Section 12: Chronic pain services

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12.1 Availability and resourcing of core chronic pain services
12.2 Trigeminal neuralgia: outcome following radiofrequency lesioning
12.3 Audit of pain management programmes
12.4 Opioid use in patients with chronic non-malignant pain
12.5 Long-term use of Transcutaneous Electrical Nerve Stimulation (TENS)
12.6 Compliance in the use of oral medication
12.7 Lumbar epidural steroid injections – standards, practice and outcomes
12.8 Supplementary prescribing for chronic pain conditions by non-medical healthcare professionals
12.9 Medial branch neurotomy for lumbar facet joint spinal pain
12.10 Payment by results
### Availability and resourcing of core chronic pain services

**Dr V K Jaitly**

#### Why do this audit?

The Clinical Standards Advisory Group Report on Services for patients with pain made wide-ranging recommendations to Health Authorities, Primary Care Groups and Trusts on the provision of appropriate pain services. Unfortunately little has happened in response to the report.

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

It has been recommended that a minimum of one whole time equivalent consultant dedicated to chronic pain management is necessary for each 100,000 population.

A chronic pain service is delivered in the out-patient clinic, by in-patient ward referrals and in oncology and palliative care units. It represents significant consultant workload and designated consultant time for all these aspects must be allocated in job planning.

A chronic pain service will also require specialist nursing personnel, clinical psychology, physiotherapy and occupational therapy staff in addition to secretarial and managerial support with appropriate accommodation.

Patients with complex chronic pain problems require thorough assessment and multidisciplinary management so time on the initial consultation should be at least 45 min.

The pain service should be provided with up-to-date electronic systems for maintaining patient bookings, medical records, outcome information and other audit data.

There should be an identifiable budget for the pain service. Purchasing and commissioning organisations should ensure that the multidisciplinary management of patients with chronic pain is specified as part of the contracting process, and recognise that this will require funding of staff, equipment and facilities.

#### Suggested indicators

- Staffing of chronic pain service with appropriately trained specialist medical staff, specialist nursing personnel, clinical psychology, physiotherapy and occupational therapy staff.
- Secretarial and managerial support with appropriate accommodation.
- Access to appropriate specialised equipment.
- Availability of accommodation to house functional restoration programmes and pain management programmes.
- Access to electronic information and communication systems when speaking to patients and the immediate presence of up-to-date electronic systems for maintaining patient bookings, medical records, outcome information and other audit data.
- An identifiable budget for the pain service is explicitly specified in the contracting process.
### Proposed standard or target for best practice

There should be a minimum of one whole time equivalent consultant dedicated to chronic pain management for each 100,000 population.¹

Other clinical and support staff levels should meet above referenced standards.

Accommodation, provision of specialist clinical equipment and electronic IT systems should meet above referenced standards.

100% new patients should have a minimum appointment time of 45 min.

There should be an identifiable budget for the pain service.

### Suggested data to be collected

- Number of consultant sessions allocated for oncology, in-patient, procedural and out-patient work.
- Number of consultant sessions allocated for administration and supporting professional activities.
- Average duration of out-patient new patient consultation times.
- Survey of members of the chronic pain team to assess if they have access to the resources including accommodation required to run clinics and other sessions.
- Presence of networked computers in consulting rooms and areas from where phone calls are made to patients.
- Presence of identifiable budget for pain service.

### Common reasons for failure to reach standards

- Lack of resources.
- Lack of prioritisation by health boards or other purchasers.
- Organisational failure.

### References

Trigeminal neuralgia: outcome following radiofrequency lesioning

Dr J R Wiles, Dr K B Yoon

Why do this audit?
The recurrence of neuralgia and the development of complications after radiofrequency lesioning (RF) for trigeminal neuralgia are more common than generally reported. Published series differ greatly in their long-term efficacy. Patients must be carefully assessed at follow up as adverse effects may go undetected.

