

Guide to Pain Management in Low-Resource Settings

Chapter 10 Pain History and Pain Assessment

Richard A. Powell, Julia Downing, Henry Ddungu, and Faith N. Mwangi-Powell

The effective clinical management of pain ultimately depends on its accurate assessment. This entails a comprehensive evaluation of the patient's pain, symptoms, functional status, and clinical history in a series of assessments, depending on the patient's presenting needs. Such assessments rely in part on the use of evaluation tools. To varying degrees, these tools attempt to locate and quantify the severity and duration of the patient's subjective pain experience in a valid and reliable manner to facilitate, structure, and standardize pain communication between the patient and potentially different health care providers.

How do you learn about a patient's pain? What is the pain assessment process?

Where pain levels permit (i.e., where severe clinical needs do not demand *immediate* intervention), the assessment process is essentially a dialogue between the patient and the health care provider that addresses the nature, location, and extent of the pain, looks at its impact on the patient's daily life, and concludes with the pharmaceutical and nonpharmaceutical treatment options available to manage it.

Is pain assessment a one-off process?

Rather than an isolated event, the assessment of pain is an *ongoing process*. Following the initial assessment,

treatment may be delivered to manage the pain. It is important, however, that this treatment intervention be evaluated via subsequent pain assessments to determine its effectiveness. The patient's pain should therefore be assessed on a regular basis and the resulting treatment options modified as required to ensure effective pain relief.

Are there key elements to the pain assessment process?

Bates (1991) suggests that the critical components of the pain assessment process include a determination of its: location; description; intensity; duration; alleviating and aggravating factors (e.g., the former might include herbal medications, alcohol or incense); any associative factors (e.g., nausea, vomiting, constipation, confusion, or depression), to ensure that the pain is not treated in isolation from comorbidities; and its impact upon the patient's life.

These components are most commonly embodied in the "PQRST" approach: *Provokes* and *Palliates*, *Quality*, *Region* and *Radiation*, *Severity*, and *Time* (or *Temporal*). In this approach, typical questions asked by a health care provider include:

P = *Provokes* and *Palliates*

- What causes the pain?
- What makes the pain better?
- What makes the pain worse?

Q = *Quality*

- What does the pain feel like?
- Is it sharp? Dull? Stabbing? Burning? Crushing?

R = *Region and Radiation*

- Where is the pain located?
- Is it confined to one place?
- Does the pain radiate? If so, where to?
- Did it start elsewhere, and is it now localized to one spot?

S = *Severity*

- How severe is the pain?

T = *Time (or Temporal)*

- When did the pain start?
- Is it present all the time?
- Are you pain-free at night or during the day?
- Are you pain-free on movement?
- How long does the pain last?

At the patient's first assessment, the pain assessment process should be a constituent part of a wider comprehensive patient assessment that could include additional questions:

- Is there a history of pain?
- What is the patient's diagnosis and past medical history (e.g., diabetes, arthritis)?
- Is there a history of surgical operations or medical disorders?
- Has there been any recent trauma?
- Is there a history of heart disease, lung problems, stroke, or hypertension?
- Is the patient taking any medication (e.g., to reduce the pain; if so, did it help the patient?)
- Does the patient have any allergies (e.g., to food or medicines)?
- Does the pain hurt on deep inhalation?
- What is the patient's psychological status (e.g., depression, dementia, anxiety)?
- What is the patient's functional status, including activities of daily living?

What can be done to ensure an effective pain assessment process?

First, in general, accept the patient's self-reported pain as accurate and the primary source of information. Pain is an inherently subjective experience, and the patient's expression of this experience (be it behavioral or verbal) can be influenced by multiple factors (e.g., gender differences, socially acceptable pain thresholds,

culturally acceptable levels of "complaining," a sense of hopelessness, diminished morale, coping and adaptation abilities, and the meaning attached to the experienced pain). Consequently, the health care provider should accept the patient as an expert on his or her own body, and accept that while some patients may exaggerate their pain (e.g., to be seen earlier in a hospital), this will generally be the exception rather than the norm. Moreover, evidence suggests that health care providers' observational pain report cannot be assumed to be an accurate indicator of the patient's pain.

Second, as much as is possible within a time-constrained service setting, allow patients to describe their pain *in their own words* (the fact that patients may report socially acceptable answers to the health care provider demands a sensitive exploration of what is expressed). For patients who feel uncomfortable expressing themselves, the health care provider can provide a sample of relevant words written on cards from which the patient can select the most appropriate descriptors. The primary intention here is to *listen to the patient* rather than make any potentially false assumptions and erroneous clinical decisions.

Third, listen actively to what the patient says. Rather than engage the patient in a distracted manner, the health care provider should focus attention on the patient, observing behavioral and body language, and paraphrasing words when necessary to ensure that what is expressed is clearly understood. In emotionally charged encounters, the health care provider must also actively listen for nonverbal descriptors.

