Royal College of Anaesthetists

Chapter 6

Guidelines for the Provision of Anaesthesia Services (GPAS)

Guidelines for the Provision of Anaesthesia Services for Day Surgery 2023

Consultation Draft November 2022

NICE accredited
www.nice.org.uk/accreditation

NICE has accredited the process used by the Royal College of Anaesthetists to produce its Guidance on the Provision of Anaesthesia Services. Accreditation is valid for five years from 2023.

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Chapter 6
Guidelines for the Provision of Anaesthesia Services for Day Surgery 2023

Aims and objectives

The objective of this chapter is to promote current best practice for service provision in day surgery anaesthesia. The guidance is intended for use by anaesthetists with responsibilities for service delivery and by healthcare managers.

This guideline does not comprehensively describe clinical best practice in day surgery anaesthesia, but is primarily concerned with the requirements for the provision of a safe, effective, well-led service, which may be delivered by many different acceptable models. The guidance on provision of day surgery anaesthesia applies to all settings where this is undertaken, regardless of funding arrangements. All age groups are included within the guidance unless otherwise stated, reflecting the broad nature of this service.

A wide range of evidence has been rigorously reviewed during the production of this chapter, including recommendations from peer reviewed publications and national guidance where available. However, both the authors and the CDG agreed that there is a paucity of level 1 evidence relating to service provision in day surgery anaesthesia. In some cases, it has been necessary to include recommendations of good practice based on the clinical experience of the CDG. We hope that this document will act as a stimulus to future research.

The recommendations in this chapter will support the RCoA's Anaesthesia Clinical Services Accreditation (ACSA) process.

Scope

Clinical management

Key components for the provision of anaesthesia services for day surgery or to ensure provision of high quality anaesthetic services for day surgery.

Areas of provision considered:

- organisation and administration
- levels of provision of service, including (but not restricted to) staffing, equipment, support services and facilities
- patient information
- areas of special requirement, such as children, prisoners, surgery on isolated sites
- training and education
- audit and quality improvement
- research and areas for further development

Target audience

All staff groups working in day surgery, including (but not restricted to) consultant anaesthetists, staff grade, associate specialist and specialty (SAS) anaesthetists, anaesthetists in training, operating department practitioners nurses and managers involved in day surgery.

Target population

All ages of patients undergoing day surgery.

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Healthcare setting

All settings within the hospital in which day surgery is provided.

Exclusions

This chapter encompasses the anaesthetic service provision for 'true day surgery' patients. It does not include '23 hour stay', endoscopy or outpatient procedures. "True day surgery' patients are those undergoing day surgery requiring operating theatre facilities and/or a general anaesthetic and who are admitted, operated on and discharged on the same calendar day of their surgical treatment.[1]

Clinical guidelines specifying how healthcare professionals should care for patients.

National level issues.

Provision of day surgery services provided by a specialty other than anaesthesia.

Introduction

Day surgery is the planned admission of a surgical patient for a procedure where the patient is admitted, undergoes surgery and is discharged on the same calendar day.[1] If the patient remains in a hospital bed overnight on the day of their surgery they are classed as having undergone inpatient surgery. The term '23-hour stay' surgery is short-stay inpatient surgery and is not included in the UK definition of day surgery. The NHS Plan (2000) stipulated that at least 75 per cent of elective surgery should be undertaken on a day case basis.[1] In 2004, the Department of Health NHS Modernisation agency in its *10 high impact changes for service improvement and delivery* stated that day surgery rather than inpatient surgery should be treated as the norm for elective surgery.[2] In the intervening years, huge strides have been made in the development of day surgery across the country; however, there is wide variation. [3,]The top performing units are achieving very high day case rates; however, others struggle to reach the 75 per cent target as set out in the NHS plan. While absolute day case rates for an individual hospital may reflect differences in case mix, there is still wide variation across the country when comparing individual procedures.[4]

Day surgery encompasses a spectrum of surgical procedures that allows the patient to go home on the day of surgery, usually after a few hours. It represents high-quality patient care which includes surgical techniques with reduced tissue trauma, and utilises enhanced recovery, effective analgesia, minimal adverse events, provision of appropriate information and postoperative support. Improvements in the provision of anaesthesia and analgesia and the introduction of minimal-access surgical techniques allow a range of procedures to be undertaken on a day case basis, which formerly would have required inpatient services.