Best practice: research evidence or authoritative opinion
All patients require sensory examination at follow up. Careful history taking will detect new pains and psychological distress. Some authors from the most dedicated centres report outcome from questionnaires after discharge as well as from the out-patient follow up records. Most recurrences are within 2 years of the procedure, and so routine follow up for 2 years is ideal.

Suggested indicators
- % patients followed up for at least 2 years after RF.
- % patients with initial success of treatment.
- % patients with recurrence (by Kaplan-Meier analysis for censored data).
- % patients treated who have adverse effects (dysaesthesia, corneal insensitivity, keratitis).

Proposed standard or target for best practice
- 100% patients should be followed up for at least 2 years.
- > 80% patients should have initially successful treatment with RF. Reported initial success rates vary between 80% and 100%.
- > 50% patients should be pain free at 2-year follow up.
- < 27% patients should have dysaesthesia, including minor dysaesthesia.
- < 15% of patients should have corneal sensitivity.
- < 4% of patients should have keratitis.

Suggested data to be collected
Anaesthetist.
Success rates and symptoms at follow up – from medical record and by questionnaire.

Common reasons for failure to reach standards
Relocation or death of patients.
Inexperienced or occasional operator.
References


Audit of pain management programmes

Mr C K Booker, Dr I Mikova, Dr G Peat, Dr C Spanswick

Why do this audit?

There is evidence that pain management programmes have a significant beneficial effect on how appropriately selected patients cope with and manage their pain and associated disability. Both purchasers and provider units pressurise units to treat more and more patients. Quality of treatment is vital. A number of variables must be monitored to demonstrate effectiveness to the patient, the GP, the trust and the purchasers. Appropriate monitoring will allow the programme style, content and delivery to be improved.

Best practice: research evidence or authoritative opinion

Meta-analytic studies\(^1,2\) have shown that multidisciplinary treatment is more effective in reducing disability and distress in chronic pain than single mode treatment. High quality trials of pain management programmes for children and adolescents are rare.\(^3\) Williams et al have shown that in-patient programmes may be more effective than out-patient programmes.\(^4\) The degree of distress and disability of a study sample may contribute more to treatment outcomes than whether or not programme patients are residential. The British Pain Society has published recommended guidelines for content, staffing, and outcome measures.\(^5\)

Suggested indicators

A distinction needs to be made between statistically significant change and clinically meaningful change. The latter will require consideration of the degree of dysfunction of the study sample beyond that of the normal population, where data is available.\(^6,7\)

Statistically significant pre to post programme improvements defined as 95% confidence given ‘within subjects’ variability and the degree of measurement error associated with the outcome measure.

Clinically significant changes in self-reported depression and disability, defined as post-treatment scores being one standard deviation closer to the score for a normal population than to the mean of the pain population.

An improvement in functional performance tests of at least 34%. Changes should be maintained for at least 6 months.

% patients who are significantly worse on each measure.

> 33% patients should have a ‘clinically significant’ outcome, as defined above, on at least one of the main domains of relevance (e.g. depression, disability).

0% patients should be worse as described above.
Suggested data to be collected

Validated measures and questionnaires should be used. Self-report measures include mood (depressive symptoms), pain, beliefs (fear or anxiety, self efficacy, pain control), coping strategies (catastrophising, active coping, diversion), disability and medication use (analgesics and psychotropics).

Over-reliance on self-report measures should be avoided. Consideration should be given to patient-specific measures. Functional measures include physical function (observed walking or stair climbing times) and observed behaviour.

Common reasons for failure to reach standards

Poor selection of patients.

Inadequate or poor:

- staff skills
- allocation of time
- delivery of programme
- funding
- team building.

Some patient variables outside staff control (e.g. not willing to change).

References

Opioid use in patients with chronic non-malignant pain

Dr L A Colvin

Why do this audit?

Opioids provide effective analgesia and improved quality of life for some patients with chronic non-malignant pain, although the evidence base supporting the use of opioids in specific clinical circumstances is limited.