Fourth, the location of the pain across the body can be determined by showing the patient a picture of the human body (at least the front and back) (see Appendix 1 for an example of a body diagram), requesting that they indicate the primary and multiple (if appropriate) areas of pain, and demonstrate the direction of any radiated pain.

Fifth, pain scales (of varying complexity and methodological rigor) can be used to determine the severity of the expressed pain (see below for some examples).

Sixth, while it is important to manage an individual's pain as soon as is possible (i.e., one is not obligated to wait for a diagnosis), in the assessment process the health care provider should also diagnose the *cause* of that pain and treat if possible, thus ensuring a longer-term resolution to the presenting pain problem.

How long should an assessment take?

The time needed for assessment will vary according to individual patients, their presenting problems, and the specific demands on clinic time. For example, the patient may be in such severe pain that they are unable to provide any meaningful information to produce a comprehensive pain history. Similarly, there will be occasions when the assessment has to be relatively brief (investigating the intensity, quality, and location of the pain) so that urgently required effective pain management can be provided quickly.

It is also important to remember that, in general terms, it is the *quality* of the pain assessment that results in effective pain management rather than the *quantity* of time spent on it.

Does pain assessment differ with children and young people?

The response to this question is mixed. On the one hand, no, it does not, because, despite the previously held misconception that children do not experience pain due to underdeveloped neurological systems, *children do feel pain*. Consequently, an effective pain assessment process is as important for children as it is for adults.

On the other hand, yes it does, because the expression and detection of children's pain can be more challenging than it is for adults (see below).

Is there a specific assessment process for children and young people?

The specifics of assessing pain in children have given rise to the "QUESTT" approach:

Question the child if verbal, and the parent or guardian in both the verbal and nonverbal child.

Use pain rating scales if appropriate.

Evaluate behavior and physiological changes.

Secure the parent's involvement.

Take the cause of pain into account.

Take action and evaluate the results (Baker and Wong 1987).

What are the challenges for pain assessment with the young?

The term "the young" refers to children of varying ages and cognitive development: neonates (0–1 month); infants (1 month to 1 year); toddlers (1–2 years); preschoolers (3–5 years); school-aged children (6–12 years); and adolescents (13–18 years). Children at each stage of development pose distinct challenges to effective pain assessment.

Neonates (0–1 month)

At this age, behavioral observation is the only way to assess a child. Observation can be conducted with the involvement of the child's family or guardian, who can advise on what are "normal" and "abnormal" behavior patterns (e.g., whether or not the child is unusually tense or relaxed). Importantly, for all children, the health care provider should follow national ethical guidelines concerning the presence of a parent or guardian at the assessment process and any associated issues (e.g., informed consent). Additionally, it must be remembered that behavior is not necessarily an accurate indicator of the patient's pain level and that the absence of behavioral responses (e.g., facial expressions such as crying and movements indicating discomfort) does not always equate with the absence of pain.

Infants (1 month to 1 year)

At this age, the child may exhibit body rigidity or thrashing, exhibit facial expression of pain (e.g., brows lowered and drawn together, eyes tightly closed, mouth open and squarish), cry intensely or loudly, be inconsolable, draw the knees to the chest, exhibit hypersensitivity or irritability, have poor oral intake, or be unable to sleep. The issues raised above for neonates resonate for infants, too.

Toddlers (1–2 years)

Toddlers may be verbally aggressive, cry intensely, exhibit regressive behavior or withdraw, exhibit physical resistance, guard the painful area of the body, or be unable to sleep. While toddlers may still be unable to communicate their feelings verbally, their behavior can express their emotional and physical disposition. At this age, generating an accurate assessment of the location and severity of the child's pain may require the use of play and drawings, offering children a nonverbal means of expressing what they are feeling and thinking. However, some children,

even at this age, are able to express their pain using simple language. Health care providers should be sensitive to such developmental differences.

Preschoolers (3–5 years)

Preschool children may verbalize the intensity of their pain, see pain as a punishment, thrash their arms and legs, attempt to push stimuli away before they are applied, be uncooperative, need physical restraint, cling to their parent or guardian, request emotional support (e.g., hugs and kisses), or be unable to sleep.

At this age, as for school-aged children (see below), the child needs to be able to trust the health care provider, who needs to overcome the child's potential reservations concerning strangers and perceived authority figures. This aim can be achieved by conducting the assessment process at a tempo, in a language, and with a demeanor that is suited to the child (e.g., taking more time, where possible, using open-ended questions to encourage children to discuss what they are experiencing, and using appropriately supportive and encouraging body language).

School-aged children (6–12 years)

The school-aged child may verbalize pain, use an objective measure of pain, be influenced by cultural beliefs, experience pain-related nightmares, exhibit stalling behaviors (e.g., "Wait a minute" or "I'm not ready"), show muscular rigidity (e.g., clenched hands, white knuckles, gritted teeth, contracted limbs, body stiffness, closed eyes, or wrinkled forehead), engage in the same behaviors as preschoolers, or be unable to sleep. At this age, the child may be more reserved, feeling genuine fears and anxieties (e.g., they may deny the presence of pain because they fear the consequences, such as a physical examination or injection).

