10 Pain medicine

Edited by Dr Matthew Brown and Dr Manohar Lal Sharma
QI editor Dr Fay Gilder

10.1 Assessment and documentation in acute pain management

Dr Matthew Brown, Ms Caroline Spence
Royal Marsden Hospital, London

Why do this quality improvement project?

Developing methods to ensure and test the existence of comprehensive and systematic documentation will benefit both the service and patients alike as it will assure both continuity of care and robust clinical governance and provide evidence of the delivery of high-quality holistic care.

Background

Scoring and recording levels of acute pain represents a fundamental facet of many quality assurance methods. These present opportunities for pain teams to make efficiency savings for staff, potentially mitigate expensive legal cases for hospitals and, most importantly, facilitate the best analgesia for our patients either in the perioperative period or during a medical admission.

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

Best practice

Effective and safe acute pain services will be able to demonstrate:

- local protocols defining observations required for specific clinical scenarios
- appropriate maintenance and testing of equipment
- appropriate documentation for charting observations
- completion of documentation – leads to improved pain control[1]
- competency of staff
- provision of patient information of sufficient standard
- evidence of reporting, analysing and preventing adverse incidents.

These service features are detailed in the Faculty of Pain Medicine's Core Standards for Medicine Services in the UK and incorporate good medical practice.[2]

Suggested data to collect

Preoperative phase indicators (if appropriate)

1. The percentage of patients for whom a perioperative acute pain management plan is created at the preoperative assessment clinic.
2. The percentage of patients whose perioperative acute pain management plan is documented in an accessible manner in the clinical notes.

Inpatient acute pain management indicators

1. Protocols should be specific to the techniques used and based on the highest level of recent evidence that is available.
2. Any protocols should have appropriate document control measures in place (have been reviewed and accepted by relevant institutional body, have version number, be dated and have a date for review).
3. Where relevant (ie post nerve or neuraxial block), there should be an agreed and unique formal arrangement for recording the directions of the anaesthetist, together with contingency recommendations for action.
4. Clinical data for pain and analgesia and its adverse effects may be combined with other observation parameters to reduce duplication, but the directions must be explicit. The type and frequency of observations required should be clear. Pain scores should be appropriate to patient culture, language and development and take into account cognitive and emotional states.[1]
5. Other documents – a clear, concise operating manual should be available (and easily located) for each piece of equipment that is used (ie patient anaesthesia pump).
6. A robust process should exist and be used to report and investigating pain-related adverse events. Evidence of documentation of action regarding adverse incident reports should exist – this should align with local organisation policies.

Quality improvement methodology

Preoperative phase

The process by which a pain management plan is instigated (ie by whom and when) and then implemented can be identified using a process map. This requires mapping the existing pathway to identify the problems and then create an aim statement/driver diagram/measures of success (process and outcome) and balance. All stakeholders should be involved in the mapping and ideation process to capture a wide range of improvement ideas

Inpatient acute pain management

Indicators 3 and 4 would suit a process mapping approach as suggested for the preoperative phase, mapping out how, when and by whom recordings should be made and what recordings should be made, for each pain relief modality.

The modality addressed could be prioritised using the impact/effort matrix. The process map can be used to identify and prioritise challenges in the existing pathway.

The stakeholders can then decide on an aim, create a driver diagram and test ideas using plan–do–study–act methodology. Process, outcomes and balancing metrics must be agreed prior to any methodology employed and plotted using a statistical process control chart.

Overview of pain documentation in organisation

Establish a log of all areas of documentation for all aspects of pain in your organisation. For example, this could include electronic prescribing systems, paper-based drug charts or post-intervention order sheets as well as patient information sheets and pain-related content on the organisation's web site. There should be a process of who is responsible of keeping this information up to date.

Mapping

ACSA standards: 1.1.1.2, 1.4.1.2, 1.4.4.2, 1.2.2.1, 1.2.1.6, 1.4.2.1, 1.4.4.1, 1.4.4.2, 1.4.5.3, 1.4.5.4, 1.1.1.7, 2.1.1.13, 2.3.1.1, 2.3.1.2, 3.1.2.2, 4.2.1.1, 4.2.1.2, 4.2.2.1

Curriculum competences: PM_AK_14, PM_AK_15, PM_AK_16, POM_AS_08,

CPD matrix codes: 1D01, 1D02, 3E00

GPAS 2020: 11.5

References

1. Schug SA et al, eds. Acute Pain Management: Scientific Evidence. 4th ed. Melbourne: Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine; 2015 (http://www.anzca.edu.au/documents/fpm-apmse4-final-20160426-v1-0).
2. General Medical Council. Good Medical Practice (https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice).

10.2 The use of gabapentinoids in the perioperative period

Dr Matthew Brown
Royal Marsden Hospital, London

Why do this quality improvement project?

The use of gabapentinoid agents (pregabalin and gabapentin) in the perioperative period has increased, driven both by the desire to minimise opioid intake and interest in using these agents to reduce the occurrence and severity of both acute and persistent post-surgical pain.[1] This improvement project aims to ensure that an organisation-level appreciation of the volume of perioperative gabapentinoid usage exists, as well as to stimulate the development and implementation of processes to ensure responsible, safe and effective prescribing of these agents. This is an important area, as there is increasing interest in the potential for abuse of these drugs and the rescheduling of gabapentinoids in April 2019 to controlled-drug status.

Background

A number of guidelines from learned bodies such as the American Pain Society and the Australian and New Zealand College of Anaesthetists have been published, which advocate a multimodal approach to perioperative pain control.[2,3] Gabapentinoids feature as a potential component in these guidelines. These guidelines do not provide specific instructions on optimal dosing, drug choice (gabapentin or pregabalin), monitoring of effect and adverse effects and duration of treatment.

Gabapentinoids have a range of clinical uses, including as anticonvulsants and anxiolytics and as treatment for (predominantly chronic) pain. However, gabapentinoids do present an abuse risk, more commonly in those patients with a history of previous aberrant opioid use, as well as having some addictive potential and so rigorous stewardship of these drugs is important.[4,5]

Best practice

Robust and actionable policies should be in place to identify patients who may potentially benefit from the use of these drugs in the perioperative period, to ensure that appropriate review is undertaken while the patient is receiving the drug and to facilitate weaning and termination of the drug in the postoperative period. These measures contribute to a measured and considerate deployment of these agents and help to safeguard against indiscriminate use (where supportive clinical evidence may be poor) and appropriate weaning in the postoperative period.

Suggested data to collect

Preoperative phase:

- Define the preoperative process for selecting patients. How are those patients at risk of developing severe acute pain or persistent post-surgical pain (ie those patients with anxiety, depression or catastrophising, pre-existing pain or opioid or anti-neuropathic agent consumption)?
- Types of surgical procedure that patients who are 'gabapentinoid appropriate' are undergoing.
- Number of patients per annum being prescribed gabapentinoids within the organisation.
- Provision of written information on the potential adverse effects and rationale for use of gabapentinoids (this could comprise part of a perioperative pain plan agreed with the patient) with documentation in the notes.

