Section 11: Acute pain services

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Education and training by the acute pain team

Sister T J Towell

Why do this audit?
In-service education and training is an important aspect of the Acute Pain Service (APS) role.1–3 Medical and nursing education is still found to be inadequate with many doctors and nurses trained outside of the United Kingdom.3–5 Changes in clinical practice may be successfully introduced following tutorials, practical instruction on the wards,6,7 a reduction of the restrictions on drug administration,7 induction programmes and mandatory training.3,4 It is important to establish, update and provide this training on a regular basis in order to improve care and ensure patient safety.3,7–9

Best practice: research evidence or authoritative opinion
The introduction of an APS into a hospital leads to improved knowledge, improved regular assessment of patients’ pain and to the safe implementation of multi-modal pain management strategies.1,2,6
However, educational efforts to bring about sustained changes in practice have been slow, for patients outside the APS immediate sphere of influence.7

Suggested indicators
The following relate to educational initiatives provided by the APS.
% pre-registration house surgeons who have attended a pain management induction tutorial.
% other ward-based junior surgical staff who have attended a pain management tutorial in the last 3 years.
% ward-based junior staff (all specialties) who have had the opportunity to attend such a tutorial in the time scale above.
% trained nurses in all surgical areas who have received pain management training in the last 3 years.
% trained nurses on wards where epidurals are used who have attended training in the care of patients with epidurals in the last 3 years.
% trained nurses who have had the opportunity to attend such a tutorial in the time scale above.
% of trained nurses who achieve 80% pass rate for the questionnaire.10

Proposed standard or target for best practice
100% pre-registration house officers should have attended a pain management induction tutorial.
66% other ward based surgical staff should have attended a pain management tutorial in the last 3 years.
100% junior surgical staff should have had the opportunity to attend.
100% trained nurses on surgical wards should have received pain management training in the last 3 years.
A target of 66% trained nurses on wards where epidurals are used should have attended training in the care of patients with epidurals in the last 3 years.
100% trained nurses should have had the opportunity to attend.
100% trained nurses should have had the opportunity to complete the questionnaire in the last 3 years.
**Acute pain services**

**Suggested data to be collected**

Training attended by ward staff, A&E staff, out-patients departments such as fracture clinic, endoscopy and radiography/imaging.

Type of training (in-service training day, training package for private study, informal ward based tutorial, APS ward round) and subjects covered (PCA, PONV, epidural, entonox, regional blocks, intrathecal opioids, wound infiltration devices, IV bolus, SC algorithms, analgesia ladder).

**Common reasons for failure to reach standards**

Lack of communication/advertising/resources to provide tutorials.

Lack of study time available for staff to attend tutorials.

Wards too busy to allow staff to attend tutorials.

Lack of mandatory training in induction programmes or preceptorship programmes.

Lack of interest/awareness.

**References**


Patient information on pain management

Mrs A Jolly

Why do this audit?

Successful acute pain management depends on many factors. One is the understanding by patients of the importance of pain relief, especially following major surgery. Another is explaining the problems that can arise if pain relief is not effective, the different types of pain relief available and the importance of taking regular analgesia.

Best practice: research evidence or authoritative opinion

Preoperative education improves patient or carer knowledge of pain and encourages a more positive attitude towards pain relief. On the other hand one study examining preoperative information and patient controlled analgesia (PCA) has shown patients were better informed about PCA than the control group but there was no effect on pain relief.

Information regarding pain relief in hospital is available from general and specialist national bodies and from many local hospital acute pain services.

The hospital Patient Information Group or equivalent should check locally developed leaflets before the final draft. This is to ensure the use of plain English and answer frequently asked questions.

Information regarding pain relief can be given to patients in pre-assessment and antenatal clinics. Patient information leaflets are sent out to patients with their admission details. This gives them time to assimilate the information and allows time to answer any queries. This has been shown to be more effective than displaying leaflets.

Suggested indicators

% elective patients receiving preoperative information about pain management.

% unplanned admission patients receiving information regarding pain management.

Proposed standard or target for best practice

100% elective patients receive preoperative information on pain management.

80% unplanned admission patients receiving information on pain management.

Suggested data to be collected

Audit acute pain service (APS) information leaflets are sent to all elective surgical patients. Periodic audits to check distribution is continuing from admissions office.

Audit nurses’ knowledge of leaflets, location and contents.

Periodic audit of availability of leaflets on surgical wards.

