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OneTogether Assessment Toolkit

Infection prevention practice across the surgical pathway

Updated 2019

AfPP PROGRESSING SAFER SURGERY
The Association for Perioperative Practice

CODP
College of Operating Department Practitioners

CSC
CENTRAL STERILISING CLUB

ips Infection Prevention Society

Royal College of Nursing

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OneTogether's founding partners

The Association for Perioperative Practice is a registered charity working to enhance skills and knowledge within the perioperative arena. For more than 50 years they have promoted best practice and standards of care within this area and currently represent 7,200 theatre practitioners from across the UK and overseas.
www.afpp.org.uk

The Infection Prevention Society is a registered charity whose mission is to inform promote and sustain expert infection prevention policy and practice in the pursuit of patient or service user and staff safety wherever care is delivered. Its vision is that no person is harmed by a preventable infection.
www.ips.uk.net

The College of Operating Department Practitioners is the professional body for operating department practitioners (ODPs).
It provides guidance on professional and educational issues to members of the profession, and advises a broad selection of national and local bodies on matters relating to operating department practice.
It represents more than 5000 members throughout the UK and overseas, and hosts regular seminars and other public events.
www.codp.org.uk

The Royal College of Nursing is the UK's largest nursing professional body and trade union representing more than 430,000 nursing staff. Founded in 1916, the RCN has worked for more than 100 years to improve nursing education, develop and share good practice and promote nursing as a profession.
The RCN Perioperative Forum and the Infection Prevention and Control Network support nursing staff working in settings where surgical care is given.
www.rcn.org.uk

Health care is evolving rapidly. Changing reimbursements. More stringent patient requirements. New care delivery models. 3M understands your challenges and strives to make your job easier with reliable, quality products and solutions.
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The CSC was founded in 1960 by a small group of enthusiastic individuals working in sterile service departments and those solving problems in the cleaning, disinfection and sterilization field covering surgical instruments, medical devices, patient and hospital environments. CSC is the original decontamination forum solely dedicated to all aspects of cleaning, disinfection sterilization.
Its focus includes medical device and equipment decontamination, the general healthcare environment, infection prevention and control engineering and technical aspects of decontamination equipment, services and products.
www.centralsterilisingclub.org

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Assessment: Infection prevention practice across the surgical pathway

HOSPITAL OR TRUST	
THEATRE SPECIALITY	
PERSONNEL CONDUCTING ASSESSMENT	
Name and job title	
Name and job title	
Name and job title	
Name and job title	
DATE(S) OF ASSESSMENT	

TIME to make a difference

Contents

1 Introduction

OneTogether is a partnership between leading professional organisations with an interest in the prevention of surgical site infection (SSI). The partnership has been initiated as a quality improvement collaborative with the aim of promoting and supporting the adoption of best practice to prevent SSI throughout the patient's surgical journey.

MEMBERSHIP

The founding partners in OneTogether are:

- Association for Perioperative Practice (AfPP)
- Infection Prevention Society (IPS)
- College of Operating Department Practitioners (CODP)
- Royal College of Nursing (RCN)
- 3M Company
- 2019: Central Sterilising Club (CSC)

The OneTogether assessment tool has been designed to demonstrate infection prevention compliance across the surgical pathway. It supports staff in addressing challenges identified throughout the pre, intra and postoperative stages of surgery. The tool also acknowledges the difference in practice across differing specialities. The standards included in the assessment tool have been derived from national evidence-based guidelines or expert recommendations from professional bodies (see Appendix 1). This toolkit was last updated in 2017 to reflect new NICE guidance (CG65) (updated 2016) on preventing and managing inadvertent hypothermia in adults.

The assessment tool supports close collaboration between infection prevention teams and surgical teams. The exercise is proposed as quality improvement in practice, and the intention is to increase understanding of current infection prevention guidance and the challenges in implementation. Results from the assessment tool will support identification of areas for improvement, and in conjunction with a risk assessment, ensure resources are appropriately allocated.

2 Instructions for conducting the assessment

The tool assesses seven areas of care that are fundamental to best practice in minimising the risk of surgical site infection. After each section of the assessment there are notes providing further instructions on how to complete each element. Following these instructions will yield the best indication of performance and compliance.

1 Skin preparation

2 Prophylactic antibiotics

3 Patient warming

4 Maintaining asepsis

5 Surgical environment

6 Incision and wound management

7 Surveillance of surgical site infection

The assessment ideally is conducted separately for each surgical speciality. The assessment process may be conducted over several visits to theatre/ward areas. Following a patient through their journey in a speciality is recommended where and when possible. At a minimum the assessment should be conducted by a Theatre Practitioner and an Infection Prevention Practitioner. For a full and comprehensive review of current practice efforts should be made to include all staff involved within the patient's surgical journey.

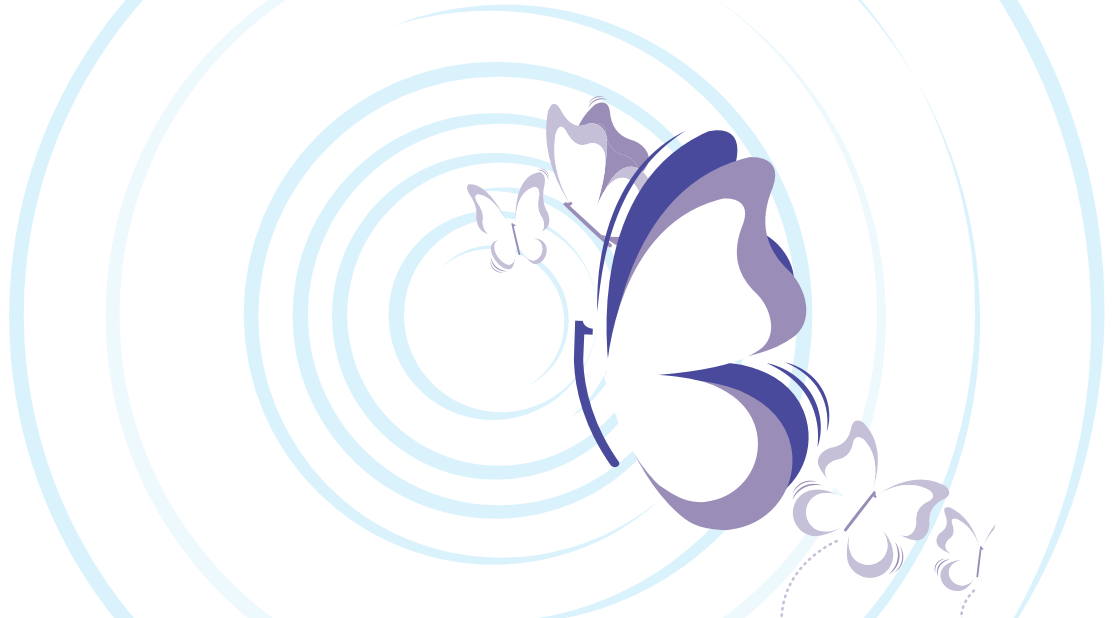
For each section of the assessment policies should be reviewed in person to establish whether a policy (defined standard) is in place. To evaluate whether a standard is applied, practice should be observed and staff carefully questioned to establish whether practice is consistently applied. Where observation of practice is recommended, five observations of any element can be judged as a reasonable minimum. It is vital that guestimates of compliance are not recorded, as this will lead to inaccurate results.