Operative phase:

- Aim to understand the frequency the factors contributing to inappropriate gabapentinoid use. Establish the percentage of people in whom a perioperative gabapentinoids is appropriately used. This includes starting when indicated only and correct administration of prescribed doses on day of surgery.
- Percentage of patients who receive gabapentinoids as prescribed in the perioperative period.

Postoperative phase:

- Percentage of patients receiving gabapentinoids not reviewed by the acute pain team or anaesthetist to identify potential adverse effects (standard: 0%).
- Percentage of patients who continue receiving a gabapentinoid following discharge when it should have been stopped (standard: 0%).

Quality improvement methodology

Correct planning and prescribing of gabapentinoid for perioperative use

- Draw out a process map of the patient journey from preassessment to postoperative ward care:
  - What is the most reliable point to make the perioperative plan and which staff members should make it? A plan-do-stud-act (PDSA) cycle may aid this process.
  - What is the most reliable point to prescribe gabapentinoids and who should prescribe them?

  - Can the prescription be standardised or preprinted to minimise prescribing errors? Run a PDSA cycle with a pilot group.
  - How can the plan be communicated most accurately across the admission phases and to the patient?
  - How can the plan for termination of gabapentinoids be communicated to and carried out accurately by the ward staff or following discharge? Patient and carer involvement would enrich this process.
- Define the preoperative process for selecting patients. Collect baseline data to understand how the process is working and where potential gaps exist.
- Once the gaps have been identified, use a Pareto chart to understand which are the most commonly occurring gaps.
- An effort impact matrix could also be used to prioritise which gap or issue to address first.
- To address the gap, a SMART (specific, measurable, achievable, relevant, time-bound) aim is required. Measures (process, outcome and balancing) must be agreed and these data collected as a baseline.
- A driver diagram can be used to describe what drivers contribute to the aim. Drivers are sources of improvement ideas. Ideas should be tested using rapid-cycle PDSA (ideally each lasting two weeks).
- Statistical process control charts can be used to understand the impact of each improvement idea.

Correct prescribing of gabapentinoids

- Look at the process map from admission to the postoperative ward stay identifying areas where pregabalin prescribing is often missed.
- Use a 'five whys' or fishbone diagram to identify which members of staff are involved in this process.[6,7]
- A driver diagram for ideas could then be followed by a PDSA cycle created by stakeholders involved in this process, which could be used to prompt the appropriate prescribing of gabapentinoids.

Mapping

ACSA standards: 1.1.1.2, 1.4.1.2, 1.4.4.2, 1.2.1.1, 1.2.1.3, 1.2.1.4, 1.2.2.1, 1.4.5.1, 1.4.5.3

Curriculum competences: POM_HK_01, POM_HK_04, POM_HK_05, POM_HS_05, POM_HS_06, POM_HS_17, PM_HK_02, PM_HS_06

CPD matrix codes: 1A02, 1D01, 1D02, 1I05, 2E01, 3E00

GPAS 2020: 11.2.5, 11.2.6, 11.4.2,11. 5.2, 11.5.6, 11.5.7, 11.9.1, 11.9.2, 11.9.3

References

1. Mishriky BM et al. Impact of pregabalin on acute and persistent postoperative pain: a systematic review and meta-analysis. Br J Anaesth 2015;114:10–131.
2. Chou R et al. Management of Postoperative Pain: A Clinical Practice Guideline From the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Committee on Regional Anesthesia, Executive Committee, and Administrative Council. J Pain 2016;17:131–157.
3. Schug SA et al, eds. Acute Pain Management: Scientific Evidence. 4th ed. Melbourne: Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine; 2015 (http://www.anzca.edu.au/documents/fpm-apmse4-final-20160426-v1-0).
4. Evoy KE et al. Abuse and misuse of pregabalin and gabapentin. Drugs 2017;77:403–426.
5. Bonnet U, Scherbaum N. How addictive are gabapentin and pregabalin? A systematic review. Eur Neuropsychopharmacol 2017;27:1185–1215.
6. NHS Improvement. Root cause analysis: using five whys (https://improvement.nhs.uk/resources/root-cause-analysis-using-five-whys).
7. NHS Improvement. Cause and effect (fishbone diagram) (https://improvement.nhs.uk/resources/cause-and-effect-fishbone-diagram).

10.3 Non-medical prescribing for pain management

Professor Roger D Knaggs, School of Pharmacy, University of Nottingham
Ms Felicia Cox, Royal Brompton and Harefield NHS Foundation Trust, London

Why do this quality improvement project?

Prescribing by non-medical healthcare professionals was developed to improve access to treatments and patient care, and to use resources more effectively. Non-medical prescribers are an ever-expanding workforce, who play an increasing role in the modern NHS. This quality improvement project aims to establish the scope of activity by non-medical healthcare professionals and improving individual performance.

Background

Prescribing by non-medical healthcare professionals has increased over the 2000s. Since 2006, nurse independent prescribers have been able to prescribe any medicine for any medical condition within their competence, which now includes most controlled drugs.[1] Non-medical prescribers and doctors consider that patients accessing non-medical prescribing receive higher-quality care, with greater choice and convenience.[2] Working with non-medical healthcare professionals can improve teamwork and either reduce doctor workload or free up time to spend on more acute patient cases.[3]

Non-medical healthcare professionals report that the authority to prescribe increases their job satisfaction and self-confidence, makes them more independent and enables better use of their skills.[4] They have also reported feeling that it enhances their relationships with patients.[5] As an alternative to independent prescribing, nurses, pharmacists and a range of allied health professions may use supplementary prescribing, which requires a voluntary prescribing partnership between an independent prescriber (doctor or dentist) and a non-medical prescriber to implement an agreed patient-specific clinical management plan with the agreement of the patient.

Best practice

Best practice for non-medical prescribing is dictated by the legal framework under which it was developed and the prescribing competency framework.[1,6] All non-medical prescribers must prescribe only within their own area of competence.

Suggested data to collect

Prescribing activity

- Total number of items prescribed and number of prescriptions written over a predetermined period.
- Proportion of medicines prescribed by a non-medical prescriber within their own personal formulary during a predetermined period.

Prescribing competence

- Adherence to local policies and personal formulary (independent prescribing scope of practice).
- Adherence to regulatory body's requirements (Royal Pharmaceutical Society, Royal College of Nursing, Health and Care Professions Council) for continuing professional development supporting registration and prescribing competence.

