

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Draft quality standard for surgical site infection

1 Introduction

Surgical site infection is a type of healthcare-associated infection in which a wound becomes infected after an invasive (surgical) procedure. Other types of healthcare-associated infections that may affect patients having surgery are postoperative respiratory and urinary tract infections, bacteraemias (including methicillin-resistant *Staphylococcus aureus* infections [MRSA] and infections secondary to wound sepsis or medical devices such as intravascular cannulae) and diarrhoea related to antibiotics (particularly *Clostridium difficile*-associated disease). Surgical site infections account for up to 15.7% of all of healthcare-associated infections¹. At least 5% of patients who have a surgical procedure develop a surgical site infection.

This quality standard covers the prevention and treatment of surgical site infection. For more information see the [scope](#) for this quality standard.

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. They draw on existing guidance, which provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement. The quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following frameworks:

¹ Health Protection Agency (2011) [English National Point Prevalence Survey on Healthcare-associated Infections and Antimicrobial Use](#).

- [NHS Outcomes Framework 2013/14 \(Department of Health, November 2012\)](#)
- Improving outcomes and supporting transparency: [Part 1: a public health outcomes framework for England, 2013–2016 \(Department of Health, January 2012 and technical refresh November 2012\)](#)

The table below shows the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving:

NHS outcomes framework 2013–14	
Domain 1: Preventing people from dying prematurely.	<p>Overarching indicators</p> <p>1a Potential Years of Life Lost (PYLL) from causes considered amenable to healthcare.</p>
Domain 3: Helping people to recover from episodes of ill health or following injury	<p>Overarching indicators</p> <p>3b Emergency readmissions within 30 days of discharge from hospital</p> <p>Improvement areas</p> <p><i>Improving outcomes from planned treatments</i></p> <p>3.1 Total health gain as assessed by patients for elective procedures</p> <p>3.1i Hip replacement</p> <p>3.1ii Knee replacement</p> <p>3.1iii Groin hernia</p> <p>3.1iv Varicose veins</p> <p><i>Improving recovery from injuries and trauma</i></p> <p>3.3 Proportion of people who recover from major trauma</p> <p><i>Improving recovery from fragility fractures</i></p> <p>3.5 The proportion of patients recovering to their previous levels of mobility/walking ability at</p> <p>3.5i 30 and</p> <p>3.5ii 120 days</p> <p><i>Helping older people to recover their independence after illness or injury</i></p> <p>3.6 Proportion of older people (65 and over) who were</p> <p>3.6i still at home 91 days after discharge into rehabilitation</p>
Domain 4: Ensuring that people have a positive experience of care	<p>Overarching indicators</p> <p>4a Patient experience of primary care</p> <p>4i GP services</p> <p>4ii GP out of hours services</p> <p>4b Patient experience of hospital care</p> <p>Improvement areas</p> <p><i>Improving hospitals' responsiveness to personal needs</i></p> <p>4.2 Responsiveness to in-patients' personal needs</p>

Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm	<p>Overarching indicators</p> <p>5a Patient safety incidents reported 5b Safety incidents involving severe harm or death 5c Hospital deaths attributable to problems in care</p> <p>Improvement areas</p> <p><i>Reducing the incidence of avoidable harm</i></p> <p>5.2.i Incidence of healthcare associated infection: MRSA bacteraemia 5.2.ii Incidence of healthcare associated infection: <i>C. difficile</i></p>
Public Health Outcomes Framework 2013–14	
Domain 4: Healthcare public health and preventing premature mortality	<p>Objective</p> <p><i>Reduced numbers of people living with preventable ill health and people dying prematurely, while reducing the gap between communities</i></p> <p>4.3 Mortality from causes considered preventable</p>

2 Draft quality standard for surgical site infection

Overview

The draft quality standard for surgical site infection states that services should be commissioned from and coordinated across all relevant agencies encompassing the surgical pathway. A person-centred and integrated approach to provision of services is fundamental to delivering high-quality services for the prevention and treatment of surgical site infection.

