

**Why you should read this article:**

- To recognise the importance of undertaking comprehensive pain assessments for all patients who have undergone a surgical procedure
- To be aware of various tools that could assist in assessing the type, nature and intensity of a patient's pain
- To support you with identifying when a patient may require appropriate pain management interventions

# How to undertake a pain assessment for patients with acute post-operative pain

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Please note that information provided by *Nursing Standard* is not sufficient to make the reader competent to perform the task. All clinical skills should be formally assessed according to policy and procedures. It is the nurse's responsibility to ensure their practice remains up to date and reflects the latest evidence

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**Rationale and key points**

Acute post-operative pain is common among patients in secondary care settings, and the alleviation of this pain is a principal responsibility for all healthcare professionals, including nurses. To achieve this, it is essential to regularly undertake comprehensive pain assessments, using validated pain assessment tools, for all patients who have undergone a surgical procedure. Inadequate pain assessment may lead to ineffective or inappropriate pain management, which can adversely affect the patient's recovery and increase their risk of developing chronic pain.

- » Pain is a subjective experience and therefore requires individualised, comprehensive assessment and management interventions.
- » The assessment process for patients with acute pain is fundamental to understanding the patient's current status, informing differential diagnoses regarding the underlying cause of the pain, providing appropriate treatment and monitoring, and evaluating the effectiveness of treatment.
- » Pain assessment should not be undertaken as a one-off care activity; it should be completed whenever a patient reports pain and repeated following pharmacological and/or non-pharmacological interventions.

**Reflective activity**

'How to' articles can help you to update your practice and ensure it remains evidence-based. Apply this article to your practice. Reflect on and write a short account of:

- » How this article might improve your practice when undertaking a comprehensive pain assessment with patients experiencing acute post-operative pain.
- » How you could use this information to educate nursing students or colleagues on the appropriate actions to take when undertaking a comprehensive pain assessment with patients experiencing acute post-operative pain.

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The International Association for the Study of Pain (IASP) (2021a) defines pain as 'an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage'. IASP (2021a) expands on and contextualises this definition with the addition of 'six key notes':

- » Pain is always a personal experience that is influenced to varying degrees by biological, psychological and social factors.
- » Pain and nociception (the neural detection of painful stimuli) are different phenomena. Pain cannot be inferred solely from activity in sensory neurons.
- » Through their life experiences, individuals learn the concept of pain.
- » A person's report of an experience as pain should be respected.
- » Although pain usually serves an adaptive role, it may have adverse effects on function and social and psychological well-being.

» Verbal description is only one of several behaviours to express pain; inability to communicate does not negate the possibility that a human or a non-human animal experiences pain.

Definitions of acute pain vary and have evolved over the decades, but this type of pain is generally considered to be sudden, intense and short in duration. For example, IASP (2021b) describes it as pain that ‘happens suddenly, starts out sharp or intense, and serves as a warning sign of disease or threat to the body. It is caused by injury, surgery, illness, trauma, or painful medical procedures and generally lasts from a few minutes to less than six months. Acute pain usually disappears whenever the underlying cause is treated or healed’.

In secondary care settings, acute post-operative pain remains common, with almost 20% of patients experiencing severe pain in the first 24 hours following surgery (Small and Laycock 2020). The alleviation of post-operative pain is a principal responsibility for all healthcare professionals, including nurses, and to achieve this it is essential to regularly undertake a structured and comprehensive pain assessment.

### Preparation and equipment

- » If you are not already familiar with the patient and their current health status, read the patient’s clinical notes and check their previous pain scores and vital sign observations.
- » Select a pain intensity rating scale that is appropriate for use with the patient, considering factors such as the patient’s age, their usual cognitive ability and any language or other communication barriers. Table 1 shows some examples of pain intensity rating scales.
- » If you have chosen to use a different scale from one that has been used previously with the patient, be prepared to explain to them why you have done this and what it entails.

### Procedure

#### Pain type, nature and intensity

1. Introduce yourself and verify that you are with the correct patient by asking them to confirm their name and/or by checking their identity band.
2. Explain what the pain assessment will entail, for example by saying ‘I’m just going to ask you a few questions about your pain’. Gain the patient’s consent to undertake the assessment.

