British Pain Society

and

British Geriatrics Society

Guidance on:

The assessment of pain in older people

2007

British Pain Society and British Geriatrics Society
Guidance
"The assessment of pain in older people".

Foreword

Pain is so universal that it is essential that it is recognized by all people working with older people. It places a blight on daily life, limiting functional ability and impairing the quality of life. The symptom manifests itself in many ways not only as a sensory experience but also by causing psychological distress.

For some groups of older people, it may be difficult to articulate their pain as for example in those with dementia, some forms of stroke or Parkinson's disease. The non-verbal manifestations of pain must be recognized and interpreted so that the distress caused to these most vulnerable members of society can be alleviated.

The National Service Framework for Older People placed great emphasis on the dignity of older people. The appropriate management of pain is essential to ensure the dignity and well being of older people. This important need has been reiterated in my review of progress with the NSF and plans for the next phase in "A New Ambition for Old Age".

It is timely therefore that the British Pain Society has worked with the British Geriatrics Society to review the current evidence in the literature and to produce sound guidance to help practitioners in assessing for the presence of pain

I fully commend the guidance presented here, I hope that health and social practitioners will take heed and utilize in their everyday practice.

Ian Philp
National Director, Older People.

Summary of Guidance

1. Any health assessment of older people should aim to identify the presence of pain.

2. The assessment should recognise that older people are often reluctant to acknowledge and report pain. Patience and persistence may be required to make an accurate assessment.

3. The assessor should recognise that older people may use a wide range of alternative descriptors (other than "pain" itself) to describe their pain.

4. An assessment of pain should routinely include a standardised intensity rating scale, preferably a simple verbal descriptor scale or a numeric rating scale (Appendix 2).

5. An attempt to locate pain should be made by asking the patients to point to the area on themselves. Pain maps can be used to assist in identifying both the location and the extent of pain (Appendix 4).

6. Careful physical examination should be undertaken to identify any treatable causes. Treatable causes are common in older people. Pain can exist even if physical examination is normal.

7. Where pain is present, all older people should have a detailed pain history taken and a clinical assessment of the multi-dimensional aspects of pain including:
     -a sensory dimension which describes the intensity and nature of pain
     -an affective/evaluative dimension which describes the emotional component of pain and how pain is perceived e.g. dangerous, exhausting, frustrating, frightening.
     - impact on life including physical, functional and psychosocial effects.

8. In people with difficulty in communication (including cognitive impairment) and in situations where procedures might cause pain, an observational assessment is additionally required.

9. Health care professionals should familiarise themselves with the range of behaviours which may indicate the presence of pain. These behaviours differ between individuals and between pains: none are specific indicators of pain. Regular care-givers may be more sensitive to the meaning of behaviours, but it is important not to dismiss the possibility of pain without further attempts to assess it.

Background

Pain is under-recognised and under-treated in older people, particularly in those with cognitive impairment or communication difficulties. Major barriers to appropriate pain management in older people include:
1) The failure to recognise that an older person is in pain;
2) Failure to assess pain adequately in older people.

There is an urgent clinical need to improve both practice and the evidence base underpinning the assessment of pain in older people. Much of the research in this field to date has been descriptive and/or qualitative. Therefore, it has not, been possible to develop a robust guideline based on graded evidence in the usual manner. However, given the need to improve practice for this most fundamental aspect of care, we have prepared this guidance based on best available evidence and practice [for details of methodology see Appendix 1].

The aims of this guidance are:
- To raise the profile of pain as an important, common problem in older people amongst all those who are involved in their care.
- To disseminate best practice in the identification and assessment of pain in older people

Pain definitions relevant to this guidance

Older person: For the purpose of the development of this guidance, the World Health Organisation definition of older people as being over 65 years of age is used. (Appendix 1).