Recent guidelines from The British Pain Society highlight the need for careful patient selection and ongoing monitoring of patients on long-term opioids. These guidelines should be followed when using opioids in the management of patients with chronic non-malignant pain.

Best practice: research evidence or authoritative opinion

The use of opioids for chronic non-malignant pain is accepted practice, although there is a lack of evidence in the form of randomised controlled trials. Published national and international guidelines are based on expert opinion on appropriate long-term management of patients requiring opioids for chronic non-malignant pain.

With appropriate patient selection, opioid use can improve pain control and quality of life. Ongoing assessment of an individualised patient analgesic regimen is required to maximize analgesic benefits and minimise potential side effects. There is a lack of knowledge about potential problems associated with long-term use of opioids such as tolerance, dependence and effects on the immune system. Co-existing chemical dependency should not preclude use of opioids but careful assessment and ongoing monitoring is important.

Suggested indicators

% patients seen in pain clinic with chronic non-malignant pain who are on long-term opioids.

% patients with chronic non-malignant pain using prescribed opioids who fulfil the following criteria.

- Full assessment documented before starting treatment. This should include physical, psychological and social factors. Opioids should be used as part of a rehabilitation plan with clear goals. Patients should be fully informed as to the aims and limitations of opioid treatment, with specific issues relating to patient beliefs having been addressed.

- Other appropriate treatments should have been used before opioid use is considered, or in conjunction with opioids if there is a partial response.

- Use of long acting opioid preparations. Once the initial period has passed opioid dose should remain stable unless clinical circumstances change. The use of injectable opioids is rarely appropriate.

- Regular review at least monthly. This should evaluate pain relief, physical, psychological and social function, sleep, side effects and signs of problem drug use. Changes in other analgesic medication should be monitored and documented.

- Opioid usage should be monitored to provide an early indication of loss of efficacy or signs of tolerance or dependence requiring further specialist input.

Proposed standard or target for best practice

100% patients should fulfil the criteria outlined above for patients on long-term opioids.
**Suggested data to be collected**

- % of patients seen in clinic on long-term opioids.
- Type of opioid preparation, changes in dose and duration of use.
- % of patients with evidence of opioid efficacy in terms of analgesia and quality of life.
- % of patients with problematic side effects.
- % of patients with signs of problem drug use.
- Follow up plan.

**Common reasons for failure to reach standards**

- Inadequate initial assessment and patient selection.
- Incorrect use of opioids including poor compliance, opiophobia, therapy started with inadequate follow up arrangements, e.g. acute setting.
- Problems with regular review due to limitations in availability of healthcare or due to patient related factors such as failure to attend for review.

**References**

Long-term use of Transcutaneous Electrical Nerve Stimulation (TENS)

Dr J Hester

Why do this audit?

Long term effectiveness of TENS in the management of chronic pain remains controversial, although it is used as a first line therapy in 95% of UK pain services. TENS machines are loaned to patients for variable periods, and may subsequently be bought or supplied by a charity; replacement electrodes and batteries cannot be prescribed. Cost effectiveness has not been thoroughly evaluated, though one study has demonstrated savings in both pain medication and number of physical therapy treatments. Efficacy may fade with length of use. TENS has not been assessed as part of a pain management regimen in combination or compared with other therapies, or as a method of allowing patients to regain locus of control. Despite the negative results of some randomised controlled trials, it is a treatment generally welcomed by patients.

Best practice: research evidence or authoritative opinion

A systematic review by Carroll in 2001 included 19 RCTs on TENS and chronic pain of at least 3 months duration from a broad range of conditions, with visual analogue score (VAS) for pain as the primary outcome measure. The results of the review were inconclusive. A subsequent review on TENS for low back pain showed no evidence to support the use of TENS, but a review of TENS for knee osteoarthritis showed effective pain control over placebo.

Many trials on TENS are of poor quality and do not specify site and type of applications, duration of stimulation, optimal frequencies and intensities.

Suggested indicators

TENS may be used as a part of a pain management treatment plan, for selected patients.

