Public Health England

Managing persistent pain in secure settings

FACULTY OF PAIN MEDICINE
of the Royal College of Anaesthetists

RCGP Royal College of General Practitioners

THE BRITISH PAIN SOCIETY

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Introduction

Managing persistent pain in secure environments presents clinicians with a number of challenges surrounding diagnosis, management, and measuring meaningful outcomes of therapy. It may also present a good opportunity to observe the outcomes of treatment. Every person in custody should have access to evidence-based pain management that can be safely delivered. To achieve this, healthcare professionals working in secure environments need to understand current best practice in diagnosing and managing the symptoms of persistent pain.

Clinicians working in secure environments are rightly concerned about the safe use of analgesic medication. Prescribers should work with patients with pain to find effective therapeutic options, but the potential for the drugs to be diverted and misused necessarily influences their decisions. Medications used for pain have a number of effects on the central nervous system that make them prone to misuse, so the prescribing decision must take into account the safety of the patient and not put him or her at risk from bullying and coercion. When drugs known to be misused are clinically indicated for the treatment of pain, appropriate safeguards must be put in place.

While clinicians need to understand and apply the principles of pharmacotherapy in managing persistent pain, they must also recognise that analgesic medication plays only a partial role in effectively managing long-term symptoms.

Aims of the document

The document is an overview of best practice in managing persistent pain and describes how this practice might be implemented in secure environments, including prisons, police custody and immigration removal centres. It empowers clinicians by supporting the evidence-based decisions they make within a context of multidisciplinary pain management. The document also acknowledges the challenges posed by difficult clinical presentations and the particular environment. It is not a comprehensive guide to managing all pain conditions but instead offers guidance with the most commonly identified challenges for pain management in the secure environment. It does not discuss interventions that can be delivered only in secondary care. This document complements Safer Prescribing in Prisons (RCGP 2011).

1. The context

1.1 The size of the problem

No current data identifies the prevalence of pain in the secure environment population. A number of risk factors in the relatively young population (who may have expectations of being pain free) suggest that persistent pain is likely to be common. These factors include a high prevalence of mental health and substance misuse disorders (including alcohol use), and histories of physical and emotional trauma. Also, the anxiety of coming into prison may intensify an individual's experience of existing pain.

Among the prison population, 16% have musculoskeletal disorders, 5% have cardiovascular disease and 5% have neurological conditions. Detoxification from opioids and other drugs may cause previously masked pain symptoms to emerge. Prisoners in the high security prison estate, or serving long sentences elsewhere, may develop co-morbid long-term ill health that can contribute to their reports of persistent pain.

1.2 Trends in prescribing

Accurate prescribing data for analgesics is unavailable. It can be difficult to distinguish between patients who ask for medication because they are in pain and those who request the drugs to continue their substance misuse or to use as a commodity. As an example of the scale of analgesic prescribing, a snapshot from two institutions (populations 751 and 859 respectively) suggested that between 55,000 and more than 350,000 analgesic tablets (excluding paracetamol and ibuprofen) were prescribed in one month.

Local compliance with national guidance on mitigation strategies may be limited because of difficulties in implementing them. This includes meeting the Prison Service Instruction (PSI 45/2010) that 'all abusable medication' should not be given in possession (note that this instruction does not affect non-abusable analgesics, which may be given in possession). In addition, advice that long-acting medications should be considered for first-line use may be inconsistently implemented.

In community and secure environment settings, clinicians may lack good understanding and application of high-quality evidence-based pain management. In particular, they may not recognise the circumscribed role of opioid analgesics in managing long-term pain symptoms. This can cause them to lack confidence in resisting unsuitable requests for analgesic medication.

Although the increased potential for misuse and diversion of analgesic drugs can influence clinical decisions in secure environments (and particularly prisons), these risks are sometimes balanced by the opportunity to monitor and regularly review patients and their response to the medication.