Collection of data by anaesthetists and nurses by asking patients if they received information about pain management.
Common reasons for failure to reach standards

- Failure of admissions personnel to include information leaflets in admission packs.
- Inability to determine type of analgesia to be used, e.g. coagulation status.
- Failure to inform patients requiring unplanned surgery of pain management options because of time limits.
- Lack of information regarding nature of emergency surgery.
- Some patients may receive information but fail to understand the information given.
- Some patients are too ill and there is no time to give information.
- Language difficulties.
- Some patients will never comprehend information or wish to.

Related audits

1.1 – Patient information about anaesthesia

References

Pain management in the recovery room

Mrs J Marshall, Mrs F Duncan

Why do this audit?
The overall incidence of severe pain after surgery reported in the literature is 11%. Effective pain management affects morbidity and duration of hospital stay. Effective pain management in the peri and postoperative period helps to ensure the best outcome for the patient and prevents unnecessary distress. This audit identifies the pain score upon waking and the time taken to achieve a pain score of below 4 on a 0–10 Visual Analogue Score (VAS).

Best practice: research evidence or authoritative opinion
Effective pain management is fundamental to the quality of care received by patients. Preventive analgesia rather than pre-emptive analgesia has an effect on postoperative pain. No patient should return to the ward in uncontrolled pain where problems will escalate. This may be defined as a pain score of 4 or more on a VAS. Evaluate, treat and re-evaluate frequently, e.g. every 15 min initially.

Suggested indicators
% patients arriving in the recovery room following surgery with a pain score on first waking less than 4 (0–10 VAS).
% patients in the recovery room who have a pain score of 4 or more 30 min after first waking.

Proposed standard or target for best practice
100% patients have a pain score of < 4 on first waking in the recovery room after surgery.
100% patients should have a pain score of < 4 within 30 min of first waking in the recovery room.
100% of patients should have regular and breakthrough analgesia and anti-emetics prescribed prior to discharge.

Suggested data to be collected
Identifier of individual anaesthetist.
The time of first eye opening, the pain score on waking and the pain score at 30 min.
If the pain score is 4 or more, time for a score less than 4 to be reached.
Pre- intra- and postoperative analgesia administered.
Surgery performed.
Age and sex of patient.
Reasons for high pain scores.
Follow up the patient 24 h post discharge from the recovery room to assess VAS or next day follow up telephone interview if day case.
Document length of time in recovery and include patient’s preoperative pain score.
Acute pain services

Common reasons for failure to reach standards

- Failure by anaesthetist to judge the need for analgesia correctly.
- Failed local or regional block.
- Workload in recovery room.
- Lack of recovery room protocol for nurse administered IV opiates.
- Failure to identify patients with long-term opioid exposure preoperatively.
- Failure of staff to appreciate importance of need to manage pain effectively and pro-actively.

References

Assessment and documentation in acute pain management

Mrs A Dwyer, Dr T Johnson, Dr J Turner

Why do this audit?

Regular clinical assessment is essential in order to inform decisions regarding acute pain, its management and resulting side effects. Comprehensive and systematic documentation will assure continuity of care and avoid complications.

Scoring levels of pain is only one component of a very wide range of quality assurance methods that ultimately will save time and effort for staff, avoid expensive legal cases for trusts and most importantly facilitate the best analgesia for our patients.

The availability and use of documentary systems within acute pain services is an excellent topic for audit.

Best practice: research evidence or authoritative opinion

Effective and safe acute pain services will be able to demonstrate:
- local treatment protocols defining observations required
- maintenance of equipment
- appropriate documentation for charting observations
- completion of documentation (leads to improved pain control)\(^1\)
- competency of staff
- patient information
- evidence of reporting, analysing and preventing adverse incidents.

These are all requirements of the Clinical Negligence Scheme for Trusts\(^2\) and incorporate good medical practice.\(^3\)

Suggested indicators

Protocols

Protocols should be specific to the techniques used and based on the highest level of recent evidence that is available.\(^1\) The protocols should be dated and have a date for review. There should be an agreed and unique formal arrangement for recording the directions of the anaesthetist (e.g. minimum acceptable blood pressure) together with contingency recommendations for action.

Charts

Clinical data for pain and analgesia and its side effects may be integrated with other observations to avoid duplication but the directions must be explicit. The type and frequency of observations required should be clearly stated. Pain scores should be appropriate to patient culture, language and development and take into account cognitive and emotional states.\(^1\)

Other documents

A clear, concise operating manual should be available for each piece of equipment that is used (can this be easily located?).