Pain: an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.[1]

Acute pain: pain of recent onset and probable limited duration, usually having an identified temporal and causal relationship to injury or disease[2]

Persistent (chronic) pain: pain that persists beyond the point at which healing would be expected to be complete (generally considered to be three months) or that which occurs in disease processes in which healing does not take place. Persistent pain may be accompanied by severe psychological and social disturbance. Persistent pain can be experienced by those who have no evidence of tissue damage[3].

The term health care professional used in this guidance refers to all members of the multi-professional team and other care providers regardless of setting.

Epidemiology

Epidemiological studies have demonstrated that persistent pain is common and under-reported. There is wide variation in estimates of persistent pain in the community ranging from 7% to 54%[4,5].There have been several reports of age-related increases in the prevalence of persistent pain [5,6], recurrent pain[7], musculoskeletal pain[8] and fibromyalgia[9]. Small population-based studies have estimated that between 25%-50% of community-dwelling older people suffer significant pain problems[10]. Higher prevalence estimates are obtained from institutionalised samples of older people. In this setting, 45-83% of patients report at least one current pain problem[4,11]. Many pain problems are known to commonly affect older people, including osteoarthritis, degenerative spinal disease, spinal stenosis, osteoporotic vertebral factures, peripheral neuropathy, central post-stroke pain, post-herpetic neuralgia, temporal arteritis, polymyalgia rheumatica, cancer and peripheral vascular disease.

There are important differences between acute and persistent pain. Older people can under-report persistent pain as a symptom[12, 13].It is not always possible to identify the cause/s of persistent pain, making it more difficult to cure or minimise and may require a multi-dimensional approach to treatment. Persistent pain is associated with more pain sites, usage of greater number of pain descriptors, less response to interventions, more sleep disturbance and greater emotional distress including anxiety and depressive symptoms compared with acute pain[14, 15].

Assessment of pain

Pain is a subjective, personal experience, really only known to the person who suffers**.** Pain is multidimensional. Dimensions include:

   i.   a sensory dimension which describes the intensity and nature of pain (e.g. – crushing, sharp)
   ii.   an affective / evaluative dimension which describes the emotional component of pain and how pain is perceived (e.g. dangerous, exhausting, frustrating frightening)
   iii. impact on life, including physical, functional, and psychosocial effects.

Assessing pain becomes even more challenging in the presence of severe cognitive impairment, communication difficulties or language and cultural barriers. Older people with severe cognitive impairment can find it difficult to articulate their pain and their ability to self-report can become impaired or absent. Instead, behavioral reactions may be the only available externally observable sign of pain**.** Behavioural reactions are difficult to interpret. It is particularly important that pain is considered as a possible underlying cause for behavioural change and that steps are taken to pinpoint the cause. Even in the presence of moderate cognitive impairment, when a person can communicate about their pain, their self-reports have been shown to be valid.[16, 17]

All health care professionals, carers and family, should be alert to the possible presence of pain. Health care professionals should be in the possession of the skills and tools needed to assess pain.

This guidance does not seek to differentiate between acute and persistent pain as the literature relating to pain in older people renders such distinction impractical.

GUIDANCE

1. Assessing for the presence of pain

i.   Screening/Care planning

> **Evidence based statement**
>
> **Self reporting of pain is the gold standard method for identifying pain.**

Pain has been referred to as 'The Fifth Vital Sign™'. This emphasises the importance of considering, measuring and monitoring the presence of pain systematically.

It is important to encourage all health care workers to include a routine screening question to assess for the presence of pain in assessments of older people. In the context of the single assessment process proposed in the National Service Framework for Older People[18] this would include the overview assessments as well as more detailed levels of assessment.

