# Guidance on the provision of anaesthesia services for Acute Pain Management

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.

Acute pain is defined as pain of sudden onset that is often severe. Safe and effective management of acute pain associated with surgery, non-surgical interventions and some medical conditions is a basic requirement of any professional health service. Good practice should ensure provision of an evidence-based, high quality, adequately resourced acute pain service dedicated to the safe and effective delivery of pain relief and continuing training of non-specialist staff.

In response to concerns regarding the safe administration of opioids in the hospital setting, the Chief Medical Officers of England, Wales, Scotland and Northern Ireland have written to Chief Executives stressing the importance of local guidelines, monitoring and protocols.[1] They acknowledged that much progress has been made in the management of pain in hospitals and that 'an important contribution to this has come from the continued existence of consultant-led Acute Pain Services, which have promoted the safe and effective use of parenteral opioids.'

## Summary

The following points of service provision are consistent with the 'Pain Management Services: Good Practice', a joint publication of the Royal College of Anaesthetists and The British Pain Society, May 2003.[2] Effective and safe management of acute pain in hospitals requires:

- The provision of services for acute pain management in all hospitals dealing with patients who may experience acute pain.
- A multidisciplinary approach involving medical, nursing and pharmacy staff; input from other healthcare professionals (e.g. physiotherapy) may be required when appropriate.
- Local written guidelines and protocols for good clinical practice in acute pain management reflecting evidence-based recommendations. These should include the use of adequate patient information (including provision for non-English speakers), management of the vulnerable (e.g. neonates, children, elderly, patients with mental health disorders, communication and learning difficulties, physical or cognitive impairment and problem drug use) and equality of service access to all patient groups.
- An ongoing programme of education and training for all healthcare staff involved in the management of patients with acute pain.
- Adequate administrative support, accommodation, facilities and equipment.
- Provision of programmed activities for appropriately trained consultants. There should be a named consultant(s) with responsibility for the acute pain service.
- Availability of acute pain management advice and intervention at all times.
- Close liaison between acute pain management and other services (e.g. chronic pain management, emergency

medicine, spinal and neurosurgery, oncology, primary care, palliative care). This is particularly important when managing acute-on-chronic pain and acute exacerbations of cancer pain.

- Robust governance arrangements and service evaluation, including audit of efficacy, complications and staff training.
- A dedicated service for paediatric acute pain management delivered by staff with appropriate training and competencies.

## Introduction: the importance of acute pain management services

- Acute pain is commonly associated with surgery, trauma, non-surgical interventions and some medical conditions (e.g. myocardial infarction, ureteric colic, acute pancreatitis, sickle cell disease). It may also be an important component of the pain associated with cancer. It is often inadequately relieved[3–4] and poor pain management is a common cause of distress and complaint.
- The relief of suffering associated with acute pain is first and foremost a humanitarian matter; however, effective acute pain management is also likely to improve the quality of clinical care by preventing some complications, reducing hospital stay and promoting recovery and rehabilitation.[5] It can enable more efficient use of acute hospital facilities. Inadequately managed acute pain can have psychological, physiological and socio-economic consequences.
- Pain after surgery or trauma may become persistent and result in severe chronic pain states which are devastating for the patient and often difficult to treat.[6] The pain management service ensures optimal acute pain treatment and may reduce the incidence of this complication.
- Day-case and short-stay surgery require the provision of safe and effective acute pain management to reduce the need for interventions within primary care or return to hospital because of unrelieved pain.
- Excellent acute pain services can enable many procedures to be performed as day cases.
- Multidisciplinary acute pain management was developed in the 1990s and it now has an established evidence base.[7] In September 1990, the Royal College of Surgeons of England and the College of Anaesthetists, 'Report of the Working Party on Pain after Surgery' stated the perceived needs to include 'Organisation of services so that the level of care and monitoring is appropriate both for the clinical condition of the patient and the technique employed' and 'Provision of in-service training for medical and nursing staff involved in the management of postoperative pain. This should include establishment of programmes for the diagnosis and management of the complications and hazards of particular forms of treatment'.[8] These recommendations are still relevant and were endorsed in 2009 by the Chief Medical Officers of England, Wales, Scotland and Northern Ireland.[1] Similar guidance has been published by Quality Improvement Scotland.[9]