This will help to evaluate whether:

1 The standard is defined i.e. best practice is documented in local policy

2 The standard is applied i.e. best practice is consistently performed

Staff involved in the area assessed should be made aware of the assessment and results fed back within an agreed time limit. All results should be reviewed through normal governance platforms. Action planning following the assessment should be a multi-disciplinary activity in which theatre and infection prevention teams actively participate.



SCORING

Compliance can be scored as yes, partial or no. There is space to add comments as required which is particularly useful to identify what constitutes partial compliance and areas for improvement.

Scoring a defined standard

- **Yes** – Score 2: Where you have found a component is present in a local policy.
- **Partial** – Score 1: If it is agreed as local practice but not written in a policy document this counts as 'partial'. Where you think a policy exists and the component may be represented, you should check the actual document.
- **No** – Score 0: Where a policy doesn't exist, or where you know the relevant component is not represented.

Scoring whether a standard is applied

- **Yes** – Score 2: Where you are confident that a component of this standard is applied consistently.
- **Partial** – Score 1: If it is applied intermittently or only for some procedures. Record the aspects of practice that vary from the standard.
- **No** – Score 0: Where you are certain that this component of the standard is not applied.

When assessing any standard of care, it is possible that the component/best practice is not defined within a local policy (score 0), however, it may be confidently applied in practice (score 2).

2 Instructions for conducting the assessment

SCORING EXAMPLE

STANDARD OF CARE	DEFINED STANDARD	STANDARD IS APPLIED
There is a defined skin disinfection process agreed by a multi-disciplinary team.	0 Rationale: There is a local policy for skin disinfection but it is very out of date and doesn't reflect NICE guidance. I am unsure how it was developed.	0 Rationale: This cannot be measured for each procedure, as there is no guide for different procedures.
All products for skin disinfection must have an associated management protocol. E.g. multi-dose bottles: date of opening and use by date.	0 Rationale: There is no protocol available.	1 Rationale: All multi-dose bottles viewed today are labelled with date of opening and use by date. But not all questioned could confirm this and thought they did not use multi-dose bottles.
	Sum of Scores = 0	Sum of scores = 1

CALCULATION

A simple formula is used to calculate the percentage compliance for each section completed. For both 'Defined Standard' and 'Standard is Applied' assessments both scores are calculated as:

% Compliance = (sum of scores/total possible score) x 100

To calculate the overall % compliance, the score is calculated as:

Overall % Compliance = (sum of all scores/sum of total possible score) x 100

In the above example, % compliance would be calculated as follows:

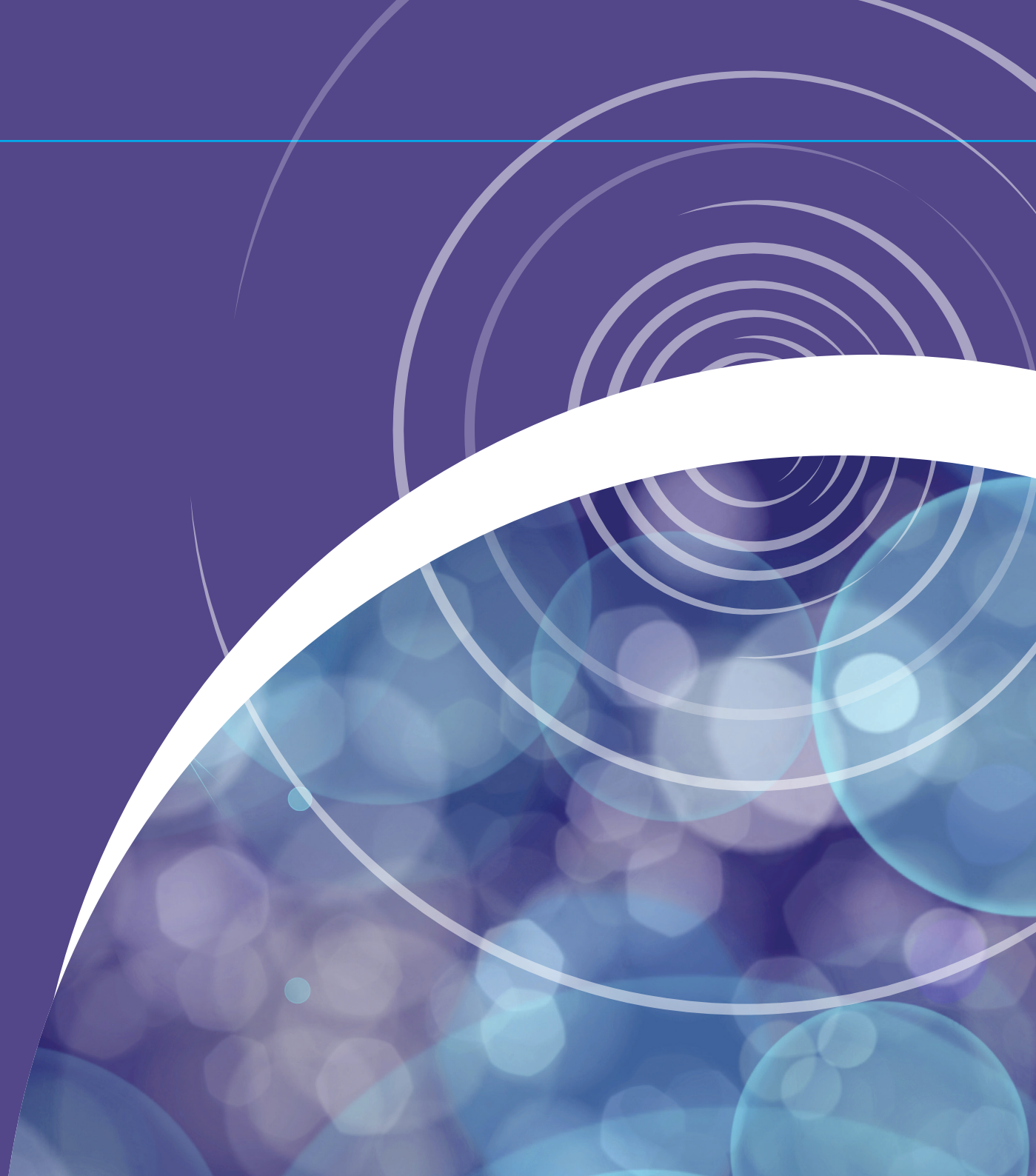
DEFINED STANDARD	STANDARD IS APPLIED	OVERALL % COMPLIANCE
Sum of scores = 0 (Sum of scores ÷ 4) x 100 = % (0 ÷ 4) x 100 = **0%**	Sum of scores = 1 (Sum of scores ÷ 4) x 100 = % (1 ÷ 4) x 100 = **25%**	**Sum of all scores = 1** (Sum of all scores ÷ 8) x 100 = % (1 ÷ 8) x 100 = **12.5%**