> **Recommendation**
>
> **Any health assessment of older people should include asking whether they experience pain**
>
> **The single assessment process should include a question seeking to identify the presence of pain**

ii   Finding out about the presence of pain

> **Evidence based statements**
>
> **Enquiring about pain when assessing the health of older people is the most effective way of determining the presence of pain.**
>
> **Older people may use a wide range of words to express pain e.g. sore, hurting, aching**
>
> **In addition to asking a person about pain, the use of an intensity rating scale will enhance the detection of pain**
>
> **Every effort should be made to facilitate communication particularly with those people with sensory impairments (use of e. g. hearing aids)**

Attention to pain within the history is the most effective way of determining the presence of pain[19, 20]. The history should be supplemented by the use of an intensity rating scale to enhance the identification of pain (Appendix 2) and to assess the response to

analgesics [21, 22, 23]. Patients' own words are important in documenting the experience of pain[24]. Some patients who respond "no" when asked if they have pain will respond affirmatively to follow-up questions using words such as, aching and soreness[19]. Older people may use a wide range of words to express pain [24, 25].

Older people select fewer words from standardized instruments than younger people to describe their pain[26] and use additional words, phrases, similes and word repetition not found in self-report instruments.[24, 27]

Barriers to Self-Report

There are age-related increases in stoicism and reticence in reporting pain. Older people demonstrate greater self-doubt than younger people and are more reluctant to label a sensation as painful [28]. Many older people living in long-term residential care may have become resigned to pain, are ambivalent about benefits of any actions for relieving their pain and may be reluctant to express pain[13]. Residents fear being perceived as 'complaining', they commonly do not want to worry families or bother nursing staff who are often perceived to be 'too busy'[13]. There is considerable variability in how frequently nursing home residents are asked about pain [29].

Role of intensity scales as a supplement to detecting pain

Some older people may be more willing to score pain on a pain intensity rating scale than say they have pain[21]. Intensity rating scales can enhance the detection of pain in nursing home residents.[22, 23, 30]

Recommendations

Any health assessment of an older person, including the single assessment process, should include asking whether he/she experiences pain (using terms such as pain, ache, hurt)

The assessment should recognise that older people use a wide range of words to describe pain.

The assessment should recognise that older people may be reluctant to acknowledge and report pain.

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iii. Observation

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Evidence based statements
Autonomic signs are often present during severe acute pain, but not in chronic pain, regardless of severity

Facial expressions can indicate the presence of pain in older people with and without cognitive impairment.

Guarding of body movements can indicate the presence of pain in older people with and without cognitive impairment.

Verbalisations or vocalisations including sighing, grunting, groaning, calling out, can indicate pain.

Changes in interpersonal interactions e.g. aggression, withdrawal, resisting care can indicate pain.

Mental status changes e.g. confusion, crying, distress, irritability can indicate pain

Estimation of pain intensity from observation of facial expressions or behaviour is not reliable in older people with and without cognitive impairment

Observing patients during physical activity can help identify pain

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Observation is an important component of assessing pain. While reliance should not be placed on observation alone it provides important information regarding pain. Observation is particularly important for patients who have difficulty in communicating [31]. Observation may include positive reactions such as facial expressions, physical reactions, behavioural characteristics and negative reactions such as avoiding functional and recreational activities. Observation during movement enhances the detection of some pains particularly musculoskeletal pain.[32, 33]

Behaviours potentially indicating the presence of pain vary enormously from individual to individual and also vary in the same individual [34]. Some patients may show subtle changes e.g. becoming withdrawn and others becoming aggressive and verbalising and vocalising their pain. It should be remembered that such behaviours may have causes other than pain. All types of unusual behaviour should therefore be comprehensively monitored and their causes considered, especially during patient activity such as walking, transfers or during procedures. The identification of behavioural indicators of possible pain should prompt a more detailed clinical assessment[35].

In addition, physiological changes should prompt a search for possible pain.
Physiological cues to the possible presence of acute pain include autonomic responses, commonly pallor, sweating, tachypnoea/altered breathing pattern, tachycardia and hypertension. With persistent or chronic pain states autonomic signs rarely occur and the absence of such signs does not mean the absence of chronic pain [31].

Facial expressions:

Grimacing has been shown to increase during activity, especially in those with cognitive impairment. Several facial actions characteristic of pain have been identified including brow raising, brow lowering, cheek raising, eyelids tightening, nose wrinkling, lip corner pulling, chin raising, and lip puckering etc [36, 37].