Day surgery outcomes can be measured in terms of quantity (percentages of procedures undertaken on a day case basis) and quality (for example unplanned admission rates, patient satisfaction, postoperative symptoms). For a hospital to have successful day surgery outcomes, a variety of clinical and managerial processes are required. There should be a multidisciplinary management team responsible for the strategic development and running of the day surgery unit and a dedicated clinical lead or clinical director with allocated programmed activities to allow them to lead service development. Consultant or autonomously practising anaesthetic involvement is essential in the development of policies, protocols and guidelines designed to facilitate smooth running of the day surgery unit and preoperative assessment processes.[5,6,7,8]

There should be a clear day surgery process for all day surgery patients treated within the Trust whether through dedicated facilities, which is the ideal scenario, or through the inpatient operating theatres, which should only be supported if the development of dedicated facilities is

either not a viable option or there is insufficient capacity to accommodate all day surgery activity.

Processes should be in place to ensure that all appropriate patients are considered for day surgery management.[9] This includes adopting the British Association of Day Surgery (BADS) Directory of Procedures and ensuring that all recommended procedures default to day surgery management where clinically appropriate.[10] Preoperative assessment processes, which enable the majority of patients to be safely managed within day surgery pathways, are essential. This includes children, the elderly, and patients with complex medical conditions.

Anaesthesia for day surgery should be consultant-led and all anaesthetists delivering day surgical care must be trained, experienced and skilled in the practice of anaesthesia for Day Surgery. This is in order to provide the high quality anaesthesia pivotal to successful outcomes.[6] The day surgery Unit provides an ideal training opportunity and training in anaesthesia for day surgery is essential. Anaesthetic trainees may undertake Day Surgery lists under appropriate senior supervision.[11] During their day surgery training, anaesthetists need to develop techniques that permit their patients to undergo surgical procedures with minimum stress and maximum comfort and optimise their chance of early discharge.

Effective audit is essential in the provision of quality anaesthesia for day surgery.[3,5,6,12]

Some day surgery units or 'treatment centres' may be sited in a geographically separate location from the main hospital building. Self-contained units must be sufficiently equipped and have access to all the necessary perioperative support services. Patient selection should consider the availability of additional help in an emergency, and ease of overnight admissions if required. Patients deemed unsuitable for anaesthesia or surgery in these isolated locations may very well still be appropriate for a day surgery pathway managed through the main hospital facilities.

Anaesthetists play a pivotal role in achieving successful outcomes for day surgery patients. Working as part of the multidisciplinary team, anaesthetists can and should contribute in more ways than solely providing anaesthesia.

Recommendations

The grade of evidence and the overall strength of each recommendation are tabulated in Appendix 1.

1 Organisation and Administration

1.1 Day surgery should be a consultant or autonomously practising anaesthetist/surgeon led service with a dedicated clinical lead or clinical director who has programmed activities allocated to the role within their job plan. The role of the clinical director is to champion the cause of day surgery and ensure that best practice is followed. This role may involve the development of local policies, guidelines and clinical governance and should be recognised by adequate programmed activity allocation and provided with the administrative and secretarial support necessary to achieve these goals. [3,5,6]

1.2 The day surgery unit should have appropriate administrative support involving patient booking for lists and pre-operative assessment services, communication with patients about admission times and starving instructions, reception to meet and greet patients on the day of surgery and admit them electronically for their procedure.[13]

1.3 Day surgery should be represented at Board -level .[3]

1.4 There should be a senior nurse manager or appropriately trained allied health professional who, with the clinical director, can provide the day to day management of the unit.

1.5 Many larger units, especially those that are freestanding, should consider having a separate business manager to support the clinical director and senior nurse.

1.6 The Clinical Director should chair a management group and liaise with all those involved in day surgery. This will include representatives from surgery, anaesthesia, nursing, pharmacy, management, finance, community care both nursing and medical, audit, professions allied to medicine and representatives of patient groups.

1.7 Effective preoperative assessment and patient preparation, performed as early as possible in the planned patient pathway, is essential to the safety and success of day surgery [5,7,8,11]

1.8 Local preoperative assessment guidelines and protocols should be established. These should be in line with current national recommendations from BADS, GIRFT, CPOC, NHSE and the Preoperative Association.[14,15,16,17]

1.9 Protocols should be available to maximise the opportunity for patients with significant co-morbidities (e.g. diabetes, morbid obesity, sleep apnoea) to be safely managed via a day case pathway. Preoperative assessment should be Inclusive not exclusive.[11]

1.10 Appropriate investigation should be ordered at preassessment, according to a locally agreed protocol. A mechanism for review and interpretation of the results of tests ordered before the day of surgery should be in place.

1.11 The patient should be provided with verbal and written information or directed to available electronic media outlining the day surgery pathway, planned procedure and anaesthetic, and expectation of postoperative recovery, to reinforce the day surgery message.