Supplementary prescribing

- Is a clinical management plan available for each patient?
- Is the clinical management plan specific for each patient?
- Is each clinical management plan completed fully?
- Is each clinical management plan legible?
- Proportion of patients reviewed by a medical practitioner within the last 12 months.

Quality improvement methodology

Prescribing practice

- One of the methods of assessing one's own performance is to carry out activity log sampling. A review is carried out to assess the appropriateness of prescriptions for 10% of patients over the previous month. This is then discussed with colleagues and supervisors to measure one's own performance against that of others and to set standards.
- Using a 'five-whys' analysis, causes of poor quality of care can be explored.[7]

Patient-focused care

- Looking at patient satisfaction surveys and having patients as major stakeholders in any service improvement work will help to identify areas for improvement.

Mapping

ACSA standards: 1.2.2.1, 1.4.1.2, 1.4.5.1, 1.4.5.3, 2.2.1.1
Curriculum competence: PM_AK_14
CPD matrix code: 3E00
GPAS 2020: 11.1.1, 11.1.4, 11.1.6, 11.2.9, 11.2.10, 11.4.1, 11.4.2, 11.4.3, 11.4.4, 11.4.6, 11.5.4, 11.5.5,11.5.6, 11.5.7, 11.5.10, 11.7.1

References

1. Department of Health. Improving Patients' Access to Medicines: A Guide to Implementing Nurse and Pharmacist Independent Prescribing within the NHS in England. London: DoH; 2006.
2. Latter S et al. Evaluation of Nurse and Pharmacist Independent Prescribing. London: Department of Health; 2010 (https://www.gov.uk/government/publications/evaluation-of-nurse-and-pharmacist-independent-prescribing-in-england-key-findings-and-executive-summary).
3. Stewart D et al. Views of pharmacist prescribers, doctors and patients on pharmacist prescribing implementation. Int J Pharm Pract 2009;17:89–94.
4. Courtenay M, Berry D. Comparing nurses' and doctors' views of nurse prescribing: a questionnaire survey. Nurs Prescrib 2007;5:2005–2010.
5. Latter S et al. An Evaluation of Extended Formulary Independent Nurse Prescribing: Executive Summary of Final Report. Southampton: University of Southampton; 2005 (http://eprints.soton.ac.uk/17584).
6. Royal Pharmaceutical Society. A Competency Framework for All Prescribers. London: Royal Pharmaceutical Society; 2019 (https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/Prescribing%20competency%20framework/prescribing-competency-framework.pdf).
7. NHS Improvement. Root cause analysis: using five whys (https://improvement.nhs.uk/resources/root-cause-analysis-using-five-whys).

10.4 Managing epidural analgesia

Dr Richard Gordon-Williams
Royal Marsden Hospital, London

Why do this quality improvement project?

Epidural analgesia remains integral to many enhanced recovery pathways,[1] but one-third of patients fail to gain effective analgesia,[2] a fact that must be weighed against the possible serious complications that may occur with epidural insertion.[3]

Background

Continuous epidural analgesia can offer excellent pain control following, for example, major intra-abdominal or intrathoracic surgery and it has been suggested that in some circumstances it may reduce the rate of chronic post-surgical pain.[4] However, despite studies such as the Third National Audit Project in 2009 highlighting the potential for serious complications with this technique, serious adverse events still occur.[3] Analysis of what is known of such events suggests that 'systems failure' is often a major factor.

Best practice

The RCoA publication Best Practice in the Management of Epidural Analgesia in the Hospital Setting was updated in 2010 and describes the requirements for good practice under a number of headings that cover the process of delivering safe epidural analgesia.[5] These are reflected with a number of recommendations in each chapter of the RCoA's Guidelines for the Provision of Anaesthetic Services. Organisational structure is an important aspect in optimising outcomes from pain management techniques.[6]

Suggested data to collect

The RCoA publication outlines a number of recommendations that would be suitable to audit compliance to best practice. Some of these recommendations are mandatory (eg patient selection and consent) but many are advisory and can be adapted for local practice.

Suggested key audit recommendations include:

- There should be a discussion of the risks and benefits of epidural analgesia with documented values for those risks according to local or national figures.
- The department of anaesthesia should ensure that there are designated personnel and clear protocols to support the safe and effective use of epidural analgesia.
- Registered nurses with specific training and skills in the supervision of epidural analgesia and management of its complications must be present on the ward and on every shift (ie 24-hour cover).
- Local guidelines should be in place with respect to the insertion and removal of epidurals in patients receiving anticoagulants with impaired coagulation. All staff should be aware of, and adhere to, these guidelines.
- Epidural infusion lines should be clearly identified as such. All NHS institutions use the newly developed NRFit™ (ISO 80369-6) neuraxial connector.
- The Bromage scale should be used consistently between healthcare professionals to prevent serious complications that could arise from using an incorrect scale.[7]
- Protocols for the management of these complications should be available locally.
- Availability of neuraxial imaging for detection of epidural space occupying lesion.
- Information specific to the use of epidurals in paediatric patients should be provided to parents and/or carers based on local guidelines.
- There should be clear procedures for the reporting of, and response to, critical incidents associated with the use of epidural analgesia.

Quality improvement methodology

- The epidural service should be process mapped to understand the issues preventing delivery of high-quality care.
- Once this has been established, the following approach could be taken to decide how important each issue is in terms of patient care and service delivery.
- This could be done using the 'five whys' or fishbone methodology and then a Pareto chart used to measure frequency of the problem perhaps aided by an impact/effort matrix to help decide what issue to focus on first.[8,9]
- Decide a SMART (specific, measurable, achievable, relevant, time-bound) aim for the issue that needs to be improved and use a driver diagram to understand drivers for the issue and to explore possible solutions.
- For each potential improvement idea, measures need to be decided and should be classified as outcome measures, process measure and balancing measures. These should be decided before the idea is tested.

- Ideally, rapid-cycle plan-do-study-act methodology can be used to test each idea, with data collected frequently and plotted on a run or statistical process control chart. By establishing the impact of each idea, this would strengthen each improvement cycle.