However, school-aged children are more articulate and cognitively advanced. As such, they are more curious about their own body and health and may ask spontaneous questions of the health care provider (e.g., "What is happening to me?" "Why do I have a stomachache?"). They can also begin to understand cause and effect issues, enabling the health care provider to give them age-sensitive explanations (e.g., "You have a pain in your stomach because you have a lump there which is making it hurt"). They also may want to be involved in their own clinical care and, where possible, be given choices about what will happen to them.

Adolescents (13–18 years)

Adolescents may verbalize their pain, deny pain in the presence of their peers, have changes in sleep patterns or appetite, be influenced by cultural beliefs, exhibit muscle tension, display regressive behavior in the presence of their family, or be unable to sleep.

At this age, the child can appear relatively uncommunicative or express a disdainful disposition. This tendency can in part be countered by the health care provider expressing genuine interest in what the adolescent has to say, avoiding confrontation or generally negative sentiments (which can cause anxiety and avoidance), focusing the conversation on the adolescent rather than the problem (e.g., by asking informal questions about friends, school, hobbies, family), and avoiding deliberate moments of silence, which generally prove unproductive.

As a consequence of this diversity across age groups (especially in children's cognitive abilities to comprehend what is being asked, and verbal abilities to articulate what is being thought or felt), the pain evaluation tool selected for the assessment process must be appropriate to the individual child. Moreover, given that behavior alone is not necessarily a reliable indicator of experienced pain, and self-reporting has potential limitations, a pain rating scale should ideally be used in conjunction with an investigation of physiological pain indicators, such as changes in blood pressure, heart rate, and the patient's respiratory rate (see Chapter 26 on Pain Management in Children for additional information).

Does pain assessment differ with the aged?

Aged patients present additional challenges in that they may be visually or cognitively challenged, hearing impaired, or influenced by socially determined norms regarding the reporting of negative feelings (e.g., not wanting to appear to be a social burden). Geriatric patients (i.e., patients with advanced biological age with multiple morbidities and—potentially—multiple medications) are especially problematic when they have dementia. Such patients normally receive inadequate analgesia due to their inability to communicate their need for it. (Defining "the aged" in low-resource settings can be problematic. The United Nations definition of "older people" is commonly associated with a legal entitlement

to age-specific pension benefits arising from the formal employment sector, but in regions such as sub-Saharan Africa such a chronological definition is problematic, often replaced by more complex, multidimensional sociocultural definitions, such as the person's seniority status within their community and the number of grandchildren they have.)

Consequently, the principal rule, especially for the geriatric patient, is to *ask for pain*. Among those who have sufficient cognitive functioning to express themselves, the health care provider can increase the text size of word descriptors for the visually impaired, include relatives in the pain assessment process where it is considered appropriate and helpful, and avoid "mental overload" (i.e., discussing multiple topics and providing insufficient explanatory guidance in the pain assessment).

In noncommunicative patients, however, assessments of the extent of presenting pain will be primarily based on behaviorally based proxies (e.g., facial expression, daily activity, emotional reactions, the effect of consolation, and vegetative reactions) rather than relying upon any scale whose use is premised on communication (see Chapter 27 on Pain in Old Age and Dementia for additional information).

How do you measure a patient's pain?

A number of unidimensional and multidimensional tools exist that to varying degrees lend themselves to everyday use. One-dimensional assessment tools simplify the pain experience by focusing on one particular aspect or dimension, and in a challenging low-resource, nonresearch, clinical setting they take less time to administer and require less patient cognitive functionality than do multidimensional instruments. Often these tools have been validated in linguistically and culturally diverse settings. Additionally, they are not usually used in isolation (e.g., a body diagram may be used in conjunction with a scale indicating the severity of the pain experienced). (Examples of multidimensional tools not discussed in this chapter, which could be used for clinical and research purposes, include the McGill Pain Questionnaire (short- and long-form); the Brief Pain Inventory; the Dartmouth Pain Questionnaire; the West Haven-Yale Multidimensional Pain Inventory; the Minnesota Multiphasic Personality Inventory; the State-Trait Anxiety Inventory; the Beck Depression Inventory, the Self-Rating Depression

Scale, the Depressivity Scale; the University of Alabama in Birmingham (UAB) Pain Behavior Scale, the Neonatal/Infant Pain Scale, and the Children's Hospital Eastern Ontario Pain Scale.) Importantly, it is essential that the health care provider selects the most appropriate tool (depending on the aims of the pain assessment, and on the practicality, applicability, and acceptability of the instrument to particular patient populations) and uses it consistently over time.