- % patients who receive a TENS unit and adequate training within a defined timescale (for example 1 month). ‘Adequate training’ should include written information to support verbal and practical instruction.
- % patients still using TENS at 1, 6 and 12-month follow up.
- % achieving adequate pain relief, improvement in function and quality of life, reduction in analgesic consumption and number of additional physical therapies used.

Proposed standard or target for best practice

100% patients for whom TENS is recommended should have access to a TENS unit and adequate training within an acceptable timescale. The units should have a range of frequencies and wave-forms. Electrodes should be provided for at least 4 weeks.

100% patients using TENS should be followed up as above

Routine measurements as above. Discontinue use after 6 weeks if ineffective.
### Suggested data to be collected

- Waiting time for loan/purchase of a TENS machine. Compliance with instructions, return rate of borrowed machines.
- Site of application of electrodes, duration of stimulation per day, length of time used. Type of wave-form (continuous, burst or modulated), frequency and pulse width.
- Outcome measures: VAS for pain and pain relief, analgesic consumption, quality of life, psychological and physical function.

### Common reasons for failure to reach standards

- Failure of training leading to poor patient compliance.
- Failure to attend for review.
- Inadequate assessment of effect.
- Failure to change wave-forms and frequencies.
- Physical inability to apply electrodes.
- Allergy to or lack of adhesion of electrodes.
- Tolerance.
- Ineffectiveness.

### References

# Compliance in the use of oral medication

Dr B Miller

## Why do this audit?
There is increasing evidence that failure to comply with drug therapy is a major barrier to the successful treatment of many conditions. Without a clearer idea of whether drugs are taken correctly, the clinician is unable to make appropriate decisions as to whether the patient would benefit from a repeat trial with a different approach (e.g. simpler schedule, lower dose), a different ‘flavour’ of medication (e.g. pregabalin instead of gabapentin), or an entirely new option.

## Best practice: research evidence or authoritative opinion
The issue shows surprisingly little variation from symptom control to life threatening disease management, with rates of non-adherence in the early stages of treatment around 30–50%. The reasons are many and complex, but there is evidence that the prescriber can help to reduce this.

## Suggested indicators
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<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
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<td>% of patients taking the drug at prescribed doses at 6 weeks.</td>
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<tr>
<td>% of patients taking sub-optimal doses at 6 weeks.</td>
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<tr>
<td>% of patients no longer taking medication and reason for this.</td>
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<tr>
<td>% of patients with side effects leading to sub-optimal treatment or abandonment.</td>
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<td>% abandonment due to lack of efficacy.</td>
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## Proposed standard or target for best practice
70% taking the drug correctly at 6 weeks. Figures for abandonment due to lack of efficacy for a correctly taken medication should not be included in the results.

The other indicators have no recognised standards, but may provide local services with information to help improve compliance.

## Suggested data to be collected
Data will normally be obtained by patient interview, and subject to the limits of this method. Other methods such as the reports of carers, records of prescriptions, and bottle and tablet counts may occasionally be used to supplement this.

## Common reasons for failure to reach standards
- Failure to understand the rationale behind drug use (e.g. ‘Will this anti-epileptic drug give me epilepsy?’).
- Lack of clear instructions on how to take drug (e.g. PRN, escalating dose).
- Lack of efficacy.
- Side effects, especially if unexpected.
References


Lumbar epidural steroid injections – standards, practice and outcomes

Dr V K Jaitly, Dr B Miller, Mrs S Barnes, Mrs S Downs

Why do this audit?

The use of lumbar epidural (including caudal epidural) steroid injections is a widespread practice in the management of low back and radicular pain. There is debate as to their place and efficacy, but not on their safe administration. Auditing the outcome of epidural injections and making these figures available locally may allow pain services to provide patients with realistic expectations of outcomes of injections as well as demonstrating to healthcare commissioning services that an injection service has utility despite the controversy.

