare-associated infections in primary and community care. National Clinical Guideline Centre http://guidance.nice.org.uk/CG139/Guidance/pdf/English</p> <p>The-ASAP: A contemporary Model for Asepsis Defined and Explained http://antt.org/ANTT_Site/survey_files/Asepsis%20Model.pdf</p>

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				contemporary, best available, and most widely utilised comprehensive Practice Framework for Asepsis and Aseptic Technique.	
004	The Association For Safe Aseptic Practice	Aseptic technique – Describes the practice of protecting patients from infection during invasive clinical procedures	<p>The literature has described a lack of a standard approach to aseptic technique, and variability in standards of aseptic practice (Gilmour 2000, Hartley 2005, Preston 2005, Flores 2008, Aziz 2009, Rowley et al 2010).</p> <p>The 2008 Health and Social Care Act established the requirement to establish a standard approach to aseptic technique for NHS Trusts in England.</p> <p>The guideline development advisory group of the epic3 project made a preliminary (consultation) recommendation: SP43 Use an aseptic technique for all procedures that entail contact with a susceptible site or sterile invasive device.</p>	<p>Despite a ‘prescribed’ imperative to perform aseptic technique (DH 2007, APIC 2009, DH 2010) there is little if any definitive descriptive instruction of how to safely and efficiently perform aseptic technique either in the literature or national / international clinical guidance – with the lone exception of the ANTT Clinical Practice Framework (see key area for quality improvement 3).</p> <p>It has widely been reported that standardisation and harmonization with evidenced-based infection prevention measures in clinical practice improves outcomes (Palefski & Stoddard 2001, Jackson 2007, DH 2007, Bion et al 2012). The use of such standardization (e.g. clinical care bundles) has been successful in both the USA (Pronovost et al 2006) and UK (DH 2007, Bion et al 2012)</p>	<p>DH (2010) The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance. Available: http://www.dh.gov.uk/en/AdvanceSearchResult/index.htm?searchTerms=Health+and+Social+Care+Act+2008+update+2010</p> <p>Epic2: National evidence based guidelines for Preventing Healthcare-Associated Infections in NHS hospitals in England. Journal of Hospital Infection65: S1-S64</p> <p>Bion et al (2012) Matching Michigan’: a 2-year stepped interventional programme to minimise central venous catheter-blood stream infections in intensive care units in</p>

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					England. BMJ Quality & Safety doi:10.1136/bmjqs-2012-001325
004	The Association For Safe Aseptic Practice	Aseptic Non Touch Technique (ANTT) – A specific type of aseptic technique based on a unique theory / practice framework (NICE 2012)	<p>ANTT is the only comprehensive evidenced-based contemporary Practice Framework for asepsis and aseptic technique anywhere in the world – as such it is the most widely used aseptic technique in the UK (Rowley & Clare 2009).</p> <p>NICE cited ANTT thus: ‘The GDG considered that Aseptic Non Touch Technique (ANTT) is an example of an aseptic technique for vascular access device maintenance, which is widely used in acute and community settings and represents a possible framework for establishing standardised aseptic guidance.’</p>	<p>Aseptic Technique can be said to be the most commonly performed critical infection prevention procedure in health care. It is also one of the most variable and poorly understood.</p> <p>The widespread national and international adoption of ANTT (Which is protected to prevent dilution and generification – but is freely accessible) has done much to progress towards a single standard and common practice language for this critical infection prevention competency).</p> <p>Because ANTT is so widely used it offers the best opportunity to generate research and move practice forward. ANTT has great potential to generate evidence and test practice based theories.</p> <p>ANTT has demonstrated the benefits of employing a standard approach to aseptic technique (Rowley & Clare 2009, Pike 2009, White 2010).</p> <p>NICE commented that ‘there is no evidence (RCT or cohort) that one aseptic technique</p>	<p>NICE (2012) Infection: prevention and control of healthcare-associated infections in primary and community care. National Clinical Guideline Centre http://guidance.nice.org.uk/CG139/Guidance/pdf/English</p> <p>Epic2: National evidence based guidelines for Preventing Healthcare-Associated Infections in NHS hospitals in England. Journal of Hospital Infection 65: S1-S64</p> <p>Rowley S, Clare S (2009) Improving standards of aseptic practice through an ANTT trust-wide implementation process: a matter of prioritisation and care. Journal of Infection Prevention, Vol. 10(1), s18-s23</p>

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				is more clinically or cost-effective than another'; however, they went on to state that ANTT 'represents a possible framework for establishing standardised aseptic guidance.'	– update due in November, 2013 The-ASAP: A contemporary Model for Asepsis Defined and Explained http://antt.org/ANTT_Site/survey_files/Asepsis%20Model.pdf
005	Healthcare Infection Society	General Dental Practice should be included in the scope of "healthcare".	It is important to emphasise that infection control requirements in healthcare settings include all aspects of dental practice. Audit locally and nationally has demonstrated variable ability to comply with decontamination guidance and other areas of infection control practice.	Standards in dental practice should be regarded as equally important as other areas of healthcare	Please see HTM 01-05: Decontamination in primary care dental practices
005	Healthcare Infection Society	Improvement in water quality for High Risk patient areas	There is a significant peer-reviewed evidence base to show improvements in quality of life and decreased colonisation/infection with waterborne bacteria such as <i>Pseudomonas aeruginosa</i> , <i>Legionella</i> spp and Non-Tuberculous Mycobacteria	Recent guidance has been issued from the DH to advice on the setting up of water safety groups and appropriate sampling techniques in order to protect vulnerable patient groups.	Please see HTM04-01 addendum gateway reference 18520 which highlights advice for augmented care units
006	Nutricia	NICE prevention and control of healthcare	Clarification regarding 1.3..3.1	To provide a standardised simple message regarding what advice should be provided	<i>No additional information provided by stakeholder</i>

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		<p>associated infections in primary and community care March 2012 Guideline 139 1.3.3 Administration of feeds Use minimal handling and an aseptic technique to connect the administration system to the enteral feeding tube</p>	<p>Non healthcare professionals may not fully understand the concept of true asepsis which would require a sterile field including sterile gloves to prepare any equipment for the administration of feed. This may be difficult to achieve in a patient's home however where the patient is immuno compromised then guidance may suggest a more rigorous aseptic technique using sterile gloves as opposed to minimal handling and an aseptic technique Previous guidance recommended an aseptic no touch technique</p>	<p>regarding sterility and asepsis when advising carers and patients on the correct procedure for administration of feeds.</p> <p>To provide specific guidance regarding immuno compromised patients within the community</p> <p>To reduce infections associated with bacterial contamination of feeds</p> <p>The previous NICE recommendation regarding an aseptic no touch technique policy was removed and replaced by minimal handling and an aseptic technique and providing a rationale for the change including whether patients and carers should use sterile /non sterile gloves would support healthcare workers when providing training in the administration of enteral feeds.</p>	
006	Nutricia	Enteral feed 1.3.4	<p>A reference to best practice regarding guidance and a timeline for aseptic technique when caring for the PEG stoma site following initial placement would support standardisation of practice in a community setting. Patients are not always provided with a care plan regarding stoma</p>	<p>Reduce the risk of stoma site infections Guidance from NICE would support standardisation of practice regarding care of the stoma site post PEG placement in the community setting and ensure that the correct equipment and dressing packs are provided on hospital discharge to allow an aseptic approach to stoma care following early hospital discharge.</p>	<p>The “ NHS Institute for Innovation and Improvement - High Impact Actions for nursing and midwifery – High Impact Action stoma care “ provides guidance on care of the PEG tube immediately post insertion</p>