1.3 Additional challenges in specific settings

1.3.1 Female prison estate

Few problems or risk factors are gender-specific. However, female prisoners exhibit a higher prevalence than male prisoners of a number of risk factors that may contribute to pain symptoms, worsen the experience of pain, and act as barriers to effective pain management and recovery. These factors include histories of sexual and emotional abuse, and the disruption of their roles as parents.

Many female prisoners receive relatively short sentences, which can interrupt consistent long-term management of their symptoms. Prescribed medication misuse, particularly sedatives, is common among women in the community and in secure environments. As in male prisons, patients can be intimidated into diverting their personal medication.

1.3.2 Male high-security prisons

Serious personality disorders, often associated with childhood histories of abuse and trauma, are prevalent in male high-security prisons, but substance misuse disorders tend to be less common than elsewhere in the prison estate. Long-term medical conditions may have been previously poorly managed.

The high-security prison environment is challenging, with prisoners potentially intimidating and manipulating staff as well as other prisoners. These prisons also have a history of inappropriate prescribing of abusable analgesic medications. In common with other secure environments, people who use illicit drugs and medications infrequently outside may begin to do so in these settings.

Staff may feel isolated from mainstream clinical education and practice, and may fear criticism, complaints and legal claims, which can become a barrier to optimal prescribing. Recruiting and retaining staff is problematic and may lead to inconsistencies in care.

The context: key points

- The prevalence of long-term pain in the secure environment population is unknown
- Prisoners have a number of risk factors for chronic pain, including mental health and substance misuse disorders, physical and emotional trauma
- It can be difficult to distinguish patients who need medication for pain from those who want to misuse it or trade it as a commodity
- The secure environment offers an opportunity to assess regularly the effect of analgesic medications on pain and function
- Professional isolation and fear of criticism and complaints can erode confidence in prescribing decisions.

2. Clinical issues

2.1 Diagnosis and prescribing

2.1.1 Diagnosing persistent pain

Pain is a subjective sensory and emotional experience, usually expressed in terms of tissue damage. In routine clinical practice in the community it is unusual for patients to use factitious pain symptoms to secure medication or other support. Instead, clinicians are likely to take the patient's report as a starting point for investigating and treating the pain. However, it is difficult for an observer to confirm or refute such a report. Physiologic changes in particular, such as tachycardia, hypertension and sweating seen in patients with acute painful injury, are not features of long-term pain. Facial and other behavioural expression may have habituated to low levels and only facial expression is specific to pain.

Although our understanding of pain is always changing and sophisticated techniques such as functional imaging give information about pain in experimental settings, it is generally agreed that routine investigations and tests may not be helpful in making a diagnosis.

Confirming a diagnosis of persistent pain in a secure setting is even more challenging because the proportion of patients presenting with false symptoms to acquire analgesic medications for personal use or as currency is greater than in routine clinical practice in the community. Timely communication from the patient's community healthcare team or an enquiry to them about existing painful conditions may provide useful information about long-term pain that needs continuing management in custody. Common antecedents of persistent pain may include a history of trauma or a defined episode of tissue damage. The symptoms should bear an intuitive temporal relationship with the putative cause and onset/exacerbation of pain.

Persistent pain is usually accompanied by an observable decrement in physical, social and emotional function, but with possible day-to-day variation, such that inconsistency across time does not necessarily denote that the pain is not real.

2.1.2 Diagnosing neuropathic pain

Neuropathic pain is a consequence of disease or damage to pain-conducting pathways, resulting in abnormal pain signalling in the nervous system.

A number of well-defined neuropathic pain syndromes exist including diabetic neuropathy, post-herpetic neuralgia (pain after shingles), phantom limb pain, and pain following a stroke. Neuropathic pain may also result from damage to the nervous system from infection, injury or disease (e.g. multiple sclerosis). Epidemiological studies suggest that neuropathic pain is more severe and associated with a poorer quality of life than other types of pain. The pain can come on without obvious stimulus or can be evoked by a stimulus that is not normally painful e.g. light touch. The pain can be continuous or intermittent.