The objectives of an acute pain service include:

- systems for regular assessment and individual treatment of acute and acute-on-chronic pain;
- development of protocols for the alleviation of the common side effects associated with pain relief (e.g. nausea, vomiting) and early detection of severe adverse effects (e.g. excessive sedation, respiratory depression, cardiovascular collapse and neuraxial damage);[9–11]
- provision of specialist pain management and advice for difficult acute pain problems (e.g. management of patients already taking strong analgesics for cancer and chronic non-cancer pain, problem drug users);
- early diagnosis and management of neuropathic pain after surgery or trauma;
- liaison with other healthcare teams responsible for the shared care of patients with acute pain;
- provision of acute pain management at all times;
- provision and dissemination of information, education and resources for patients;
- education for nurses, medical staff and other healthcare professionals about the assessment and management of acute pain;
- audit and evaluation of the efficacy of acute pain management, complications and staff training;
- provision of specialised methods of pain relief that can facilitate the recovery of patients after

major surgery (this requires close integration with surgical and other services);[5,12]

- provision and maintenance of equipment;
- pharmacy support;
- support for research in acute pain.

# Provision of an Acute Pain Management Service

## 1 Staff

1.1 The acute pain management service should be led by a named doctor with competence in acute pain management, who takes responsibility and provides leadership for co-ordinating the provision of a safe and effective service. The medical personnel staffing acute pain services in the UK are frequently consultant anaesthetists; they have the appropriate competencies and experience. It is essential that these clinicians have programmed activities for direct clinical care for acute pain as part of their job plans.

1.2 Children's pain management should be supervised by consultants and specialist nurses with competencies in acute and procedural paediatric pain management.

1.3 Specialist acute pain management advice and intervention should be available at all times and staffing should be sufficient to provide prospective cover for all personnel.

1.4 There should be dedicated clinical nurse specialists who:

- advise on acute pain management;
- undertake regular review of acute pain problems;
- undertake education of ward-based staff informally in clinical areas;
- deliver formal education for all disciplines with medical colleagues and other health care professionals;
- liaise with consultant anaesthetists with overall responsibility for acute pain management.

1.5 Provision of effective acute pain management can be optimised by collaboration with other healthcare professionals (e.g. physiotherapists, pharmacists and clinical psychologists). These healthcare professionals should have job plans that include time dedicated to acute pain management.

1.6 Education, training, staffing arrangements and the provision of local recommendations for clinical practice must ensure safe practice at all times, even when core acute pain staff are not on duty.

1.7 All post-anaesthesia care unit staff must be trained in basic pain management and be able to employ protocols to minimise pain and side effects; this is pivotal to the successful management of post-operative pain.[8]

1.8 Provision must be made for access to specialist pain medicine advice when difficulties with pain management arise. Acute-on-chronic pain may be particularly difficult and often requires input and follow-up from chronic pain teams. The chronic pain service should have sufficient staff and resources to provide support for acute pain teams when needed. It is recommended that hospitals should offer an integrated pain service led by Fellows of the Faculty of Pain Medicine, Royal College of Anaesthetists (FFPMRCA).

1.9 In non-surgical clinical areas (e.g. medical wards, emergency medicine, interventional radiology, palliative medicine), there should be staff with knowledge and skills sufficient to provide safe and effective acute pain management for patients with non-surgical acute pain. Their pain management must be of the same standard as for patients with post-operative pain.

1.10 There should be sufficient administrative and clerical staff to support the acute pain service.

## 2 Equipment, Support Services and Facilities

### 2.1 Equipment

Appropriate equipment should be provided to ensure safe and effective pain management in adults and children. This equipment includes specialised delivery devices for 'spinal' (epidural and intrathecal) infusion, patient-controlled analgesia systems (PCAS) and monitoring. Pumps and PCAS should be dedicated for use in acute or acute-on-chronic pain management only. It is essential that all staff have formal training and achieve competencies in the use of all medical equipment for which they are responsible. The pain management service should ensure that maintenance contracts and a rolling replacement programme for equipment are in place. All staff should be aware of local recommendations for the introduction and use of new medical devices within their service. They should also be aware of national recommendations regarding patients' safety and medical equipment (e.g. National Patient Safety Agency). These issues should be covered in induction programmes for new staff members.