Best practice: research evidence or authoritative opinion

Guidelines on standards of practice exist. Adverse event rates of dural tap are 2.5%, transient headache 2.3% and a transient increase in pain 1.9%. Benefits are more difficult to predict, being dependent on the underlying condition, the time that symptoms have been present, previous treatments attempted (e.g. surgery) etc.

Suggested indicators

Evidence of consent.
An environment with full resuscitation facilities.
Measurement of heart rate and non-invasive blood pressure during procedure.
Evidence of review within 6 weeks.
Minor/short-term complications.
Major/long-term complications.
Results at 6 weeks.

Proposed standard or target for best practice

100% procedural and 30 min post-procedural measurement of heart rate and non-invasive blood pressure.
100% evidence of consent.
90% evidence of review within 6 weeks.
90% recording of results by 6 weeks.
< 3% minor complications resulting in morbidity < 6 weeks.
< 1% major complications resulting in morbidity > 6 weeks.

Suggested data to be collected

Written evidence of adherence to guidelines by referring to casenotes. Out-patient or telephone review may be used to determine follow up data and complications. Patient report of duration of effectiveness (or otherwise) of the epidural steroid injections.

Data may be collected using the form available on the accompanying CR-ROM.
Common reasons for failure to reach standards
Lack of awareness of RCoA guidelines.
Lack of resources.
Lack of trained staff.
Failure to capture patient report of injection result (patient doesn’t attend clinic, or can’t be contacted or clinician forgets to capture information).

References

Supplementary prescribing for chronic pain conditions by non-medical healthcare professionals

Dr R Knaggs

Why do this audit?
Over recent years the government has developed a role for prescribing by appropriately qualified non-medical practitioners. At present, nurses may prescribe independently from a restricted formulary for a limited range of medical conditions. In addition, nurses, pharmacists and a range of allied health professions may use supplementary prescribing, involving a voluntary prescribing partnership between an independent prescriber (doctor or dentist) and a non-medical prescriber. This may be used to implement an agreed patient specific clinical management plan (CMP) with the agreement of the patient. All practitioners undertaking this extended role have demonstrated competence against nationally agreed standards.

Best practice: research evidence or authoritative opinion
Best practice for supplementary prescribing is dictated by the legal framework under which it was developed.

Suggested indicators
**Prescribing activity**
Number of times each patient has been reviewed by supplementary prescriber.
Total number of prescriptions written.
Number of prescriptions written per patient.
Drugs prescribed by non-medical practitioner.

**Clinical management plan (CMP)**
Is a CMP available for each patient?
Is the CMP specific for each patient?
Is each CMP completed fully?
Is each CMP legible?
% of patients reviewed within 1 year by independent prescriber.

Proposed standard or target for best practice
There are no standards for best practice, however healthcare professionals should regularly prescribe medication to maintain competence.

**Clinical management plan (CMP)**
A CMP should be available for 100% of patients.
The CMP should be individualised for 100% of patients.
100% CMPs should use the Department of Health framework documentation.
100% CMPs should be legible.
100% of patients should be reviewed at least annually by the independent prescriber.
Suggested data to be collected

Data will be collected by retrospective documentation review.

Common reasons for failure to reach standards

- Misconceptions and misunderstanding regarding nature and practice of supplementary prescribing.
- Insufficient time to complete CMP.
- Illegible CMP.
- Infrequent clinical supervision with medical practitioner.
- Prescribing outside CMP.
- Availability of training places for non-medical health care practitioners.

References

Medial branch neurotomy for lumbar facet joint spinal pain

Dr J Richardson

Why do this audit?
Zygapophysial joint pain (ZJP) accounts for up to 40% of low back pain. ZJP cannot be diagnosed clinically, only by controlled blocks of the medial branch of the dorsal primary rami (MBDPR) of the suspected involved joint. Two blocks significantly reduce the number of false positives. Diagnosis must be made accurately before denervation is carried out. Radiofrequency coagulation of the MBDPR has been shown to be effective in the treatment of ZJP. This audit aims to assess how this treatment is applied. The audit aims to assess the incidence of damage to the nearby lumbar plexus.