The quality standard should be read in the context of national and local guidelines on training and competencies. All health and social care professionals involved in surgery, including surgical site infection prevention and treatment, should be sufficiently and appropriately trained and competent to deliver the actions and interventions described in the quality standard.

No.	Draft quality statements
1	People having surgery are offered advice and help with personal preparations for surgery (including washing and advice not to remove hair).

2	People having surgery are cared for by staff who follow practices that minimise the risk of surgical site infection.
3	People having surgery have a record of being given antibiotic prophylaxis where indicated.
4	People having surgery are offered procedure-targeted case-finding for <i>Staphylococcus aureus</i> , and those who are positive are offered suppression.
5	People having surgery receive surgical skin antisepsis using an alcohol-based solution immediately before incision.
6	People having surgery are given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.
7	People who have the recognised clinical features of surgical site infection are offered treatment with an antibiotic that covers the likely causative organisms.
8	People having surgery should have normothermia maintained before, during and after surgery.
9	People having surgery are cared for in an environment that minimises the risk of surgical site infection.
10	People having surgery should be cared for by healthcare providers that monitor and feedback infection levels and use the information to adjust clinical practice, where necessary.

Other quality standards that should also be considered when choosing, commissioning or providing a high-quality service for surgical site infection are listed in section 7.

General questions for consultation

Question 1 Does this draft quality standard accurately reflect the key areas for quality improvement?

Question 2 If the systems and structures were available, do you think it would be possible to collect the data for the proposed quality measures?

Please refer to [quality standards in development](#) for additional general points for consideration.

Statement-specific questions for consultation

- Question 3 For draft quality statement 3, the definition section provides an example of a tool (ASEPSIS) which can be used to determine if someone has a surgical site infection. Is this the most appropriate tool, and if not are there any other tools stakeholders can suggest?

Draft quality statement 1: Personal preparations for people having surgery

Draft quality statement	People having surgery are offered advice and help with personal preparations for surgery (including washing and advice not to remove hair).
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are offered advice and help with personal preparations for surgery (including washing and advice not to remove hair).</p> <p>Process: Proportion of people having surgery who receive advice and help with personal preparations for surgery (including washing and advice not to remove hair).</p> <p>Numerator – the number of people in the denominator who receive advice and help with personal preparations for surgery (including washing and advice not to remove hair).</p> <p>Denominator – the number of people having surgery.</p> <p>Outcome: Feedback from people having surgery on the advice and help received with personal preparations for surgery (including washing and advice not to remove hair).</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be offered advice and help with personal preparations for surgery (including washing and advice not to remove hair)</p> <p>Healthcare professionals offer people having surgery advice and help with personal preparations for surgery (including washing and advice not to remove hair)</p> <p>Commissioners ensure they commission services that offer people having surgery advice and help with personal preparations for surgery (including washing and advice not to remove hair)</p> <p>People having an operation are offered advice and help with personal preparations before the operation (including washing and advice not to remove hair).</p>
Source clinical guideline references	NICE clinical guideline 74 recommendations 1.2.2, 1.2.3 (key priorities for implementation) and 1.2.1.
Data source	<p>Structure: Local data collection.</p> <p>Process: Local data collection.</p> <p>Outcome: Local data collection.</p>
Definitions	<p>Washing: People should be advised to have (or assisted with having) a shower, bath or bed bath using a minimum of soap, either the day before or on the day of surgery.</p> <p>Hair removal: NICE clinical guideline 74 states that hair should not</p>

	be removed routinely to reduce the risk of surgical site infection. If hair has to be removed, healthcare professionals should use electric clippers with a single-use head on the day of surgery. Do not use razors for hair removal, because they increase the risk of surgical site infection.
Equality and diversity considerations	This quality statement applies to all groups of people, regardless of their ability to prepare themselves for surgery. If people need help with washing before surgery, they should be treated with dignity during all personal preparations.