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			care when discharged from hospital		
007	Department of health	It is important to recognise that The Health and Social Care Act 2008 Code of Practice on the prevention and control of infections and related guidance provides guidance for registered providers of all healthcare and adult social care in England on how they may comply with all aspects of infection prevention and control.	The Code sets out the 10 compliance criteria against which the Care Quality Commission will judge a registered provider on how it complies with the cleanliness and infection control requirement, which is set out in regulations. It provides examples of how a proportionate approach could be applied to the compliance criteria and gives over-arching guidance on all the detailed areas of infection prevention and control outlined in this NICE consultation. It is therefore essential that the proposed quality standard complements the Code of Practice.		<i>No additional information provided by stakeholder</i>
007	Department of health	Management of patients with urinary catheters (UC) and urinary tract infections.	CMO highlighted that urinary tract infections are an important healthcare associated infection in older adults. There is good evidence the management of patients with urinary catheters is sub-optimal. CMO also stated that it is important to identify the occurrence of bloodstream infections associated with urinary	A reduction in the use of inappropriate urinary catheters or prolonged catheterisation has the potential to reduce the morbidity and mortality associated with infection. This could be improved through the use of <ul style="list-style-type: none"> • UC avoidance strategies 	CMO report – Infections and the rise of antimicrobial resistance https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/138331/CMO_Annual_Report_Volume_2_2011.pdf

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			<p>tract infections so as to identify risk factors and permit more effective preventive action</p> <p>There is a strong association between the duration of catheterisation and the risk of infection. In acute care the risk of bacteriuria increases 5% for each day of catheterisation, with 20-30% of patients becoming bacteriuria. Between 2 - 6% of bacteriuric patients will develop a catheter associated UTI, and of these 1 – 4% will develop a bloodstream infection.</p> <p>The PHE E.coli bacteraemia surveillance shows that these infections are increasing year on year. At the request of DH, PHE have undertaken enhanced sentinel surveillance of E.coli bacteraemias. An interim analysis of these data indicate that 50% of E.coli bacteraemias are seeded by the urogenital tract. The highest rates of infections are >64years.</p> <p>UCs may be inserted</p>	<ul style="list-style-type: none"> • Improved care of patients where an UC deemed necessary, through documentation of indication, daily assessment of continuing need, planning for catheter removal and communication • Correct procedures for insertion and maintenance of UCs. • Defined care pathways for UCs when patients are removing between primary and secondary care • Promoting the use of intermittent self-catheterisation or supra-pubic catheterisation for patients requiring long term UC where this is appropriate. <p>The Department’s Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) have stated that the management of urinary catheters, including post discharge and in the community, is a priority.</p>	<p>Infection: prevention and control of healthcare-associated infections in primary and community care. NICE clinical guideline 139 (2012). this covers long term catheterisation > 28 days</p> <p>Pratt RJ et al. (2007) epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. Journal of Hospital Infection 65 (supplement 1):S1–64. Covers the use of UC < 28 days</p> <p>2011 Point prevalence study – 17.2% of patients with a HCAI had a urinary tract infection. 43% of patients had had an UC inserted in the previous 7 days (8.1% not known if had a UC).</p> <p>http://www.hpa.org.uk/servlet/Satellite?c=HPAweb_C</p>

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			inappropriately e.g.: to manage urinary continence or without a justifiable clinical indication.		<p data-bbox="1818 320 2179 427">&pagename=HPAwebFile&rendermode=previewnoinsite&cid=1317134304594</p> <p data-bbox="1818 496 2179 660">Public Health England E.coli data http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317138991349</p> <p data-bbox="1818 699 2179 1034">ARHAI meeting papers – interim E.coli data https://www.gov.uk/government/policy-advisory-groups/advisory-committee-on-antimicrobial-resistance-and-healthcare-associated-infection#minutes</p>
007	Department of health	Surgical site infection (SSI)	Qualitative and quantitative studies have demonstrated the physical and physiological morbidity of SSI, which can occur for many months after the original surgical intervention. Patients with SSIs stay longer in hospital, and require significantly more outpatient visits and home care.	It is likely that no other complication of surgical care has been studied more extensively than SSIs. Experimental and level I clinical evidence from randomised clinical trials show that SSI rates could be reduced though implementation of evidence based interventions. However, the prevalence of SSI and the associated human and healthcare costs are not	<p data-bbox="1818 1075 2179 1145">NICE SSI guidelines (CG74)</p> <p data-bbox="1818 1184 2179 1254">http://www.nice.org.uk/cg74</p> <p data-bbox="1818 1289 2179 1385">NICE Inadvertent perioperative hypothermia: The management of</p>

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			<p>In 2008, NICE estimated that the national cost of SSI was £57 million.</p> <p>When surveillance after discharge is included, SSIs have been reported to complicate 10-20% of surgical operations and there is a wide body of evidence which supports this underestimation of prevalence which includes all classes of surgery</p>	<p>decreasing.</p> <p>Evidence based interventions include</p> <ul style="list-style-type: none"> • skin preparation with 2% alcoholic chlorhexidine • prophylactic antibiotics (in most cases single dose) • appropriate hair removal • avoidance of hypothermia • use of antiseptic-impregnated incise drapes • glucose control in patients with diabetes. <p>There needs to be greater engagement of surgeons and their teams to improve peri-operative patient care in the prevention of SSI</p>	<p>inadvertent perioperative hypothermia in adults (CG65)</p> <p>http://www.nice.org.uk/cg65</p> <p>PHE SSI surveillance reports</p> <p>http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SurgicalSiteInfection/</p> <p>2011 Point prevalence study – 15.7% of patients with a HCAI had a SSI.</p> <p>http://www.hpa.org.uk/servelet/Satellite?c=HPAweb_C&pagename=HPAwebFile&rendermode=previewnoinsite&cid=1317134304594</p> <p>WHO Surgical safety checklist</p> <p>http://www.who.int/patientsafety/safesurgery/en/</p>

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					<p>SIGN guideline 104 – Antibiotic prophylaxis in surgery</p> <p>http://www.sign.ac.uk/guidelines/fulltext/104/</p>
007	Department of health	Vascular access devices (VAD).	<p>Vascular access devices (VAD), including peripheral, central venous and arterial catheters, are commonly used in the management of patients in acute and chronic care settings. Catheter-related bloodstream infection involves the presence of systemic infection and evidence implicating the intravascular catheter as its source. Catheter-related bloodstream infections (CR-BSI) associated with the insertion and maintenance of CVC are potentially among the most dangerous complications associated with healthcare. The Health Protection Agency reported (now Public Health England) that 0.5% prevalence accounts for 6.8% of HCAI.2 Sixty-four percent of CR-BSI</p>	<p>There is evidence to demonstrate that the risk of infection with VADs declines following the standardisation of aseptic technique and increases when the maintenance of intravascular catheters is undertaken by inexperienced healthcare workers. Therefore, healthcare workers caring for patients with intravascular catheters should be trained and assessed as competent in using and consistently adhering to the infection prevention practices for the prevention of catheter-related bloodstream infection. A programme to improve the insertion and management of VADs should include:</p> <ul style="list-style-type: none"> • Education of healthcare workers and patients • General principles of asepsis • Selection of type of intravascular catheter • Selection of intravascular catheter insertion site 	<p>Infection: prevention and control of healthcare-associated infections in primary and community care. NICE clinical guideline 139 (2012) – this covers long term VADs > 28 days</p> <p>Pratt RJ et al. (2007) epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. Journal of Hospital Infection 65 (supplement 1):S1–64. – this cover the use of VAD < 28 days</p> <p>2011 Point prevalence study – 7.3% of patients with a HCAI had a</p>