3 Assessment tool

The following section details the assessment tool and associated guidance.

SUMMARY OF INSTRUCTIONS

- The assessment ideally is conducted **separately for each surgical speciality.**
- The assessment process may be conducted over several visits to theatre/ward areas.
- Following a patient through their journey in a speciality is recommended where and when possible.
- At a minimum the assessment should be conducted by a Theatre Practitioner and an Infection Prevention Nurse.
- For a full and comprehensive review of current practice efforts should be made to include all staff involved within the patient's surgical journey.
- To evaluate whether a standard is applied, practice should be observed and staff carefully questioned to establish whether it is consistently applied.
- Where observation of practice is recommended, five observations of any element can be judged as a reasonable minimum.
- It is vital that guestimates of compliance are not recorded, as this will lead to inaccurate results.



Assessment tool: 1.1 Patient washing

1.1 PATIENT WASHING				
NICE recommends that patients should shower or have a bath (or be assisted to shower, bath or bed bath) using soap, either the day before, or on the day of surgery.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Prior to elective admission: patients are given verbal and written information on washing. This includes what they should do, why this is important and how to ask for help.			
2	There is a defined process to assist patients unable to wash by themselves.			
3	There is a defined process for assisting patients undergoing emergency procedures to wash wherever this is possible.			
4	The patient wash is recorded in the preoperative checklist.			
		(Sum of scores ÷ 8) x 100 = %	(Sum of scores ÷ 8) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 16) x 100 = %

GUIDANCE ON COMPLETING 1.1 PATIENT WASHING

1 a) Visit pre-assessment clinic to review process and what written and verbal information is given to patients.
b) Ask a few patients waiting for surgery if they were given advice about washing.

2 Check protocols and procedures for preoperative washing in the surgical admission ward.

3 Check protocols and procedures for preoperative washing in A&E.

4 Check examples of the preoperative surgical checklist for documentation of preoperative wash.

Assessment tool: 1.2 Hair removal

1.2 HAIR REMOVAL				
NICE recommends that razors should not be used for hair removal because they increase the risk of SSI. If hair must be removed, then clippers with disposable heads are recommended.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Prior to elective admission: patients are given verbal and written information not to shave or remove hair from operative site. This includes why this is important and how to ask for help.			
2	Hair removal is only undertaken where it is necessary to visualise the operative site.			
3	Hair is removed as near to time of incision as possible.			
4	Hair is removed using clippers with single-use disposable head.			
5	Staff who are responsible for hair removal have been trained and are competent in performing the procedure.			
		(Sum of scores ÷ 10) x 100 = %	(Sum of scores ÷ 10) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 20) x 100 = %

GUIDANCE ON COMPLETING 1.2 HAIR REMOVAL

1 a) Visit pre-assessment clinic to review process and what written and verbal information is given to patients.
b) Ask five patients waiting for surgery if they were given advice about hair removal.

2 a) Check if theatre protocols include a standard for hair removal.
b) Check how hair removal for patients on a list is managed; if removal is routine rather than patient specific then this does not comply with the standard.

3 a) Check if theatre protocol includes this in the standard. b) Check how hair removal for patients on a list is managed.

4 a) Check if theatre protocol includes this in the standard. b) Check how hair removal for patients on a list is managed.

5 Ask staff who remove hair if they have received training and have had competency assessment.

Assessment tool: 1.3 Antiseptic skin preparation

1.3 ANTISEPTIC SKIN PREPARATION				
Prepare the skin at the surgical site immediately before incisionusing an antiseptic preparation. Unless contra indicatedalcohol-based solution of chlorhexidine is first choice.[1]		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	There is a defined skin disinfection process agreed by a multi-disciplinary team that states the specific agent, application method, timing and person responsible. When deciding which antiseptic skin preparation to use, options are taken from the table referenced in NICE 2019.			
2	All products used must be licensed as intended for use as surgical skin preperation for minor or major cases. If using an unlicensed product,the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented.			
		(Sum of scores ÷ 4) x 100 = %	(Sum of scores ÷ 4) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 8) x 100 = %

GUIDANCE ON COMPLETING 1.3 ANTISEPTIC SKIN PREPARATION

1 a) Check if theatre protocols include a standard on antiseptic skin preparation that describes the specific agent, method of application (including timing in relation to draping and incision, allowing to dry), who is responsible.
b) Check how antiseptic skin preparation is conducted for five patients on a list; if only some of the elements are adhered to then record compliance as partial; if most are not adhered to then record as zero.

2. a) Check if theatre protocols include a management protocol for the antiseptic skin preparations that describes how solutions should be used, labelled, stored and discarded.
b) Check if the agents being used are recommended for antiseptic skin preparations prior to surgical procedures (i.e. licensed for this purpose). If the product in use is not licensed check that it has been agreed locally and that there is a method of consent in place. If multi-use bottles are in use, check the procedures for ensuring that the solutions are used appropriately, labelled with the date of opening and discarded correctly.