Features in the patient's history, such as a distribution of pain that makes anatomical sense and a relevant history of nerve injury or damage, can support the diagnosis. It is important to corroborate a suggestive history of, or positive screening test for, neuropathic pain with a physical examination that identifies abnormal function (i.e. numbness or hypersensitivity in the area of pain) or tests that demonstrate nerve injury (such as a scan showing nerve compression or electrophysiologic evidence of neuropathy). A number of screening tools for neuropathic pain are available (see further reading).

2.1.3 Diagnosing chronic visceral pain and poorly defined disorders

Chronic visceral pain occurs in men and women. Examples include chronic pelvic pain, irritable bowel syndrome, painful bladder syndrome and prostatodynia. There is an association with sexual and physical abuse in childhood and as an adult, but causality is unclear.

While terms such as prostatitis or cystitis imply a solely organ-based pathology, it is becoming more clear that central nervous system processes play a key role in the development of many of these conditions. Understanding this can help clinicians explain and formulate more effective treatment plans.

Diagnosing pain: key points

- Pain is a subjective experience and can only be diagnosed by interpreting the patient's report
- Good communication with the patient's community healthcare team can help to identify pre-existing painful conditions
- The onset of pain is often related to an obvious inciting event, such as trauma or other tissue damage
- Pain is usually associated with an observable (but variable) decrement in physical functioning
- The history (nerve injury or damage) and any abnormal findings on sensory examination can support the diagnosis of neuropathic pain
- Understanding the complexity of origin of visceral pain and of poorly defined disorders can help to plan realistic interventions.

2.1.4 The role of opioids in managing persistent pain

The World Health Organisation analgesic ladder recommends introducing more potent analgesics incrementally when pain does not respond to first-line therapy. However, this tool was developed for managing cancer pain and is not applicable for managing persistent non-cancer pain.

Little evidence exists for the effectiveness of opioids in treating long-term pain. In particular, there is no data to show that opioids improve key pain-management outcomes, including level of functioning, mood and quality of life. Given this lack of evidence for positive effects, the possibility of long-term harm (particularly to the endocrine and immune systems and risk of opioid-induced hyperalgesia – i.e. the opioids enhance rather than attenuate the pain) assumes greater significance.

Robust data shows that harms of treatment are dose related. In most cases, opioids should be titrated to a maximum of 120mg morphine equivalent per 24 hours for patients not currently using opioids. If there is no demonstrable benefit at this dose, adjusting it upwards is unlikely to help and the drug should be tapered and stopped. Opioid therapy aims to reduce the intensity of pain sufficiently to allow the patient to engage in self-management strategies, which usually need additional physiotherapy and psychological interventions as described below. When patients report sustained benefit from opioid treatment, it is important to continue to advise them about the value of self-management strategies in the longer-term, and about the risks of opioid analgesia becoming less effective with time.

Opioids are traditionally classified as weak (codeine, dihydrocodeine) or strong (tramadol, morphine, oxycodone, buprenorphine, fentanyl). All should be prescribed with caution. A therapy trial is recommended whenever opioids are prescribed, starting with a low dose and discontinuing if, after suitable adjustment, pain is not relieved and improved function not demonstrated.

Most cases of persistent pain should be managed with sustained-release preparations, again starting with a low dose and adjusting upwards if necessary. There is no evidence that any strong opioid is more effective for pain than another. Oral sustained-release morphine is a rational first-line choice if codeine or dihydrocodeine are ineffective. Tramadol has opioid receptor and monoamine effects, and might be useful in some cases before a morphine trial. Transdermal fentanyl patches are equivalent to a high daily dose of morphine (see table) and are not indicated for managing pain in this context.

It is not usual to manage day-to-day fluctuations in pain intensity with immediate-release opioid preparations (unlike when managing breakthrough cancer-related pain). If a patient has infrequent intermittent symptoms or a varied pattern of pain intensity, this might prompt the use of immediate-release preparations but this should be discussed with a specialist. Fast-acting oral transmucosal, sublingual and nasal preparations are not recommended for treating persistent pain.