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			<p>occur in patients with an intravascular device, with previous point prevalence data reporting that 0.85% prevalence accounts for 7% of HCAI and, of these, 70% are primary CR-BSI.³ Peripheral venous catheters (PVC) cause phlebitis in some patients with studies indicating mean rates of between 7%-27%, but evidence suggests that these devices are less frequently associated with CR-BSI.</p>	<ul style="list-style-type: none"> • Maximal sterile barrier precautions during insertion • Cutaneous antisepsis • Catheter and catheter site care • Replacement strategies • General principles for catheter management 	<p>bloodstream infection of which 29.1% were VAD related (central and peripheral) and 37.6% which were secondary to other infections.</p> <p>http://www.hpa.org.uk/servelet/Satellite?c=HPAweb_C&pagename=HPAwebFile&rendermode=previewnoindex&cid=1317134304594</p> <p>Public Health England, at the request of DH, have established 'Infections in Critical Care Quality Improvement Programme' which will be undertaking surveillance of central venous catheter bloodstream infections in adult, paediatric and neonatal units where the greatest burden of these infections is seen in acute hospitals.</p>
007	Department of health	Antimicrobial stewardship (AMS)	CMO's report Infection and the rise of antimicrobial resistance, published March 2013, provided a comprehensive overview of the	AMS is a coordinated programme that promotes the appropriate use of antimicrobials (including antibiotics), improves patient outcomes, reduces	CMO report – Infections and the rise of antimicrobial resistance

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			<p>threat of antimicrobial resistance and infectious diseases. The new UK Integrated Five Year Antimicrobial Resistance Strategy is expected to be published in September and sets out how the UK will address the challenges set out in the CMO report.</p> <p>There are few public health issues of greater importance than antimicrobial resistance in terms of impact on society. Infectious diseases account for about 7% of all deaths in England and Wales each year and is estimated to cost the NHS and society more generally around £30billion annually.</p> <p>It has been estimated that Antimicrobial Resistance (AMR) costs the EU approximately €1.5 billion in healthcare expenses and lost productivity.</p> <p>Data collated by the European Centre for Disease Prevention and Control shows the rate of increasing antimicrobial resistance across the EU (EARS</p>	<p>microbial resistance, and decreases the spread of infections caused by multidrug-resistant organisms.</p> <p>Start Smart, Then Focus, states that an organisational level stewardship needs to be supported by an AMS Management Team to:</p> <ul style="list-style-type: none"> • Ensure that evidence-based local antimicrobial guidelines are in place and reviewed regularly • Ensure regular auditing of the guidelines, antimicrobial stewardship practice and quality assurance measures • Formally report a regular review of the organisation's retrospective antibiotic consumption data (especially highlighting the uses of broad-spectrum antibiotics such as cephalosporins, quinolones and carbapenems) • Identify actions to address: non-compliance with local guidelines; general antimicrobial stewardship issues; and other prescribing issues. <p>AMS needs to be embedded on primary care prescribing. The RCGP TARGET toolkit (Treat Antibiotics Responsibly – Guidelines, Education, Tools) could be used</p>	<p>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/138331/CMO_Annual_Report_Volume_2_2011.pdf</p> <p>2011 Point prevalence study - antimicrobial usage in all acute hospitals was 34.7% (34.3% in NHS hospitals).</p> <p>Prescribing intention: Community acquired infection – 74.8% Hospital acquired infection – 20.2%</p> <p>http://www.hpa.org.uk/servlet/Satellite?c=HPAweb_C&pagename=HPAwebFile&rendermode=previewnoin site&cid=1317134304594</p> <p>The Health and Social Care Information Centre published its annual bulletin Prescriptions Dispensed in the Community Statistics for 2002 to 2012: England on</p>

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			<p>–Net) and antimicrobial consumption (ESAC-Net).</p>	<p>to enable this.</p> <p>The AMR strategy aims</p> <ul style="list-style-type: none"> • to extend the learning from hospital antimicrobial stewardship programmes and prescribing measures to primary care by developing tools to facilitate behaviour changes such as mobile downloadable and readable applications that can be linked to British National Formulary advice as well as local formularies. • encourage the development and implementation of robust antimicrobial stewardship quality measures, a quality standard on antimicrobial stewardship and guidance on heterogeneity of prescribing in both secondary and primary care 	<p>30 July 2013. The largest increase in cost between 2011 and 2012 was Antibacterial Drugs, where costs rose by £25.1 million (14.8 per cent) to £195.4 million. The number of items dispensed increased by 2.5 million, (6.1 per cent) to 43.3 million. These data do not provide information on the condition for which an antibiotic is prescribed for. Studies show that a significant proportion is prescribed for viral infections such as cold and sore throats. Thus, there is scope to reduce total prescribing without adverse patient outcomes.</p> <p>http://www.hscic.gov.uk/catalogue/PUB11291</p> <p>Start Smart, Then Focus - Guidance for antimicrobial stewardship in hospitals (England) https://www.gov.uk/govern</p>

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					<p>ment/uploads/system/uploads/attachment_data/file/215308/dh_131181.pdf</p> <p>RCGP TARGET toolkit http://www.rcgp.org.uk/clinical-and-research/target-antibiotics-toolkit.aspx</p> <p>EARS-Net http://www.ecdc.europa.eu/en/activities/surveillance/EARS-Net/database/Pages/database.aspx</p> <p>ESAC-Net http://ecdc.europa.eu/en/activities/surveillance/ESAC-Net/database/Pages/database.aspx</p> <p>Public Health England, at the request of DH, has established the English Surveillance Programme for Antimicrobial Utilisation and Resistance Oversight Group which will develop and maintain robust</p>

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					information and surveillance systems to measure antimicrobial utilisation and its impact on resistance and patient safety.
007	Department of health	Early warning systems to recognise the deteriorating patient and the identification of sepsis	<p>Severe sepsis is a major cause of morbidity and has a mortality rate of 35%.</p> <p>There is evidence that patients who are, or become acutely unwell in hospital receive sub optimal care. This has recently been evidenced by the Francis report and Keogh review.</p> <p>There is a range of guidance already in existence to support healthcare workers to recognise and escalate concerns about the deteriorating patient.</p> <p>The NHS Litigation Authority expects healthcare providers to have an approved documented process for managing the risks associated with the deteriorating patient.</p> <p>Sepsis can manifest in primary or</p>	<p>Effective use of early warning systems should aim to reduce patient mortality; morbidity and length of stay both in the hospital overall and in a critical care area should they be admitted to critical care.</p> <p>DH has published competences for recognising and responding to acutely ill patients in hospital. Improved compliance to this guidance and the NICE clinical guideline has the potential to improve patient outcomes including those related to infections and sepsis.</p> <p>The prompt recognition of sepsis by GPs, paramedic and hospital clinicians has the potential to improve patient outcomes.</p> <p>There are a range of tools to assist clinicians in the recognition and management of sepsis</p> <ul style="list-style-type: none"> Surviving sepsis campaign: international guidelines for management of severe sepsis and 	<p>Keogh review into the quality of care and treatment provided by 14 hospital trusts in England: overview report http://www.nhs.uk/NHSEngland/bruce-keogh-review/Documents/outcomes/keogh-review-final-report.pdf</p> <p>NICE: Acutely ill patients in hospital (CG50) http://www.nice.org.uk/cg50</p> <p>NHS Litigation Authority Risk Management Standards 2012-13. http://www.nhs.uk/nhsli/Documents/NHSLA%20Risk%20Management%20Standards%202012-2013.pdf</p>