### 2.2 Drugs

For PCAS devices and 'spinal' infusions, drugs should be supplied in clearly identifiable, aseptically prepared containers. There must be mechanisms in place that ensure that spinal drugs are not inadvertently administered by other routes. For example, drugs for spinal use must be stored separately from those intended for intravenous infusion in order to reduce the likelihood of administration errors and serious adverse events. Spinal and epidural drugs should be prepared in a central sterile unit; they should not be prepared by staff in clinical areas unless there are exceptional circumstances. In this event, the reason should be recorded in the patient's notes. The post-anaesthesia care unit should have a suitable stock of necessary drugs and equipment to ensure that optimal post-operative pain relief is established before patients return to surgical wards or are discharged. This facility should be available at all sites where out-of-hours operating occurs. In non-surgical clinical areas, drugs and equipment should be sufficient to provide safe and effective acute pain relief.

### 2.3 Facilities

Appropriate office space should be provided for the acute pain service, as well as administrative, secretarial and information technology support. Critical care facilities should be available for appropriate patients. There should be storage space for PCAS devices, pumps and educational materials.

### 2.4 Protocols, guidelines and recommendations for practice

Appropriate recommendations should be promulgated, widely disseminated and readily available in all clinical areas where acute pain is managed; these must be reviewed regularly. Pain and its management must be assessed and documented on a regular basis using validated tools for each clinical setting. As a minimum, such clinical recommendations should address the assessment and documentation of acute pain, analgesic prescriptions, clinical management of acute pain in different situations including PCAS and spinal (epidural and intrathecal) infusions. Pain intensity should be regarded as a 'vital sign' and recorded as regularly as pulse and blood pressure. The response to treatment and side effects of pain therapies should also be clearly documented. The prescription of analgesics should be reviewed regularly to ensure that pain management is adequate, timely and appropriate. Protocols relating to pain management techniques, complications and important scenarios (e.g. management of spinal techniques and anti-coagulants, prevention/detection of spinal infections after regional techniques) should be in place and adhered to wherever the techniques are used.

## 3 Areas of Special Requirement

3.1 Specific arrangements must be made for the management of pain in neonates, infants and children; this must be of the same standard as for adults and delivered by appropriately trained staff with competencies in paediatrics.

3.2 Specific arrangements must be made for the management of acute pain in patients:

- with special needs, by virtue of their vulnerability or disability (e.g. elderly, physical and intellectually disabled, non-English speakers);
- with problems of drug and substance misuse;
- with opioid tolerance as a consequence of long-term opioid use;
- with chronic pain who develop acute pain problems.

3.3 Specific arrangements must be made for the management of patients undergoing day-case surgery; effective analgesia and simple instructions must be provided for home use and advice given on seeking further help if pain relief is unsatisfactory.

3.4 There should be an established mechanism for the management of serious complications from epidural analgesia (e.g. neurological damage, haematoma and infection).[13–14] This must include the immediate availability at all times of laboratory investigations, imaging and support from other teams (e.g. microbiology, radiology, neurology, spinal surgery, neurosurgery). It is essential that all units that provide spinal analgesia have rapid access at all times to appropriate scanning techniques and surgical support.

## 4 Training and Education

4.1 Education is a key factor in the provision of effective and safe acute pain management. Ultimately, changes in clinical practice and behaviour depend upon the quality and quantity of education and training. The acute pain service should be involved in education and training at all levels.

4.2 All personnel involved in acute pain management should be trained with regard to the delivery of a safe and effective service. Such training should include communication skills, pain assessment, pain management options, use of relevant equipment and the early detection/management of problems.

4.3 Participation in an ongoing programme of continuing education and professional development should be encouraged for all staff

in pain management services; funding should be provided for these activities and staff must be released to attend. It is important that this training is updated regularly to maintain competencies to assure and improve the quality of care.