1.12 Consultant or autonomously practising anaesthetist advice should be available to review an individual patient's suitability for day surgery and to assist with preoperative optimisation in discussion with medical specialists as appropriate. A referral service for nurses or appropriately trained allied health professionals to allow complex patients to have anaesthetic review should be developed. [3,5]

1.13 Consideration should be made towards optimisation of patients on waiting lists so they are ready to be listed once they reach the date for surgery.[18]

1.14 Mixed inpatient and day surgery lists may increase flexibility, but this practice should be minimised, as conflicting priorities can compromise the care of both groups.

1.15 If it is occasionally necessary to undertake day case surgery on inpatient operating lists, the day cases should be prioritised at the beginning of the list to allow time for postoperative recovery and discharge. Starting the list with a day case patient may improve efficiency (no delay to starting list) in times of bed pressures.

1.16 Day case patients should ideally be managed on dedicated day surgery ward areas, to ensure safe and timely discharge.[24]

1.17 Locally agreed guidelines and policies should be in place for pre-operative management on the day of admission. This should include assessment for risk of venous thromboembolism, pregnancy premedication and pathways for major surgery e.g. day case arthroplasty

1.18 Locally agreed policies should be in place for the management of postoperative pain after day surgery. This should include pain scoring systems in recovery and a supply of pain relief medication on discharge, with written and verbal instructions on how to take medications and what to take when the medications have finished. Information on over the counter analgesics to have at home should be given at pre-operative assessment.

1.19 There should be agreed protocols for the management of patients who require unplanned hospital admission following their day case procedure.

1.20 Patients may be discharged home with residual sensory or motor effects after nerve blocks or regional anaesthesia. Duration of the effects should be explained and the patient should receive written instructions as to their conduct until normal sensation returns.

1.21 Discharge should be delegated to nursing staff or allied health professionals trained in nurse led discharge, according to local protocols.[19]

1.22 Postoperative short term memory loss may prevent verbal information being assimilated by the patient.[32] If postoperative analgesia has been provided, clear, written instructions on how and when to take medication should be provided. Other important information should also be provided in writing.[5,36]

1.23 A 24-hour telephone number should be supplied so that every patient knows whom to contact in case of postoperative complications. This should ideally be to an inpatient surgical area of the appropriate speciality and should not be an answer phone.

1.24 Following procedures performed under general or regional anaesthesia, a responsible adult should escort the patient home and provide support for the first 24 hours after surgery.[5] A carer at home may not be essential if there has been good recovery after brief or non-invasive procedures and where any postoperative haemorrhage is likely to be obvious and controllable with simple pressure.[20,21]

1.25 Transport home should be by private car or taxi; public transport is not normally acceptable following GA / regional anaesthesia.

1.26 Where the patient's general practitioner (GP) may need to provide postoperative care within a short time of discharge, arrangements for this should have been made with the GP in advance of the patient's admission.

1.27 The patient's GP should be informed of the patient's procedure as soon as practical, and provided with a written discharge summary, which will usually be completed by the surgeon.

1.28 All patients should receive a copy of their discharge summary in case emergency treatment is needed overnight.

1.29 A number of urgent surgical operations (for example, abscess drainage, superficial lacerations or hand trauma) can be managed on a day case basis, with semi-elective admission to day surgery facilities on the day of operation and discharge later the same day. Effective pre-operative assessment will add to success for these patients. In contrast, the accommodation of emergency inpatients within the ward environment of day surgery facilities, without alteration of the surgical pathway, represents a failure of bed capacity planning and causes disruption of effective ambulatory care.

2 Patient Information

The Royal College of Anaesthetists have developed a range of Trusted Information Creator Kitemark accredited patient information resources that can be accessed from the website. Main leaflets are now translated into more than 20 languages, including Welsh.

2.1 Patients should be provided with information specific to their condition/indication for surgery in addition to information about day surgery. Clear and concise information given to patients at the right time and in the correct format is essential to facilitate good day surgery practice.[5] This information should be provided before the day of surgery and may be given to patients at the surgical clinic or at their preoperative assessment. Verbal information should always be reinforced with printed material or information available from specialist sources online such as the RCoA website. Alternative means of communication with patients, including the internet, email and text messaging, should be considered.[11]

2.2 An explanation of the of the patient pathway for the day of surgery and written information should be provided. This could include infographics or video.

2.3 Information should be arranged in such a way that is comprehensive, comprehensible, age appropriate and suitable for patients with special needs and those with other difficulties understanding and considering the information. It may be necessary to provide information leaflets in a number of different languages to accommodate the needs of the local population.

2.4 The information should be sufficient to allow informed consent and patients should have an opportunity to ask for further information or clarification.[11,22,23]

2.5 In addition to clinical information, patients should be provided with:

- the date and time of admission to the unit
- location of the unit, travel and parking instructions including information regarding parking costs if relevant
- Any relevant preoperative preparations required of the patient
- information on the anaesthetic to be provided, including clear instruction for preoperative fasting and hydration, and the way in which patients will manage their medication
- requirement to arrange an escort home and a postoperative carer if indicated
- postoperative discharge information, including details of follow up appointments, management of drugs, analgesia including stepping down of pain relief, opioids, dressings, and clear instructions on whom to contact in the event of postoperative problems.