Methadone is suitable for managing persistent pain and its use for this indication is established practice. Patients with long-term pain also receiving methadone for substance misuse may experience pain as the dose reduces. Pain can be treated in this circumstance by maintaining an effective methadone dose. The pharmacokinetics of methadone mean that once-daily dosing is unsuitable for managing pain and it should instead be given as a twice-daily divided dose.

When changing from one opioid to another, equianalgesic conversion ratios are a guide only. They are derived from single dose studies and have poor applicability to chronic use. Incomplete cross-tolerance between opioids when they are switched can lead to a risk of overdosing. Conversion ratios for methadone are unpredictable and vary several-fold when converting from a non-methadone opioid depending on the starting dose of original opioid and the duration of treatment. Also note that conversion ratios between methadone and other opioids are not bidirectional so should not be used to convert from methadone to another drug.

In summary, conversion should use the most conservative ratio (i.e. the one that gives the lowest estimated dose of the new opioid), and incorporate a modest dose reduction provided that early review (within 48 hours) is available for further dose adjustment.

Opioids for persistent pain: key points

- The WHO analgesic ladder has poor applicability in treating persistent non-cancer pain
- Evidence for opioids' effectiveness in managing long-term pain is lacking, particularly in relation to important functional outcomes
- Opioid therapy should support other pain management strategies e.g. physiotherapy
- If doses of 120mg morphine equivalent/day do not achieve useful relief of symptoms, the drug should be tapered and stopped
- All opioids (strong and weak) should be prescribed with caution
- There is no evidence that any opioid produces superior pain relief to morphine
- Sustained release opioid preparations can be used for most cases
- Fast-acting preparations are unsuitable to treat persistent pain
- Methadone is an established way of treating long-term pain. For patients with pain who also receive methadone substitution, pain can be treated by maintaining an effective daily dose in two divided increments
- When converting from one opioid to another, ratios should be cautious and the effect monitored. Conversion ratios between opioids vary substantially, particularly for methadone.

2.1.5 Pharmacological management of neuropathic pain

Neuropathic pain is difficult to treat. Medications are probably the most effective intervention but fewer than a third of patients respond to any given drug. Different classes of drug have distinct and relevant mechanisms of action, so if the first class tried does not work it is helpful to try an alternative. Pain reduction with all types is modest, with most lessening the intrusiveness of pain rather than providing substantial relief.

Drug choices for neuropathic pain should be based on evidence for efficacy. A number of drug classes (of equivalent efficacy) are available and the decision must reflect the safety of the drug in relation to the potential adverse effects as well as the specific risks related to the prescribing context.

Published evidence suggests that tricyclic antidepressants (given as a once-daily dose) are the most effective first-line treatment for neuropathic pain (see further reading – Finnerup et al). Carbamazepine is also effective. Gabapentin and pregabalin are effective in some cases but should not be used first line in this context because of the risk of misuse and diversion (for more, see the endnote on page 8).

These drugs may be considered in specific situations where other therapy (at appropriate doses) has failed and the risks of misuse and dangerous adverse effects have been assessed. If pregabalin is used it should be prescribed as a twice-daily dose; gabapentin needs to be given three times daily.

Patients arriving in custody may have a documented history of significant neuropathic pain, be established on pregabalin and have clinically demonstrated poor analgesic response to other therapies. These patients may be considered for continued pregabalin or gabapentin prescribing after carefully assessing their pain and previous drug therapies.

Drugs should be titrated to an effective dose range (see appendix): 'start low, go slow' is a good principle. If there is no perceptible benefit after four weeks of titrating, taper the drug and stop. (Also consider amitriptyline for non-neuropathic pain, particularly if the clinical team has evidence that suggests nocturnal symptoms are impairing sleep.) If neuropathic pain of well-defined origin is refractory to optimal doses of tricyclic antidepressants or antiepileptic drugs, consider a trial of opioid therapy (see suggested treatment pathway).