Draft quality statement 2: Preparations for staff caring for people having surgery

Draft quality statement	People having surgery are cared for by staff who follow practices that minimise the risk of surgical site infection.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are cared for by staff who follow practices that minimise the risk of surgical site infection.</p> <p>Process:</p> <p>a) Proportion of people having surgery who are cared for by staff who follow practices for surgical hand decontamination in accordance with NICE clinical guideline 74 recommendations 1.3.1 and 1.3.2.</p> <p>Numerator – the number of people in the denominator who are cared for by staff who follow practices for surgical hand decontamination in accordance with NICE clinical guideline 74 recommendations 1.3.1 and 1.3.2.</p> <p>Denominator – the number of people having surgery.</p> <p>b) Proportion of people having surgery who are cared for by staff who remove hand jewellery, artificial nails and nail polish before operations.</p> <p>Numerator – the number of people in the denominator who are cared for by staff who remove hand jewellery, artificial nails and nail polish before operations.</p> <p>Denominator – the number of people having surgery.</p> <p>c) Proportion of people having surgery who are cared for by staff who do not move in and out of the operating area unnecessarily.</p> <p>Numerator: the number of people in the denominator who are cared for by staff who do not move in and out of the operating area unnecessarily.</p> <p>Denominator: the number of people having surgery.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be cared for by staff who follow practices that minimise the risk of surgical site infection.</p> <p>Healthcare professionals caring for people having surgery follow practices that minimise the risk of surgical site infection.</p> <p>Commissioners ensure they commission services in which staff caring for people having surgery follow practices that minimise the risk of surgical site infection.</p> <p>People having an operation are cared for by staff who make sure that the risk of infection is as low as possible.</p>
Source clinical	NICE clinical guideline 74 recommendations 1.2.6, 1.2.9, 1.2.10,

guideline references	1.3.1 and 1.3.2.
Data source	<p>Structure: Local data collection.</p> <p>Process:</p> <ul style="list-style-type: none"> a) Local data collection. b) Local data collection. c) Local data collection. <p>Outcome: Local data collection.</p>
Definitions	<p>NICE clinical guideline 74 recommends the following for surgical hand decontamination:</p> <p>Recommendation 1.3.1 The operating team should wash their hands prior to the first operation on the list using an aqueous antiseptic surgical solution, with a single-use brush or pick for the nails, and ensure that hands and nails are visibly clean.</p> <p>Recommendation 1.3.2 Before subsequent operations, hands should be washed using either an alcoholic hand rub or an antiseptic surgical solution. If hands are soiled then they should be washed again with an antiseptic surgical solution.</p>

Draft quality statement 3: Antibiotic prophylaxis

Draft quality statement	People having surgery have a record of being given antibiotic prophylaxis where indicated.
Draft quality measure	<p>Structure: Evidence of local arrangements, including a written clinical protocol and audit process, to ensure people having surgery have a record of being given antibiotic prophylaxis where indicated.</p> <p>Process: Proportion of people having surgery who have a record of being given antibiotic prophylaxis where indicated.</p> <p>Numerator – the number of people in the denominator who have a record of being given antibiotic prophylaxis.</p> <p>Denominator – the number of people having surgery for whom antibiotics are indicated.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place to record the antibiotic prophylaxis given to people having surgery for which antibiotic prophylaxis is indicated.</p> <p>Healthcare professionals record antibiotic prophylaxis given to people having surgery for which it is indicated.</p> <p>Commissioners ensure they commission services that record the antibiotic prophylaxis given to people having surgery for which it is indicated.</p> <p>People having an operation have a record of any antibiotics given to prevent infection.</p>
Source clinical guideline references	NICE clinical guideline 74 recommendations 1.2.11, 1.2.12, 1.2.13 1.2.14 (key priorities for implementation), 1.2.15, 1.2.16 and 1.2.17.
Data source	<p>Structure: Local data collection.</p> <p>Process: Local data collection.</p>
Definitions	<p>NICE clinical guideline 74 recommends that people having clean surgery involving the placement of a prosthesis or implant, clean-contaminated surgery, or contaminated surgery should be offered antibiotic prophylaxis before surgery. It also recommends that antibiotic prophylaxis should not be used routinely for clean non-prosthetic uncomplicated surgery.</p> <p>NICE clinical guideline 74 (full version) uses the following surgical wound classifications:</p> <ul style="list-style-type: none"> • Clean – an incision in which no inflammation is encountered in a surgical procedure, without a break in sterile technique, and during which the respiratory, alimentary and genitourinary tracts are not entered. • Clean-contaminated – an incision through which the