Adhesive labels and order sheets may be helpful to guide prescription and avoid prescribing errors (are these available?).

Written information can assist patients in understanding postoperative analgesia – there should be evidence that these have been used (ask the patients).
Acute pain services

Ward staff should be able to demonstrate training and competence with the techniques (have they got training certificates?).
There should be evidence of and documentation of action regarding adverse incident reports (ask the team leader).

Proposed standard or target for best practice
Audit should confirm that all of these audit standards are met.
It is difficult to justify support for services that do not strive towards this goal.

Suggested data to be collected
As above in suggested indicators.

Common reasons for failure to reach standards
Lack of leadership.
Lack of clear protocols.
The protocols are perceived as inappropriate.
Poor integration with other hospital teams, e.g. education and training, equipment maintenance, pharmacy, or operating department.
Failure to record observations may suggest that staff are poorly motivated or resourced to comply.

References
2 Clinical Negligence Scheme for Trusts (CNST) (see: www.nhsia.com/Claims/Schemes/CNST/).
Effective pain management is important for clinical and humanitarian reasons. Humanitarian pain relief is important for patient comfort and for the reduction in postoperative psychological stress. Poorly managed postoperative pain is associated with morbidity in many physiological systems leading to increased morbidity, to a need for critical care support and in some instances death. Analgesia fails in many patients despite the use of modern techniques.

The use of modern methods of pain relief such as patient controlled analgesia (PCA) and epidural infusions have been shown to be effective and safe when used under the supervision of an Acute Pain Team. Patient controlled analgesia achieves humanitarian pain relief objectives in the majority of appropriate cases but does not confer any protection against postoperative morbidity. Epidural analgesia has been demonstrated to decrease perioperative morbidity particularly in high risk patients.

Pain free at rest is a good indicator of humanitarian pain relief. Dynamic analgesia, defined as adequate pain relief to allow free movement, deep breathing and effective coughing, is necessary to avoid pain related morbidity. Failure of the chosen technique due to technical reasons can lead to breakthrough periods of inadequate pain relief that can be physiologically or psychologically detrimental. Causes of and duration of these failures should be monitored.

All patients should be pain free at rest. Dynamic analgesia should be achieved in patients at risk of respiratory or cardiovascular morbidity due to surgical or medical causes. Failure of analgesia should be detected within 2 h and managed effectively.

Suggested data to be collected

Pain scores based upon ‘pain at rest’ and on movement/coughing.
Frequency of analgesia failure.
Duration of analgesia failure.
Reasons for analgesia failure.

Common reasons for failure to reach standards

Inadequate dose on PCA or epidural.
Wrong choice of technique.
Poorly sited epidural (usually too low).
Slow or absent response to high pain scores by nursing staff.
Inadequate education of medical/nursing staff.
References


## Why do this audit?
Modern pain management techniques such as patient controlled analgesia and epidural infusions are associated with well known risks and complications. Common complications such as epidural-induced hypotension need to be well managed in order to avoid associated morbidity. Basic organisational approaches need to be in place to ensure adequate monitoring and supervision of these patients. Rare complications, for example epidural haematoma, need to be investigated, treated and reported.

## Best practice: research evidence or authoritative opinion
The requirements for the safe use of these techniques have been clearly outlined in the 1990 'Pain after surgery' document and much of this guidance remains valid. The 2004 document from the Royal College of Anaesthetists, British Pain Society and others gives further guidance on the safe management of epidural analgesia.

## Suggested indicators
- Existence of structure and resources for Acute Pain Services (APS).
- Presence of and compliance with technique specific protocols.
- Use of appropriate monitoring and frequency/effectiveness of nursing observations.
- Collation of adverse events and review of possible contributory factors.

## Proposed standard or target for best practice
- APS in every hospital with one whole time equivalent (WTE) pain nurse per 250 patients and a minimum of one consultant session per week for acute pain.
- Protocols and monitoring that are in line with current recommendations.
- 100% recognition and review of adverse events.
- Monitoring in place in all cases. Observations performed in line with protocols and appropriate measures taken.

## Suggested data to be collected
- Review of service provisions and protocols against national guidelines.
- Use of monitoring.
- Frequency and accuracy of nursing observations.
- Collate adverse critical incidents particularly major and minor neurological complications, cardiovascular collapse and opioid induced respiratory depression – Report these to National Patient Safety Agency and via the National Confidential Acute Pain Critical Incident Audit (NCAPCIA – see www.ncapia.org.uk).
Common reasons for failure to reach standards

- Poor resources for acute pain services.
- Inadequate recording and reporting by nursing staff.
- Failure to recognise late complications at subsequent follow up, e.g. epidural related infection or pressure sores. ('Late' may mean after discontinuation of a particular technique or after discharge from hospital).
- Inadequate education of medical/nursing staff.