Assessment tool: 1.4 Preventing skin recolonisation

1.4 PREVENTING SKIN RECOLONISATION				
NICE recommends that if an incise drape is used, this should be iodophore impregnated unless the patient has an iodine allergy.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	For surgical procedures where an incise drape is required an iodophore impregnated drape is used (unless the patient has an iodine allergy).			
2	The manufacturers guidance on incise drape size selection and method of application is adhered to.			
		(Sum of scores ÷ 4) x 100 = %	(Sum of scores ÷ 4) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 8) x 100 = %

GUIDANCE ON COMPLETING 1.4 PREVENTING SKIN RECOLONISATION

1 Check that the incise drapes in use are iodophore impregnated. If the patient has an iodine allergy then an incise drape should not be used (as non-impregnated ones are associated with an increased risk of SSI).

2 Observe the application of drapes for five patients on the list to check if the manufacturer's instructions are adhered to.

DO NOT COMPLETE THIS SECTION IF INCISE DRAPES ARE NOT USED IN THIS SPECIALITY

Assessment tool: 1.5 Reducing nasal colonisation

1.5 REDUCING NASAL COLONISATION				
NICE recommends consider applying nasal mupirocin in combination with a chlorhexidine body wash before procedures in which *Staphylococcus aureus* is a likely cause of a surgical site infection.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	There is a local assessment, by infection prevention and surgical staff to identify procedures where nasal mupirocin is applied.			
2	Nasal mupirocin is used in combination with a chlorhexadine bodywash			
		(Sum of scores ÷ 4) x 100 = %	(Sum of scores ÷ 4) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 8) x 100 = %

GUIDANCE ON COMPLETING 1.5 REDUCING NASAL COLONISATION

1 Check that all procedures are assessed taking into account: procedure details, patient risk factors, taking note of side effects in pre term infants and the likely impact of SSI.

2 Observe and review local surveillance of mupirocin resistance.

3 Check instructions for application.

4 Observe or ask patients how the nasal product is used.

Assessment tool: 2 Prophylactic antibiotics

2 PROPHYLACTIC ANTIBIOTICS				
Antibiotics are given as indicated to minimise the risk of infection and reduce the emergence of antibiotic resistance.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	There is a defined list of surgical procedures where prophylactic antibiotics may be required.			
2	For surgical procedures where prophylactic antibiotics are indicated the recommended agents and dose are administered.			
3	Prophylactic antibiotics are administered within 60 minutes before the incision.			
4	A single dose of prophylactic antibiotics is administered unless surgery is prolonged or there is another specific indication for a repeat dose.			
		(Sum of scores ÷ 8) x 100 = %	(Sum of scores ÷ 8) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 16) x 100 = %

GUIDANCE ON COMPLETING 2 PROPHYLACTIC ANTIBIOTICS

1 Check that guidance on prophylactic antibiotics is written in a local hospital (antimicrobial policy and/or theatre) policy.

2 Check the prescription chart for five patients on the list to identify if the recommended agent and dose is given.

3 Check the prescription and operation records for five patients on the list to identify the timing of prophylactic antibiotic administration.

4 a) Check the prescription and operation records for five patients on the list to identify if any inappropriate repeat doses were given.
b) Follow up five patients on the surgical ward to check if prophylactic antibiotics were given postoperatively.

Assessment tool: 3.1 Warming intravenous and irrigation fluids

3.1 WARMING INTRAVENOUS AND IRRIGATION FLUIDS				
Intravenous fluids (500 ml or more) and blood products should be warmed to 37°C using a fluid warming device following manufacturer's instructions. All irrigation fluids used intraoperatively should be warmed in a thermostatically controlled cabinet to a temperature of 38–40°C.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	All intravenous fluids (500 ml or more) and blood products are warmed during operative procedures.			
2	All irrigation fluids used intraoperatively should be warmed in a thermostatically controlled cabinet to a temperature of 38–40°C.			
3	There is sufficient and the appropriate equipment available for warming intravenous and irrigation fluids.			
4	The temperature of warmed irrigation fluids is measured to ensure the temperature is within the recommended temperature range 38-40°C.			
5	Staff are trained in the use of fluid warming devices.			
		(Sum of scores ÷ 10) x 100 = %	(Sum of scores ÷ 10) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 20) x 100 = %

GUIDANCE ON COMPLETING 3.1 PERIOPERATIVE WARMING, WARMING OF INTRAVENOUS AND IRRIGATION FLUID

1 a) Check if theatre protocols include this standard. b) Observe five patients on a list to establish if the standard is adhered to.

2 a) Check if theatre protocols include this standard.
b) Check the thermostatic cabinet and if the warming is done according to the manufacturer's instructions and/or conduct a test to determine if fluid is placed in the cabinet according to local protocols and it reaches the required temperature.

3 a) Check if suitable equipment is available to warm fluids. b) Query theatre staff to establish if there is sufficient equipment to do this when required.

4 a) Check if theatre protocols include this standard.
b) Observe five patients on a list to establish if the irrigation fluid is used immediately it is removed from the warming cabinet.
c) Check if there are systems in place to test the temperature of the irrigation fluid (i.e. with a sterile temperature probe) immediately prior to placing in the patient body cavity.

5 Check with theatre staff if they receive training about warming irrigation fluids and the manufacturer's instructions for warming cabinets.

Assessment tool: 3.2 Perioperative warming, preoperative

3.2 PREOPERATIVE PATIENT WARMING				
NICE recommends that all patients should be assessed for their risk of perioperative hypothermia. **All patients should be actively warmed on the ward/emergency department at least 30 minutes prior to induction of anaesthesia. If the patient's temperature is below 36°C or they are at high risk of hypothermia, they should be warmed immediately.** **The patient's core temperature should be 36°C or above before they are transferred to theatre, unless there is a need to expedite surgery.**		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Prior to elective admission: patients are given verbal and written information on the importance of keeping warm. This includes what they should do, why this is important and how to ask for help.			
2	The patients' risk of hypothermia is assessed preoperatively and recorded.			
3	Measure the patient's temperature using a site that produces a direct measure or direct estimate of core temperature, within one hour before transfer to theatre.			
4	All patients should be actively warmed for at least 30 minutes prior to induction of anaesthesia. If the patient's temperature is below 36°C or are at high risk of hypothermia they are warmed immediately.			
5	All patients are kept warm and comfortable before and during transfer to theatre and active warming should be continued or restarted as soon as possible.			
6	Preoperative staff are trained in the use of temperature monitoring equipment and warming devices.			
		(Sum of scores ÷ 12) x 100 = %	(Sum of scores ÷ 12) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 24) x 100 = %

Assessment tool: 3.2 Perioperative warming, preoperative

GUIDANCE ON COMPLETING 3.2 PERIOPERATIVE WARMING, PREOPERATIVE

1 a) Check what written and verbal information patients are given at pre-assessment clinic. This should include informing patients about the consequences of perioperative hypothermia and that remaining adequately covered and staying warm will reduce these risks.
   b) Ask five patients waiting for surgery if they were given advice about keeping warm.