	<p>respiratory, alimentary or genitourinary tract is entered under controlled conditions but with no contamination encountered.</p> <ul style="list-style-type: none">• Contaminated – an incision undertaken during an operation in which there is a major break in sterile technique or gross spillage from the gastrointestinal tract, or an incision in which acute, non-purulent inflammation is encountered. Open traumatic wounds that are more than 12–24 hours old also fall into this category.• Dirty or infected – an incision undertaken during an operation in which the viscera are perforated or when acute inflammation with pus is encountered during the operation (for example, emergency surgery for faecal peritonitis), and for traumatic wounds where treatment is delayed, and there is faecal contamination or devitalised tissue present. <p>NICE clinical guideline 74 also states that people with dirty or infected wounds should be given antibiotic treatment (in addition to prophylaxis).</p>
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Draft quality statement 4: Screening for *Staphylococcus aureus*

Draft quality statement	People having surgery are offered procedure-targeted case-finding for <i>Staphylococcus aureus</i> , and those who are positive are offered suppression.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are offered procedure-targeted case-finding for <i>S. aureus</i>, and those who are positive are offered suppression.</p> <p>Process:</p> <p>a) Proportion of people having surgery who receive procedure-targeted case-finding for <i>S. aureus</i>.</p> <p>Numerator – the number of people in the denominator who receive procedure-targeted case-finding for <i>S. aureus</i>.</p> <p>Denominator – the number of people having surgery for which case-finding for <i>S. aureus</i> is indicated</p> <p>b) Proportion of people who test positive for <i>S. aureus</i> through procedure-targeted case-finding who receive suppression.</p> <p>Numerator – the number of people in the denominator who receive suppression.</p> <p>Denominator – the number of people having surgery who test positive for <i>S. aureus</i> through procedure-targeted case-finding.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be offered procedure-targeted screening for <i>S. aureus</i>, and for those who are positive to be offered suppression.</p> <p>Healthcare professionals offer people having surgery procedure-targeted screening for <i>S. aureus</i>, and offer suppression to those who are positive.</p> <p>Commissioners ensure they commission services that offer procedure-targeted screening for <i>S. aureus</i> to people having surgery, and offer suppression to those who are positive.</p> <p>People having certain types of operation are offered screening for a type of bacteria called <i>S. aureus</i>, and those who are positive are offered treatment.</p>
Source clinical guideline references	NICE clinical guideline 74 recommendation 1.2.7.
Data source	<p>Structure: Local data collection.</p> <p>Process:</p> <p>a) Local data collection.</p> <p>b) Local data collection.</p>

Definitions	<p>NICE clinical guideline 74 recommends that nasal decontamination with topical antimicrobial agents aimed at eliminating <i>S. aureus</i> should not be used routinely to reduce the risk of surgical site infection. Therefore, it should be targeted at specific procedures. Local services should conduct risk assessments to determine their high-risk procedures for <i>S. aureus</i>.</p>
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Draft quality statement 5: Skin decontamination

Draft quality statement	People having surgery receive surgical skin antisepsis using an alcohol-based solution immediately before incision.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure that people having surgery receive surgical skin antisepsis using an alcohol-based solution immediately before incision.</p> <p>Process: Proportion of people having surgery who receive surgical skin antisepsis using an alcohol-based solution immediately before incision.</p> <p>Numerator – the number of people in the denominator who receive surgical skin antisepsis using an alcohol-based solution immediately before incision.</p> <p>Denominator – the number of people having surgery.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to receive surgical skin antisepsis using an alcohol-based solution immediately before incision.</p> <p>Healthcare professionals caring for people having surgery prepare the surgical site using an alcohol-based solution immediately before incision.</p> <p>Commissioners ensure they commission services for people having surgery that prepare the surgical site using an alcohol-based solution immediately before incision</p> <p>People having an operation have the skin in the area of the operation cleaned with an alcohol-based antiseptic solution immediately before the operation starts.</p>
Source clinical guideline references	NICE clinical guideline 74 recommendations 1.3.7 (key priority for implementation), 1.3.8 and 1.3.9.
Data source	<p>Structure: Local data collection.</p> <p>Process: Local data collection.</p>
Definitions	NICE clinical guideline 74 recommendation 1.3.8 states that if diathermy is to be used, antiseptic skin preparations should be dried by evaporation and pooling of alcohol-based preparations should be avoided.
Equality and diversity considerations	Some people having surgery may be allergic to alcohol. An aqueous antiseptic solution is appropriate for these people.