Mapping

ASCA standards: 1.1.1.7, 1.2.1.6, 2.1.1.13, 2.1.1.7, 2.1.1.8, 3.1.2.1, 3.1.2.2

Curriculum competences: RA_BK_07, RA_BK_08, RA_BK_09, RA_BS_02, RA_BS_05, RA_BS_08, RA_BS_09, RA_BS_10, PC_BK_85, PA_BK_11, PM_BK_03, 08, PM_BS_01–06, 08, RA_IS_02, PM_IS_01, 02, 10, VS_HS_06, PR_IK_01, RA_HS_01, VS_HS_06, PA_HS_07, PM_HK_01, PM_HS_01–04, 06, VS_AS_04, PM_AS_05

CPD matrix codes: 1E01, 1F01, 1F05, 1H02, 1I01, 1I02, 1I05, 2E01, 2G01, 2G02, 2G04, 3A09

GPAS 2020: 2.5.17, 3.2.24,4.1.11, 4.3.17, 6.2.19, 6.5.22, 7. 3.39, 9. 2.28, 9.2.30, 9.5.4, 9.5.5, 9.5.8, 10. 9.12, 11. 1.5,11. 2.1,11. 2.4, 11.4.7, 11.9.1, 16. 4.7, 16.4.8, 5.25, 17.9.2

References

1. Li C et al. An enhanced recovery pathway decreases duration of stay after esophagectomy. Surgery 2012;152:606–616.
2. Hermanides J et al. Failed epidural: causes and management. Br J Anaesth 2012;109:144–154.
3. Cook TM et al, Royal College of Anaesthetists. Major complications of central neuraxial block: report on the Third National Audit Project of the Royal College of Anaesthetists. Br J Anaesth 2009;102:179–190.
4. Weinstein EJ et al. Local anaesthetics and regional anaesthesia versus conventional analgesia for preventing persistent postoperative pain in adults and children. Cochrane Database Syst Rev 2018;(6):CD007105.
5. Faculty of Pain Medicine et al. Best Practice in the Management of Epidural Analgesia in the Hospital Setting. London: RCoA; 2010 (https://anaesthetists.org/Home/Resources-publications/Guidelines/Best-practice-in-the-management-of-epidural-analgesia-in-the-hospital-setting).
6. Schug SA et al, eds. Acute Pain Management: Scientific Evidence. 4th ed. Melbourne: Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine; 2015 (http://www.anzca.edu.au/documents/fpm-apmse4-final-20160426-v1-0).
7. Anaesthesia UK. Bromage scale (https://www.frca.co.uk/article.aspx?articleid=100316).
8. NHS Improvement. Root cause analysis: using five whys (https://improvement.nhs.uk/resources/root-cause-analysis-using-five-whys).
9. NHS Improvement. Cause and effect (fishbone diagram) (https://improvement.nhs.uk/resources/cause-and-effect-fishbone-diagram).

10.5 Opioid use in chronic pain

Professor Lesley A Colvin, Ninewells Hospital and Medical School, Dundee
Professor Blair H Smith, Dr Magda Laskawska School of Medicine, University of Dundee

Why do this quality improvement project?

There has been a large increase in opioid prescriptions in the UK over the past two decades.[1] Chronic opioid use may be associated with harm such as addiction and death.[2] The implementation of the suggested standards is central in improving patient care, reducing the burden of overtreatment and unwarranted variation as well as identifying and managing clinical risks.

Background

Chronic opioid use, especially at higher doses, may be associated with harms such as increased risk of overdose, misuse, dependence, depression, fractures, myocardial infarction, road traffic accidents and sexual dysfunction.[3] There is a lack of good-quality randomised controlled trials that study long-term opioid use, with the majority of studies being of three months' duration or less. There is no reliable evidence to support the effectiveness of long-term opioid therapy for chronic pain.[4] However, there is a place for short-term, low-dose opioid treatment for some conditions with appropriate monitoring.[2]

There are several important guidelines which have been developed to provide recommendations for the appropriate use of opioids in clinical practice, including the opioid aware resource.[5] The section of the Scottish Intercollegiate Guidelines Network guidelines on the use of opioids has recently been updated, based on current best evidence and provides a useful resource.[6] This aligns with the Scottish quality prescribing for chronic pain guide.[7]

Best practice

While there is a limited evidence base in some areas, clinical practice should aim to ensure that individual benefit (decreased pain, improved function and/or quality of life) outweighs harms (including misuse, addiction, opioid induced hyperalgesia, tolerance, endocrine dysfunction, possible immune system dysfunction). Non-pharmacological approaches and/or non-opioid analgesics should be considered before initiating opioid treatment.

Suggested data to collect

Standards	Measures
Before commencing opioid therapy, the patient should have a biopsychosocial assessment for suitability of strong opioid use. A plan for an opioid trial, with agreed outcomes, should be made.	■ The assessment should include the severity and type of pain (eg Read code 1M52 'Chronic Pain'), impact on mood, sleep, function and quality of life. ■ Previous pharmacological and non-pharmacological treatments; relevant past history (including mental health).
There should be planned review of patients started on opioid therapy within four weeks of commencement. If patients continue on opioids there should be regular planned review, at least annually.	■ Percentage of patients with documented review (including efficacy and adverse effects) within four weeks of starting opioids (eg Read code 66n 'Chronic Pain Review'). ■ Percentage of patients with documented review (including efficacy and adverse effects) at least annually if on opioids for more than one year.

Opioids should only be continued if there is ongoing evidence that benefits outweigh risks. They should be used at the lowest effective dose for the shortest possible time. Specialist advice or referral should be sought for those patients on more than 90-120 mg morphine-equivalent doses (MED)/day (depending on local policy).	■ % of patients on opioids for more than 1 year; % of patients on high dose opioids more than 90-120 mg MED/day) where specialist advice has been sought.
If risks of harm outweigh benefits of continued opioid use, a plan for reduction or cessation of opioids should be agreed between patient and prescriber.	■ Percentage of patients with an agreed management plan for opioid reduction.
Signs of misuse or addiction should be sought. If there is evidence of addiction of misuse, then there should be a plan to support reduction or cessation, with specialist support if needed.	■ Percentage of patients developing problematic opioid use. ■ Percentage of patients with problematic use who have a documented management plan.

Quality improvement methodology

Opioid initiation

- Draw out a process map of when opioids are used in chronic pain management. Look at assessment and planned outcomes of treatment.
- Are anticipated benefits (eg decreased pain, improved quality of life) clearly documented?
- What information is given to patients before commencing opioid therapy and by whom (pain specialist, general practitioner, pharmacists; written, oral, websites)?
- How is any planned review scheduled?
- Is dose titration monitored and by whom?

Continuing opioid therapy

- Current guidance is for short- to medium-term use in carefully selected patients.
- What processes are in place to ensure regular review occurs (at least annually)?
- How is continued benefit assessed? How are harms and adverse effects assessed?

Risk assessment

Risk of harms increases as dose increases, with evidence of harm at doses more than 50 mg MED/day, increasing further at more than 90 mg MED/day, and limited evidence of any additional benefit at doses over 120 mg MED/day.

Who monitors opioid dose?

- Is there a mechanism where patients on more than 90 mg MED/day are reviewed, to assess need for specialist advice or review?
- How are risks assessed?
- Can a systematic approach be used to assess different harms (eg gastrointestinal; cognitive, sedative; misuse, tolerance, dependence, addiction, endocrine)?

Opioid reduction or cessation

- Draw a process map of how opioids are reduced of stopped.
- How is the decision to reduce opioids made?
- What support is available for patients reducing opioids?
- Who carries out planned reviews?
- What information is given to patients reducing opioids?
- What non-pharmacological approaches can be used?