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			<p>secondary care settings and is associated with a high morbidity and mortality. Prompt recognition and appropriate treatment are essential.</p>	<p>septic shock</p> <ul style="list-style-type: none"> • Intensive Care Society Sepsis app • Sepsis care bundle 	<p>Surviving Sepsis Campaign: International Guidelines for Management of Severe Sepsis and Septic Shock: 2012 http://www.sccm.org/Documents/SSC-Guidelines.pdf</p> <p>Intensive Care Society: Severe sepsis resuscitation and management protocol http://www.ics.ac.uk/education/iicm_package/sepsis_checklist_and_protocol</p> <p>Sepsis care bundle http://www.survivingsepsis.org/Bundles/Pages/default.aspx</p> <p>2011 Point prevalence study –10.5 % of patients with a HCAI had clinical sepsis.</p>

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					http://www.hpa.org.uk/servelet/Satellite?c=HPAweb_C&pagename=HPAwebFile&rendermode=previewnoinsite&cid=1317134304594
007	Department of health	Chronic wounds	<p>Pressure ulcers have been associated with an increased incidence of infection including osteomyelitis. Localised infections can delay healing and also lead to systemic infection, such as blood stream infections.</p> <p>Infections are a common clinical feature of a diabetic foot. Deep seated infections can cause wide spread tissue damage requiring amputation. Foot ulcers are susceptible to infection and polymicrobial infection may spread rapidly causing overwhelming tissue destruction</p> <p>Onset of gangrene of a digit or of the forefoot is often precipitated by soft tissue infection. Infection often complicates neuropathy and ischaemia and is responsible for considerable damage in diabetic feet.</p>	<p>Chronic wounds may never heal or may take years to do so. These wounds cause patients severe emotional and physical stress and create a significant financial burden on patients and the whole healthcare system.</p> <p>Serious pressure ulcer infections, including those with spreading cellulitis, osteomyelitis, or bacteraemia have a high associated mortality.</p> <p>ARHAI have advised that SSTI associated with pressure sores, venous leg ulcers and diabetic foot ulcers are an important source of E.coli bacteraemias.</p> <p>Avoidance strategies, and early recognition and effective management of infection complications has the potential to reduce associated bacteraemia.</p> <p>The NHS Mandate states that newly-acquired category 2, 3 and 4 pressure ulcers are an avoidable harm.</p>	<p>NICE Pressure ulcer management (CG29) http://www.nice.org.uk/cg29</p> <p>NICE Pressure ulcer prevention: Pressure ulcer risk assessment and prevention, including the use of pressure-relieving devices (beds, mattresses and overlays) for the prevention of pressure ulcers in primary and secondary care (CG7) http://publications.nice.org.uk/pressure-ulcer-prevention-cg7</p> <p>NICE Diabetic foot problems: Inpatient management of diabetic foot problems (CG119) http://publications.nice.org.</p>

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					<p>uk/diabetic-foot-problems-cg119</p> <p>NICE Type 2 diabetes - footcare (CG10) http://www.nice.org.uk/guidance/CG10</p> <p>The Mandate: A mandate from the Government to the NHS Commissioning Board: April 2013 to March 2015 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213131/mandate.pdf</p>
008	Pfizer Ltd	Emphasis on antimicrobial stewardship	“An Antimicrobial Stewardship Programme is a key component in the reduction of healthcare associated infections (HCAI) and contributes to slowing the development of antimicrobial resistance. A Start Smart - then Focus approach is recommended for all antibiotic prescriptions.” 1	<p>Antimicrobial stewardship initiatives are important in the era of increasing antimicrobial resistance and decreasing drug development.</p> <p>Implementation of the DH “Start Smart-Then Focus” guidance is still patchy across the UK, e.g. setting up of multidisciplinary interprofessional antimicrobial stewardship teams and implementing a clear plan of action for individual patients which may include stopping antibiotics or early</p>	<p>Nov 2011, Dept of Health, Antimicrobial Stewardship “Start Smart – Then Focus” https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/146981/dh_131181.pdf</p> <p>Annual Report of the Chief Medical Officer. Volume Two, 2011. Infections and</p>

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				<p>discharge out of hospital using an oral antibiotic or outpatient parenteral antibiotic therapy (OPAT). Early appropriate discharge can avoid patients acquiring other HCAIs and/or transmitting their infections.</p> <p>The benefits and outcomes of implementing antimicrobial stewardship programmes such as reductions in C. difficile infections are also highlighted in the recent Chief Medical Officer's Report. 2</p>	<p>the rise of antimicrobial resistance Department of Health (11 March 2013)</p>
008	Pfizer Ltd	Improvement in diagnostics for infections	<p>Rapid diagnostics can provide a more patient-centric tailored approach to treatment. This can help to curb overuse of broad spectrum antibiotics which in turn may reduce the prevalence of resistant pathogens, the occurrence of adverse effects and the development of superinfections such as Clostridium difficile infections as well as offer potential cost savings.</p>	<p>As highlighted in the recent Chief Medical Officer's report, this is one of the measures that can help reduce the rise of infections caused by resistant organisms. The report also mentions the use of biomarkers that could be used to distinguish patients with a bacterial infection from those whose symptoms have other origins. 2</p> <p>In their review, Diekema and Pfaller, state that "during outbreaks, the prompt detection and isolation of carriers can be important steps in containing spread". 3</p>	<p>Annual Report of the Chief Medical Officer. Volume Two, 2011. Infections and the rise of antimicrobial resistance Department of Health (11 March 2013) Diekema D and Pfaller M (2013) Rapid detection of antibiotic-resistant organism carriage for infection prevention CID 56: 1614-1620</p>
008	Pfizer Ltd	Vaccination	<p>Effective vaccines can reduce infectious disease burden with a beneficial knock on effect of reduced antimicrobial use and hospital admissions.</p>	<p>Evidence identified in the review by Wilby and Werry suggests that vaccination programmes (particularly against influenza and pneumococcal disease) may decrease the use of antibiotics and should be considered as elements of antimicrobial stewardship policies. 4</p>	<p>Annual Report of the Chief Medical Officer. Volume Two, 2011. Infections and the rise of antimicrobial resistance Department of Health (11 March 2013)</p>