References


Management of acute pain in the non-postoperative patient

Dr A P Vickers

Why do this audit?

Effective analgesia is capable of modifying many of the pathophysiological responses to injury, thereby assisting recovery. 1 All patients should have the benefits of effective pain management. Anaesthetists and the Acute Pain Service (APS) are closely involved in the management of patients with pain after surgery. Acute pain, however, occurs in many other situations including trauma (A&E, orthopaedic ward), ischaemic limbs and pancreatitis (surgical ward), acute back pain (orthopaedic ward), and painful procedures (medical and surgical wards, radiology). Many different departments and specialties will be involved in this broad group, and it may be a challenge to recruit the interest and enthusiasm of these professionals to collect data, apply these standards and introduce corrective measures.

Best practice: research evidence or authoritative opinion

Regular assessment of pain leads to improved acute pain management. 1 Staffing levels, their knowledge and skills, and the availability of drugs and equipment should be sufficient to provide safe and effective pain relief for patients with non-surgical acute pain to the same standard as for patients with postoperative pain. The provision of guidelines may be helpful in this situation. 2 There should be a uniform pain scoring system throughout the hospital.

Suggested indicators

% patients with painful conditions who have a completed record of pain scores.
% of patients who score moderate or severe pain on more than one consecutive assessment.
% of patients with moderate or severe pain who receive analgesia within 15 min of assessment.
% of medical and nursing staff who have received education and training in the management of acute pain in the past 12 months.
% of wards and clinical departments with current guidelines for managing acute pain relevant to their particular areas.

Proposed standard or target for best practice

The same standards applied locally to postoperative patients should be the target here too. The following are suggested:

- 100% patients with acute pain should have a completed record of pain scores.
- < 10% patients should have an unacceptable peak or average pain score.
- Of patients with an unacceptable score, 100% should receive treatment within 15 min of the score being documented.
- > 95% patients requiring treatment should have a reduced pain score within 30 min of treatment. This should be documented on the chart.
- 95% of staff should have received training within the past 12 months.
- 100% of clinical areas should have current relevant guidelines for managing acute pain.
Suggested data to be collected

Appropriate data to assess the standards recommended above need to be collected. Continuous collection of data may be unworkable.
Specific clinical areas (e.g. A&E) or particular groups of patients (e.g. patients with fractured neck of femur prior to surgery) should be targeted periodically with the intention of covering all areas within a period of 2 years.

Common reasons for failure to reach standards

A belief that pain is always easy to manage and does not require regular reappraisal.
Reluctance to consider pain score as 'vital sign'.
Fears of addiction and toxicity.
Low patient expectations.

References

Patient satisfaction with pain management

Mrs J Gregory

**Why do this audit?**

Capturing the individual patient’s experience of pain should be central to endeavours to improve pain management. The management of pain should be evaluated by the patients themselves. The development of policy, research and education should be influenced by the patient’s experience.

Patient satisfaction is a key indicator of performance.

**Best practice: research evidence or authoritative opinion**

Satisfaction ratings are subjective and cannot be evaluated in an objective way. Patients have been found to be satisfied with overall pain relief despite severe pain in the previous 24 h; they expect pain postoperatively and accept it.

The Picker Institute has used surveys of satisfaction since 1987 in USA and 1994 in UK. They measure patient experience rather than satisfaction. Pain management is included in one of the eight dimensions measured. The questionnaire can be used for in-patients, out-patients, maternity and A&E departments.

**Suggested indicators**

% patients followed up regarding the management of postoperative pain. This should include day cases and in-patients.

% patients satisfied with the information they received about postoperative pain and proposed pain control method.

% who feel that the hospital staff did everything they could to control pain.

% patients who would choose an alternative method of pain relief if they were to need further surgery.

**Proposed standard or target for best practice**

100% of patients within an audit period should have follow up.

100% of day cases should be followed up.

100% of patients were given information or explanations about pain control.

100% patients feel that hospital staff did everything they could to control pain.

< 10% patients should opt for an alternative method of pain relief.

**Suggested data to be collected**

Telephone audit of all day cases 24 h following discharge home.

Postal questionnaires to be completed at home using a Likert type scale.