10.5 Opioid use in chronic pain

Professor Lesley A Colvin, Ninewells Hospital and Medical School, Dundee
Professor Blair H Smith, Dr Magda Laskawska School of Medicine, University of Dundee

Mapping

ASCA standards: 1.4.1.2, 1.4.5.1, 1.4.5.2, 1.4.5.3, 1.4.5.4, 4.1.2.1

Curriculum competences: PM_BK_04_06_07, PM_IK_04, PM_IK_06,_07,_08, PM_IK_06,_08,_10, PM_HK_02, PM_HS_01,_04,_06, PM_AK_04, PM_AS_01,_03,_07

CPD matrix: codes: 2 E03, Level 3

GPAS 2020: 11.1.1, 11.1.2, 11.1.6, 11.2.5, 11.2.6, 11.2.7, 11.2.8, 11.4.1, 11.4.2, 11.4.3, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.6, 11.7.1, 11.7.2

References

1. Torrance N et al. Association of opioid prescribing practices with chronic pain and benzodiazepine co-prescription: a primary care data linkage study. Br J Anaesth 2018;120:1345–1355.
2. International Association for the Study of Pain. IASP Statement on Opioids. 2018 (http://www.iasp-pain.org/Advocacy/Content.aspx?ItemNumber=7194).
3. Chou R et al. The effectiveness and risks of long-term opioid therapy for chronic pain: a systematic review for a National Institutes of Health Pathways to Prevention Workshop. 2015;162:276–286.
4. Krebs EE et al. Effect of opioid vs nonopioid medications on pain-related function in patients with chronic back pain or hip or knee osteoarthritis pain the SPACE randomized clinical trial. JAMA 2018;319:872–882.
5. Faculty of Pain Medicine. Opioids Aware (https://www.rcoa.ac.uk/faculty-of-pain-medicine/opioids-aware).
6. Scottish Intercollegiate Guidelines Network. Management of Chronic Pain: A National Clinical Guideline. SIGN 136. Edinburgh: SIGN; 2019 (https://www.sign.ac.uk/sign-136-management-of-chronic-pain.html).
7. Scottish Government and NHS Scotland. Quality Prescribing for Chronic Pain: A Guideline for Improvement 2018–2021. Edinburgh: NHS Scotland; 2018 (https://www.therapeutics.scot.nhs.uk/pain).

10.6 Intrathecal drug delivery in the management of cancer-related pain

Dr David J Magee
Royal Marsden Hospital, London

Why do this quality improvement project?

Current practice of using intrathecal drug delivery systems varies widely depending on local factors including funding and expertise. The aim of this project is to help identify opportunities for improvement in the services at local levels.

Background

Pain is common in cancer. It affects between 40% and 60% of patients, depending on tumour type and stage of disease.[1] Pain has a marked impact on those living with and beyond cancer; affecting multiple aspects that contribute to a reduced quality of life.[2,3]

Use of the World Health Organization analgesic ladder in 1986 are 80-90% effective in providing adequate pain relief in this patient group.[4,5] The remainder will experience refractory pain and will require more specialist techniques.[6] Intrathecal drug delivery systems are one such intervention. Their clinical use is supported by class 1 evidence on treatment efficacy and safety, when compared with standard care,[6] providing a therapeutic option for those with uncontrolled cancer-related pain or those receiving escalating dosages of opioid medications with associated negative consequences. Importantly, the British Pain Society report that this technique is underused in the management of cancer pain.[7]

There are recommendations published relating to the use of specific drugs, the maximum doses and concentrations.[7] Additionally, there are also recommendations published addressing best practices.[6,7] It is not known whether all recommendations are stringently adhered to.

Best practice

Good practice guidance has been set by the British Pain Society and the Faculty of Pain Medicine.[7,8] Additionally, the NHS England clinical commissioning policy on intrathecal pumps for treatment of severe cancer pain provides details surrounding criteria for commissioning, patient pathways and governance arrangements, among other elements.[6] Further information and guidance on interventional cancer pain management is contained within the Faculty of Pain Medicine's core standards for the provision of pain services.

Suggested data to collect

Pre-procedural phase

- Percentage of patients initially assessed within three months from referral; the NHS England Clinical Commissioning Group suggests that the number of referrals assessed within three months should be audited (standard 80%).
- Percentage of patients receiving multidisciplinary team assessment including appropriate psychological work-up.
- Percentage of patients having baseline endocrine function checked (standard 95%):
  - serum testosterone, luteinising hormone and follicle-stimulating hormone levels in men
  - estradiol, progesterone, luteinising hormone and follicle-stimulating hormone levels in women.
- Percentage of patients assessed using validated tools to determine the impact of pain, pain relief, quality of life and function (standard 95%).
- Percentage of patients having proposed position of pump reservoir agreed preoperatively, considering clothing to be worn.

Procedural phase

- Percentage of patients receiving antibiotic prophylaxis at the time of implant.

Post-procedural phase

- Percentage of patients receiving documented instructions regarding arrangements for changes and refill attendances.
- Percentage of patients with access to 24-hour medical cover from an experienced team.
- Percentage of patients with annual measurements of endocrine function (standard 95%).
- Percentage of patients with continued assessment using validated tools to determine the impact of pain, pain relief, global impression of change, quality of life and function (standard 95%).

Quality improvement methodology

This whole pathway way is well suited to a rigorous pathway or process mapping approach, given that an ideal pathway has been described by several authorities. There is excellent scope for this quality improvement project to look at the whole pathway and identify gaps, bottlenecks and opportunities to improve standards of care.

Suggested approach

- Assemble stakeholder group (including patients).
- Map out existing pathway.
- Compare existing to ideal as defined by the authorities.
- Define gaps, bottlenecks and opportunities using data to describe current state.
- Prioritise the issues using a matrix which could be either urgent/important or impact/effort.
- Agree first improvement opportunity.
- Use stakeholder group to decide aims statement and create driver diagram (see section A5).
- Generate improvement ideas.
- Choose an idea and agree process, outcome and balancing metrics.
- Collect baseline data.
- Do a first plan-do-study-act cycle and collect agreed metrics frequently enough to rapidly generate a statistical process control chart. Use the chart to identify an improvement and opportunity for scale up and spread or identify and study why improvement is not working. If it is not working, abandon the chart, share learning and move on to the next idea.
- Scale up and spread the successful improvement but continue to measure and use statistical process control to ensure continuing improvement.