Pharmacoptherapy for neuropathic pain: key points

- Medications are the best way to treat neuropathic pain but fewer than a third of patients will respond
- Pain relief from neuropathic pain medications is modest
- Tricyclic antidepressants are the most effective treatment for neuropathic pain
- Carbamazepine may be effective
- Gabapentin and pregabalin are unsuitable as first-line drugs in secure environments.

2.1.6 Pharmacological management of chronic visceral pain and poorly defined disorders

These respond poorly to medication although there is some evidence for using tricyclic antidepressant drugs in treating pain associated with irritable bowel syndrome. Psychological-based interventions including physiotherapeutic treatment are more effective for managing these disorders.

Visceral pain and poorly defined disorders: key points

- Psychological interventions are mainstays of managing visceral pain and poorly defined disorders
- Tricyclic antidepressant drugs may help to manage pain linked to irritable bowel syndrome.

2.2 Non-pharmacological management of pain

2.2.1 Psychological interventions

Addressing patient's fears and mistaken beliefs about the causes and implications of pain requires good information, and possibly cognitive and behavioural intervention. For example, people often believe that back pain indicates serious degeneration that will end in immobility and loss of independence unless they are cautious about using their backs. Over-caution, instead of the pain itself, is more likely to lead to disability. Information and education often needs support from a demonstration (guided by a physical therapist) that using the back more will strengthen rather than weaken it.

Depression should be treated in the context of pain, with no assumption that relieving depression will abolish pain. Attributing pain to anxiety, depression or psychosomatic processes is unhelpful and poorly supported. Pain and psychological disorders should be diagnosed on positive evidence, and treated appropriately in the context of multiple problems. Anxiety, depression and stress all worsen the experience of pain and can be barriers to successful pain management. Rehabilitation and progress towards participation are best achieved jointly with physiotherapeutic support or intervention. The aim is effective self-management rather than long-term therapy.

2.2.2 Physical rehabilitation

Good evidence supports active techniques, such as exercise classes, working towards activity goals and better health,in managing pain. These techniques are best combined with cognitive and behavioural interventions and need to be individually adjusted to set a realistic baseline and rate of progress.

Evidence for other non-pharmacological physical interventions is poor, but techniques such as acupuncture and TENS are common. No strong evidence supports them but they may help patients self-manage their pain without medication.

Note that pharmacotherapy has little role in managing simple, persistent mechanical lower back pain. The mainstays of therapy are physical rehabilitation and interventions to address mistaken beliefs about the causes of pain and the association between pain and activity. Patients with more complex presentations, e.g. those who have had multiple spinal surgery, may need additional interventions including opioid medication and specialist advice may be needed.

Non-pharmacological management of pain: key points

- Fears and mistaken beliefs about the causes and consequences of pain must be addressed
- Co-morbid depression and other psychological disorders need treating as part of pain management
- Good evidence supports active physical techniques in managing pain
- Physical rehabilitation is best combined with cognitive and behavioural interventions
- Interventions such as TENS and acupuncture are poorly supported by evidence for benefit but may support self-management of pain.

Endnote

Healthcare professionals have consistently observed gabapentin and pregabalin misuse in secure environments for some years, and pregabalin has been identified as a possible contributor to death in custody (published data highlights the potential for misuse – see further reading Schwan et al). Both drugs have a significant number of adverse effects with a frequency of 'common' or higher. These include psychiatric and gastrointestinal effects and many clinically important others at a lower incidence. Adverse effects are additive when co-prescribed with other drugs acting on the CNS, particularly opioids. Bioavailability of gabapentin decreases as the dose increases whereas pregabalin's is largely independent of dose, which explains the increased risk of high dose pregabalin use. The adverse effect profile and potential for misuse make gabapentin and pregabalin potentially problematic in secure environments and these drugs should not ordinarily be used as first line therapy.

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Process of preparation

Members of the consensus group were identified following a three-month period of communication between representatives of professional stakeholder organisations, policy makers and providers of clinical care in secure environments. The scope of the project has been informed by current challenges identified by stakeholder individuals and organisations. Members of the consensus group met in Bristol on 9 February 2012. The consensus group subsequently finalised this clinical best practice statement and derived the accompanying clinical pathways.