Picker Institute questionnaires of experience data.
Acute pain services

Common reasons for failure to reach standards
- Failure to contact day case patient by telephone.
- Failure of patient to return postal questionnaire.
- Insufficient funds and clerical support to provide telephone or postal follow up.

References
4 Picker Institute (see: www.pickereurope.org/).
Acute pain management and the drug-abusing patient

Dr A P Vickers, Mrs A Jolly

Why do this audit?

It has been shown that drug abusers may receive sub-standard acute pain management. There are several reasons for this including preconceptions about the behaviour of such patients by healthcare staff and possible reluctance by the patients themselves to reveal their problems for fear of being discriminated against. All patients should benefit from safe and effective pain management. The risk of abuse of analgesics by some drug addicted patients means that efforts must be made to protect them from self-induced harm.

Best practice: research evidence or authoritative opinion

Effective management of acute pain in patients with substance abuse disorder may be complex. There is a need to provide effective analgesia and to prevent withdrawal as well as dealing with possible psychiatric disorders and social problems. A team approach is essential. Appropriate education and written guidance are vital. Many patients will be known to local community drug teams (CDT) and street addicts may accept referral to such services. Close liaison with the CDT and primary care is essential to ensure continuity of care.

Suggested indicators

Local guidelines for managing acute pain in drug addicted patients.
Local guidelines for the management of such patients on discharge including liaison with the CDT and GP (to include contact numbers).
Availability on all wards of the Department of Health Guidelines on clinical management of drug misuse and dependence.3
Guidance for the management of withdrawal.
Guidance for the management of overdose.
Guidance for the management of recovering patients.
Education programme for medical and nursing staff to include the drugs used to manage addictions, e.g. methadone, Subutex (buprenorphine) and naltrexone.

Proposed standard or target for best practice

100% availability of written material.
100% of medical and nursing staff on acute wards should be aware of this material.
100% of patients registered as drug addicts notified to CDT ± GP within 72 h of admission.
100% of medical and nursing staff should have received appropriate education within the past 12 months.

Suggested data to be collected

Availability of appropriate written guidance.
Assessment of staff knowledge about managing acute pain in drug addicts and about the availability of local guidelines.
Confirmation of contact with CDT and patient’s key worker from hospital records.
Confirmation of maintenance dose and number of doses supplied of methadone or Subutex from CDT or patient’s registered pharmacy.
Acute pain services

Common reasons for failure to reach standards
Lack of an Acute Pain Service.
Failure to appreciate the importance and difficulties of managing acute pain in drug addicted patients.
Failure to develop appropriate lines of communication with local drug services.

References
### Compliance with RCoA guidelines for managing epidural analgesia

**Dr A P Vickers, Mrs A Jolly**

#### Why do this audit?
Continuous epidural analgesia can offer excellent pain control following, for example, major intra-abdominal or intra-thoracic surgery. Serious complications can be associated with this technique. Analysis of what is known of such events suggests that a ‘systems failure’ is often a major factor. The publication in 2004 of guidelines for good practice by the RCoA and other bodies¹ provided Acute Pain Services with a strong foundation for the safe management of this invasive technique.

#### Best practice: research evidence or authoritative opinion
The RCoA publication *Good practice in the management of continuous epidural analgesia in the hospital setting* described the requirements for good practice under the headings of patient selection and consent, personnel and staffing levels, wards and nursing areas, technique for catheter insertion, equipment for continuous epidural analgesia, drugs for continuous epidural analgesia, monitoring of patients, documentation, guidelines and protocols, audit, and education.¹

#### Suggested indicators
Availability for all healthcare staff who are directly involved in acute pain management of the RCoA publication *Good practice in the management of continuous epidural analgesia in the hospital setting*.¹

Compliance with the recommendations for good practice. Some of these recommendations can be considered mandatory but many are advisory and can be adapted for local practice.

#### Proposed standard or target for best practice
- 100% availability of the RCoA booklet.
- 100% compliance with all recommendations.

#### Suggested data to be collected
Observation of the clinical process of managing epidural analgesia to include, for example, the insertion of the epidural catheter, the availability of appropriate staff, the availability of suitable drugs etc.

Log of staff training.

Availability of written material including observation chart, contact numbers, protocols and guidelines.

#### Common reasons for failure to reach standards
- Absence of an Acute Pain Service.
- Inadequate resourcing of Acute Pain Service.
- Inadequate staffing levels.
- Frequent changes of staff.
- Lack of support from management.
Acute pain services

References