2 a) Check if theatre/pre-assessment clinic/ward protocols include this standard.
   b) Review five patient records to check that risk of hypothermia is assessed and documented at pre-assessment clinic and/or anesthetic assessment.
   [The presence of two or more of the following factors increases the risk of perioperative hypothermia and indicates need for forced air warming: ASA grade 2 – 5 (higher grade > risk); undergoing combined general and regional anaesthesia; major or intermediate surgery; risk of cardiovascular complications; temperature below 36°C].

3 a) Check if ward protocols include procedures for checking a patient's temperature preoperatively using a site that measures either a direct measurement of core temperature or a direct estimate of core temperature. These sites are: pulmonary artery, distal oesophagus, urinary bladder, zero heat-flux (deep forehead), sublingual, axilla or rectum. Devices that provide an indirect measure or estimate of core temperature, (e.g. infrared tympanic, infrared temporal, infrared forehead & forehead strips) are not recommended.
   b) Query ward staff to establish if the patient's temperature is taken within an hour of surgery and what they do if a patient's temperature is below 36°C.

4 a) Check if ward protocols include procedures for actively warming patients preoperatively. Active warming is a process that transfers heat to the patient rather than passively keeping them warm. This can be achieved using forced-air warming or conductive fabric devices.
   b) Query ward staff to establish what action is taken if a patient's temperature is below 36°C and if appropriate equipment to deliver active warming is available on the ward/unit.

5 Query the ward staff about how they ensure that patients are kept warm prior to going to theatre. For example: blankets are provided and patients use dressing gown/slippers if walking.

6 Check with ward staff if they are trained in the use of temperature monitoring equipment and warming devices.

Assessment tool 3.3 Perioperative warming, intraoperative

3.3 INTRAOPERATIVE PATIENT WARMING				
NICE recommends that patients having anaesthesia for longer than 30 minutes, or at a higher risk of perioperative hypothermia are warmed from induction of anaesthesia using forced-air warming.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	The patient should be adequately covered to conserve heat and only exposed during surgical preparation.			
2	There is sufficient and appropriate equipment available to measure the patient's temperature using a site that produces either a direct measure or direct estimate of core temperature.			
3	The patient's core temperature should be measured and recorded before induction of anaesthesia. If less than 36°C, then anaesthesia should not commence, unless there is a need to expedite surgery.			
4	The patient's temperature should be measured and recorded every 30 minutes, using a site that produces either a direct measure or direct estimate of core temperature.			
5	All patients are actively warmed using forced-air warming* throughout the intraoperative phase, except those identified as low risk of hypothermia and whose surgery will last less than 30 minutes.			
6	There is sufficient and appropriate equipment to administer active warming using forced-air* within the theatre.			
7	Intraoperative staff are trained in the use of temperature monitoring equipment and warming devices.			
		(Sum of scores ÷ 14) x 100 = %	(Sum of scores ÷ 14) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 14) x 100 = %

*A resistive heating mattress or blanket may be considered if a forced-air warming device is unsuitable.

Assessment tool 3.3 Perioperative warming, intraoperative

GUIDANCE ON COMPLETING 3.3 PERIOPERATIVE WARMING, INTRAOPERATIVE

1 a) Check if theatre protocol includes this standard.
  b) Observe five patients on a list to establish if the standard is adhered to.

2 a) Check if suitable equipment is available to measure patient temperature.
  b) Query theatre staff to establish if there is sufficient equipment to do this when required.

3 a) Check if theatre protocol includes this standard.
  b) Observe five patients on a list to establish if the standard is adhered to.

4 a) Check if theatre protocol includes this standard.
  b) Observe five patients on a list to establish if the standard is adhered to.

5 a) Check if theatre protocol includes this standard.
  b) Observe five patients on a list to establish if the standard is adhered to.

6 a) Check if suitable equipment is available to deliver forced-air warming.
  b) Query theatre staff to establish if there is sufficient equipment to do this when required.

7 Check with theatre staff if they are trained in the use of temperature monitoring equipment and warming devices.

Assessment tool: 3.4 Perioperative warming, postoperative

3.4 POSTOPERATIVE PATIENT WARMING				
The postoperative period is defined by NICE as 24 hours after the patient enters the recovery area. The patient's temperature should be monitored and documented every 15 minutes in recovery. The patient should not be transferred to the ward, until their temperature is 36°C or above.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	The patient's core temperature is measured and recorded every 15 minutes in recovery using a site that produces a direct measure or direct estimate of core temperature.			
2	Patients with a core temperature less than 36°C are actively warmed with forced-air, until their temperature reaches a normothermic level.			
3	Patients should not be returned to the ward if their temperature is less than 36°C.			
4	There is sufficient and appropriate equipment to administer forced-air warming within recovery if required.			
5	Postoperative staff are trained in the use of temperature warming devices.			
		(Sum of scores ÷ 10) x 100 = %	(Sum of scores ÷ 10) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 20) x 100 = %

GUIDANCE ON COMPLETING 3.4 PERIOPERATIVE WARMING, POSTOPERATIVE

1 a) Check if recovery protocol includes this standard.
b) Observe five patients in recovery to establish if the standard is adhered to.

2 a) Check if recovery protocol includes this standard.
b) Observe five patients in recovery to establish if the standard is adhered to.

3 a) Check if recovery protocol includes this standard.
b) Observe five patients in recovery to establish if the standard is adhered to.

4 a) Check if suitable equipment is available to deliver forced air warming.
b) Query theatre staff to establish if there is sufficient equipment to do this when required.