Implementation of this document has been supported by information sessions fo prison healthcare and other stakeholder groups. The consensus group, pain professionals and Public Health England will continue to work collaboratively to deliver high-quality healthcare to patients with pain in secure environments.

Consensus group members

Chairs of project and co-editors:

Dr Linda Harris, medical director, RCGP Substance Misuse and Associated Health

Dr Cathy Stannard, consultant in pain medicine, British Pain Society, Faculty of Pain Medicine Royal College of Anaesthetists

Members of consensus group

Mr Danny Alba, NHS Wakefield District

Prof Mike Bennett, University of Leeds, Faculty of Pain Medicine Royal College of Anaesthetists

Dr Iain Brew, GP at HMP Leeds and RCGP Secure Environments Group member

Dr Michelle Briggs, senior research fellow, University of Leeds (on behalf of the Pain in Prisons NIHR programme development group)

Ms Helen Carter, healthcare inspector, Her Majesty's Inspectorate of Prisons

Dr Beverly Collett, consultant in pain medicine, Chronic Pain Policy Coalition, Faculty of Pain Medicine Royal College of Anaesthetists

Mrs Cathy Cooke, chair, Secure Environment Pharmacists Group

Ms Annette Dale-Perera, Central and North West London NHS Foundation Trust

Mr Kieran Lynch, Public Health England (formerly National Treatment Agency)

Mr David Marteau, Department of Health

Ms Jan Palmer, Department of Health

Dr Mary Piper, Department of Health

Dr James Robinson, clinical lead HMP Styal; RCGP Secure Environments Group

Mr Mark Warren, Avon and Wilts Mental Health Partnership

Dr Amanda Williams, reader in clinical health psychology, University College London; University College London Hospitals

Policy observers

Mr Mark Edginton, Department of Health

Dr Mark Prunty, senior medical officer for substance misuse policy, Department of Health

Declaration of interests

Professor Bennett has received honoraria and consulting fees in the last three years from Pfizer, Cephalon, Gruenthal and Astellas.

Dr Collett has received hororaria and consulting fees in the last three years from Pfizer, NAPP, Mundipharma, Astellas, Grunenthal

Dr Stannard has received consulting fees in the last three years from Grunenthal and Napp Pharmaceuticals

Dr Williams has received honoraria and consulting fees from Reckitt Benckiser and Janssen-Cilag.

Appendix 1

SUGGESTED DOSING FOR COMMONLY USED DRUGS IN TREATING NEUROPATHIC PAIN

(Start all drugs at a low dose with at least one week between dose increments: the figures below represent the starting dose and a suggested upper dose limit)

DRUG	DOSE
Amitriptyline	10-75mg once daily
Nortriptyline	10-75mg once daily
Duloxetine	60-120mg once daily
Carbamazepine	200-1200mg daily in two divided doses
Gabapentin	900-2700mg daily in three divided doses
Pregabalin	150-600mg daily in two divided doses

If pregabalin needs to be withdrawn, reduce the daily dose gradually at a maximum of 50-100mg/week. Withdraw gabapentin at a maximum rate of 300mg daily dose every four days.