Mapping

ASCA standards: 1.2.2.1, 1.4.5.3, 1.4.4.2

Curriculum competences: Annex E: PM_AK_40, PM_AK_41, PM_AK_42, PM_AK_43, PM_AK_44, PM_AK_45, PMS_AS_38, PM_AS_39, PM_AS_40, PM_AS_41, PM_AS_42

References

1. Van Den Beuken-Van Everdingen MHJ et al. Update on prevalence of pain in patients with cancer: systematic review and meta-analysis. J Pain Symptom Manage 2016;51:1070–1090.
2. Breivik H et al. Cancer-related pain: a pan-European survey of prevalence, treatment, and patient attitudes. Ann Oncol 2009;20:1420–1433.
3. Li X-M et al. Psychological distress and cancer pain: results from a controlled cross-sectional survey in China. Sci Rep 2017;7:39397.
4. World Health Organization. Cancer Pain Relief. Geneva: WHO; 1986.
5. World Health Organization. WHO's pain ladder for adults. (http://www.who.int/cancer/palliative/painladder/en).
6. NHS England. Clinical Commissioning Policy: Intrathecal Pumps for Treatment of Severe Cancer Pain. London: NHS England; 2015 (https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/10/d08pb-intra-pumps-trtmnt.pdf).
7. British Pain Society. Intrathecal Drug Delivery for the Management of Pain and Spasticity in Adults; Recommendations for Best Clinical Practice. London: British Pain Society; 2015.
8. The Faculty of Pain Medicine. Guidance on Competencies for Intrathecal Drug Delivery. London: RCoA; 2019.

10.7 Audit of pain management programmes

Dr Hannah Twiddy
Walton Centre NHS Foundation Trust, Liverpool

Why do this quality improvement project?

It is vital to ensure that patients with chronic pain are provided with the opportunity to engage in biopsychosocial approaches to pain management within evidenced-based interventions, such as pain management programmes. Pain management programmes should be interdisciplinary and should meet minimum requirements in respect to content and delivery outlined in the Faculty of Pain Medicine's Core Standards for Pain Management Services.[1] Pain management programmes reduce psychological distress and improve physical function in well-selected patients, but continued improvement approaches will ensure ongoing quality in service provision, as well as supporting the continuing commissioning of services.

Background

Chronic pain is estimated to affect over 28 million patients in the UK with significant negative consequences to the individual and society.[2] Chronic pain and disability are not just influenced solely by somatic pathology but also psychosocial factors. Multidisciplinary biopsychosocial approaches are accepted and used more frequently over recent decades in the treatment of chronic pain. Pain management programmes are cost effective, as they have been found to reduce healthcare consumption, pain related issues in primary care, onward referrals and medication use.

Best practice

Evidence suggests that interdisciplinary pain management programmes are more effective in the long-term management of chronic pain than unidisciplinary interventions.[3] Pain management programmes are designed to improve both the psychological and physical functioning of a patient in the context of chronic pain. All programmes should comply with the British Pain Society's most up-to-date recommended guidelines, which state:[4]

- Pain management programmes should consist of methods to promote behaviour change to promote wellbeing.
- They should include education on pain physiology and psychology, general health and pain self-management. Pain management programmes also contain guided practice on exercise and activity management, goal setting, identifying and changing unhelpful beliefs and ways of thinking, relaxation and changing habits to reduce distress and disability.
- Core staff should include Health and Care Professions Council practitioner psychologists, physiotherapists, occupational therapists and a medically qualified person (preferably a consultant in pain medicine).
- Data should be collected at baseline, post treatment and minimally at a six-month follow-up.

Suggested data to collect

Core outcome datasets for assessing the effectiveness of interdisciplinary pain management have been presented by both IMMPACT and the VAPAIN consensus statements.[5,6] Commissioners, referrers and participants expect providers to deliver an effective pain management programme and there is an expectation that this should be reflected in measurable outcomes. It is commonly agreed that there is no single primary outcome, since multiple problems imply multiple outcomes, and goals are to a large extent determined by participants themselves. The following domains have recently been proposed for assessing the effectiveness of interdisciplinary multimodal therapy by an expert panel of clinicians and patients:[6]

- pain intensity and pain frequency
- physical activity (including activities such as household chores)
- emotional wellbeing
- health-related quality of life
- satisfaction with social roles and activities
- productivity (including work-related activities both paid and unpaid)
- participant's perception of treatment goal achievement.

These domains have been listed in the same order as the primary source and the order does not reflect importance.[6] In addition to the above, the following domains could also be considered:

- healthcare use
- patient experience of the programme (both quantitative and qualitative)
- process outcomes (monitoring concordance of the programme with best practice)
- participant demographic data.

Services should routinely use the data collected to evaluate the service and make improvements where a need is identified. Outcome data should be evaluated for minimally clinically significant change and reported as the percentage of patients who make meaningful change in the outcome domains described. Patient satisfaction data should also be routinely collated.

Quality improvement methodology

- Use process mapping to describe current state and identify gaps.
- Ensure that a stakeholder group is involved in mapping the pathway to capture as many experiences of the pathway as possible.
- Gaps and bottlenecks can then be prioritised, an aims statement created and a driver diagram used to identify drivers and create improvement ideas.
- Ideas are then prioritised, metrics (process, outcome and balancing) are agreed, baseline data are collected and the plan-do-study-act started.
- A statistical process control chart can be plotted for each metric to rapidly identify if there has been an improvement such that the idea can be scaled up, learnt from or abandoned and another idea tested.
- Determine the ways in which the outcomes of your pain management programme are collected, analysed and interpreted. Do the data points collected serve their required purpose and how is this information disseminated throughout the relevant teams? How could this process be improved?

Mapping

Curriculum competences: PM_AK_02, PM_AK_03, PM_AK_16, PM_AS_02, PM_AS_14
CPD matrix codes: 1D01, 1D02, 3E00

References

1. Faculty of Pain Medicine. Core Standards for Pain Management Services. London: FPM; 2015 (https://www.rcoa.ac.uk/system/files/FPM-CSPMS-UK2015.pdf).
2. Fayaz A et al. Prevalence of chronic pain in the UK: a systematic review and meta-analysis of population studies. BMJ Open 2016;6:e010364.
3. Williams AC et al. Psychological therapies for the management of chronic pain (excluding headache) in adults. Cochrane Database Syst Rev 2012;(11):CD007407.
4. British Pain Society. Guidelines for Pain Management Programmes for Adults: An Evidence-based Review prepared on behalf of the British Pain Society. London: BPS; 2013 (https://www.britishpainsociety.org/static/uploads/resources/files/pmp2013_main_FINAL_v6.pdf).
5. Dworkin RH et al. Interpreting the clinical importance of treatment outcomes in chronic pain clinical trials: IMMPACT recommendations. J Pain 2008;9:105–121.
6. Kaiser U et al. Developing a core outcome domain set to assessing effectiveness of interdisciplinary multimodal pain therapy: the VAPAIN consensus statement on core outcome domains. Pain 2018;159:673–683.