2.6 Patients should also be made aware at the preoperative assessment visit that conversion to inpatient care is always a possibility and that they should consider how this may impact on their home arrangements, including any dependent relatives.

3 Staffing Requirements

3.1 Preoperative assessment clinics should have a nominated consultant or SAS lead involved in developing local protocols, co-ordination of day surgery pre-operative services, selection of complex patients for day surgery and audit of outcomes.[3]

3.2 Pre-operative assessment staff should be specifically trained in day surgery pre-operative assessment including optimisation and preparation for day surgery.

3.3 Where possible progress should be made towards development of dedicated day surgery teams with pre-operative assessment delivered by the day surgery team to reinforce the day surgery message.

3.4 High quality anaesthesia is pivotal to achieving successful outcomes following day surgery. The majority of anaesthesia for day surgery should be delivered by consultants or autonomously practising anaesthetists. Staff grade, associate specialist and specialty doctors (SAS) grade doctors and experienced trainee anaesthetists may also provide anaesthesia for day surgery. However, these doctors should be suitably experienced and skilled in techniques appropriate to the practice of day surgery and have undertaken appropriate training in the provision of anaesthesia for day surgery.[11]

3.5 Anaesthetists should have been trained in this field to the standards required by the Royal College of Anaesthetists.[11]

3.6 There should be adequate staffing levels provided within the department to ensure that there is minimal handover of patients between staff.[24]

3.7 Anaesthesia Associates (AAs) should work under the supervision of a consultant or autonomously practising anaesthetist at all times, as required by the RCoA.[25]

3.8 The secondary recovery area in the day surgery unit (day surgery ward) should be staffed to match patients' needs and consideration should be given to the skill mix as well as numbers of staff.

3.9 The secondary recovery area in the day surgery unit (day surgery ward) should be staffed with adequate numbers of registered nurses or allied health professionals trained in nurse-led discharge.[26]

3.10 When children are present on the unit, there should be a registered paediatric nurse present at all times. The Royal College of Nursing standards recommend two registered paediatric nurses at all times.

3.11 When children are present on the unit, support workers and health play specialists should play a key role within day surgery provision.

4 Facilities, Equipment and Support Services

Facilities

4.1 The ideal day surgery facility is a purpose built, self contained, ringfenced day surgery unit (DSU) with its own pre-operative, intra-operative and post-operative facilities. The Association of Anaesthetists believe there is an advantage if pre-operative assessment is performed within the facility where the day surgery will take place. This may be contained within a main hospital or in its grounds to allow access to higher level patient support services if required, or it may be a freestanding unit remote from the main hospital site. [5,28]

4.2 A viable alternative is for patients to be admitted to and discharged from a dedicated day surgery ward, with surgery undertaken in the main theatre suite. This arrangement may be more flexible for complex work and avoids duplicating theatre skills and equipment. Day surgery patients should be prioritised as first on the main theatre list to allow recovery time for successful discharge.[5,6]

4.3 Day case patients should only be managed through inpatient wards in exceptional circumstances as this greatly increases their chance of an unnecessary overnight stay.[6,27]

4.4 The DSU should have no capacity to accept inpatient or emergency admissions.[5]

4.5 Adequate time and facilities should be provided within the DSU to enable the multidisciplinary day surgery clinical team to undertake all aspects of the admission process, including clinical examination, further discussion about the procedure and delivery of information whilst maintaining patient dignity and privacy.[28]

4.6 The minimum operating facility required is a dedicated operating session in a properly equipped operating theatre to the same standards as an inpatient theatre.[28]

4.7 Secure storage for patients' belongings, clothes and medications should be available whilst they undergo their surgery.[28]

4.8 Waiting areas should be available for parents and carers who are providing support to patients immediately after surgery.[6,28]

4.9 Children should be separated from and not managed directly alongside adults throughout the patient pathway, including reception and recovery areas. Where complete separation is not possible, the use of screens or curtains, whilst not ideal may provide a solution.[28,29]

4.10 Dedicated second stage recovery which is usually the Day Surgery Ward should be provided separate from inpatient ward areas. This should ideally have a single sex set up with respect for gender identity.

4.11 The Day Surgery Ward should provide essential, close and continued supervision of all patients, who should be visible to the nursing staff whilst maintaining privacy and dignity.