The most commonly used tools for assessing pain in cognitively unimpaired adults and the elderly are the visual analogue scale (VAS), the numerical rating scale (NRS), the verbal descriptor scale (VDS). A tool that has been evaluated in a low-resource setting, the APCA (African Palliative Care Association)'s African Palliative Outcome Scale (POS). One tool used among cognitively impaired adults is the Pain Assessment in Advanced Dementia (PAINAD) Scale. The most commonly used tools for assessing children's pain, in addition to the VAS, NRS, and VDS (for some children aged over seven years old), include the FLACC (i.e. Face, Legs, Activity, Cry, and Consolability) Behavioral Pain Scale, the Touch Visual Pain (TVP) Scale, the Wong-Baker FACES Pain Rating Scale, and the Pain Thermometer. These tools, and how they are used, are described below, along with an outline of the comparative advantages and disadvantages of each.

Adult pain tools

i) Visual analogue scale (VAS)

The VAS pain rating scale uses a 10-cm-long horizontal line, anchored by the verbal descriptors "No pain" and "Worst pain imaginable," on which patients make a mark to indicate what they feel best represents their perception of the intensity of their current pain (Fig. 1).

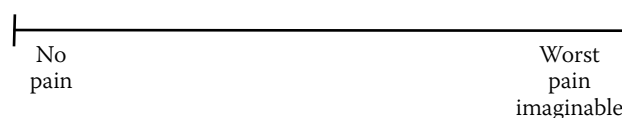


Fig. 1. Visual analogue scale.

ii) Numerical rating scale

Using this scale, the health care provider asks patients to rate their pain intensity on a numerical scale that usually ranges from 0 (indicating "No pain") to 10 (indicating the "Worst pain imaginable").

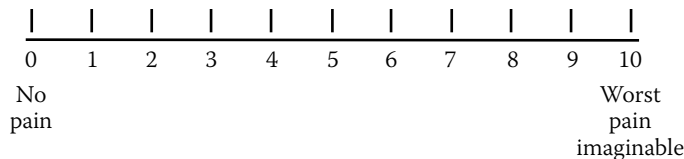


Fig. 2. Numerical rating scale.

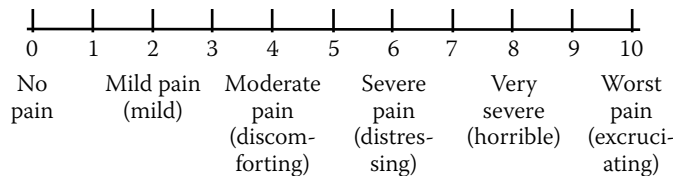


Fig. 3. Verbal descriptive scale

iii) Verbal descriptor scale

When using this scale, the health care provider describes the meaning of pain to the patient (e.g., significant feelings of unpleasantness, discomfort, and distress, and the significance of the experience for the individual).

Then either verbally or visually, the patient is asked to choose one of six descriptors (i.e. “No pain,” “Mild pain,” “Moderate pain,” “Severe pain,” “Very severe pain,” and “Worst pain possible”) that best represents the level of pain intensity he or she is experiencing. Sometimes (as in Fig. 3), numbers are also used to ease the recording of the results.

iv) African Palliative Outcome Scale

The APCA African POS is a simple and brief multi-dimensional outcome measure, specifically for palliative care, that uses patient-level indicators that include

pain, but do not focus exclusively on pain. The health care provider interviews patients and their carers using a 10-item scale over four time periods on a scale of 0–5 that can also be completed using the “hand scale.” Promoted by the WHO, the hand scale ranges from a clenched hand (which represents “No hurt”) to five extended digits (which represents “Hurts worse”), with each extended digit indicating increasing levels of pain. A pediatric version of the APCA African POS is currently being developed.

v) Pain Assessment in Advanced Dementia (PAINAD) Scale

The PAINAD is an observational tool that assesses pain in patients who are cognitively impaired with advanced dementia, who as a result of their condition

APCA AFRICAN PALLIATIVE OUTCOME SCALE

PATIENT NO. _____	POSSIBLE RESPONSES	Visit 1 DATE	Visit 2 DATE	Visit 3 DATE	Visit 4 DATE
ASK THE PATIENT					
Q1. Please rate your pain (from 0 = no pain to 5 = worst/overwhelming pain) during the last 3 days	0 (no pain) to 5 (worst/overwhelming pain)				
Q2. Have any other symptoms (e.g., nausea, coughing, or constipation) been affecting how you feel in the last 3 days?	0 (not at all) to 5 (overwhelmingly)				
Q3. Have you been feeling worried about your illness in the past 3 days?	0 (not at all) to 5 (overwhelming worry)				
Q4. Over the past 3 days, have you been able to share how you are feeling with your family or friends?	0 (not at all) to 5 (yes, I've talked freely)				
Q5. Over the past 3 days, have you felt that life was worthwhile?	0 (no, not at all) to 5 (yes, all the time)				
Q6. Over the past 3 days, have you felt at peace?	0 (no, not at all) to 5 (yes, all the time)				
Q7. Have you had enough help and advice for your family to plan for the future?	0 (not at all) to 5 (as much as wanted)				
ASK THE FAMILY CARER					
Q8. How much information have you and your family been given?	0 (none) to 5 (as much as wanted) N/A				
Q9. How confident does the family feel caring for _____?	0 (not at all) to 5 (very confident) N/A				
Q10. Has the family been feeling worried about the patient over the last 3 days?	0 (not at all) to 5 (severe worry) N/A				

Fig. 4. APCA African Palliative Outcome Scale (used with permission). Copyright 2008, the African Palliative Care Association.