BROW LOWERS LIDS TIGHTEN NOSE WRINKLES LIPS TIGHTEN

CHEEK RAISED

Facial expression without pain   **Facial expression with pain**

Reproduced with permission from Pain in Residential Aged Care Facilities: Management Strategies. The Australian Pain Society August 2005 [38].

Body movements:

In older people guarding and to a lesser extent bracing can be used to detect movement-exacerbated pain [32, 33].

- ❖ *Guarding* refers to an abnormally stiff, rigid or interrupted movement while changing position.
- ❖ *Bracing* refers to a stationary position in which a fully extended limb maintains and supports an abnormal weight distribution held for at least 3 seconds [39].

Increased guarding has been observed during transfers and walking compared with sitting, standing and reclining. Non-verbal measures were related, but did not predict each other or self-report, suggesting they tap into different domains of pain [33].

Changes in behaviour.

Changes in behaviour may commonly be related to underlying but unexpressed pain. Behaviour changes may include aggression and withdrawal, and are particularly important in cognitively impaired patients with severe communication problems who may be reticent or unable to report pain problems. Different patients have different pain behaviours e.g clutching the painful area, sighing, moaning, screaming, pacing [34]. Individual assessment is needed.

Recommendations

In people with difficulty in communicating including cognitive impairment and in situations where procedures might cause pain, an observational assessment is additionally required.

Observations should include facial expressions, body movements, verbalisations, vocalisations, physiology and changes in interpersonal interactions, changes in activity levels and patterns and changes in mental status or affect.

Pain behaviours are very individual and clinical judgement and familiarity with the older person is important in interpreting behaviour.

iv   *Involving families and the interdisciplinary team in the detection and assessment of pain*

Evidence based statement

Carers (formal and informal) can augment the detection of the presence of pain.

Nursing caregivers tend to underestimate the presence and intensity of pain in nursing home residents.

Familiarity with nursing home residents' usual patterns of behaviour may improve the ability to identify the presence and intensity of pain.

Many older patients are reluctant to report pain and stoicism is common among older people [28]. Their families can be a useful additional source of information. For patients who are unable or have difficulty in communicating, the report of others (families and members of the interdisciplinary team) is even more important. Studies of pain assessments by patients living in the community[40], in sheltered accommodation[41], and attending adult day care centres[42] compared with pain assessments by their carers (nurses and nursing assistants) reveal only moderate agreement between patients and carers, with nurses tending to underestimate pain prevalence and intensity, especially in patients with poor communication abilities[43].

Qualitative studies exploring health professionals attitudes towards older people with persistent pain suggest that staff tend to perceive older people in pain as a heterogeneous group, with some patients perceived as 'exaggerating' their pain and some 'enduring' their pain. Staff perceptions affected the pain-relieving interventions offered to patients[43].

Family caregivers on the other hand are inclined to overestimate pain compared with patients[42]. For patients with cognitive impairment resident in nursing homes, the internal consistency of relatives' pain ratings were good only when relatives visited at least once a week and correlated well with physician and nursing staff ratings. Correlations between relatives and nursing staff were greater for patients with mild cognitive impairment rather than severe impairment[44].

Overall, high levels of caregiver familiarity with residents appears to be helpful in identifying the presence of pain and estimating its intensity.

Recommendations

Families can be a useful additional source of information with the older person's consent.

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2. Establishing the cause of pain

A full medical history should be taken including a full history of the pain, its onset, its time course, radiation, aggravating and relieving factors, quality and associated symptoms. A full medication history should be taken, including 'over the counter', prescribed and complementary medicines. Past medical history should be detailed in view of co-morbidities which may be contributing to the pain.

Physical examination should include: general physical examination, examination of painful region, musculoskeletal examination, neurological examination and cognitive status evaluation [45].

Appropriate investigations should be performed as necessary, so that the cause of the pain can be clearly defined whenever possible and treated appropriately. Pain can still exist if physical examination is normal.