4.12 The Day Surgery Ward should have the facility to provide drinks and snacks after surgery.[28]

Equipment

4.13 Equipment to allow full individualised pre-operative assessment for day surgery patients should be available, including a 12 lead ECG machine, a sphygmomanometer for BP, weighing scales and equipment for taking blood samples to the same standard as for inpatient pre-operative assessment.[8]

4.14 Theatre and anaesthetic related equipment should always be equivalent to that provided for inpatient surgery. It should be regularly maintained and where possible standardised across all theatre suites within a hospital.[28]

4.15 Full resuscitation equipment and drugs should be provided as outlined by the resuscitation Council and local policy. A cardiac arrest trolly and defibrillator should be provided in the first stage recovery area. [28]

4.16 The use of operating trolleys for the entire patient pathway should be considered to maximise efficiency and reduce manual handling. No beds should be present on the day surgery ward..[5,30]

4.17 The recommended Association of Anaesthetist standards of anaesthetic monitoring should be met for every patient.[31]

4.18 Peripheral nerve blocks or short acting spinal anaesthesia often provide excellent conditions for day surgery. Equipment to facilitate these techniques such as nerve stimulators, ultrasound machines, NR Fit spinal needles and syringes should be available.[5]

4.19 Short acting anaesthetic drugs and appropriate equipment to facilitate their delivery should be available to day surgery units. Total Intravenous Anaesthesia (TIVA) with appropriate depth of anaesthesia monitoring is effective in reducing PONV. Equipment for its use should be available in day surgery theatres.[31]

4.20 Each DSU should have a fully equipped recovery area, staffed by recovery personnel trained to defined standards.[31]

Support Services

4.21 Pre-operative assessment services if provided within DSU should have support from investigation laboratories or clinical testing services to support diagnosis for risk assessment and optimisation of patients. This will allow day surgery selection to be maximised for high-risk patients.

4.22 Access for pre-operative assessment staff to MDT (Multi-Disciplinary Teams) support from other physicians, medical specialists, anaesthetists, surgeons and pain management teams should be available.

4.23 If day surgery does not have pre-operative assessment within its unit there must be an appropriate pre-operative assessment service to support effective day surgery patient selection and preparation.

4.24 Support services including radiology, pharmacy and investigative laboratories should be available.

4.25 The facility to perform a 12-lead electrocardiogram and other point of care tests, such as international normalised ratio, should be available within the DSU itself.

Information technology

4.26 The DSU requires sufficient numbers of IT equipment (computers, screens and mobile computers on wheels) to enable clinicians to access and input the electronic patient record in a timely manner.[5,7,8]

4.27 The DSU requires well-functioning WIFI to support the IT systems in place and maintain efficient running of the service.

4.28 Results from investigations should be available via the electronic patient record or via an appropriate IT system

4.29 DSU must have a clear action plan of what to do in case of failure of IT system and the need to revert temporarily to paper and any equipment or documents must be readily available e.g drug karedexes

5 Areas of special requirement

Children

Day surgery is particularly appropriate for children.

5.1 The lower age limit for day surgery depends on the facilities and experience of the staff and the medical condition of the infant. Ex-preterm neonates should not be considered for day surgery unless medically fit and beyond 60 weeks post conceptual age.

5.2 For children, a staff member with an advanced paediatric life support qualification or an anaesthetist with paediatric competencies should be immediately available.[32,33]

5.3 Infants with a history of chronic lung disease or apnoeas should be managed in a centre equipped with facilities for postoperative ventilation.

5.4 Infants, children and young people should, where possible, be managed in a dedicated paediatric unit, or have specific time allocated in a mixed adult/paediatric unit, where they are separated from adult patients.[29,34]

5.5 Nursing staff caring for children should be skilled in paediatric and day surgical care and trained in child protection.

5.6 There should be access to a paediatrician. Where the DSU does not have inpatient paediatric services, robust arrangements should be in place for access to a paediatrician and transfer to a paediatric unit if necessary.[29]

5.7 A preadmission programme for children should be considered, to decrease the impact and stress of admission to the DSU on the day of surgery. [34,35,36]

5.8 Children requiring day-stay anaesthesia for non-surgical procedures such as imaging, endoscopy, laser treatment to skin lesions, radiotherapy and oncology investigations and treatments should have the same standards of care as those having surgical procedures.

5.9 For children with OSA presenting for tonsillectomy/ adenoidectomy, a careful assessment needs to be carried out guided by consensus statement [37] that advises which children are suitable for District General Hospital care. Children with severe OSA are not suitable for day surgery due to the high risk of postoperative complications.[5]

5.10 Female patients who have begun menstruation should have their pregnancy status ascertained on the day of surgery. Departments should have a policy for pregnancy testing and documentation in line with the Royal College of Paediatrics and Child Health 2012 guidance for clinicians.[38,5]

5.11 Emergence delirium is more common in young children having short procedures, is distressing for parents and staff, and impairs the quality of recovery. Anaesthetic techniques should be modified to minimise the risk of emergence delirium in susceptible children to facilitate smooth recovery and discharge.[5,39,40]

Prisoners

5.12 Pathways and policies for managing prisoners as day cases should be agreed with the local prison. services.[41] This should include a risk assessment and information required to determine if adjustments are needed to maintain the privacy and dignity of the patient and safety of staff and other patients. The pre-operative assessment team must highlight these requirements to the day surgery team.