Draft quality statement 6: Wound care

Draft quality statement	People having surgery are given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>Process: Proportion of people having surgery who are given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>Numerator – the number of people in the denominator who are given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>Denominator – the number of people having surgery.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be given information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>Healthcare professionals give people having surgery information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>Commissioners ensure they commission services that give people having surgery information and advice on wound and dressing care, including how to recognise a surgical site infection and who to contact if they are concerned.</p> <p>People having an operation are given information and advice about how to look after their wound, including how to recognise a surgical site infection and who to contact if they are worried.</p>
Source clinical guideline references	NICE clinical guideline 74 recommendations 1.1.2 and 1.1.3.
Data source	<p>Structure: Local data collection.</p> <p>Process: Local data collection.</p> <p>Outcome: Local data collection.</p>
Definitions	NICE clinical guideline 74 recommends that patients should be offered information and advice on how to care for their wound after discharge. They should be offered information and advice about how to recognise symptoms of surgical site infection and who to contact if they are concerned. An integrated care pathway

	for healthcare-associated infections should be used to help communicate this information to both patients and all those involved in their care after discharge.
Equality and diversity considerations	Information and advice should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

Draft quality statement 7: Treatment of infections

Draft quality statement	People who have the recognised clinical features of surgical site infection are offered treatment with an antibiotic that covers the likely causative organisms.
Draft quality measure	<p>Structure: Evidence of local arrangements, including a local surgical site infection treatment protocol, to ensure people who have the recognised clinical features of a surgical site infection are offered treatment with an antibiotic that covers the likely causative organisms.</p> <p>Process: Proportion of people who have the recognised features of a surgical site infection who receive treatment with an antibiotic that covers the likely causative organisms.</p> <p>Numerator – the number of people in the denominator who receive treatment with an antibiotic that covers the likely causative organisms.</p> <p>Denominator – the number of people who have the recognised clinical features of a surgical site infection.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people who have the recognised clinical features of surgical site infection to be offered an antibiotic that covers the likely causative organisms.</p> <p>Healthcare professionals offer an antibiotic that covers the likely causative organisms to people who have the recognised clinical features of a surgical site infection</p> <p>Commissioners ensure they commission services that offer antibiotics that cover the likely causative organisms to people with recognised clinical features of a surgical site infection.</p> <p>People who have an infected wound after an operation are offered an antibiotic to treat the cause of the infection.</p>
Source clinical guideline references	NICE clinical guideline 74 recommendation 1.4.9.
Data source	<p>Structure: Local data collection.</p> <p>Process: Local data collection.</p> <p>Outcome: Local data collection.</p>
Definitions	<p>NICE clinical guideline 74 recommends that the choice of antibiotic should be based on local resistance patterns and the results of microbiological tests.</p> <p>There are various tools for judging whether someone has a surgical site infection, for example page 48 of the World Health Organisation guidelines for safe surgery 2009 outlines the ASEPSIS (additional treatment, serous discharge, erythema, purulent exudates, separation of deep tissues, isolation of bacteria and stay duration as inpatient) system for scoring</p>

	surgical site infections, which classifies wounds ranging from those with satisfactory healing to those with a severe infection.
Specific question for consultation	The definition section provides an example of a tool (ASEPSIS) which can be used to determine if someone has a surgical site infection. Is this the most appropriate tool, and if not are there any other tools stakeholders can suggest?

