NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Guideline scope

Perioperative care in Adults

The Department of Health in England has asked NICE to develop a clinical guideline on perioperative care.

The guideline will be developed using the methods and processes outlined in Developing NICE guidelines: the manual.

This guideline will also be used to develop the NICE quality standard for perioperative care.

1 Why the guideline is needed

Key facts and figures

Perioperative care refers to care during the preoperative, intraoperative and postoperative periods.

In this guideline the perioperative period starts when the patient is booked for surgery and ends when the patient is discharged from care following surgery.

According to Hospital Episode Statistics (HES) there were approximately 11 million primary surgical procedures performed in the NHS in 2015. This includes therapeutic and diagnostic procedures. Over half of these were elective (non-emergency) procedures, with the majority of these procedures performed from an elective waiting list.

The 2011 National Confidential Enquiry into Patient Outcome and Death (NCEPOD) reported that every year in the UK there are between 20,000 and 25,000 deaths among people undergoing a surgical procedure. The majority of these deaths (79%) occur among ‘high risk patients’ (as defined by their...
treating anaesthetist) who make up 10% of all patients undergoing surgery.

The enquiry concluded that patients are not receiving optimal care and that there are improvements to be made in perioperative care.

**Current practice**

The Royal College of Surgeons of England and the Department of Health reported in 2011 that patient care during surgery itself is now delivered at an extremely high standard and complex elective surgery can be performed relatively safely. However, challenges in optimising perioperative care remain. Although progress has been made in improving surgical outcomes, postoperative adverse events are reported to be more frequent than generally thought, and the consequences of these complications are considerable.

**2 Who the guideline is for**

People using services, their families and carers, and the public will be able to use the guideline to find out more about what NICE recommends, and help them make decisions.

This guideline is for:

- Healthcare professionals, including dentists, in primary, secondary and tertiary care.
- Non-NHS organisations commissioned to provide services for the NHS or local authorities.
- Adults having surgery, and their families and carers.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the Welsh Government, Scottish Government, and Northern Ireland Executive.

**Equality considerations**

NICE has carried out an equality impact assessment during scoping. The assessment:
• lists equality issues identified, and how they have been addressed
• explains why any groups are excluded from the scope.

The guideline will look at inequalities relating to age and disability.

3 What the guideline will cover

3.1 Who is the focus?

Groups that will be covered

• Adults (18 and older) undergoing surgery.

3.2 Settings

Settings that will be covered

• Secondary and tertiary healthcare (whether in a conventional hospital setting or elsewhere).
• General dental practices.

Settings that will not be covered

• Minor surgery in out-patient clinics.

3.3 Activities, services or aspects of care

Key areas that will be covered

We will look at evidence in the areas below when developing the guideline, but it may not be possible to make recommendations in all the areas.

1 Information and support needs of adults undergoing surgery, and their families and carers, before, during and after an operation.
2 Preoperative assessment
   - Identification and measurement of risk in adults who will be undergoing surgery.
3 Preoperative optimisation
Proactive care of older people undergoing surgery
- Perfusion and hydration
- Preoperative nutrition
- Preoperative fasting
- Pharmacological management
- Lifestyle optimisation.

4 Intraoperative management
- Strict glucose control
- Intravenous fluid during surgery
- Cardiac monitoring
- Crew resource management.

5 Postoperative management
- Pain management services.

6 Recovery
- Enhanced recovery programmes
- Recovery in specialist areas including intensive care.

Areas that will not be covered
1 Routine preoperative tests for elective surgery
2 Blood products and blood transfusion
3 Surgery for burns
4 Surgery for traumatic brain injury or neurosurgery
5 Other specific types of surgery

Related NICE guidance
- HumiGard for preventing inadvertent perioperative hypothermia (2017)
  NICE guidance MTG31
- Multimorbidity: clinical assessment and management (2016) NICE guidance NG56
  NICE guidance CG65
• Routine preoperative tests for elective surgery (2016) NICE guidance NG45
• Intravenous fluid therapy in adults in hospital (2013) NICE guidance CG174
• Healthcare-associated infections: prevention and control (2011) NICE guidance PH36
• The MIST Therapy system for the promotion of wound healing (2011) NICE guidance MTG5
• Venous thromboembolism in adults: reducing the risk in hospital (2010) NICE guidance CG92

**NICE guidance that will be partially updated by this guideline**

• CardioQ-ODM oesophageal doppler monitor (2011) NICE guidance MTG3.
• Surgical site infections: prevention and treatment (2008) NICE guidance CG74

The two recommendations from CG74 expected to be updated in this new guideline are:

– Recommendation 1.3.13. Do not give insulin routinely to patients who do not have diabetes to optimise blood glucose postoperatively as a means of reducing the risk of surgical site infection.