Appendix 2

TRANSDERMAL OPIOIDS: APPROXIMATE EQUIVALENCE WITH ORAL MORPHINE

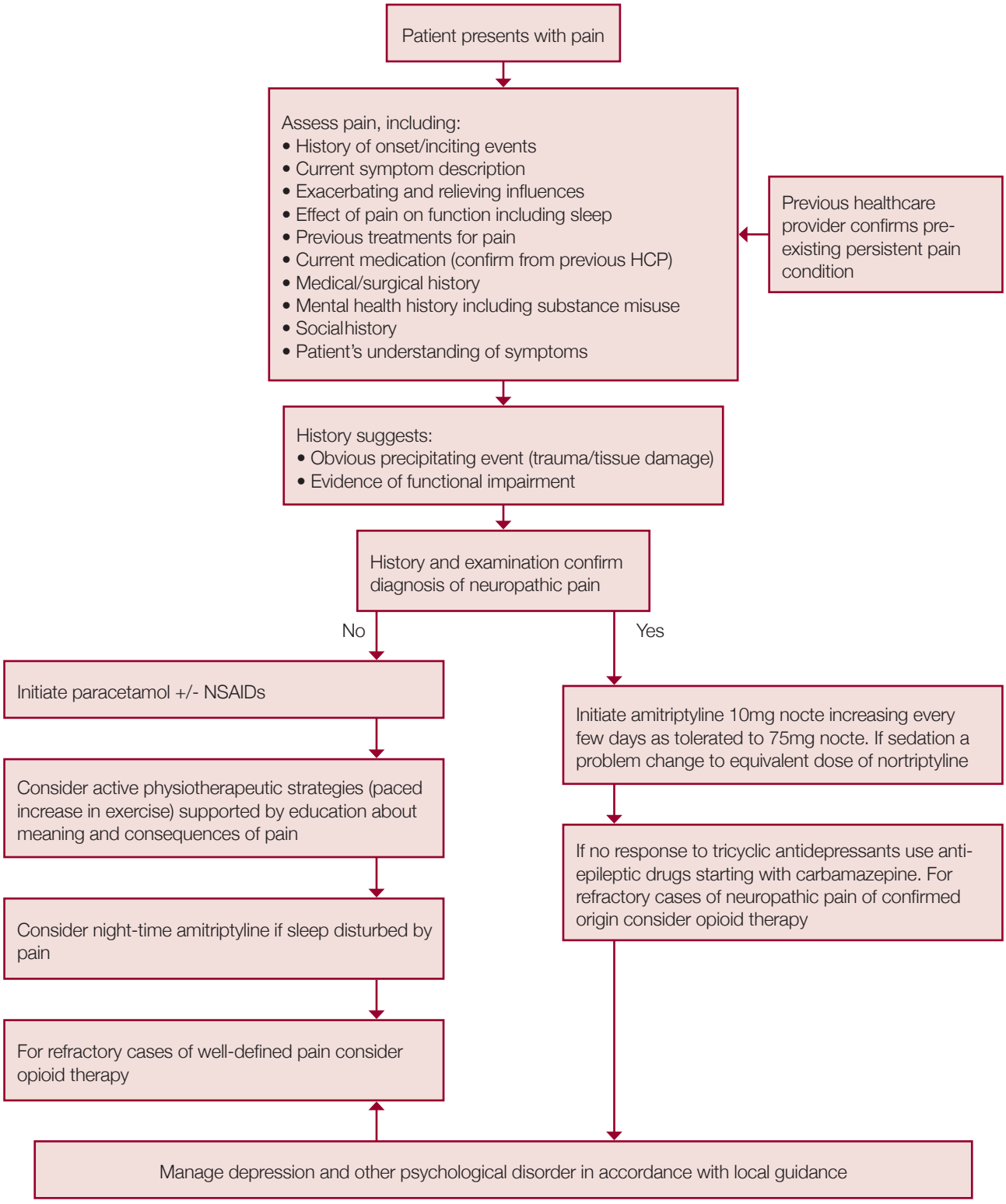
Oral morphine equivalent (mg/24-hours)	10	15	30	45	60	90	120	180	270	360
Transdermal buprenorphine (µg/hr)	5	10	20		35	52.5	70			
Transdermal fentanyl (µg/hr)				12		25		50	75	100

Published conversions ratios vary and these figures are a guide only. Morphine equivalences for transdermal opioid preparations have been approximated to allow comparison with available preparations of oral morphine.

From: The British Pain Society 2010 'Opioids for persistent pain: good practice'. (Available from www.britishpainsociety.org/pub_professional.htm#opioids). Accessed June 2013.