10.8 Continuing professional development and practice improvement for pain medicine anaesthetists

Dr Manohar Lal Sharma, Walton Centre NHS Foundation Trust, Liverpool

Why do this quality improvement project?

Continued improvements of their performance against set standards and peers will allow individual clinicals to deliver better care to their patients and also make improvements to the systems that they work in.

Background and best practice

The General Medical Council published the Good Medical Practice Framework for Appraisal and Revalidation in 2013.[1,2] The framework, based on Good Medical Practice, is the standard approach for all appraisals. The Academy of Medical Royal Colleges has published a structured reflective template to allow doctors to document their reflections for their portfolio.[3] The supporting information detailed below is not a comprehensive list of everything required in all the domains but aims to highlight the most important requirements in pain medicine practice. No patient identifiable data must be present in the portfolio.

Suggested data collect

General information (scope and description of your practice)

- Your job plan must be balanced between pain medicine and anaesthetic sessions to allow appropriate maintenance of skills, especially in relation to on-call commitments.
- You must detail any voluntary, private and medicolegal practice activity in the scope of your practice.
- Your whole practice description should include information about your pain medicine multidisciplinary team and your role within the team. Detail how the team functions, including pain multidisciplinary team, continuing professional development (CPD) and clinical governance meetings.
- If your pain service implants spinal cord stimulators and intrathecal infusion pumps you must provide information about how your service provides continuous out-of-hours emergency cover.
- Your workload (continuously recorded logbook including outcome data (eg with new/discharge ratio, Brief Pain Inventory data, functional outcomes and complications of interventions) details:
  - annual numbers of new outpatients seen and diagnostic categories
  - annual number of patients followed-up (new to follow-up ratio referenced to national data)
  - annual number and type of procedures performed (with details of complex procedures).
- Details of any issues concerning probity or health.

Keeping up to date (continuing professional development)

- You must meet the objectives of your personal development plan agreed at appraisal.
- CPD must cover the full scope of your clinical, medicolegal and non-clinical practice, including training for educational supervision, research and management.
- Use the principles outlined in the RCoA guidelines for continuing professional development and levels 1-3 of the CPD matrix.[4,5]
- Keep records and minutes of meetings attended, including action reports after multidisciplinary team and governance meetings.
- Complete reflective templates after CPD activities.
- Achieve at least 50 credits/year and at least 250 over the five-year revalidation cycle.
- Of the 50 annual credits, a minimum of 20 external and 20 internal should be obtained.

Review of your practice (audit/service evaluation)

- You will need to demonstrate that you participate in activities that review and evaluate your pain medicine practice to show quality improvement activity and, where possible, evidence and reflection of personal performance against recommended standards and guidelines:
  - Clinical audit: a minimum of one complete audit cycle (audit, practice review and re-audit) in every five-year revalidation cycle.
  - Case reviews and discussions demonstrate your engagement in discussion with your pain medicine colleagues and team to enhance and maintain the quality of your work.
  - Significant events: clinical incidents, significant untoward incidents. Keep anonymised records of incidents or declare in your appraisal if there are no incidents.

Three hundred and sixty degree feedback on your practice

- Colleague feedback: at least one validated multisource feedback exercise from a spread of the healthcare professionals with whom you work, should be undertaken in each five-year revalidation cycle.[6] The results should be benchmarked to other pain medicine specialists. Reflections and development needs should be detailed.
- Patient/carer's feedback: at least one validated patient feedback exercise should be undertaken in the revalidation cycle, preferably in year two. This allows time for a repeat survey if required. Additional patient feedback may be used:
  - pain department patient experience and satisfaction surveys
  - patient-reported clinical outcomes.
- Feedback from clinical supervision, teaching and training:
  - Evidence of training for the role should be given.
  - Evidence of performance from school of anaesthesia, deanery or department is required at least once in a five-year revalidation cycle.
  - Feedback from course organisers about the quality of teaching.
- Formal complaints: details of any formal complaints, your response and reflection and learning should be discussed at each appraisal.
- Compliments: annual record of unsolicited compliments from patients, carers and colleagues.

Standard

It will be expected that 100% of appraisals will meet all the above criteria as monitored by each NHS hospital's appraisal lead and responsible officer. Anaesthetists must measure their own performance against peers in their specialty.

Quality improvement methodology

- There are a number of ways of assessing one's own performance (ie agreeing basic standards of care and measuring oneself and others against that standard).
- When poor quality of care is identified then a 'five whys' diagnostic approach could be used to understand the challenges, a Pareto chart to look for the most common issue and then a driver diagram to understand the drivers of this aspect of poor performance.[7]
- An aim statement should describe what good could look like and then improvement ideas tested using a plan-do-study-act (PDSA) cycle.
- Process, outcome and balancing measures should be defined at the start of the PDSA cycle and then data collected (sampling frequently) and statistical process control charts used to assess impact.

Mapping

Curriculum competences: PM_AK_14, PM_AK_15, PM_AK_16

CPD matrix codes: 1H01, 1H02, 1I04, 1I05

GPAS 2020: 11.4.1, 11.4.2, 11.4.4, 11.4.7, 11.4.8, 11.5.4

References

1. General Medical Council. The Good Medical Practice Framework for Appraisal and Revalidation. London: GMC; 2013 (https://www.gmc-uk.org/-/media/documents/The_Good_medical_practice_framework_for_appraisal_and_revalidation___DC5707.pdf_56235089.pdf).
2. General Medical Council. Guidance on Supporting Information for Appraisal and Revalidation. London: GMC; 2018 (https://www.gmc-uk.org/-/media/documents/rt---supporting-information-for-appraisal-and-revalidation---dc5485_pdf-55024594.pdf).
3. Academy of Medical Royal Colleges. Academy Reflective Template for Revalidation. London: AoMRC; 2012 (https://www.aomrc.org.uk/search/?archive_search=Reflective+template+for+revalidation).
4. Royal College of Anaesthetists. Continuing Professional Development: Guidance for Doctors in Anaesthesia, Intensive Care and Pain Medicine. London: RCoA; 2018 (https://www.rcoa.ac.uk/news/updated-college-guidance-continuing-professional-development-cpd).
5. Royal College of Anaesthetists. Royal College of Anaesthetists CPD Matrix. London: RCoA; 2015 (https://www.rcoa.ac.uk/system/files/CPDMatrix2015.pdf).
6. Royal College of Anaesthetists. Patient and Colleague Feedback: Guidance for Doctors in Anaesthesia, Intensive Care and Pain Medicine. Revalidation Guidance Series. London: RCoA; 2018 (https://www.rcoa.ac.uk/system/files/MultisourceFeedback2018.pdf).
7. NHS Improvement. Root cause analysis: using five whys (https://improvement.nhs.uk/resources/root-cause-analysis-using-five-whys).