**NICE guidance about the experience of people using NHS services**

NICE has produced the following guidance on the experience of people using the NHS. This guideline will not include additional recommendations on these topics unless there are specific issues related to perioperative care:

• Medicines optimisation (2015) NICE guideline NG5
• Patient experience in adult NHS services (2012) NICE guideline CG138
• Medicines adherence (2009) NICE guideline CG76
3.4 Economic aspects

We will take economic aspects into account when making recommendations. We will develop an economic plan that states for each review question (or key area in the scope) whether economic considerations are relevant, and if so whether this is an area that should be prioritised for economic modelling and analysis. We will review the economic evidence and carry out economic analyses, using a NHS and personal social services (PSS) perspective, as appropriate.

3.5 Key issues and questions

While writing this scope, we have identified the following key issues, and draft questions related to them. The questions may be used to develop more detailed review questions, which guide the systematic review of the literature:

1. Information and support needs of adults undergoing surgery and their families and carers, before, during, and after an operation.
   1.1. What information and support is useful for adults undergoing surgery, and their families and carers, before, during, and after an operation?

2. Preoperative assessment
   2.1. Which validated risk tools best identify increased risk of adverse events in adults who will be undergoing surgery?

3. Preoperative optimisation
   3.1. In adults who will be undergoing surgery, what is the clinical and cost effectiveness of pre-operative optimisations clinics?
   3.2. What is the clinical and cost effectiveness of perioperative perfusion and hydration in adults?
   3.3. Does a systematic approach to preoperative assessment of nutritional status improve surgical outcomes for adults?
3.4. What is the most clinically and cost effective preoperative fasting strategy for adults?

3.5. What is the clinical and cost effectiveness of a systematic approach to reviewing medication prior to surgery in adults?

3.6. Do pre-operative interventions to help adults their lifestyle improve surgical outcomes?

4 Intraoperative management

4.1. What is the most clinically and cost effective intravenous fluid during surgery in adults?

4.2. What is the clinical and cost effectiveness of strict blood glucose control in adults undergoing surgery?

4.3. What is the clinical and cost effectiveness of cardiac output monitoring during surgery in adults?

4.4. What is the clinical and cost effectiveness of crew resource management during surgery in adults?

5 Postoperative management

5.1. What is the clinical and cost effectiveness of having a dedicated postoperative pain management service for adults?

6 Recovery

6.1. What is the clinical and cost effectiveness of enhanced postoperative recovery programmes for adults?

6.2. What is the clinical and cost effectiveness of postoperative recovery in specialist areas, including intensive care, for adults?

3.6 Main outcomes

The main outcomes that will be considered when searching for and assessing the evidence are:

1 Health-related quality of life.

2 Survival (mortality)

3 Adverse events and complications
202 – Surgical site infection
203 – Respiratory complications
204 4 Symptom scores and functional measures
205 5 Length of stay in intensive care unit or hospital
206 6 Hospital readmission
207 7 Psychological distress and mental wellbeing
208 8 Patient, family and carer experience of care

4 NICE quality standards and NICE Pathways

4.1 NICE quality standards

NICE quality standards that may need to be revised or updated when this guideline is published:

- Surgical site infection (2013) NICE quality standard QS49

4.2 NICE Pathways

NICE Pathways bring together everything we have said on a topic in an interactive flowchart. When this guideline is published, the recommendations will be included in the NICE Pathway on perioperative care (in development).

Other relevant guidance will also be added, including:

- The MIST Therapy system for the promotion of wound healing (2011) NICE guidance MTG5
- Depth of anaesthesia monitors – Bispectral Index (BIS), E-Entropy and Narcotrend-Compact M (2012) NICE diagnostics guidance DG6

Links to relevant NICE Pathways will be added as well, for example:

- Inadvertent perioperative hypothermia
- Intravenous fluid therapy in hospital
- Preoperative tests
An outline based on this scope is included below. It will be adapted and more detail added as the recommendations are written during guideline development.

### Perioperative care overview

1. **Person aged 16 or over having surgery in secondary or tertiary healthcare, or in a general dental practice**

2. **Information and support**

3. **Pre-operative assessment, including identification and measurement of risks**
   - Proactive care of older people undergoing surgery
   - Perfusion and hydration
   - Pre-operative nutrition
   - Pre-operative fasting
   - Pharmacological management
   - Lifestyle optimisation

4. **Intraoperative management**
   - Strict glucose control
   - Intravenous fluid
   - Cardiac monitoring
   - Crew resource management

5. **Post-operative management, including pain management**

6. **Recovery**
   - Enhanced recovery programmes
   - Recovery in specialist areas including intensive care

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5 Further information

This is the draft scope for consultation with registered stakeholders. The consultation dates are 15 November to 13 December 2017.

The guideline is expected to be published in February 2020.

You can follow progress of the guideline.

Our website has information about how NICE guidelines are developed.