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				The Chief Medical Officer's report also highlights the impact of low levels of vaccine uptake as contributing to the rise in certain vaccine-preventable infections such as measles, mumps and pertussis. 2	Wilby and Werry (2012) A review of the effect of immunization programs on antimicrobial utilization 30: 6509-6514
009	NHS England	There should be access to laboratory testing in a timely manner	To ensure appropriate and timely action is taken on results	For critical screening such as MRSA there should be a quality assured laboratory service available to deal with requests in a timely manner	There is no published evidence although this is deemed best practise from a number of scientific experts in high prevalence areas. (Level III evidence)
009	NHS England	Appropriate Consultant led clinical advice and interpretation should be available	This is of particular importance for acute and critical patients to guide treatment and further investigations	There is variation across the country in the provision 7/7 of infectious disease laboratory testing and advice	There is no published evidence although this is deemed best practise from a number of scientific experts in high prevalence areas. (Level III evidence)
010	The Royal College of Radiologists in collaboration with The British Society of Interventional Radiology	This is a very generic quality standard applicable to almost every member of staff in the hospital and relevant to all doctors/nurses etc. It is very much about the current approaches recommended to avoid HAI i.e. hand washing, cleanliness etc. and The Royal College of			<i>No additional information provided by stakeholder</i>

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		Radiologists and The British Society of Interventional Radiology support this Quality Standard.			
011	Public Health England	Provision and standardisation of efficient and effective community infection, prevention and control (CIPC) services.	<p>Critical issues have emerged in relation to community infection, prevention and control (CIPC) as a result of the abolition of PCTs and the transfer of their functions to others in the health and social care systems.</p> <p>Assurance now needs to be provided to the public and health professionals that the level of care and patient safety with regards to infection prevention and control (IPC) in non-acute and community settings matches that in acute settings.</p> <p>In some areas CIPC services have become patchy at best and non-existent at worst. There is a risk that patient safety will be severely compromised if non-acute and community settings are not afforded the same provision of IPC services as acute trusts. This is particularly important as</p>	<p>High quality IPC systems are essential to ensure that those who use health and social care services receive safe and effective care. Effective IPC needs to be inherent in everyday health and social care practice and management, whether in an acute or non-acute or community healthcare setting including the patient's home.</p> <p>Safety is one of three dimensions of quality care enshrined in legislation. The recent publication by the National Quality Board: Quality in the new system – Maintaining and Improving Quality from April 2013 (January 2013) sets out the roles and responsibilities of the different elements of the new system architecture in relation to maintaining “essential standards of quality and safety”.</p> <p>It states: “As the leaders of the national system of commissioning, regulation and performance monitoring we are, nevertheless, clear about our individual and collective responsibility for creating the conditions and the environment which allows quality to prevail and ensures that the</p>	<p>The National Quality Board: Quality in the new system – Maintaining and Improving Quality from April 2013 (January 2013): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213304/Final-NQB-report-v4-160113.pdf</p> <p>‘Transition of PCT Responsibilities and Resources: Implications for Community Infection Prevention and Control’ Dr Rashmi Shukla, PHE Transition Team Director; Dr Ruth Gelletlie, Former Director of Emergency Preparedness, HPA – see attached.</p> <p>NICE clinical guideline 139 (2012): Infection: prevention and control of</p>

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			complex care is increasingly being delivered in the community.	interests of patients always come first".	healthcare-associated infections in primary and community care A collated version of a survey of PHE Regional HCAI and Microbiology Network Leads concerns relating to CIPC (can be provided on request).
011	Public Health England	Established minimum standards for collaborative arrangements, contained within one document, between commissioners, providers and PHE for incident and outbreak management planning across the local health and social care system.	<p>There is good evidence that a system-wide approach, with organisational and partnership arrangements, will assist in preventing and minimising spread of HCAI and subsequent antimicrobial resistance (AMR).</p> <p>Where robust arrangements exist, harm to the patient is minimised. These arrangements include agreed roles and responsibilities, and key health protection elements (including early reporting, agreed engagement of key partners [such as PHE] in risk assessment and management, and the requirement for agreed action timelines and escalation criteria).</p>	<p>Currently, there is no evidence to suggest that, within the new health and social care structures, such robust collaborative arrangements exist systematically. Consistent application across the health and social care sector is required to safeguard patient safety.</p> <p>Delays in communication between the affected clinical area and the IPC team need to be reduced to allow an effective and timely response.</p> <p>There is an urgent commissioning need to require that local health and social care providers develop and test local outbreak plans collaboratively, including development of a systematic approach to capturing and incorporating lessons from Serious Incidents (SIs) and other critical incidents and outbreaks.</p>	<p>The Second Francis Inquiry: http://www.midstaffspublicinquiry.com/</p> <p>Health Care Associated Infection Operational Guidance and Standards for Health Protection Units, HPA July 2012 available at: http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317134940540</p> <p>NICE Public Health Guidance PH36 Prevention and Control of Healthcare-associated infections, NICE November 2011 available</p>

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					at: http://www.nice.org.uk/guidance/PH36
011	Public Health England	Minimum standards for IPC capacity and capability in the acute and non-acute sector to provide safe, high quality care	<p>Adequately trained and competent staff are key to ensuring good IPC is embedded into the daily norm of health and social care practice.</p> <p>Often, incidents or outbreaks due to breaches of IPC occur at a time when staff shortages are evident.</p>	To provide a safe care environment, trusts need to be guided by a defined minimum standard for the number of IPC doctors and nurses per number of hospital beds and case mix. Case mix information could be used to inform the defined minimum number of fully trained and permanent staff required for critical care settings.	<p>Mandatory Nurse Staffing Levels, Royal College of Nursing – policy briefing March 2012: http://www.rcn.org.uk/__data/assets/pdf_file/0009/439578/03.12_Mandatory_nurse_staffing_levels_v2_FINAL.pdf</p> <p>Good practice in infection prevention and control: Guidance for nursing staff.- available at: http://www.wales.nhs.uk/sites3/documents/739/rcn%20infection%20control.doc.pdf</p> <p>Guidance on safe nurse staffing levels in the UK. Royal College of Nursing, 2010. Available at: http://www.rcn.org.uk/__data/assets/pdf_file/0005/353237/003860.pdf</p>

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011	Public Health England	Enhanced cleaning of the environment with chlorine releasing agents to prevent spread of C difficile	There is good evidence that the environment in a healthcare facility is rapidly colonised with C difficile spores when patients are symptomatic and that the environment remains colonised for a variable period of time after the patient has been discharged	Individual health care trust IC policies differ in the environmental cleaning protocols used. Some only perform terminal cleaning if a patient with C. difficile has been moved out of a side room. Others use routine cleaning around a patient bed area during the symptomatic phase and others use micro- fibre cleaning. As a result, there has been anecdotal data to show that the healthcare environment remains contaminated in some cases with many different strains that are able to infect patients long after the original episode that caused the contamination.	See page 23 of this document: http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1232006607827 . A list of recommendations are provided that need to be incorporated into a single quality standard that can be evaluated and audited.
011	Public Health England	Standard processes to descale and decontaminate taps and sinks and the use of filters in augmented care areas	There is good evidence that organisms in water have been the cause of outbreaks in augmented care areas.	Trusts have variously adopted different methods to contain organism build up in taps and sink plug holes – these include use of filters, regular descaling of taps and a cleaning protocol for sinks and plug holes.	Please refer to this document: http://www.dhsspsni.gov.uk/hss-md-16-2012.pdf . This presents guidance on water safety, management and testing in augmented care areas. Several quality standards need to be addressed from this document: maintenance of clean water supplies at the user end, cleaning, surveillance and training.
012	Urology User Group Coalition	Promoting education on reducing healthcare associated infections	There is evidence that education on the standard principles of infection prevention and control to	There are studies showing that education and audit are both essential in maintaining standards of infection prevention and	EPIC 3 3 which replaces EPIC 2(Pratt) due to be published within next