4.4 It is essential for the welfare of patients that all trainee anaesthetists are guaranteed training time in pain management sufficient to meet the requirements of training in pain as specified by the Faculty of Pain Medicine, Royal College of Anaesthetists. Some centres will be able to include the option of training at an advanced level to comply with entry requirements for the Fellowship of the Faculty of Pain Medicine.

## 5 Research and Audit

5.1 There should be a regular and systematic audit of results, outcomes, complications and side effects of pain management; potential topics are suggested in the Royal College of Anaesthetists Audit Recipe Book.[15]

5.2 Effective critical incident reporting and analysis are essential.

5.3 There should be support for clinical research focused on properly designed and conducted investigations.

## 6 Organisation and Administration

6.1 Delivering high quality acute pain management is a basic requirement of a modern health service and meets minimal expectations of patients and their carers. It is also concerned with the prevention and management of many serious perioperative complications. Therefore, hospitals should ensure that adequate resources and funding are allocated to enable the acute pain service to function appropriately.

6.2 Purchasing and commissioning organisations should ensure that acute pain management is specified as part of the contracting process; this will require identified funding for designated staff, equipment and facilities.

6.3 An acute pain service requires close links with other services (e.g. chronic pain, palliative care, emergency medicine, primary care).

## 7 Patient Information

7.1 Patients should be able to make informed decisions about pain management techniques. Recommendations from the Department of Health and the General Medical Council for obtaining consent require that patients are given information in verbal and written forms and in a way that they can understand.

7.2 Special provision is needed for those whose first language is not English or for those who have problems that affect communication (e.g. visual, hearing, or cognitive impairment or learning difficulties).

## References

1 Letter from Sir Liam Donaldson. *DoH*, London, 23 July 2009 (Gateway Reference: 12266) (www.rcoa.ac.uk/docs/ITEM%204.1%20-%20Safe%20administration%20of%20parenteral%20opioids.pdf).

2 Pain management services. Good practice. *RCoA and Pain Society*, London, 2003 (www.rcoa.ac.uk/docs/painservices.pdf).

3 Apfelbaum JL et al. Postoperative pain experience: results from a national survey suggest postoperative pain continues to be undermanaged. *Anesth Analg* 2003;**97(2)**:534–540.

4 NHS Surveys: Focused on patients' experience (www.nhssurveys.org/).

5 White PF et al. The role of the anesthesiologist in fast-track surgery: from multimodal analgesia to perioperative medical care. *Anesth Analg* 2007;**104(6)**:1380–1396.

6 Macrae WA. Chronic post-surgical pain:10 years on. *BJA* 2008;**101(1)**:77–86.

7 Acute Pain Management: Scientific Evidence. Third Edition. *ANZCA*, Australia, 2010 (www.anzca.edu.au/resources/books-and-publications/acutepain.pdf).

8 Commission on the Provision of Surgical Services. Report of the Working Party on Pain After Surgery. *R Col Surg Eng and RCoA*, London, 1990.

9 Anaesthesia: Care Before, During and After Anaestheia – Standards. NHS Quality Improvement Scotland, 2005 (www.nhshealthquality.org/nhsqis/controller?p_service=Content.show&p_applic=CCC&pContentID=260).

10 Cashman JN, Dolin SJ. Respiratory and haemodynamic effects of acute postoperative pain management: evidence from published data. *BJA* 2004;**93(2)**:212–223.

11 Dolin SJ, Cashman JN. Tolerability of acute postoperative pain management: nausea, vomiting, sedation, pruritus, and urinary retention. Evidence from published data. *BJA* 2005;**95(5)**:584–591.

12 Kehlet H, Wilmore DW. Evidence-based surgical care and the evolution of fast-track surgery. *Annals of Surgery* 2008;**248(2)**:189–198.

13 Cameron CM et al. A review of neuraxial epidural morbidity – Experience of more than 8,000 cases at a single teaching hospital. *Anesth* 2007;**106(5)**:997–1002.

14 Major complications of central neuroaxial block in the UK. 3rd National Audit Project (NAP3). RCoA, London, 2009 (www.rcoa.ac.uk/index.asp?PageID=717).

15 Raising the Standard: A compendium of audit recipes (Second edition). *RCoA*, London, 2006 (www.rcoa.ac.uk/index.asp?PageID=125).