5.13 The hospital should ensure that prisoners have adequate access to postoperative analgesia. Some prisons do not have the facility to provide analgesia if the medical officer is not on duty. In these cases arrangements are required to enable the prisoner to access the required post-operative medication within the prisoner's cell or for additional arrangements to be made to enable patients to receive overnight postoperative analgesia.

5.14 The hospital should consider making an agreement on the safe provision of privacy and dignity for prisoners with the local prison governor regarding the use of restraints.

5.15 The staff should ensure patients have sufficient information and autonomy to give informed consent, including access to translation where appropriate.

5.16 The hospital staff should ensure that aftercare and observation is as adequate as for a patient returning home with a carer and the security service staff must have some understanding of the procedure performed and provide after-care in accordance with clinical advice.

Emergency day surgery

5.17 A number of urgent surgical operations can be efficiently and effectively treated as day cases via a semi-elective pathway (see BADS procedures). Suitable cases for treatment as day cases should be identified by the surgical team.

5.18 Pathways should be developed to facilitate access to day case surgery for urgent surgery which may prevent recurrent admissions whilst awaiting elective surgery. This includes robust preoperative assessment process to facilitate day case surgery.

5.19 It is essential to determine whether the patient is safe to be sent home with oral treatment and analgesia for up to 24 hours whilst awaiting urgent surgery on a day case basis.

Frail and Older Patients

5.20 Day surgery can be an advantageous choice for the frail or older patient allowing better recovery in their own familiar environment at home and avoiding a hospital stay with risk of exposure to infections

5.21 Patients who are frail or elderly with many co-morbidities should be identified early at pre-operative assessment and risk assessments made.

5.22 Peri-operative plans should be made with carers or relatives involving access to day surgery pathways to increase the chance of success.[13]

5.23 Multidisciplinary involvement early to optimise frail or elderly co-morbid patients may help decrease post operative complications. [13,42]

5.24 Planned early mobilisation and multi modal, opiate light analgesic regimens should be used to reduce post operative delirium in high-risk frail or elderly patients.

5.25 Equipment available to measure depth of anaesthesia may help facilitate recovery with fewer post-operative complications.[43]

Breastfeeding Patients

5.26 Where possible, day surgery is preferable to avoid disrupting normal routines[44]. There are recent guidelines from the Association of Anaesthetists *Guidelines on breastfeeding and sedation in breastfeeding women* which should be followed.

5.27 Patients should be supported to breastfeed as normal following surgery with appropriate facilities including allowing the infant to feed in the perioperative period. There is no requirement to discard breastmilk immediately after surgery.

5.28 Multimodal analgesia should be utilised including regional anaesthesia. Opioid analgesia can be utilised if required, but the patient should be given advice regarding observing the infant for signs of excessive drowsiness. Additional advice for prescribing for breastfeeding patients can be found in the Guideline from Association of Anaesthetists 'Guidelines on breastfeeding and sedation in breastfeeding women'.

Morbidly obese patients

5.29 There should be no restriction to treating a patient as a day case based on weight alone. Even morbidly obese patients can be safely managed in expert hands with appropriate resources.[45,46]

5.30 Anaesthetic review at preassessment is recommended for those BMI >40kg/m2 with associated co-morbidities. Optimisation is important but should allow safe day surgery. Super morbidly obese patients (BMI >50) need particular care in pre-operative assessment and optimisation and may need additional equipment or staffing to be arranged for their safe management.

5.31 Patients should be assessed for their risk of sleep apnoea using validated tools such as STOP BANG.[5] Such tests should be embedded in the pre-operative assessment process and be followed by referral for treatment with CPAP. Obstructive sleep apnoea is a multi system disorder and thorough pre-operative investigation to exclude associated cardiac disorders (Including right heart strain or pulmonary hypertension), metabolic dysfunction or neuropsychiatric disorders is important[35]. Anaesthetic review can determine suitability to proceed to day surgery.

5.32 Whilst even morbidly obese (BMI >40) patients can be managed through a day surgery pathway, it may be inappropriate to operate upon them in an isolated environment. In this case, their surgery could be undertaken through a day surgery pathway using the main hospital operating theatres if this environment has the specialist equipment required for obese patients. The patient should where possible be transferred to the day surgery unit for subsequent secondary recovery and discharge.