Items*	0	1	2	Score
Breathing independent of vocalization	Normal	Occasional labored breathing. Short period of hyperventilation	Noisy labored breathing. Long period of hyperventilation. Cheyne-Stokes respirations.	
Negative Vocalization	None	Occasional moan or groan. Lowlevel speech with a negative or disapproving quality.	Repeated troubled calling out. Loud moaning or groaning. Crying.	
Facial expression	Smiling or inexpressive	Sad. Frightened. Frown.	Facial grimacing.	
Body language	Relaxed	Tense. Distressed pacing. Fidgeting.	Rigid. Fists clenched. Knees pulled up. Pulling or pushing away. Striking out.	
Consolability	No need to console	Distracted or reassured by voice or touch.	Unable to console, distract or reassure.	
				Total**

Fig. 5. Pain Assessment in Advanced Dementia Scale. Used with permission. Copyright, Elsevier.

can experience more pain or prolonged pain due to its undertreatment.

The tool consists of five items (i.e. breathing, negative vocalizations, facial expressions, body language, and consolability), with each item assessed on a three-point score ranging in intensity from 0–2, resulting in an overall score ranging from 0 (meaning “No pain”) to 10 (meaning “Severe pain”).

Children’s pain tools

Children under 3 years old

i) The FLACC Behavioral Pain Scale

The FLACC Behavioral Pain Scale (Fig. 6) is a pain assessment instrument for use with patients who are ver-

bally unable to report their pain. Each of the scale’s five measurement categories—i.e. Face; Legs; Activity; Cry; and Consolability—is scored from 0–2, which results in a total score per patient of between 0 and 10 (Merkel et al, 1997). Scores can be grouped as: 0 = Relaxed and comfortable; 1–3 = Mild discomfort; 4–6 = Moderate pain; 7–10 = Severe discomfort/pain.

Before deciding upon a rating score, for patients who are awake, the health care provider observes the patient for at least 2–5 minutes, with their legs and body uncovered. The health care provider then repositions the patient or observes their activity, assessing their body for tenseness and tone. Consoling interventions are initiated if needed. For patients who are asleep, the health care provider observes for at least 5 minutes or longer,

DATE/TIME						
Face 0 – No particular expression or smile 1 – Occasional grimace or frown, withdrawn, disinterested 2 – Frequent to constant quivering chin, clenched jaw						
Legs 0 – Normal position or relaxed 1 – Uneasy, restless, tense 2 – Kicking, or legs drawn up						
Activity 0 – Lying quietly, normal position, moves easily 1 – Squirming, shifting back and forth, tense 2 – Arched, rigid or jerking						
Cry 0 – No cry (awake or asleep) 1 – Moans or whimpers; occasional complaint 2 – Crying steadily, screams or sobs, frequent complaints						
Consolability 0 – Content, relaxed 1 – Reassured by occasional touching, hugging or being talked to, distractible 2 – Difficult to console or comfort						
TOTAL SCORE						

Fig. 6. FLACC Behavioral Pain Scale (used with permission). Copyright 2002, The Regents of the University of Michigan.

with the patient’s body and legs uncovered. If possible, the patient is repositioned, with the health care provider touching their body to assess for tenseness and tone.

ii) Touch Visual Pain (TVP) Scale

The 10-point TVP Scale, which uses touch and observation to assess not only a child’s pain but also any anxiety or discomfort that may be experienced, is based on a search for signs of pain and anxiety that can be assessed either by looking at, or touching, an ill child. Signs of pain and anxiety include an asymmetrical head, verbalizations of pain, facial tension, clenched hands, crossed legs, shallow breathing, and an increased or irregular heartbeat.

On the first assessment, the health care provider assigns a score of 1 (for present) and 0 (for not present) across 10 items to establish a baseline score. Depending on the degree of pain and anxiety, medication is administered *when necessary*. After 20–30 minutes, the child is assessed once more using the TVP scale. If there is no positive change in these signs, a different approach to managing the child’s pain can be considered. Importantly, whilst the TVP has yet to be rigorously validated, it is being used in low-resource settings.

Children over 3 years old

i) Wong-Baker FACES Pain Rating Scale

This scale (Fig. 8) comprises of six cartoon faces, with expressions ranging from a broad smile (representing “No hurt”) to very sad and tearful (representing “Hurts worst”) (Wilson and Hockberry 2008), with each becoming progressively sadder. The health care provider points to each face, using the words to describe pain intensity, and asks the patient to choose the face that best



Fig. 8. Wong-Baker FACES Pain Rating Scale. Used with permission. (Wilson and Hockberry 2008.)

describes the pain they feel, with the number assigned to that face recorded by staff.