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		(HCAI)	all people providing care, with regular audit can reduce HCAI	reducing infection	month NICE clinical guideline 139 – including the standard principles for hand decontamination and general advice.
012	Urology User Group Coalition	Enabling patients to carry out hygienic actions	Patients should be offered the opportunity to clean their hands before meals, after using the toilet, commode or bedpan/urinal and at other times as appropriate. Products available should be tailored to patient needs and may include alcohol-based hand rub, hand wipes and access to hand wash basins	Patient surveys and anecdotal evidence indicates that this rarely happens in a consistent way on most hospital wards especially in less mobile people yet basic hand hygiene it is crucial in reducing HCAI.	EPIC 3 NICE clinical guideline 139 A 2013 study into patients role in the transmission of HCAI's concluded that 39% of hands in a 100 person trial were contaminated with at least pathogenic organism 48 hrs after admission: <i>Patients' potential role in the transmission of health care-associated infections: Prevalence of contamination with bacterial pathogens and patient attitudes toward hand hygiene</i> Nancy Istenes, James Bingham, Susan Hazelett, Eileen Fleming, Jane Kirk

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					American journal of infection control 22 February 2013 (Article in Press DOI: 10.1016/j.ajic.2012.11.012)
012	Urology User Group Coalition	Improved documentation, and information and training regarding catheterisation	<p>Catheter associated urinary tract infections(CAUTIs) are a major cause of HCAI yet rarely is the reason for catheterisation documented.</p> <p>Patients should be given information regarding the reason for the catheterisation and the plan for review and removal.</p> <p>If discharged with a urinary catheter, the patient should be given written information and shown how to: manage the catheter and drainage system (ensuring they can operate the drainage tap!); minimise the risk of urinary tract infection; obtain additional supplies that are suitable for their individual needs</p>	<p>Increasing numbers of patients are being discharged earlier from hospital with catheters in situ but no plan in place for removal, or reason for it. Many develop CAUTI with the catheter replaced by community nursing staff on an on-going basis, but no clinical reason for the patient having a catheter documented.</p> <p>Patients with both long and short term urethral catheters are often not given choice over catheter or drainage systems. Apart from often leaving the person housebound, it can lead to unnecessary infections. Drainage bags that cannot be emptied independently will become overfull, and lead to reflux back in to the urinary tract or blow off the catheter, or be removed from the catheter to allow urine to drain into a container allowing bacteria to enter.</p> <p>Many hospitals only stock one type of leg drainage bag or there is a very restricted local formulary in the community from the</p>	<p>Both CG 139 (in the long-term urinary catheters section), and EPIC 3 have this as part of a recommendation.</p> <p>RCP Continence Audit 2010, page 76 EPIC 3</p> <p>In answer to a Parliamentary written question on access to appropriate stoma and urology products, Parliamentary Under Secretary of State for Quality Earl Howe said access was essential to enable people with urological conditions to avoid infection.</p> <p>HL Deb, 28 January 2013,</p>

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				<p>many available listed in the Drug Tariff on prescription.</p> <p>These are not generic products and people with catheters must be able to use them safely and easily in lifestyle settings.</p> <p>People who clinically need long term catheters are likely to be classed as disabled under the Equality Act. Providing them with a choice of products that enables them to manage catheters safely and easily in lifestyle settings will enable them more easily to partake in public life.</p>	c277W
013	Coloplast Limited	Improving patient choice	<p>Coloplast welcomes the emphasis on placing the patient firmly at the centre of all activities notably through the NHS Constitution. In relation to infection control it is important that patients can choose how they manage their condition – especially those with long-term conditions.</p> <p>Proper patient choice is essential for those with continence needs, given the very individual nature of patients' conditions – while some catheters or other continence devices may seem very similar to healthcare professionals, for</p>	<p>We are aware that in a significant number of patients in primary care are restricted in accessing the product they would find most suitable, through restrictions imposed by the clinical commissioning group aimed at making cost savings. While these cost savings may be made at a local level, they can lead to increased spending elsewhere in the health and social care system, in part due to an increase in UTIs.</p> <p>Coloplast is keen to ensure that protecting and improving patient choice is reflected in the Quality Standard.</p>	Clinical guideline 139 notes that patients should have the opportunity to make informed decisions about their care and treatment in partnership with their healthcare professionals – we are keen that this is enforced in practice and that patients are not simply given a product because it is cheaper.

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			<p>patients with complex needs even small differences can impact on their ability to use the products – potentially leading to an increase in urinary tract infections.</p> <p>We continue to raise concern that inappropriate provision of medical devices such as catheters which are not suitable for the patient leads to unnecessary urinary tract infections.</p>		
013	Coloplast Limited	Preferring intermittent catheterisation and offering a choice of single-use hydrophilic or gel reservoir catheters	Coloplast's position is that use of single use catheters with pre-lubrication is the most appropriate method of intermittent self-catheterisation for most patients, particularly those who need to perform catheterisation outside of the home, and that more patients using reusable catheters would lead to an increase in UTIs. We welcomed the fact that recent NICE guidance on this issue recommended maintaining this as a choice for patients.	Reflecting this recommendation in the Quality Standard will ensure that patients are able to choose the best product for their needs, helping to minimise UTIs.	<p>Clinical guideline 139 recommends that intermittent catheterisation should be used in preference to an indwelling catheter if clinically appropriate, and recommends offering a choice of single use hydrophilic or gel reservoir catheters for intermitted self-catheterisation.</p> <p>One study which has concluded that intermittent catheters reduce instances of UTIs is Intermittent catheterization with hydrophilic catheters as a</p>

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					<p>treatment of chronic neurogenic urinary retention, Neurourol Urodyn. 2011 Jan;30(1):21-31. doi: 10.1002/nau.20929. Epub 2010 Oct 6.</p> <p>In 2007, the United States Veterans Administration (VA) issued the following recommendations:</p> <ul style="list-style-type: none"> • Clinicians should follow the manufacturer's instructions for catheter use, which recommend single-use devices should not be re-used in any setting. • Patients should be provided with an adequate number of catheters to allow the use of a sterile catheter for each catheterization.

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					<ul style="list-style-type: none"> Clinicians should inform patients, family members, and caregivers that catheters are for single-use only <p>(Department of Veterans Affairs, 2007; Newman, 2008).</p>
014	Royal College of Nursing	Implementation of electronic prescribing and administration systems	<p>Use of antimicrobial agents is a clear driver for selection of antimicrobial resistance.</p> <p>Untimely administration of antibiotics places patients at risk from infection or sub-therapeutic levels of treatment.</p>	<p>Currently systems used to monitor prescribing practices vary in secondary and primary care. This means there is variation in the ability and quality of data obtained on use of and prescribing practices for antibiotics.</p> <p>Electronic administration systems would support audit and evaluation of administration practices in secondary care so as to both support AMR and other quality improvement programmes (e.g. SSI prevention).</p> <p>Both systems would enable data to be compared locally and nationally to further enhance learning and the development of appropriate quality indicators in this field.</p>	<p>For surgical site infections see NICE SSI standard/guidance</p> <p>CMO report 2013</p> <p>European antibiotic awareness day (EAAD)</p> <p>ECDC annual report 2012 http://www.ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=1069</p>
014	Royal College of Nursing	Expansion of hand hygiene audit to include glove use	Transfer of micro-organisms within the care environment can occur as a direct result of transfer via the hands of staff. Staff	Hand hygiene audits that do not include observations of glove use miss many indications for identifying when gloves should be removed and hand hygiene	RCN guidance 'Tools of the Trade' http://www.rcn.org.uk/__data/assets/pdf_file/0003/450