Best practice: research evidence or authoritative opinion
Diagnosis by controlled blocks of MBDPR on two occasions.
Radiofrequency coagulation of the MBDPR relieves correctly diagnosed back pain in up to 40% patients with spinal pain. Damage should not occur to the lumbar sympathetic plexus.
The gold standard of the management of this pain is through the International Spinal Intervention Society, outlined in their best practice guidelines (ISIS 2004).

Suggested indicators
To determine the quality of ZJP diagnosis.
To determine the quality of ZJP treatments.
To demonstrate technical problems and/or complications.

Proposed standard or target for best practice
Diagnosis through at least one set of MBDPR (the nerve supply to the facet joint). Two sets of injections are preferable so that the false positive rate is reduced to 3%. Best treatment is with medial branch neurotomy. Dreyfuss showed that at 12 months 60% have 80% pain relief and 80% can expect 60% pain relief.

Suggested data to be collected
General information: age, sex, spinal levels approached.
Quality of diagnosis: How was the pain diagnosed? How were the nerves located before lesioning?
Quality of treatment: What was injected before lesioning? Radiofrequency lesioning parameters. How useful do you consider this treatment to be?
What outcome measures are commonly applied, e.g. visual analogue score, verbal report, functional assessment etc.
Technical problems and complications.
Common reasons for failure to reach standards

Ignorance of the practitioner regarding best standards (including confirmation of diagnosis).
Ignorance of where to turn to for technical and clinical information.

References and further reading


Further reading

Payment by results

Dr C Price

Why do this audit?
The NHS in England has a system of funding for work done known as Payment by results. Services get paid for work done. Treatments will be grouped into tariff bands. Fundamental to this is accurate reporting of activity. Service providers including clinicians need to check that coders in their trust are coding accurately the activity in their service or serious discrepancies in funding will quickly develop.

Best practice: research evidence or authoritative opinion

All pain services should be able to produce information on:

- diagnostic codes for all patients seen – International Classification of Diseases (ICD) -10 is the current coding system in use.
- activity levels of:
  - outpatient work
  - day cases
  - in-patient work.

This should be coded using the Intervention Classification (OPCS 4.3) or, where there is no OPCS 4.3 code described in longhand.

Treatments must be mapped to the correct Healthcare Resource Group (HRG), currently (2006), version 4. Attempt should then be made to compare costs with Department of Health tariffs.

Suggested indicators

Diagnosis: ICD-10 codes.

Treatment:

- OPCS 4.3 codes where available
- Non-coded activity recorded.

Healthcare Resource Group.

Tariff for healthcare resource group.

For pain management nearly all activity is described in terms of treatment and not diagnosis. Where a procedure could be mapped to more than one HRG then grouping logic is applied depending on further information, e.g. done under X ray, or an ICD-10 code is applied.

Proposed standard or target for best practice

100% activity recorded accurately and in agreement with trust coders

Financial balance achieved.
Suggested data to be collected

For new patients seen
A diagnostic code should be attached and the type of assessment performed
Treatments provided are mapped to OPCS 4.3
Drug treatments and equipment costs need to be collected separately
These should be compared with codes assigned by trust coders.
Reference costs for each treatment are available from the Department of Health website.
At present these are very crude measures of activity.

For follow up patients
Further therapies and procedures logged as above.

Common reasons for failure to reach standards

No organised methods of data collection.
Lack of buy in of staff.
No continuous feedback.
Poorly established coding methods.
Poor communication between coders and treatment providers.
Poor financial methods within the trust.
Nearly all pain procedures map to only two HRGs which do not reflect true costs.

References

2 World Health Organisation. International Classification of Diseases (ICD)—10 (see: www.who.int/classifications/icd/en/).
5 NHS Information Centre. Case mix for HRGs (see: www.ic.nhs.uk/casemix).