5 Check with recovery staff if they are trained in the use of temperature monitoring equipment and warming devices.

Assessment tool: 4.1 Maintaining asepsis – surgical practice

4.1 MAINTAINING ASEPSIS – SURGICAL PRACTICE				
The principles of aseptic technique must be adhered to by staff involved in the surgical procedure.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Operating staff are trained and assessed as competent in performing surgical hand antisepsis, gowning and gloving.			
2	Operating staff perform surgical hand antisepsis, gowning and gloving correctly immediately prior to commencing surgery.			
3	Operating staff are trained and assessed as competent in the maintenance and management of the sterile field.			
4	Operating staff maintain and manage sterile field correctly.			
		(Sum of scores ÷ 8) x 100 = %	(Sum of scores ÷ 8) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 16) x 100 = %

GUIDANCE ON COMPLETING 4.1 MAINTAINING ASEPSIS-SURGICAL PRACTICE

1 a) Check if theatre protocols include this standard.
b) Query different grade/types of staff involved in operating to determine if/how they have been trained and assessed as competent.
c) Review theatre held competency assessment records.

2 Observe different grade/types of staff prior to commencing five operative procedures to determine if hand antisepsis, gowning and gloving is performed correctly.

3 a) Check if theatre protocols include this standard.
b) Query different grade/types of staff involved in operating to determine if/how they have been trained and assessed as competent.
c) Review theatre held competency assessment records.

4 Observe different grade/types of staff during a few operative procedures to determine the sterile field is maintained and managed correctly.

Assessment tool: 4.2 Maintaining asepsis – instrument management

4.2 MAINTAINING ASEPSIS – INSTRUMENT MANAGEMENT				
All instrumentation should be suitably decontaminated and sterilised prior to surgical use.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Instruments should be decontaminated and sterilised in an accredited central sterilisation unit which is compliant with quality management systems.			
2	An instrument traceability system is in use.			
3	There are defined mechanisms in place for recognising sterile integrity of instrumentation.			
4	Sterile instruments are stored in a clean, dry, dust free environment.			
5	All sterile items have an identifiable event related shelf–life.			
6	Perioperative staff are competent in the handling of sterile instruments.			
7	Instrumentation is set up immediately prior to surgical use.			
8	There is a defined process to change instruments if contamination is identified.			
		(Sum of scores ÷ 16) x 100 = %	(Sum of scores ÷ 16) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 32) x 100 = %

Assessment tool: 4.2 Maintaining asepsis – instrument management

GUIDANCE ON COMPLETING 4.2 MAINTAINING ASEPSIS-INSTRUMENT MANAGEMENT

1–5 a) Check if theatre protocols include this standard.
b) Query staff to establish if standard is met.

6 a) Check if theatre protocols include this standard.
b) Query staff to determine if/how they have been trained and assessed as competent.
c) Review theatre held competency assessment records.

7 a) Check if theatre protocols include this standard.
b) Query staff to establish how this standard is met.
c) Observe preparation for five operative procedures to determine whether instruments are set up immediately prior to use.

8 a) Check if theatre protocols include this standard.
b) Query staff to establish if standard is met.

Assessment tool: 5 Surgical environment

5 SURGICAL ENVIRONMENT				
Ensuring that the risk of airborne contamination entering the operative site is kept to a minimum.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	The required air pressure and ventilation systems across the operating theatre (including anaesthetic and scrub rooms) is defined and regularly monitored.			
2	There is a defined process to reduce the disruption to the airflow in the operating room by minimising opening and closing of theatre doors while an operation is in progress.			
3	There is an established process to ensure that only the minimum number of staff required to safely perform the procedure are present.			
4	There is an agreed process to reduce the movement of personnel in and out of theatres during a procedure, as far as possible.			
5	There is a defined process to ensure that equipment is cleaned to remove all dust prior to it being brought into the operating theatre.			
		(Sum of scores ÷ 10) x 100 = %	(Sum of scores ÷ 10) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 20) x 100 = %

GUIDANCE ON COMPLETING 5 SURGICAL ENVIRONMENT

1 a) Check if theatre protocols include this standard. b) Query staff to establish how they ensure the standard is met.

2 a) Check if theatre protocols include this standard. b) Query staff to establish if standard is met. c) Observe five operative procedures to determine if doors remain closed.

3 a) Check if theatre protocols include this standard. b) Query staff to establish if standard is met.
c) Observe five operative procedures to determine how many people are in theatre during procedure and if this meets defined standard.

4 a) Check if theatre protocols include this standard.
b) Query staff to establish if standard is met.
c) Observe five operative procedures to determine how many people go in and out of theatre during procedure, and if this meets defined standard e.g. was the movement essential.

5 a) Check if theatre protocols include this standard. b) Query staff to establish if standard is met.
c) Observe five operative procedures to determine if equipment is cleaned prior to being brought into the theatre.

Assessment tool: 6.1 Incision management – closure

6 INCISION CLOSURE				
NICE recommends that when using sutures, consider using antimicrobial triclosan-coated sutures,especially for paediatric surgery. Consider using sutures rather than staples to close the skin after caesarean section, to reduce the risk of superficial wound dehiscence.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	There is use of triclosan-coated sutures in paediatric surgery and if not used there is a risk assessment and indications agreed for occasions when they must be used.			
2	If triclosan-coated sutures are not used in adult surgery,then there should be a risk assessment and indications agreed for occasions when they must be used.			
3	If sutures are not routinely used for closure in Caesarean-section, then there should be a risk assessment and indications agreed for occasions when they must be used.			
		(Sum of scores ÷ 6) x 100 = %	(Sum of scores ÷ 6) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 12) x 100 = %

GUIDANCE ON COMPLETION 6.1 INCISION CLOSURE

1–3 a) Check if theatre protocols include this standard.

b) Is there a criteria for using triclosan-coated sutures?

c) Are triclosan-coated stuture readily available?

d) Check if risk assessments have been carried out.

Assessment tool: 6.2 Incision management – wound care

6 INCISION MANAGEMENT – WOUND CARE				
NICE recommends that surgical incisions should be covered with an appropriate interactive dressing at the end of the operation.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	There is a defined range of interactive wound dressings available for all procedures.			
2	There is a surgical wound management plan for all procedures that includes the use of any wound drain.			
3	Wound management information is provided to the patient verbally and in written form. This includes information on how to look after their wound, what to expect and how and when to ask for help.			
4	There is access to a tissue viability expert for all in-patients with surgical wounds.			
		(Sum of scores ÷ 8) x 100 = %	(Sum of scores ÷ 8) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 16) x 100 = %

GUIDANCE ON COMPLETION 6.2 INCISION MANAGEMENT – WOUND CARE

1 a) Check if theatre protocols include this standard. b) Check with tissue viability nurse that the recommended wound dressings meet the required standard for postoperative wound dressings.

2 Check the postoperative management instructions in the case records of five patients to determine if there are clear instructions on wound management.