Learning and Disabilities

5.33 Pathways for managing of patients with additional needs such as severe anxiety or learning difficulties should be developed so bespoke / individualised care can be delivered to minimise anxiety and stress to the patient

5.34 Pathways should be multidisciplinary starting at pre-operative assessment and involving learning difficulty nurse specialist, if appropriate, patient's usual care team, day surgery team anaesthetist for list and surgeon as appropriate.

5.35 Patients own GP or psychiatrist may need to be involved if sedation prior to coming to hospital is required.

5.36 It is recommended that the day surgery team have a lead nurse to oversee this pathway

5.37 Appropriate planning and discussion is required depending of the level of adjustments that may be needed to the pathway so the pathway needs to include a method of highlighting these patients early

5.38 Consideration to admission times and where the patient is on the list is needed.

5.39 Post op analgesia plan should be discussed and agreed as part of the planning process.

Isolated sites

5.40 Preoperative assessment should identify those patients suitable for day surgery in an isolated site. A 1% risk of mortality has been suggested as a cut-off value for suitability.

5.41 Where day surgery is performed in isolated units, practice should comply with the RCoA guidelines on anaesthetic services in remote sites.

5.42 There should be agreed pathways for patients who require admission to hospital following their day surgery procedure.

6 Training and education

6.1 All day surgery staff should receive appropriate training. This should be tailored to meet the needs of the individual staff member and the day surgery unit.[10]

6.2 Standards and training for clinical staff working within the primary recovery area should be as defined within *Chapter 2: Guidelines for the Provision of Anaesthesia Services for the Perioperative Care of Elective and Urgent Care Patients.*

6.3 Training should be multidisciplinary, with the use of simulation encouraged.[47]

6.4 Appropriate and comprehensive training for anaesthetists in this subspecialty should be given according to current standards as defined by the RCoA.

6.5 Training for all clinical staff involved in the day surgery pathway should emphasise the following aspects:

- patient selection and optimisation for day surgery
- provision of effective postoperative pain relief[48]
- strategies for the prevention of postoperative nausea and vomiting (PONV)
- the necessity of a multidisciplinary team approach in day surgery care
- the requirement for 'street fitness' on discharge
- the postoperative management of patients in the community.

7 Financial considerations

The current focus is on the elective recovery programme and reduction in the backlog of patients waiting for elective surgery. Over 75% of this surgery involves day surgery procedures. Creation of surgery Hubs to facilitate this is being developed. Resources should be delivered to allow peri-operative processes to be optimised to maximise day surgery numbers.

7.1 Funding for pathway redesign and facilities has been provided by central government and local commissioners. Cost analysis should consider all finances, including capital and maintenance costs, staffing and training costs for both the theatre and the ward, as well as costs related to the procedure itself.

7.2 When selecting options for anaesthetic techniques within the day surgery unit, consideration should be given not only to the cost of delivering that anaesthetic but to the wider patient outcome costs. High quality anaesthetic techniques and consumables, including drugs, maybe economically viable even if apparently more expensive.[49 50]

7.3 Business planning by hospitals and surgical departments should ensure that the best resources in terms of equipment and staffing are available within the day surgery unit to provide high quality, efficient, cost effective day surgery services.

7.4 Investment in senior staff experienced in the practice of day surgery is required to ensure high quality, efficient processes.[51]

7.5 A one time investment may be needed to build a dedicated day surgery unit, setting up admission and discharge lounges, preoperative assessment clinics and allied support staff such as physiotherapy and pharmacy.

8 Audit and quality improvement

8.1 The Royal College of Anaesthetists has issued guidance for audits / Quality improvement projects in day surgery.[52] Each DSU should have a system in place for the routine audit of important basic clinical and organisational parameters such as

- Clinical: unplanned inpatient/ overnight admissions following surgery, postoperative symptoms e.g. pain and PONV
- Organisational: non-attendance (DNA) rates, patients cancelled on the day of operation

8.2 Other outcome measures in day surgery that should also be monitored are: [53]

- Clinical: perioperative clinical adverse events, postoperative morbidity: sore throat, headache, drowsiness, VTEs, unplanned return to theatre on same day of surgery, unplanned return or readmission to day surgery unit or hospital.
- Comparator: Outcomes for more complex operations should be compared to ensure day surgery clinical and patient outcomes match those with longer hospital stays.
- Organisational: Proportion of elective surgery performed as day surgery, Theatre utilisation (late starts, early finishes)
- Qualitative: Patient satisfaction, Friends and family data, PROMS

8.3 Current practice in day surgery includes more complex procedures and more elderly patients. Audit of complications related to wound-healing process and impaired mobility based on risk scores can help improve the safe delivery of day surgery service.[12]

8.4 Audits should rely only on procedure specific data and not on overall percentages. Auditors can compare activity by procedure and unit.