Children over 7 years old

i) Pain thermometer

An adaptation of the VDS (Fig. 9), this tool aligns a thermometer against a range of words that describe varying levels of pain intensity. This scale was developed for patients with moderate to severe cognitive deficits, or with difficulty communicating verbally, but a subsequent revised version (the Iowa Pain Thermometer) has been shown to be useable among the young, too. Patients are shown the tool and asked to imagine that, just as temperature rises in a thermometer, pain also increases as you move to the top of the scale. They are then asked to indicate which descriptors best indicate the intensity of their pain, either by marking the thermometer or circling the relevant words.

The health professional documents the relevant descriptor and evaluates changes in pain over time by comparing the different descriptors chosen. Some researchers have converted the indicated descriptors into a pain score by attributing scores to each.

Tactile and visual score	present
1. Toes bent down or upwards and tense under soles, ankles tightly crossed	
2. Knees tightly together or tightly crossed	
3. One leg protecting nappy area	
4. Thoracic and/or irregular breathing, and/or mouth breathing and/or intercostal muscles and/or nasal flaring and/or crackles	
5. Heart rate increased and/or irregular	
6. Arms tight against body or guarding or crossed over face, chest or stomach	
7. Fists (impossible or difficult to open with finger)	
8. Neck asymmetrically positioned on shoulders, shoulders pulled up	
9. Head asymmetrical	
10. Facial tension (fearful or painful expression); tense mouth, eyes tense or anxious, distressed look	

Fig. 7. Touch Visual Pain Scale (Used with permission. Copyright, Dr Rene Albertyn, School of Child and Adolescent Health, University of Cape Town, South Africa.)

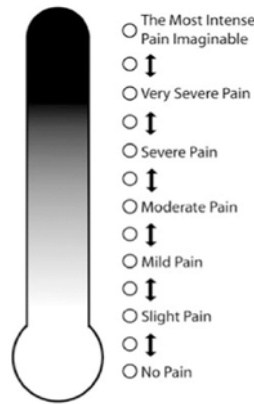


Fig. 9. Pain thermometer. (Used with permission. Copyright, Dr Keela Herr, PhD, RN, FAAN, College of Nursing, The University of Iowa, 2008.)

Case studies

Case 1

You are working in a small, rural hospital when a 7-year-old girl is brought in by her 13-year-old brother. She has AIDS and is not on antiretroviral therapy. She appears to be in some pain. How do you assess that pain?

Answer: The imperative in this instance is to control the patient's pain as quickly as possible; to achieve this, the health care provider has to assess her pain. Because she is 7 years old, the patient should be able to verbalize her pain. As such, the body diagram and the Wong-Baker FACES Pain Rating Scale could be used in combination to achieve an initial assessment of the location, radiation, and severity of her pain. Depending on how severe the patient's pain is, the health care provider may be unable to complete a full assessment until the pain has been managed. The assessment process should, subject to her agreement, involve both the girl and her older brother. It would additionally be important to explore a brief family history to determine if the child has an adult carer or whether she is being looked after exclusively by her older brother to ensure that appropriate consent is obtained to undertake possible therapeutic interventions with the child. If an adult carer cannot be located quickly, it may be necessary to assess and treat the girl's pain while waiting for the carer to begin to make her comfortable.

Case 2

You are working in a home-based care team that visits people in a rural setting. You have arrived at a house

to find an elderly woman with end-stage cancer curled up on her bed and crying, who periodically drifts into a semi-conscious state. How do you assess her pain?

Answer: From the patient's initial presenting behavior (crying and in a fetal position), it would appear that she is in pain. The severity of her condition means that she is unable to respond verbally to a pain chart or scale. The health care provider would therefore need to take a history from one of the patient's carers (assuming that one is present), asking what makes her pain better or worse, how long she has been in pain, where they think the pain is, and whether they think it is localized or referred, and using an observational tool such as the PAINAD. Additional questions should explore how long the patient has been in a curled position and crying, whether she is on any medication (including pain medication), and whether her pain is getting worse. In moments of consciousness, even if the patient is unable to verbalize responses to questions based on a pain scale, she may be able to respond by squeezing the health care provider's hand or by nodding. In that instance, the health care provider should provide the patient with closed questions (e.g., with simple "Yes" and "No" responses), providing very clear instructions on, for example, squeezing their hand if the answer is "Yes." This questioning could be supplemented by a quick physical examination to determine what might be causing the patient's pain. Consequently, the health care provider's assessment would be based on observation, a physical examination, simple questions for the patient, and a more comprehensive history from her carer.