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			frequently wear gloves as part of care activities which transfer micro-organisms in the same way as un-gloved hands.	performed. This results in only a partial view of compliance with principles of hand hygiene and allows gaps in awareness surrounding practice and the subsequent systematic ability to improve practice based on data.	507/RCNguidance_gloves dermatitis_WEB2.pdf Fuller et al ICHE 2011 Dec;32(12):1194-9
014	Royal College of Nursing	Hand hygiene compliance assessments use multiple sources of data to estimate its frequency and accuracy	Hand hygiene audits routinely use observational audits to monitor observed episodes of hand hygiene.	<p>Observational audit can be fundamentally flawed and publishing stand alone compliance scores based on one methodology is not accurate or supportive of improvement programmes.</p> <p>Hand hygiene compliance can be measured through other quality measurement processes e.g. care bundles, patient feedback, automated systems etc.</p> <p>By comparing and reporting compliance scores across a range of process audits/evaluations provides greater assurance of compliance.</p> <p>Hand hygiene product consumption should also be submitted to monitor usage over time.</p>	Evaluation of the national Cleanyourhands campaign to reduce Staphylococcus aureus bacteraemia and Clostridium difficile infection in hospitals in England and Wales by improved hand hygiene: four year, prospective, ecological, interrupted time series study. BMJ 2012;344:e3005 doi: 10.1136/bmj.e3005 (Published 3 May 2012)
014	Royal College of Nursing	Hand hygiene audits should be undertaken across 24 hour periods and involve multi-disciplinary staff via peer audit	Hand hygiene is a fundamental practice that underpins HCAI reduction programmes. Audits are frequently undertaken only during daytime hours leaving gaps in knowledge over	Care is a 24 hour process and therefore practice audits and assurance should be provided on a 24 hour basis. Staffing levels are reduced at night in many areas which may have an impact on compliance with some practices including hand hygiene.	Keogh, B (2013) Review into the quality of care and treatment provided by 14 hospital trusts in England

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			consistency across a 24 hour period.	There is no evidence available that reassures compliance or evaluation on a 24 hour basis.	
014	Royal College of Nursing	Staff undertaking any IPC audits must have received training in the audit process and know how to provide feedback when non-compliant practice is observed in a timely way	Links to 4 above but relevant to all IPC audit processes The quality of IPC audit data relies on the standardisation of the audit process. Variation in auditor practice reduces the validity of and confidence in data.	If audit data is to be used as part of the assurance process then its quality is paramount. Ownership of audit data and findings by staff is important to support sustained changes in practice at the local level. Whilst IPC teams can be used to support audit processes and validate on occasions they should not be responsible for undertaking all audits. This is partly to reduce bias from the 'hawthorn' effect but also to use audit as an educational experience and to support ownership for improvements in care.	Fuller et al The Feedback Intervention Trial (FIT)—Improving Hand- Hygiene Compliance in UK Healthcare Workers: A Stepped Wedge Cluster Randomised Controlled Trial. PLoS ONE 7(10): e41617.doi:10.1371/journal.pone.0041617
014	Royal College of Nursing	Organisations must invest in expertise to support behavioural change	Improvements in IPC require fundamental changes to behaviour and culture change.	Although IPC teams may have some experience with this greater and sustained change will occur if specialist expertise is available to support systematic change across different groups of staff. The benefits of advances in scientific knowledge relating to IPC can only be realised through successful changes to clinical practice.	<i>No additional information provided by stakeholder</i>
014	Royal College of Nursing	Implementation	We have significant concerns over the development of this standard. We are concerned that the content may only represent more or less what is already	To support implementation, it is important that the healthcare professionals see the NICE Quality standard as innovative and adding to current practice otherwise, one may question the need for another set of	<i>No additional information provided by stakeholder</i>

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			available, which may lead to the NICE Quality Standard making little or no difference in practice.	standard to be published. The QS should only be published if it contains new or novel elements.	
014	Royal College of Nursing	Evaluation	The RCN is also concerned that there will be no evaluation of the Quality Standard. Whilst acknowledging that this is outside NICE's remit as they are not tasked to do this, we are of the view that the government must accept that evaluation of the impact/benefit of Quality Standard is crucial to improvement and learning. We have raised this with Department of Health and consider that it is important to raise it here as well. We would like to suggest that IPC is used as a pilot for this.	Evaluation is important in determining effectiveness and identifying where gaps are to ensure continuous improvement and value for money of QS development.	<i>No additional information provided by stakeholder</i>
014	Royal College of Nursing	Hand hygiene	One further recommendation is that there should be separate QS for hand hygiene; This was lobbied for by the Hand Hygiene Alliance when the quality statements were developed.	This would redress and prevent loss of progress made on hand hygiene, since the end of the Clean Your Hands Campaign. The Campaign had contributed to the reduction of MRSA and Clostridium difficile rates.	<i>No additional information provided by stakeholder</i>
014	Royal College of Nursing	Nursing input	Nurses have been at the forefront promoting and leading on infection control and prevention,	Nursing involvement will ensure that the quality standard demonstrates and informs current clinical practice, leading to effective	<i>No additional information provided by stakeholder</i>

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			<p>for example working with National Patient Safety Agency on the Clean Your Hands Campaign.</p> <p>It would be beneficial to have nursing input as well as someone with expertise on behavioural change as members of the Advisory Committee developing this Quality Standard.</p>	implementation.	
015	Urology Trade Association	Extending patient choice	<p>As part of infection control efforts, it is important that patients, particularly those with long-term conditions, are given choice about how they manage their condition, working with clinicians to find the right products to meet their individual needs.</p> <p>As an example, it is essential that those using catheters and sheaths to manage urinary incontinence are given information about the different types of products available and that they are able to choose a product which suits their needs.</p> <p>A patient's individual needs can impact on how they are able to use different types of catheters –</p>	<p>At the moment, many patients in primary care face restrictions on the products they can use. Many are pushed towards cheaper products which may look similar but are harder for them to use, and so may lead to an increase in infections.</p> <p>While the Government has said that formularies restricting patient choice do not prevent patients from accessing any product listed on Part IX of the Drug Tariff, in reality healthcare professionals often have not facilitated patient choice.</p> <p>Greater emphasis on clinicians working with patients to choose the best products for them could help to reduce urinary tract infections.</p>	NICE clinical guidance 148, on urinary incontinence in neurological disease, recognises that Healthcare professionals should undertake thorough assessments which include obtaining information about other health issues including bowel and sexual problems, and use of medications and therapies, as well as other factors such as mobility, social support and lifestyle which may affect how incontinence or other urinary problems can be managed.