8.5 Audit and quality improvement should be coordinated and led by designated staff members. Audit and quality improvement should feed into the hospitals Governance process.

8.6 Audit and quality improvement should be integrated into wider areas of anaesthetic and surgical practice.

8.7 Audit in clinical practice and patient care in day surgery should involve all staff. A system should exist for the regular feedback of audit information to staff, to reinforce good practice and help to effect change and hence drive quality improvement. This feedback may take the form of regular meetings or updates, or a local newsletter.

8.8 For commissioning purposes, suggested indicators of quality of a DSU include:[6]

- day surgery existing as a separate and 'ring-fenced' administrative care pathway
- a senior manager directly responsible for day surgery
- preoperative assessment undertaken by staff familiar with the day surgery pathway

- provision of timely written information
- appropriate staffing levels
- nurse-led discharge
- provision for appropriate postoperative support including follow-up and outreach after home discharge
- involvement and feedback from patients, the public and community practitioners.

This list, however, is not exhaustive and other factors such as theatre utilisation, levels of unplanned overnight admissions after day surgery, management of pain relief and postoperative nausea/vomiting, and complication and readmission rates are also important quality indicators that should be audited regularly.

Research and areas for future development

Research into best practice day surgery should be encouraged.

The following areas are suggested for future research and development:

- procedures not currently undertaken as day surgery, including urgent / emergency surgery which could move into the day surgery arena?
- Does a specific ring-fenced day surgery pre-operative assessment service lead to fewer avoidable cancellations on the day of surgery
- Are patients established on effective CPAP for severe obstructive sleep apnoea safe to undergo more complex day surgery operations
- How much can the use of opiates be reduced in day surgery?

9 Implementation support

The Anaesthesia Clinical Services Accreditation (ACSA) scheme, run by the RCoA, aims to provide support for departments of anaesthesia to implement the recommendations contained in the GPAS chapters. The scheme provides a set of standards and asks departments of anaesthesia to benchmark themselves against these using a self-assessment form available on the RCoA website. Every standard in ACSA is based on recommendation(s) contained in GPAS. The ACSA standards are reviewed annually and republished approximately four months after GPAS review and republication to ensure that they reflect current GPAS recommendations. ACSA standards include links to the relevant GPAS recommendations so that departments can refer to them while working through their gap analyses.

Departments of anaesthesia can subscribe to the ACSA process on payment of an appropriate fee. Once subscribed, they are provided with a 'College guide' (a member of the RCoA working group that oversees the process), or an experienced reviewer to assist them with identifying actions required to meet the standards. Departments must demonstrate adherence to all 'priority one' standards listed in the standards document to receive accreditation from the RCoA. This is confirmed during a visit to the department by a group of four ACSA reviewers (two clinical reviewers, a lay reviewer and an administrator), who submit a report back to the ACSA committee.

The ACSA committee has committed to building a 'good practice library', which will be used to collect and share documentation such as policies and checklists, as well as case studies of how departments have overcome barriers to implementation of the standards or have implemented the standards in innovative ways.

One of the outcomes of the ACSA process is to test the standards (and by doing so to test the GPAS recommendations) to ensure that they can be implemented by departments of anaesthesia and to consider any difficulties that may result from implementation. The ACSA committee has committed to measuring and reporting feedback of this type from departments engaging in the scheme back to the CDGs updating the guidance via the GPAS technical team.

Abbreviations

ACSA	Anaesthesia Clinical Services Accreditation
BADS	British Association of Day Surgery
BMI	Body mass index
CDG	Chapter Development Group
CQC	Care Quality Commission
DNA	Did not attend
DSU	Day surgery unit
GMC	General Medical Council
GP	General practitioner
GPAS	Guidelines for the Provision of Anaesthetic Services
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
PONV	Postoperative nausea and vomiting
PSC	Professional Standards Committee
QMSG	Quality Management of Service Group
RCoA	Royal College of Anaesthetists
RCTs	Randomised controlled trials
SAS	Staff grade, associate specialist and specialty doctors
STOP BANG	Snoring, Tiredness, Observed apnea, high blood Pressure (STOP)-Body mass index (BMI), Age, Neck circumference, and Gender (BANG)

Glossary

Immediately – unless otherwise defined, 'immediately' means within five minutes.

Clinical lead - SAS doctors undertaking lead roles should be autonomously practicing doctors who have competence, experience and communication skills in the specialist area equivalent to consultant colleagues. They should usually have experience in teaching and education relevant to the role and they should participate in Quality Improvement and CPD activities. Individuals should be fully supported by their Clinical Director and be provided with adequate time and resources to allow them to effectively undertake the lead role.

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