Draft quality statement 8: Maintaining patient homeostasis

Draft quality statement	People having surgery should have normothermia maintained before, during and after surgery.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery have normothermia maintained before, during and after surgery.</p> <p>Process:</p> <p>a) Proportion of people having surgery who are assessed for their risk of inadvertent perioperative hypothermia and potential adverse consequences before transfer to the theatre suite.</p> <p>Numerator – the number of people in the denominator who are assessed for their risk of inadvertent perioperative hypothermia and potential adverse consequences before transfer to the theatre suite.</p> <p>Denominator – the number of people having surgery.</p> <p>b) Proportion of people having surgery and for whom there is no need to expedite surgery because of clinical urgency (for example bleeding or critical limb ischaemia) whose temperature is 36.0°C or above before they are transferred from the ward or the emergency department to theatre.</p> <p>Numerator – the number of people in the denominator whose temperature is 36.0°C or above before they are transferred from the ward or the emergency department to theatre.</p> <p>Denominator – the number of people having surgery and for whom there is no need to expedite surgery because of clinical urgency (for example bleeding or critical limb ischaemia).</p> <p>c) Proportion of people having surgery whose temperature is measured and documented before induction of anaesthesia and then every 30 minutes until the end of surgery.</p> <p>Numerator – the number of people in the denominator whose temperature is measured and documented before induction of anaesthesia and then every 1 minutes until the end of surgery.</p> <p>Denominator – the number of people having surgery.</p> <p>d) Proportion of people having surgery whose temperature is measured and documented on admission to the recovery room and then every 30 minutes.</p> <p>Numerator – the number of people in the denominator whose temperature is measured and documented on admission to the recovery room and then every 15 minutes until back on the ward.</p> <p>Denominator – the number of people having surgery.</p> <p>e) Proportion of people who have had surgery whose temperature</p>

	<p>is below 36.0°C.</p> <p>Numerator – the number of people in the denominator whose temperature is below 36.0°C.</p> <p>Denominator – the number of people who have had surgery and who have not been discharged.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to have normothermia maintained before, during and after surgery.</p> <p>Healthcare professionals maintain normothermia for people having surgery before, during and after surgery.</p> <p>Commissioners ensure they commission services that maintain normothermia for people having surgery before, during and after surgery.</p> <p>People having surgery have a comfortable and safe temperature maintained before, during and after surgery.</p>
Source guidance references	<p>NICE clinical guideline 74 recommendation 1.3.10.</p> <p>NICE clinical guideline 65 (all recommendations).</p> <p>NICE medical technology guidance 7 (2011) recommendations 1.1, 1.2 and 1.3.</p>
Data source	<p>Structure: Local data collection.</p> <p>Process: a), b), c), d), e) Local data collection.</p>

Draft quality statement 9: Facilities that minimise risk of infection

Draft quality statement	People having surgery are cared for in an environment that minimises the risk of surgical site infection.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are cared for in an environment that minimises the risk of surgical site infection.</p> <p>Process: Proportion of people having surgery in a facility with a record of completed and due maintenance tasks, including an assessment of whether the infection prevention and control objectives have been achieved.</p> <p>Numerator – the number of people in the denominator who have their surgery in a facility with a record of completed and due maintenance tasks, including an assessment of whether the infection prevention and control objectives have been achieved.</p> <p>Denominator – the number of people having surgery.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be cared for in an environment that minimises the risk of surgical site infection.</p> <p>Healthcare professionals care for people having surgery in an environment that minimises the risk of surgical site infection.</p> <p>Commissioners ensure they commission services that care for people having surgery in an environment that minimises the risk of surgical site infection.</p> <p>People having an operation are cared for in an environment with as low a risk of infection as possible.</p>
Source guidance references	NICE public health guidance 36 quality improvement statement 10.
Data source	Structure: Local data collection.
Definitions	<p>NICE public health guidance 36 provides practical examples for this quality improvement statement:</p> <ul style="list-style-type: none"> Record of adherence to the trust estates policy, including the infection prevention and control (IPC) team's involvement. This should include sign-off of documents at relevant stages of the building and maintenance process. Briefs and specifications outline the need to consider infection prevention and control when procuring, commissioning, planning, designing and completing new and refurbished