10.9 Medial branch block and radiofrequency denervation for lumbar facet joint pain

Dr Sanjeeva Gupta, Bradford Teaching Hospitals NHS Foundation Trust
Dr Manohar Lal Sharma, Walton Centre NHS Foundation Trust, Liverpool

Why do this quality improvement project?

Lumbar facet joint radiofrequency denervation is recommended by the National Institute for Health and Care Excellence (NICE) for the treatment of low back pain.[1] This improvement project will facilitate continuing improvements to patient pathway and subsequently patient outcomes.

Background

Lumbar facet (zygapophyseal) joints are one of the structures in the spine that can act as primary pain generators and a source of somatic low back pain. Lumbar facet joints have been implicated as a cause of chronic pain in up to 15-45% of patients with low back pain.[2,3]

Medial branch of the dorsal primary rami (MBDPR) nerve supply to the facet joint blocks has been shown to be effective in diagnosing lumbar facetogenic back pain. False positive rates of a single diagnostic block have been reported to range from 17% to 41%. The false positive rate is reduced when two sets of diagnostic blocks are performed.

Radiofrequency denervation of the MBDPR has been demonstrated to be effective in the treatment of facetogenic low back pain in appropriately selected patients. Dreyfuss et al reported that, at one year, 60% of their patients have 80% pain relief and 80% can expect 60% pain relief.[4] Bogduk et al, in a narrative review, summarised the available evidence for radiofrequency denervation of the MBDPR and highlighted the problems with older studies emphasising the need for proper patient selection and appropriate technique of radiofrequency denervation for optimal outcome.[5]

Best practice

- NICE Quality Standard on low back pain and sciatica in the over 16s published in 2017.[1]
- Standards of good practice for medial branch block injections and radiofrequency denervation for low back pain published by the British Pain Society and the Faculty of Pain Medicine in 2014.[6]
- Standards of good practice for spinal interventional procedures in pain medicine published by the British Pain Society and the Faculty of Pain Medicine in 2015.[7]
- Lumbar medial branch blocks: practice guidelines for diagnostic and treatment procedures, published by Spinal Intervention Society.[8]
- Lumbar medial branch thermal radiofrequency neurotomy: 2013 practice guidelines for diagnostic and treatment procedures, published by Spinal Intervention Society.[9]

Suggested data to collect

- Pre- and post-medial branch block pain scores and functional improvement following diagnostic medial branch block within 2-4 hours of the procedure. This is to confirm whether the pain is originating from the lumbar facet joints.
- Saving and reviewing fluoroscopic images of lumbar medial branch block and radiofrequency denervation.
- Percentage pain relief and duration of pain relief after radiofrequency denervation.
- Percentage of pain relief following diagnostic medial branch block and cut-off figure for pain relief for offering radiofrequency denervation.
- Technique of radiofrequency denervation and duration of pain relief following the procedure.
- When is radiofrequency denervation repeated (ie how long has previous radiofrequency denervation helped for before considering a repeat procedure).
- Complications following medial branch block or radiofrequency denervation (eg permanent aggravation of pain, permanent nerve damage).
- EuroQoL Quality of Life Scale EQ-5D and other outcome measures as suggested by the Faculty of Pain Medicine and the British Pain Society.[10]
- Any decrease in analgesic requirement following radiofrequency denervation.
- Outcome measures following radiofrequency denervation: in a number of different domains which collectively look at several quality of life indicators including pain relief (degree and duration), effect on sleep and mood, effect on mobility and ability to work, and use of healthcare resources.

Standard

All the cases in the hospital undergoing medial branch block and radiofrequency denervation must have patient-reported outcome data collected in all the domains as above.

Quality improvement methodology

- The pathway could be mapped from referral to discharge and compared with an ideal pathway (as in NICE low back pain guideline).[11]
- The best practice for patient selection for radiofrequency denervation treatment (eg have patients followed NICE Guideline 59 recommendations before consideration of radiofrequency denervation?) should be highlighted to clinicians treating patient with low back pain in secondary care and compared locally with an emphasis on improvement projects targeted to converge local pathway towards those suggested by the NICE Guideline 59.[11]
- A stakeholder group approach (including general practitioners, physiotherapists and patients) could be used to understand how to improve patient selection with timely access to pain service.
- An aims statement should be created to chart out improvement ideas that could be tested as a quality improvement project.
- Prior to testing any ideas, outcome, process and balancing measures should be defined and baseline data collected to understand whether the idea being tested is appropriate to allow assessment for an improvement in low back pain pathway.

Mapping

ASCA standards: 1.2.2.1, 1.2.2.2, 1.4.4.2
Curriculum competence: PM_HK_01
CPD matrix codes: Level 3: Pain Medicine

References

1. National Institute for Health and Care Excellence. Low Back Pain and Sciatica in Over 16s. Quality Standard QS155. London: NICE; 2017 (https://www.nice.org.uk/guidance/qs155).
2. Schwarzer A et al. Clinical features of patients with pain stemming from the lumbar zygapophyseal joints. Is the lumbar facet syndrome a clinical entity? Spine 1994;199:1132–1137.
3. Manchikanti L et al. Prevalence of lumbar facet joint pain in chronic low back pain. Pain Physician 1999;2:59–64.
4. Dreyfuss P et al. Efficacy and validity of radiofrequency neurotomy for chronic lumbar zygapophysial joint pain. Spine 2000;25:1270–1277.
5. Bogduk N et al. A narrative review of lumbar medial branch neurotomy for the treatment of back pain. Pain Med 2009;10:1035–1045.
6. British Pain Society and Faculty of Pain Medicine. Standards of Good Practice for Medial Branch Block Injections and Radiofrequency Denervation for Low Back Pain. London: BPS and FPM; 2014.
7. British Pain Society and Faculty of Pain Medicine. Standards of Good Practice for Spinal Interventional Procedures in Pain Medicine. London: BPS and FPM; 2015.
8. Lumbar medial branch blocks. In: Bogduk N, ed. Practice Guidelines for Diagnostic and Treatment Procedures. 2nd ed. Hinsdale, IL: Spinal Intervention Society; 2014. pp. 559–600.
9. Lumbar medial branch thermal radiofrequency neurotomy. In: Bogduk N, ed. Practice Guidelines for Diagnostic and Treatment Procedures. 2nd ed. Hinsdale, IL: Spinal Intervention Society; 2014. pp. 601–641.
10. British Pain Society and Faculty of Pain Medicine. Outcome Measures. London: BPS and FPM; 2019 (https://www.britishpainsociety.org/static/uploads/resources/files/Outcome_Measures_January_2019.pdf).
11. National Institute for Health and Care Excellence. Low Back Pain and Sciatica in over 16s: Assessment and Management. NICE Guideline NG59. London: NICE; 2016 (https://www.nice.org.uk/guidance/ng59).