Case 3

You are working in a regional hospital. A week-old baby boy is brought in by his mother. He is experiencing projectile vomiting (a symptom typical of congenital hypertrophic pyloric stenosis, a condition that 1 out of 500 babies are born with) and will need surgery. The baby appears tense and agitated and you suspect that he is in pain. How do you assess the pain?

Answer: The FLACC scale could be used to assess the baby's pain. What is the expression on the baby's face? Is he lying with his legs in a relaxed position, or are they restless and tense, or is he kicking? Is he lying quietly, or is he squirming or rigid? Is he crying and inconsolable?

Alongside the FLACC score, the health care provider should speak to his mother to determine how long he has been in this condition, whether he has

any other symptoms, whether he has a known medical condition, when the pain started, and what makes it worse or better? While it is possible that the underlying cause of the pain may be treatable (and it is important to ascertain what the underlying cause is), it is critical to manage his pain quickly, which should also allow him to become more relaxed, making it easier to ascertain the cause.

Pearls of wisdom

- An understanding of the need to undertake an assessment of pain that is sensitive to the individual patient (e.g., age, regarding cognitive ability, and literacy).
- An appreciation of the potential value of standardized pain assessment scales.
- The ability to use pain assessment tools and make decisions within the clinical setting of the most appropriate in different situations.
- Pain assessment is not an academic exercise! Every question potentially provides the therapist with essential information about the etiology of pain and certain first steps to be undertaken to treat it.
- Pain intensity: asking for pain intensity helps you to assess the need for treatment: 0–3 would mean generally that no change of therapy is necessary, 4–7 that analgesic therapy has to be changed, and 8–10 that analgesic therapy has to be changed immediately (a pain emergency).
- Pain quality: this helps you to differentiate the etiology of pain (“burning,” “shooting,” “electrical,” etc. would be indicators of neuropathic pain; “dull,” “aching,” etc. would be indicators of nociceptive pain; and “terrible,” “unbearable,” etc. would suggest an affective valuation of pain).
- Pain increase: pain increase after certain movements or at certain times of the day helps to identify the etiology of pain (e.g., pain because of inflammation will be often worst in the early morning hours, while constant high pain levels might suggest a chronic pain disease).
- Pain decrease: positions or situations in which the pain decreases are also helpful for assessment; e.g., if only rest—and no other coping strategies—is considered useful for the patient, this is important information for the therapist that chronic

pain may be present and that cognitive restructuring will be indicated. Another example would be a decrease of pain with movement, when possibly osteoarthritis might be present.

- Localization: probably the most important question. Localization of the pain may differentiate between a radicular and nonradicular etiology of pain.
- The items mentioned are only rough indicators of certain etiologies. Further questioning and examination must to be undertaken to confirm suspicions.

References

- [1] Baker CM, Wong DL. QUEST: a process of pain assessment in children. *Orthop Nurs* 1987;6:11–21.
- [2] Breivik H, Borchgrevink PC, Allen SM, Rosseland LA, Romundstad L, Breivik Hals EK, Kvarstein G, Stubhaug A. Assessment of pain. *Br J Anaesth* 2008;101:17–24.
- [3] Carlsson AM. Assessment of chronic pain: I. Aspects of the reliability and validity of the visual analogue scale. *Pain* 1983;16:87–101.
- [4] Eland JM, Coy JA. Assessing pain in the critically ill child. *Focus Crit Care* 1990;17:469–75.
- [5] Gracely RH, Dubner R. Reliability and validity of verbal descriptor scales of painfulness. *Pain* 1987;29:175–85.
- [6] Herr KA, Mobily PR. Comparison of selected pain assessment tools for use with the elderly. *Appl Nurs Res* 1993;6:39–46.
- [7] Herr K, Bjoro K, Decker S. Tools for assessment of pain in nonverbal older adults with dementia: a state-of-the-science review. *J Pain Symptom Manage* 2006;31:170–92.
- [8] McLafferty E, Farley A. Assessing pain in patients. *Nurs Stand* 2008;22:42–6.
- [9] Norval DA, Adams V, Downing J, Gwyther L, Merriman A. Pain management. In: Gwyther L, Merriman A, Mpanga Sebuyira L, Schietinger H, editors. *A clinical guide to supportive and palliative care for HIV/AIDS in Sub-Saharan Africa*. Kampala, Uganda: African Palliative Care Association; 2006. pp. 43–64.
- [10] Powell RA, Downing J, Harding R, Mwangi-Powell F, Connor S; APCA. Development of the APCA African Palliative Outcome Scale. *J Pain Symptom Manage* 2007;33:229–32.
- [11] Royal College of Physicians, British Geriatrics Society, and British Pain Society. The assessment of pain in older people: national guidelines. Concise guidance to good practice series, No. 8. London: Royal College of Physicians; 2007.
- [12] Schofield P. Assessment and management of pain in older adults with dementia: a review of current practice and future directions. *Curr Opin Support Palliat Care* 2008;2:128–32.
- [13] Wilson D, Hockberry MI. *Wong's Clinical Manual of Pediatric Nursing*, 7th ed. St. Louis: Mosby; 2008.
- [14] World Health Organization. *Palliative care: symptom management and end-of-life care. Integrated management of adolescent and adult illness*. Geneva: World Health Organization; 2004.