3. Use a mnemonic to structure the assessment, such as one of those outlined in Table 2. Mnemonics are widely used in healthcare settings to provide a structure when gathering information from patients and are an effective way of remembering to incorporate essential aspects of the assessment (Bickley et al 2021). An example of how to assess the type, nature and intensity of a patient’s pain using the SOCRATES mnemonic is shown in Table 3.
4. Ask open questions that enable the patient to use their own words to describe their pain. This can also prompt a conversation with the patient to explore their pain further, can show that you are interested in their experience of pain and can guide pain management interventions (Cox 2022). If necessary, prompt the patient – for example by using some of the common pain descriptors (Box 1) – but be careful not to ‘put words in their mouth’, since this may direct them away from describing their experience of the pain.
5. Observe the patient’s facial expressions, posture and body language, which can provide

**Table 1. Examples of pain intensity rating scales**

Tool	Description
Numerical rating scale	The patient verbally rates their pain on a numbered scale, usually 0-10, where 0=no pain and 10=the most intense pain imaginable
Visual analogue scale	<ul style="list-style-type: none"> <li>» This scale consists of a straight line with the endpoints defining extreme limits, such as ‘no pain at all’ and ‘pain as bad as it could be’</li> <li>» The patient is asked to mark their level of pain on the line between the two endpoints</li> <li>» The British Pain Society website provides a visual analogue pain rating scale in various languages, available at: <a href="http://www.britishpainsociety.org/british-pain-society-publications/pain-scales-in-multiple-languages">www.britishpainsociety.org/british-pain-society-publications/pain-scales-in-multiple-languages</a></li> </ul>
Wong-Baker FACES Pain Rating Scale	<ul style="list-style-type: none"> <li>» A visual ‘facial expression’ tool used to support children in communicating their experience of pain</li> <li>» It can be accessed via the Wong-Baker FACES Foundation website at: <a href="http://wongbakerfaces.org/wp-content/uploads/2016/05/FACES_English_Blue_w-instructions.pdf">wongbakerfaces.org/wp-content/uploads/2016/05/FACES_English_Blue_w-instructions.pdf</a></li> </ul>
Bolton Pain Assessment Tool	<ul style="list-style-type: none"> <li>» An observational pain assessment tool used in acute care settings. It is based on the Pain Assessment in Advanced Dementia (PAINAD) scale (Warden et al 2003) and the Abbey pain scale (Abbey et al 2004)</li> <li>» For use with patients who have cognitive impairment and/or communication issues</li> </ul>
Critical Care Pain Observation Tool	<ul style="list-style-type: none"> <li>» A behavioural assessment pain scale for use with patients who are unable to verbalise pain</li> <li>» It includes evaluation of four behaviours: facial expressions; body movements; muscle tension; and compliance with the ventilator for patients who are mechanically ventilated or vocalisation for patients who are not intubated</li> </ul>

(Adapted from Gélinas et al 2006, Haefeli and Elfering 2006, Wong-Baker FACES Foundation 2016, Gregory 2017)

**Table 2. Commonly used pain assessment mnemonics**

Mnemonic	Meaning
SOCRATES	<ul style="list-style-type: none"> <li>» Site</li> <li>» Onset</li> <li>» Character</li> <li>» Radiation</li> <li>» Associated symptoms</li> <li>» Time/duration</li> <li>» Exacerbating and relieving factors</li> <li>» Severity</li> </ul>
PQRST	<ul style="list-style-type: none"> <li>» Provoking and palliating factors</li> <li>» Quality</li> <li>» Region and radiation</li> <li>» Severity</li> <li>» Time</li> </ul>
OLD CARTS	<ul style="list-style-type: none"> <li>» Onset</li> <li>» Location</li> <li>» Duration</li> <li>» Character</li> <li>» Alleviating and aggravating factors</li> <li>» Radiation</li> <li>» Time</li> <li>» Severity</li> </ul>

(Adapted from Bickley et al 2021)

further information regarding their pain experience (Bickley et al 2021). For example, grimacing or frowning, clenched teeth, groaning or crying, rigid or tense posture and guarding or touching the affected area may indicate pain.