	<p>services and facilities.</p> <ul style="list-style-type: none"> • Record of completed and due maintenance tasks, including an assessment of whether the infection prevention and control objectives have been achieved. • Record of estates risk assessments that have considered infection prevention and control in areas of high HCAI risk (for example, in patient care areas and for facilities such as water storage tanks). • IPC team-approved written protocols for routine, planned preventive maintenance (PPM), remedial and interventional maintenance activity. • Record of planned preventive, remedial and interventional maintenance works that adheres to IPC team-approved protocols. • An appropriately competent person regularly reviews, verifies, confirms and signs off work delivered in accordance with infection-control protocols. <p>NICE public health guidance 36 quality improvement statement 10 also contains 8 structural measures which can be used as evidence for this quality statement. These include:</p> <ol style="list-style-type: none"> 1. Evidence of local arrangements for involving infection prevention and control teams in the planning, design, commissioning, completion and maintenance of services and facilities used by the trust. 2. Evidence of local procedures to ensure infection prevention and control is considered during the commissioning and handover of facilities. 3. Evidence of local procedures to ensure infection prevention and control is considered during the selection, commissioning and installation of equipment 8. Evidence of mechanisms for consideration of current national estates policy and whether or not it should be incorporated into local practice.
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Draft quality statement 10: Surveillance

Draft quality statement	People having surgery should be cared for by healthcare providers that monitor and feedback infection levels and use the information to adjust clinical practice, where necessary.
Draft quality measure	<p>Structure: Evidence of local arrangements to ensure people having surgery are cared for by healthcare providers that monitor and feedback infection levels and use this information to adjust clinical practice, where necessary.</p> <p>Process: Proportion of people having surgery who are cared for by healthcare providers that monitor and feedback infection levels and use this information to adjust clinical practice, where necessary.</p> <p>Numerator – the number of people in the denominator are cared for by healthcare providers that monitor and feedback infection levels and use this information to adjust clinical practice, where necessary</p> <p>Denominator – the number of people having surgery.</p>
Description of what the quality statement means for each audience	<p>Service providers ensure systems are in place for people having surgery to be cared for by services that monitor and feedback infection levels and use the information to adjust clinical practice where necessary.</p> <p>Healthcare professionals monitor and feedback infection levels in people having surgery and use the information to adjust clinical practice where necessary.</p> <p>Commissioners ensure they commission services that monitor and feedback infection levels in people having surgery and use it to adjust clinical practice where necessary.</p> <p>People having an operation are cared for by services that monitor levels of infection and use the information to improve clinical practice.</p>
Source guidance references	NICE public health guidance 36 quality improvement statement 3.
Data source	Structure: Local data collection.
Definitions	<p>NICE public health guidance 36 states that adjustments to practice that trusts can make include closing beds or a ward to visitors, in response to an outbreak.</p> <p>NICE public health guidance 36 provides practical examples for this quality improvement statement:</p> <ul style="list-style-type: none"> • Surveillance data (for example, on antimicrobial resistance) are routinely communicated to both the board and to individual clinical units. This includes comparative data on performance within the trust over time and compared with other local or