Websites

International Association for Hospice and Palliative Care: www.hospicecare.com/resources/pain-research.htm

National Institute of Health Pain Consortium: http://painconsortium.nih.gov/pain_scales/index.html

Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials (IMMPACT) www.immpact.org

Appendix 1

When using the body diagram (in children a broad equivalent is the Eland Colour Scale), patients are requested to indicate, using a marker, the location of their pain (which could include several sites) by shading the relevant areas. The severity of pain experienced can then be determined using one of the adult pain assessment tools (Appendix 2).

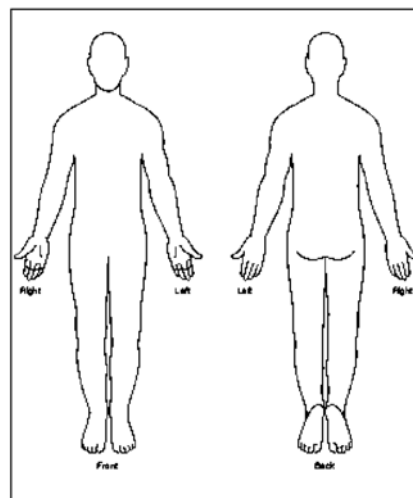


Fig. 10. Body diagram.

Appendix 2: Pain intensity scales

Children’s pain intensity scales

Scale	Advantages	Disadvantages
(i) Faces, Legs, Activity, Cry and Consolability Scale	This tool is useful among children who are unable or unwilling to report pain; it is quick to use and easily reproducible.	It has not been validated among children with special needs, neonates, or ventilated children.
(ii) Touch Visual Pain Scale	This tool is useful among children who are unable or unwilling to report pain; it is quick to use and easily reproducible.	Additional research is required to validate the tool in different populations and settings.
(iii) Wong-Baker FACES Pain Rating Scale	This tool is simple and quick to administer, is easy to score, requires no reading or verbal skills, is unaffected by issues of gender or ethnicity, and provides three scales in one (i.e., facial expressions, numbers, and words).	The tool is sometimes described as measuring mood instead of pain, and sad or crying faces are not culturally universal.
(iv) Pain Thermometer	The tool is simple and quick to use and is intuitively preferred by some patients instead of attempting to express their pain intensity numerically.	While overcoming some of the limitations of the VDS by providing an accompanying illustration of pain intensity, the tool may be problematic among the cognitively or visually impaired.

Adult pain intensity scales

Scale	Advantages	Disadvantages
<i>Cognitively Unimpaired</i>		
(i) Visual analogue scale	The tool is quick and simple to administer, is easy to score and compare to previous ratings, is easily translated into other languages, has been validated extensively, and is considered one of the best tools for assessing variations in pain intensity.	The tool is highly sensitive to changes in pain levels, which can hinder its use. Some adults can find the tool too abstract to understand, especially among patients with cognitive dysfunction, non-English-speaking patients, postoperative patients (whose levels of consciousness and attention may be altered after receiving general anesthesia or certain analgesics), and patients with physical disability such as reduced visual acuity or manual dexterity (the health practitioner marking the scale can introduce bias).
(ii) Numeric rating scale	The tool is quick and simple to use, and it is easy to score and document the results and compare with previous ratings. The tool is well validated, can be translated into other languages, and can be used to detect treatment effects. It is easy to teach patients its correct use. Unlike the VAS, the scale can be administered verbally, thereby overcoming problems for those with physical or visual impairments and enabling those who are physically and visually disabled to quantify their pain intensity over the telephone.	Some patients are unable to complete the tool with only verbal instructions. Consequently, there is decreased reliability at the age extremes and with nonverbal patients and the cognitively impaired.
(iii) Verbal descriptor scale	The tool is quick and simple to use, easily comprehended, well validated and sensitive to treatment effects, and intuitively preferred by some patients instead of attempting to express their pain intensity numerically.	Based on the use of language to describe pain, the tool depends upon a person's interpretation and understanding of the descriptors; which can prove to be a challenge in different cultures. The tool is problematic for use among the very young or old, the cognitively impaired, and the illiterate.
(iv) APCA African Palliative Outcome Scale	The tool is quick and simple to use, and provides three scales in one (i.e. numbers, words, and the physical hand).	This tool, which only addresses pain as a single domain in addition to others affecting a patient's life, requires a degree of staff training to ensure its consistent application. Additional research is ongoing to validate the tool in different populations and settings.
<i>Cognitively Impaired</i>		
(v) Pain Assessment in Advanced Dementia Scale	This tool is useful among adults who are unable to report pain; it is quick to use and easily reproducible.	Relies upon proxy indicators of pain rather than verbal self-reporting.

Note: The table above draws on McLafferty and Farley (2008).