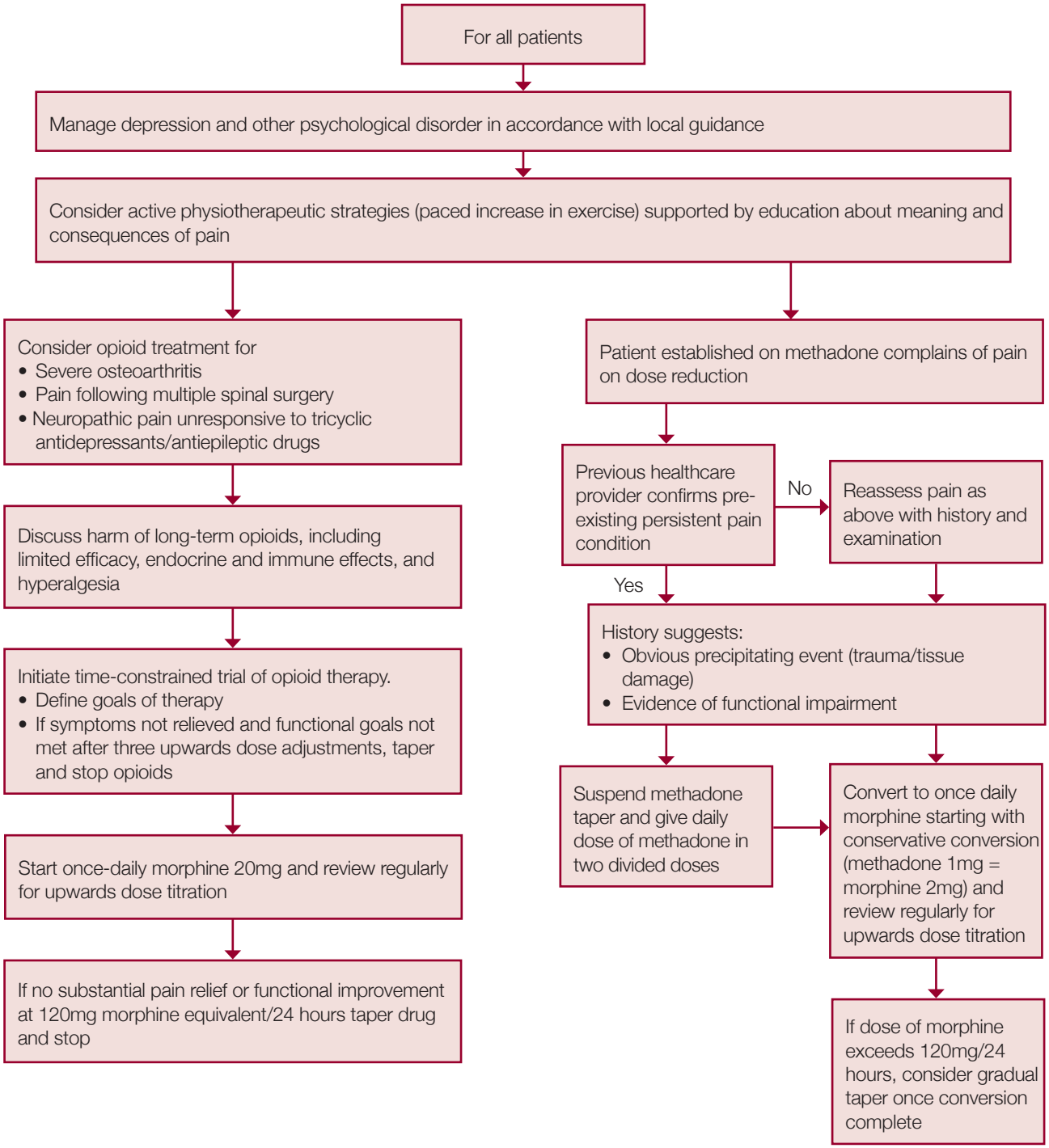
Appendix 3. Suggested treatment pathways

Assessing and initiating pain management



Appendix 3. Suggested treatment pathways

Opioid therapy guidance pathway



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Wellington House
133-155 Waterloo Road
London SE1 8UG
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