	<p>national data.</p> <ul style="list-style-type: none"> • Regular publication of outputs from the surveillance system, for example, on post-surgical infection rates and rates of compliance with recommendations on surgical prophylaxis. • Analysis of trends from local and national surveillance data informs practice across the trust or setting. For example, it could be used to initiate a review of how prepared the trust is for an infection outbreak. • Surveillance outputs are used to monitor progress against local quality improvement objectives. <p>NICE public health guidance 36 quality improvement statement 3 also contains 14 structural measures that can be used as evidence for this quality statement. These include:</p> <ol style="list-style-type: none"> 1. Evidence of an adequately resourced surveillance system with specific, locally defined objectives and priorities for preventing and managing healthcare associated infections. The system should be able to detect organisms and infections and promptly register any abnormal trends. 2. Evidence of clearly defined responsibilities for the recording, analysis, interpretation and communication of surveillance outputs. 3. Evidence of arrangements for regular review of the surveillance programme to ensure it supports the trust's quality improvement targets for infection prevention. 4. Evidence of fit-for-purpose IT systems to support surveillance activity. This includes evidence of validation processes that ensure data accuracy and resources that can analyse and interpret surveillance data in meaningful ways. 5. Evidence of surveillance systems that allow data from multiple sources to be combined in real time (epidemiological, clinical, microbiological, surgical and pharmacy). 6. Evidence that surveillance systems capture surgical-site and post-discharge infections. 8. Evidence that systems are in place for timely recognition of incidents in different spaces (for example, wards, clinical teams, clinical areas, the whole trust). This includes evidence of regular time-series analyses of data. 10. Evidence that surveillance data in key areas is regularly compared with other local and national data and, where appropriate, is available at clinical unit level. 11. Evidence of a process for surveillance outputs to feed into accountability frameworks, inform audit priorities and be used to set objectives for quality improvement programmes in relation to healthcare associated infection prevention. 13. Evidence of surveillance outputs being fed back to relevant staff and stakeholders, including patients, in an appropriate format to support preventive action.
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3 Status of this quality standard

This is the draft quality standard released for consultation from 17 May to 17 June 2013. This document is not NICE's final quality standard on surgical site infection. The statements and measures presented in this document are provisional and may change after consultation with stakeholders.

Comments on the content of the draft standard must be submitted by 5pm on 17 June 2013. All eligible comments received during consultation will be reviewed by the Topic Expert Group and the quality statements and measures will be refined in line with the Topic Expert Group's considerations. The final quality standard will then be available on the [NICE website](#) from October 2013.

4 Using the quality standard

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered by commissioners, providers, health and social care professionals, patients, service users and carers alongside the documents listed in section 8.

The quality measures accompanying the quality statements aim to improve the structure, processes and outcomes of care in areas identified as requiring quality improvement. They are not a new set of targets or mandatory indicators for performance management.

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice when taking account of safety, choice and professional judgement and so desired levels of achievement should be defined locally.

We have illustrated where national indicators currently exist and measure the quality statement. National indicators include those developed by the Health and Social Care Information Centre through its [Indicators for Quality Improvement Programme](#). If national quality indicators do not exist, the quality measures should form the basis for audit criteria developed and used locally to improve the quality of care.

For further information, including guidance on using quality measures, please see [What makes up a NICE quality standard?](#)

5 Diversity, equality and language

During the development of this quality standard, equality issues have been considered and equality assessments will be published on the NICE website with the final version of the quality standard.

Good communication between healthcare services and people having surgery is essential. Treatment, care and support, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People having surgery should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

6 How this quality standard was developed

The evidence sources used to develop this quality standard are listed in section 8, along with relevant policy context. References for the definitions and data sources for the quality measures are also included. Further explanation of the methodology used can be found in the [Quality standards process guide](#).

7 Related NICE quality standards

- [Patient experience in adult NHS services](#). NICE quality standard 15 (2012)
- Infection control (referred to the core library but not yet in development)
- Perioperative care (referred to the core library but not yet in development).

8 Development sources

Evidence sources

The documents below contain recommendations from NICE guidance or other NICE-accredited sources that were used by the Topic Expert Group to develop the quality standard statements and measures.

- [Prevention and control of healthcare-associated infections](#). NICE public health guidance 36 (2011).
- [Inditherm patient warming mattress for the prevention of inadvertent hypothermia](#). NICE medical technology guidance 7 (2011).
- [Prevention and treatment of surgical site infection](#). NICE clinical guideline 74 (2008).
- [Perioperative hypothermia \(inadvertent\)](#). NICE clinical guideline 65 (2008).

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

- Department of Health (2010) [The Health and Social Care Act 2008: Code of practice on the prevention and control of infections and related guidance](#).
- Department of Health (2009) [National Decontamination Programme: theatre support pack](#).

Definitions and data sources for the quality measures

References included within the definitions and data sources sections:

- World Health Organization (2009) [WHO guidelines for safe surgery 2009](#).

- Health Protection Agency (2011) [English national point prevalence survey on healthcare-associated infections and antimicrobial use](#).