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			<p>even where the difference seem minor to health care professionals – and so it is essential that patients are offered this choice. Inappropriate provision of products such as catheters can increase the rate of urinary tract infections, which are a major cause of healthcare associated infections.</p> <p>Catheter design may also influence whether a person successfully copes with intermittent self-catheterisation – using indwelling catheters has a higher rate of infection.</p>		
015	Urology Trade Association	Intermittent self-catheterisation	We welcome the recommendation in the NICE clinical guidance 139 on prevention and control of healthcare-associated infections in primary and community care, that patients with a need for long-term catheterisation for urinary incontinence should be offered a choice of either hydrophilic or gel reservoir catheters for intermittent self-catheterisation.	We very much welcome this recommendation, as a method of both minimising catheter related infections and ensuring the continued dignity and independence of patients. We are keen to ensure that this recommendation continues to be reflected in the Quality Standard.	NICE clinical guidance 139 on infection: prevention and control of healthcare-associated infections in primary and community care
016	Kent and Medway NHS and social Care	To address the number of urine infections reported and treated	To ensure that treatment is required and appropriate.	To ensure the correct antimicrobial treatment is prescribed for the right organism and duration of time.	In-patient units are required to send where possible a urine sample to

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	Partnership Trust	without samples being acquired for lab analysis	<p>To ensure patients are not treated inappropriately.</p> <p>Patients that require treatment are prescribed the correct antimicrobial therapy tailored to the causative organism.</p>	<p>To prevent antibiotic associated diarrhoea from needless prescribing of antibiotics.</p> <p>To ensure that any prescribing complies fully with the Trusts Antimicrobial Prescribing Policy.</p>	<p>the lab for analysis.</p> <p>Where a sample cannot be obtained the ward is required to provide evidence as to why this cannot be done.</p> <p>Antimicrobial pharmacist and Infection Control Nurses monitors prescribed treatment to ensure that the correct medication is prescribed within the antimicrobial guidelines.</p>
016	Kent and Medway NHS and social Care Partnership Trust	To assess and highlight the number of urine infections reported as catheter associated infections (CAUTI) across the organisation	<p>Patients who have an indwelling urinary catheter are more likely to develop a urinary infection.</p> <p>Meticulous catheter care is essential in minimising the risk of acquiring a CAUTI.</p>	<p>To raise awareness amongst mental health care workers best practice in both insertion and aftercare of urinary catheters.</p> <p>Implementation of the Urinary Catheter passport devised by Kent Community Health NHS Trust which involves the service user as owner of the document which is then shared with the ward environment and community services to monitor the duration, change schedule or removal of the catheter is policed.</p> <p>A planned programme has been devised on urinary catheter usage and its management.</p>	<p>A copy of the catheter passport is included as evidence.</p> <p>Training packages are evaluated for their effectiveness.</p> <p>Improved reporting due to increased staff awareness.</p> <p>Patient information leaflets have been devised to educate and inform service users on how to</p>

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				Catheter Care is re-enforced through the organisations Urinary Catheter policy.	manage and report problems.
017	The Faculty of Intensive Care Medicine – The Royal College of Anaesthetists	Prevention of blood stream infections in hospital		Aseptic technique for medical device insertion (eg: CVCs, peripheral iv cannulae, urinary catheters), and systematic approach to continuing care of these devices.	Matching Michigan project BMJ Qual Saf doi:10.1136/bmjqs-2012-001325
017	The Faculty of Intensive Care Medicine – The Royal College of Anaesthetists	Control of ventilator-associated pneumonia (VAP) in the intensive care unit (ICU)		Evaluation of multifaceted interventions to prevent VAP, including selective digestive decontamination (and non-emergence of resistance), subglottic aspiration endotracheal tubes, and oropharyngeal decontamination with chlorhexidine.	See Surviving Sepsis Campaign Intensive Care Medicine2014
017	The Faculty of Intensive Care Medicine – The Royal College of Anaesthetists	Control of clostridium difficile infections in the community and in hospital		Early screening and case detection, cohorting, and use of hydrogen peroxide vapour in addition to standard infection control procedures.	<ul style="list-style-type: none"> • HPA (PHE) data • PHE is setting up a national surveillance programme for intensive care infections. This will provide important insights into infection frequency, and impact on patient outcomes,
017	The Faculty of Intensive Care Medicine – The	Rapid testing of antibiotic impregnated central lines		High level of completeness and quality of data collection to support national infection control initiatives ie ICCQIP	<ul style="list-style-type: none"> • National Neonatal Audit Programme

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	Royal College of Anaesthetists				<ul style="list-style-type: none"> National Neonatal research Database held at the Neonatal Data Analysis Unit (www.imperial.ac.uk/nda)
018	SCM-1	Antimicrobial Stewardship		Key area. Not adequately addressed elsewhere	<i>No additional information provided by stakeholder</i>
018	SCM-1	Board Leadership and appropriate organisational KPIs to drive continuous improvement in IPC.			<i>No additional information provided by stakeholder</i>
018	SCM-1	Surveillance system that monitors and feeds back infection levels, with outputs used to drive continuous quality improvement.			<i>No additional information provided by stakeholder</i>
018	SCM-1	Adequate staffing levels throughout organisation with staff that have the skills and training required for IPC.			<i>No additional information provided by stakeholder</i>
018	SCM-1	Facilities are built, maintained and cleaned to reduce minimise the risk of HCAs.		Unable to include in SSI Quality Statement due to lack of accredited evidence source. Important and need to consider in this QS.	<i>No additional information provided by stakeholder</i>

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019	SCM-2	Standard Principles – including PPE and hand decontamination To ensure that the prevention of spread of infection between patients and environments		There are still some mis-conceptions around basic principles of prevention of infections	Nice guideline IPC 2012
019	SCM-2	Urinary Infections and catheter associated urinary catheter infections Cause of morbidity and high risk due to the growth in multi resistant bacteria		Cause of morbidity and high risk due to the growth in multi resistant bacteria	Nice guideline IPC 2012 EPIC 2007 Nice IPC HAI 2011
019	SCM-2	Patient and staff education		There is great potential to change the quality of care by the reduction in HCAI that patients encounter	Nice guideline IPC 2012 EPIC 2007 Nice IPC HAI 2011
019	SCM-2	Antibiotic stewardship		Long term potential for reduction in multiresistant bacteria	<i>No additional information provided by stakeholder</i>
019	SCM-2	Joint working across care delivery boundaries		Effective joint working across care delivery boundaries has the potential to improve the tracking of infections and the implementation of joint strategies for reduction of HCAI	Nice guideline IPC 2012 EPIC 2007 Nice IPC HAI 2011
020	SCM-3	Cross organisational and partnership arrangements to ensure that local health and			- The NICE HCAI quality statements for acute and foundation trusts (of which I was a TEG member)

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		social care providers and commissioners are joined up and talking to each other at both a strategic and operational level so that we ensure a system wide approach to tackling HCAs.			- PHE document: HCAI Operational Guidance for Health Protection Units at: http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1317134940691
020	SCM-3	That the key health protection elements are considered including: early reporting of critical infections and clusters/outbreaks to inform surveillance and public health risk assessment; development and testing of local outbreak plans; engagement of PHE Health Protection Teams in risk assessments and advice regarding management of communicable diseases and outbreaks, a systematic approach to capturing and incorporating lessons from SUIs, other critical incidents and outbreaks.			- The NICE HCAI quality statements for acute and foundation trusts (of which I was a TEG member) - PHE document: HCAI Operational Guidance for Health Protection Units at: http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1317134940691

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021	SCM-4	Recognition of the role of the built environment in the control and reduction of cross infection in acute hospital settings			<i>Further information supplied</i>
021	SCM-4	Recognition of the role of medical devices and equipment in the control and reduction of cross infection in acute hospital setting			<i>Further information supplied</i>
022	DH Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infections	No comments to make			
023	Royal College of Pathologists	No comments to make			
024	Royal College of Paediatrics and Child Health	No comments to make			