



# Guidance on the provision of anaesthesia services for Post-operative Care

When considering the provision of anaesthesia, the Royal College of Anaesthetists recommends that the following areas should be addressed. The goal is to ensure a comprehensive, quality service dedicated to the care of patients and to the education and professional development of staff. The provision of adequate funding to provide the services described should be considered.

## Summary

- After general or regional anaesthesia, all patients should recover in a specially designated area, which should conform to the guidelines of the Department of Health (DH) and Association of Anaesthetists of Great Britain and Ireland (AAGBI) for design and equipment.<sup>1-3</sup>
- Until they have regained control of their airway, demonstrated cardiovascular stability and are able to communicate, patients must be cared for in the recovery area by appropriately trained staff, on a one-to-one basis.<sup>1</sup>
- An appropriate standard of monitoring should be maintained until patients have recovered from anaesthesia and good records made to support effective 'hand-over' to ward staff.<sup>1,4</sup>
- Agreed criteria for discharge of patients from the recovery room to the ward should be in place.<sup>1</sup>
- All patients should receive effective control of pain and post-operative nausea and vomiting (PONV). Local guidelines should be available for the treatment of acute pain and PONV. Scoring systems for pain, PONV and sedation should be in place.<sup>1,5</sup>
- Where emergency surgery is performed, the recovery unit should be open and staffed by appropriately trained resident or on-call personnel.<sup>5</sup>
- There should be a specially designated area for the recovery of children.<sup>1,6</sup>
- For particular categories of patients, visits should be made by an anaesthetist within 24 hours of discharge from the recovery unit.<sup>7,8</sup>
- Requirements for critical care after surgery should be assessed and facilities made available for all patients deemed to need these.<sup>9,10</sup>

## Introduction: The importance of post-operative anaesthetic care

- All patients who have undergone operations, under either general or regional anaesthesia, are at risk of compromise to airway, breathing and circulation.
- Transport of patients, especially between hospitals, immediately after anaesthesia can be hazardous.
- Most patients can be managed in a recovery room, but some may need to be transferred to a critical care environment.
- The purpose of the post-anaesthetic recovery area is to provide care until patients can be safely discharged awake to a general ward or home in a stable condition, or be transferred to a critical care unit if further close monitoring and care are necessary.
- If adequate standards of care are not provided serious complications can occur.

## Levels of provision of service

### 1 Staffing requirements

- 1.1 Until patients can maintain their airway, breathing and circulation they must be cared for on a one-to-one basis.
- 1.2 At least two appropriately trained staff should be present in the recovery room while there is a patient who does not fulfil the criteria for discharge to the ward.
- 1.3 With the exception of circumstances as detailed in 1.2, it is difficult to give guidance on the exact numbers of staff required for any particular recovery area. The staffing levels will depend on factors such as the case mix, numbers of patients and the number of operating lists per session. If the workload is spread unevenly throughout the week, this will have an effect on the deployment of staff and may encourage the use of part-time staff.
- 1.4 During whatever hours of the day emergency surgery is undertaken, the recovery unit should be continuously open and adequately staffed.
- 1.5 After agreed criteria for recovery have been met, an appropriately trained member of staff must accompany patients who are to be transferred to the ward. Relevant information must be given at hand-over.
- 1.6 The anaesthetist should ensure hand-over to the recovery room staff. This includes information relevant to after-care. The anaesthetist is responsible for ensuring that the endotracheal tube is removed safely. Nurses who are trained in the management of supraglottic airways may remove them, although an anaesthetist should be immediately available.<sup>1</sup>
- 1.7 Adequate provision should be made for a member of the anaesthetic team to visit the following groups of patients within 24 hours following their operation:
  - those graded as 'American Society of Anesthesiologists (ASA) Physical Status 3, 4 or 5'
  - those receiving epidural analgesia in a general ward
  - those discharged from recovery with invasive monitoring *in situ*
  - those for whom a request is made by other medical, nursing or other clinical colleagues
  - those for whom there is any other appropriate need.

### 2 Equipment, support services and facilities

- 2.1 The size, design and facilities of the recovery area should meet the AAGBI and DH guidelines.
- 2.2 The recovery room should be sited within the operating department and away from the department's admission area. Similarly, the routes that patients take to individual theatres, to the recovery room and to the wards, should as far as is possible not cross. It is particularly important to make careful provision in this respect when the patients are children.
- 2.3 The recovery area should be situated as close to the operating theatres as possible, and if there are several operating suites each should have a fully equipped recovery area.
- 2.4 An emergency call system must be in place and understood by relevant staff.
- 2.5 There should be enough recovery trolleys of an acceptable design. Where it can be done without compromising safety, patients undergoing major surgery may be transferred to a bed immediately after surgery.
- 2.6 Oxygen and suction should be present in every recovery bay and ideally be delivered by pipeline.
- 2.7 Currently acceptable standards of patient monitoring<sup>4</sup> should be available for all patients. This includes pulse oximetry, and non-invasive blood pressure monitoring. An electrocardiograph, nerve stimulator, thermometer and capnograph should be readily available. Ideally, there should be compatibility between operating theatre, recovery room and ward equipment.
- 2.8 All drugs, fluids and equipment (including a defibrillator) required for resuscitation and management of anaesthetic and surgical complications should be immediately available in every recovery area.
- 2.9 In every recovery area, emergency boxes or drugs for use for management of cardiovascular collapse, anaphylaxis and malignant hyperthermia must be available and regularly maintained. There should be wall-mounted algorithms for the treatment of these conditions.
- 2.10 The range of drugs and the means of their delivery should be subject to regular review. The methods of delivery include devices for epidural, patient controlled analgesia and other drug administration.

- 2.11 Devices such as forced warm air blowers should be available.
- 2.12 Locally devised protocols should be available for discharge criteria, analgesia and treatment, and prevention of nausea and vomiting.
- 2.13 The need for X-rays in the recovery room should be carefully weighed against the hazard to staff and other patients, for whose protection appropriate precautions must be taken.

### 3 Areas of special requirement

#### Children

- 3.1 Particular provision should be made for the care of children.<sup>6</sup>

#### Critically ill patients

- 3.2 Some patients may require ventilatory support or a longer than usual period of observation and treatment in the immediate post-operative period. When critically ill patients are held in the recovery area because of a lack of availability of appropriate facilities elsewhere, this should only occur if recovery staff are appropriately trained, and the recovery area is appropriately equipped to enable full monitoring and treatment. It cannot be assumed that it is safe to use the recovery facility as an extension of critical care, and local policies and procedures should govern this issue.

#### Specialist surgical units

- 3.3 Specialised units such as those involved in cardiothoracic surgery, neurosurgery and transplant surgery should have their own policies and staffing requirements.

### 4 Training and education

- 4.1 All specialist recovery staff should be appropriately trained, to nationally recognised standards.
- 4.2 At least one member of staff present at any given time should be certified as an advanced life support provider.
- 4.3 Core skills and education of recovery staff must be maintained as a programme of continuing professional development.

### 5 Research and audit

- 5.1 Regular revision and audit of standards of care, guidelines and protocols and critical incident reporting are essential in the ongoing development and improvement of post-anaesthetic patient care.

There should be regular meetings of staff to discuss these issues.

### 6 Patient information

- 6.1 Information provided to patients about their anaesthetic should include what to expect in the recovery room.
- 6.2 Some patients, adults or children may need interpreters, parents or other members of their family to be with them. This need is best determined by nursing staff, who are also sensitive to the need for privacy of other patients in the recovery room.

#### References

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