3 a) Check with ward staff what verbal or written information is given to patients on discharge.
b) Ask five patients ready for discharge what they have been told about managing their wound and where to get advice.

4 Check what tissue viability service is available in the hospital for surgical patients.

Assessment tool: 7 Surveillance of Surgical Site Infection (SSI)

7 SURVEILLANCE OF SURGICAL SITE INFECTION (SSI)				
SSI is monitored using a standardised surveillance methodology to provide feedback to surgeons and the surgical team about the quality of infection prevention in the operating theatre, and to provide patients with accurate information about the risk of SSI associated with the operation.		**Defined standard** Present in local policy N = 0; Partial = 1; Yes = 2	**Standard is applied** Evidence that element is performed N = 0; Partial = 1; Yes = 2	**Comments** If 'partial' – specify where non-compliant
1	Patients are provided with verbal and written information about the risks of SSI associated with their operation. This includes how and when they should report problems with their wound.			
2	There is a planned programme of SSI surveillance that covers major surgery over a defined period, e.g. 5 years.			
3	There is a robust process for data collection to assess rates of SSI based on a standardised surveillance methodology.			
4	There is a system in place to capture data on SSI that develop after the patient has been discharged from hospital e.g. detection of patients readmitted with SSI and/or post-discharge patient review or questionnaire.			
5	Results of surveillance are reviewed by the surgical teams, theatre staff and hospital governance structures.			
6	High or increased rates (or unusually low rates) are investigated and appropriate action taken to address any problems identified.			
		(Sum of scores ÷ 12) x 100 = %	(Sum of scores ÷ 12) x 100 = %	**Overall % compliance** (Sum of all scores ÷ 24) x 100 = %

GUIDANCE ON COMPLETING 7 SURVEILLANCE OF SURGICAL SITE INFECTION (SSI)

1 a) Check if theatre/ward/hospital protocols include this standard.
b) Check with pre-assessment/ward staff about verbal and written information given to patients about risk of SSI and what to do when they have problems with their wound.
c) Ask five patients ready for discharge what they were told about the risk of SSI, and what they have been told about reporting problems with their wound.

2 a) Check local policies/standards to determine if there is an agreed/planned programme of surveillance for SSI following major procedures (within this specialty).
b) Check surveillance data records to determine if data collected according to the planned programme (over last 2-5 years).

3 a) Check protocols used for surveillance comply with a standard methodology.
b) Review methods (e.g. by discussion with staff responsible for surveillance) used to capture denominator (operation data) and numerator data (follow up of all patients to detect SSI) to determine that they comply with the surveillance protocol and reliably detect all operations and SSI.

4 a) Check protocols used for post-discharge surveillance (PDS) comply with a standard methodology.
b) Review methods (e.g. by discussion with staff responsible for surveillance) used to capture PDS data to determine that they comply with the surveillance protocol and reliably detect SSI.

5 a) Check who is expected to review the results of surveillance and how often this is done.
b) Check that results are received by surgical team and theatre staff in addition to hospital governance committee.

6 a) Check what action is expected to be taken by whom in response to results of surveillance.
b) Check if there are clear systems in place to review the results and take action if problems are identified.
c) Review previous surveillance results – if rates unusually high or increasing, or unusually low (i.e. there may be a problem with the accuracy of the surveillance data capture systems) check what action was taken in response and determine if this was sufficient to address the problem.

4 Interpreting the assessment results

The results from the assessment provide guidance into the level of compliance within each area. As a guide OneTogether recommends the following categorisation of compliance.

% range	Compliance
80–100	High
50–79	Medium
0–49	Low

Please note: Although a score of 80% compliance is categorised a high compliance score, further improvements can still be implemented to achieve 100% wherever possible.