6. Apply the pain intensity rating scale you have selected to assess the severity of the patient's pain at rest and on movement (Table 3). Give the patient time to respond. Note that such scales vary across healthcare settings and patients may have been asked to rate their pain in a variety of ways. Therefore, when using numerical and visual analogue scales, ensure that you clearly define which number relates to 'no pain' and which relates to 'worst pain'.
7. Observe the surgical site for any issues that may be causing pain, for example signs of infection such as redness, swelling, warmth and pus.
8. Record the patient's pain rating score at rest and on movement (and/or your score if using an

**Table 3. Example of how to assess the type, nature and intensity of a patient's pain using the SOCRATES mnemonic**

Aspect of the mnemonic	Example questions
Site	<ul style="list-style-type: none"> <li>» 'Can you tell me where your pain is?'</li> <li>» If the pain is located in multiple areas, discuss each one in turn</li> <li>» If the area is widespread, ask the patient: 'Can you point with one finger to where the pain is most painful?'</li> </ul>
Onset	<p>'When did the pain start?'</p> <p>'What were you doing when the pain started?'</p>
Character	<p>'How would you describe your pain?'</p> <p>'Can you use some words to describe your pain?' (see Box 1 for some commonly used pain descriptors)</p>
Radiation	<p>'Does your pain move anywhere?'</p>
Associated symptoms	<p>'Do you have any other symptoms when you have the pain, for example a feeling of wanting to be sick or feeling short of breath?'</p>
Time/duration	<p>'Is your pain there all the time or does it comes and go?'</p> <p>'How long have you had the pain for?'</p> <p>'Is the pain getting worse, better or staying the same?'</p>
Exacerbating and relieving factors	<p>'What makes the pain worse?'</p> <p>'What makes your pain better or more manageable?'</p>
Severity	<p>'If you are sitting still "resting," what number would you give to your pain on a scale of 0-10, with 0 being no pain and 10 being the worst pain you can imagine?'</p> <p>'When you are moving, for example breathing deeply, coughing or walking, does this number change? If so, what number would you give the pain?'</p>

observational or behavioural pain assessment tool) on the pain assessment section of the patient's routine observations chart; this may differ depending on local documentation processes. In the nursing notes, document relevant information about the type and nature of their pain, such as the location of the pain and any exacerbating factors, based on the patient's description and your observations.

**Functional assessment**

9. Assess the patient's function using a tool such as the Functional Activity Scale (Scott and McDonald 2008) to identify if their ability to undertake activities that could support their recovery is restricted by their post-operative pain. Ask the patient if they can undertake, or assist them to undertake, a specific activity, such as taking a deep breath

or walking to the toilet, and assess their response against the following three levels (Levy et al 2021):

- No limitation – the patient can undertake the activity without

**Box 1. Common pain descriptors**

- » Tender
- » Cramping
- » Throbbing
- » Heavy
- » Crushing
- » Pulling
- » Pressure
- » Gnawing
- » Sharp
- » Pounding
- » Sore
- » Tight
- » Aching
- » Dull
- » Stabbing
- » Drilling
- » Discomfort
- » Squeezing

(Adapted from Melzack 1975)

- limitation due to pain.
  - Mild limitation – the patient can undertake the activity but experiences moderate-to-severe pain.
  - Significant limitation – the patient is unable to complete the activity due to pain or pain treatment-related adverse effects.
10. Document the outcome of the Functional Activity Scale in the patient's nursing notes, as per local procedures.
  11. If the patient's pain is such that they require immediate pharmacological intervention, pause the assessment and administer a prescribed analgesic and/or use any appropriate non-pharmacological interventions. If the patient does not require analgesia at this point, you can continue with the pain assessment. Alternatively, you can return to the next part of the assessment when the patient's pain is more manageable.