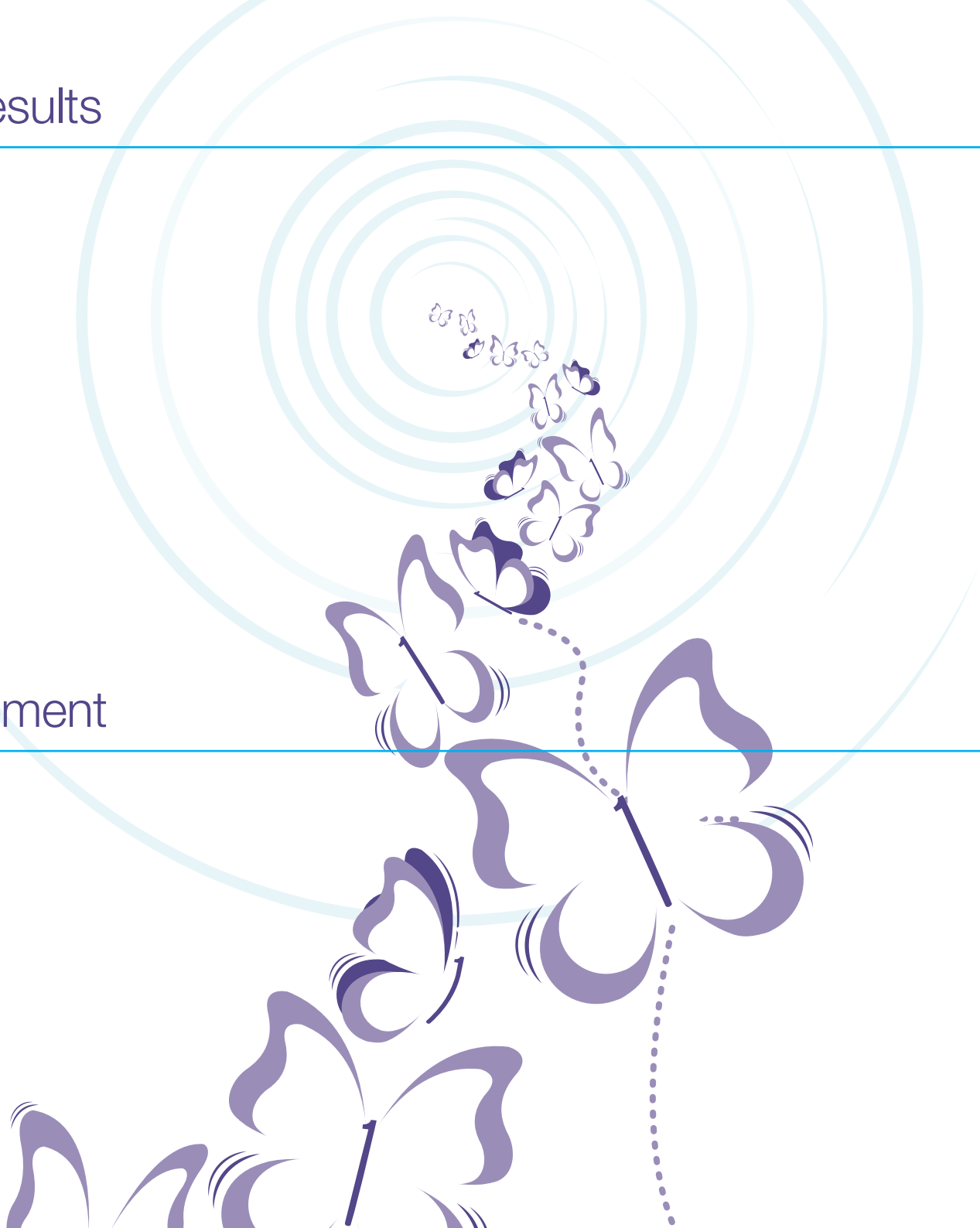
5 Prioritising actions for improvement

There are a number of ways in which a team may prioritise actions for improvement:

- Areas of practice with the lowest compliance scores
- Speed with which action can be taken to address compliance
- Risk associated with non-compliance

OneTogether recommends that the results from the assessment, action planning and prioritisation should be reviewed and approved by a local multi-disciplinary team. Local systems of governance and action planning should be adhered to with regards to a review of any assessment.

An example of a quality improvement action plan is attached for your information. You can use or adapt this for your activities as required.



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Action plan

ACTION PLAN LEAD		**ACTION PLAN TEAM**	
Speciality			
Date			

AREA OF ONETOGETHER SURGICAL PATHWAY:	
Initial compliance score: %	**Re-assessed compliance score:** %

IMPROVEMENT AREA	ACTIONS	RESPONSIBLE PERSON	REVIEW DATE	COMMENTS/UPDATE

IMPROVEMENT AREA	ACTIONS	RESPONSIBLE PERSON	REVIEW DATE	COMMENTS/UPDATE

IMPROVEMENT AREA	ACTIONS	RESPONSIBLE PERSON	REVIEW DATE	COMMENTS/UPDATE

Standards and Guidance
Reducing the risk of Surgical Site Infection (SSI)

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1. Skin Preparation

1.1 Washing

Recommendation

NICE recommends that patients should shower or have a bath (or be assisted to shower, bath or bed bath) using soap, either the day before, or on the day of surgery.[1]

1.2 Hair Removal

Recommendation

NICE recommends that razors should not be used for hair removal because they increase the risk of SSI. If hair must be removed, then clippers with disposable heads are recommended.[1]

1.3 Skin Antisepsis

Recommendation

Prepare the skin at the surgical site immediately before incision using an antiseptic preparation. Unless contra indicated alcohol-based solution of chlorhexidine is first choice.[1]

1.4 Reducing Skin Recolonisation

Recommendation

NICE recommends that if an incise drape is used, this should be iodophor impregnated unless the patient has an iodine allergy.[1]

1.5 Reducing Nasal Colonisation

Recommendation

NICE recommends to consider applying nasal mupirocin in combination with a chlorhexidine body wash before procedures which are locally determined.

2. Prophylactic Antibiotics

Recommendation

NICE recommends that there must be a local guide to antibiotic prescribing including advice on appropriate surgical prophylaxis.[1]

Surgical prophylaxis should be given intravenously on induction of anesthesia or within 60 mins before the incision is made.[2]

In most circumstances a single dose of antibiotic with a long enough half-life to achieve activity throughout the operation is sufficient.[3]

3. Perioperative Warming

Recommendation

NICE recommends that all patients should be assessed within the hour prior to surgery for their risk of perioperative hypothermia and their temperature measured using a site that produces a direct measure or direct estimate of core temperature.

Active warming should commence on the ward/emergency department at least 30 minutes prior to induction of anaesthesia for all patients (and immediately if their temperature is below 36°C).

The patient's core temperature should be 36°C or above before they are transferred to theatre, unless there is a need to expedite surgery.

Patients having anaesthesia for longer than 30 minutes, or at a higher risk of perioperative hypothermia are warmed from induction of anaesthesia using forced-air warming.

The patient's temperature should be measured and documented before induction of anaesthesia and then every 30 minutes until the end of surgery.

Induction of anaesthesia should not begin unless the patient's temperature is 36.0°C or above.

Intravenous fluids (500 ml or more) and blood products should be warmed to 37°C using a fluid warming device.

Irrigation fluids should be warmed in a thermostatically controlled cabinet to a temperature of 38°C to 40°C.

The patient's temperature should be monitored and documented every 15 minutes in recovery.

The patient should not be transferred to the ward, until their temperature is 36°C or above.[4]

4. Maintaining Asepsis

Recommendation

All pre sterilised instruments must be checked for evidence that they have been sterilised and that the packs are intact.

Instruments should be set up in a clean area, as close to the procedure time as possible. All prepared instruments must be closely observed at all times.

Staff who undertake procedures which require skills such as aseptic technique, must be trained and demonstrate proficiency before being allowed to undertake these procedures independently.[5,6]

5. Surgical Environment

Recommendation

An effective air changing ventilation system should be in operation and regularly monitored.

The doors to the operating theatre should remain closed and traffic in and out of theatre restricted to a minimum to ensure efficiency of the ventilation.

The number of personnel present in theatre should be kept to a minimum.[5]

There is a process to ensure equipment is cleaned prior to admission into the operating theatre.

6. Incision and Wound Management

Recommendation

6.1. Only apply an antiseptic or antibiotic to the wound before closure as part of a clinical research trial.

6.2. NICE recommends that when using sutures, consider using antimicrobial triclosan-coated sutures, especially for paediatric surgery.

6.3. NICE recommends consider using sutures rather than staples to close the skin after caesarean section to reduce the risk of superficial wound dehiscence.

6.4. NICE recommends that surgical incisions should be covered with an appropriate interactive dressing at the end of the operation.[1]

7. Surveillance

Recommendation

The risk of SSI should be monitored using a standardised surveillance methodology to provide feedback to surgeons and the surgical team about the quality of infection prevention in the operating theatre.

Monitoring of infection rates is essential to provide patients with accurate information about the risk of SSI associated with the operation.[6,7]

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Appendix B Reference list

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