#### Pain management interventions

12. Explore the patient's pain management history by:
  - Asking the patient if they take analgesics regularly at home, including over-the-counter medicines, for example to manage a chronic pain condition (this may also already be recorded in their medical or nursing notes). Confirm the dose, frequency and efficacy of this medicine and any side effects they have experienced. This information will enable you to consider whether these medicines should be incorporated into their current pain management plan.
  - Asking the patient if they have tried any non-pharmacological management interventions at home, such as a hot or cold compress or repositioning, and whether these have been effective in reducing painful symptoms. These interventions could be incorporated into the current pain management plan, if appropriate.
13. Try to set realistic expectations about the potential outcomes of pain management interventions, for example by saying 'We may

- not be able to make you pain-free, but we will aim to make you more comfortable than you are now'. Reassure the patient by explaining that you, or a colleague, will undertake the pain assessment regularly and remind them that they should alert healthcare staff if their pain changes and/or intensifies.
14. Administer analgesics as prescribed, and if required, and/or undertake or request a medication review if the current regimen has been ineffective. In addition, offer non-pharmacological interventions, such as repositioning a hot or cold compress, or suggest that the patient uses distraction methods, such as listening to music (Mota et al 2021).
  15. Reassess the patient's pain at regular intervals and/or when they say they are experiencing pain.

#### Evidence base

For patients with acute pain, the assessment process is fundamental to understanding their current health status, informing differential diagnoses in relation to the underlying cause of the pain, providing effective and appropriate treatment, and monitoring and evaluating the effectiveness of treatment (Schug et al 2020). Pain assessment should not be undertaken as a one-off care activity but should be completed whenever a patient reports pain and repeated following pharmacological and/or non-pharmacological interventions (Dydyk and Grandhe 2023).

There are no formal UK guidelines on frequency for pain assessment; however, in the author's extensive clinical experience, the standard expectation across pain management teams is to undertake an assessment a minimum of every four hours, or more frequently depending on the patient's clinical condition. The Core Standards for Pain Management Services in the UK (Faculty of Pain Medicine 2021) specifies that all inpatients with acute pain 'must have regular pain and functional assessment using consistent and validated tools, with results recorded', and that

for people in severe pain 'action must be taken immediately and an intervention must take place within 30 minutes. The effectiveness of the intervention must be reassessed after an appropriate interval'.

The functional assessment referred to in the Faculty of Pain Medicine (2021) core standards is important. Although it is essential to assess the intensity of the patient's pain, Levy et al (2018) argued that in patients who have undergone a surgical procedure, provision of analgesics – particularly opioids – should be guided by an assessment of their functioning rather than by self-reported pain intensity alone. A functional assessment aims to identify whether post-operative pain is causing any restrictions in the patient's ability to undertake activities that may be necessary to support their recovery (Levy et al 2021).

Inadequate pain assessment may lead to suboptimal or inappropriate pain management, which can have a range of adverse effects on the patient's recovery from surgery, including deterioration in their condition or the development of complications, resulting in a prolonged length of hospital stay (Sundaram Venkatesan et al 2022). Furthermore, inadequate management of acute pain carries a risk of the patient developing chronic pain, due to complex mechanisms such as peripheral and central sensitisation (McGreevy et al 2011), which are beyond the scope of this article. Chronic pain is a complex phenomenon that can be challenging to manage (Feizerfan and Sheh 2015).

The experience of pain is complex and influenced by various factors, including the cause, the patient's previous experiences of pain, their psychological status and their understanding of the situation. Since pain is a subjective experience, it requires individualised, comprehensive assessment and management interventions (Gordon 2015). Exploring the patient's pain history as part of such an assessment can provide an understanding of their previous experiences of pain and how they usually cope

with and/or manage it (Schug et al 2020). Ustunel and Erden (2022) undertook a descriptive, cross-sectional study that explored patients' ( $n=419$ ) fear of surgery-related pain in the preoperative period, finding that 89% of participants feared experiencing pain after surgery. Some evidence suggests that there is a link between patients' pre-existing fear of pain and increased pain intensity following a surgical procedure (Luo

et al 2022). Therefore, undertaking comprehensive pain assessments regularly may help patients feel that their pain is being acknowledged, heard and understood, which subsequently can reduce their anxiety levels and pain severity (Kwame and Petrucka 2021). In addition, this may enhance the therapeutic relationship and nurse-patient communication, which can support effective pain management interventions and improve overall

patient outcomes (Kwame and Petrucka 2021).

Patients can find it challenging to verbally describe their pain, so asking open questions and prompting the person to expand on their responses can support patients to self-report their symptoms (Cox 2022). This is vital because pain 'is whatever the experiencing person says it is, existing whenever and wherever the person says it does' (McCaffery 1968).

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