3. Multidimensional assessment of pain

As highlighted previously, pain is a complex personal, subjective, unpleasant experience. Assessment of the pain is important to aid diagnosis, to understand the impact that the pain has on the person, physically, emotionally, functional and socially, to help decide on the choice of therapy and to monitor the effect of treatment.

All these dimensions of pain need to be addressed during a comprehensive pain assessment. Specific tools can be used to measure individual components of the pain experience e.g. Verbal Rating Scale for intensity, Hospital Anxiety and Depression scale for mood. Functional and other multidimensional aspects can be measured using more comprehensive, questionnaires.

The tools must be chosen appropriate to the individual and to the setting.

The complex nature of pain must be appreciated and assessment should not focus on just one dimension. Ideally assessment should be multidisciplinary. All health care professionals and the patient's family and carers are important in the assessment[45]

i. Intensity of pain

Evidence based statement

Verbal Rating / Descriptor Scales and Numerical Rating Scales best quantify the intensity of pain in older people with no cognitive impairment and in those with mild to moderate cognitive impairment.

The "Faces Scale" is less effective in older people than Verbal Descriptor Scales or Numerical Rating scales.

Visual Analogue Scales (VAS) are the least effective method for measuring the intensity of pain in older people.

The intensity of pain should be measured and monitored. Several different types of pain intensity scale are available to choose from:

Numerical Rating Scales where the patient is presented with numbers (usually ranging from 0 to 10) on a line representing ascending order of pain intensity, and the patient is asked to indicate the number which best represents his/her pain;

Verbal Rating/Descriptor scales which use words to grade pain intensity and the patient is asked to choose the word which best describes his / her pain. There are many versions of these, using between 4 and 7 intensity points. Most commonly 5 points are used, such as none, mild, moderate, severe or very severe, which are scaled 0 to 5;

Visual Analogue Scales where patients are asked to mark on a line where they rate the severity of their pain, from no pain at one end of the line to maximal possible pain at the other end;

Pictorial pain scales include the Faces Pain Scale developed by Bieri et al[46] for use with children and consists of seven faces presented in horizontal format representing increasing levels of pain intensity and patients are asked to choose the face which bests reflects the intensity of their own pain. Visual images of thermometers and graded intensities of colour have also been used to rate pain intensity.

Studies comparing the psychometric properties and usability of these different pain intensity scales in the older adult have found that simple Numerical Rating Scales and Verbal Descriptor/Rating Scales give the best validity and reliability for rating pain intensity in older adults[16,47,48].   Simple Numerical Rating Scales and Verbal Rating/Descriptor scales are used well even by older adults with mild to moderate cognitive impairment.) [16,49,] Older people may have both physical and conceptual difficulties in using Visual Analogue Scales resulting in a significant failure rate for this

scale late in life, i.e. the older person is not always able to use a Visual Analogue Scale to indicate their pain intensity. [47,50]

Pictorial pain scales appear attractive in that they minimise the use of words or numbers. Even though cognitively intact older adults use the Faces Pain Scale with good test-retest reproducibility, they do not always place the faces in the correct order of pain intensity when asked to rank the faces independently, raising serious doubts about the validity of the Faces Pain Scale as a measure of pain intensity in older adults[51]. This problem is even more marked when nursing home residents and older adults with mild cognitive impairment are asked to put the faces in the correct order[48]. The Faces Pain Scale cannot, therefore, be recommended for general clinical use with older adults or nursing home residents. Older adults appear to find the pain thermometer easy to use[52], but its validity as a measure of pain intensity especially in those with cognitive impairment has not been fully evaluated. [49]

A detailed review of the psychometric properties of different pain intensity scales used with older people may be found in Hadjistavropoulos et al (2007) [45].

Whichever scale is selected for use, its visual presentation should be suitable for older people. Focusing ability, colour discrimination and visual acuity all decline with age.[53] Visual acuity shows a modest decrease under high-contrast lighting conditions and a substantial decrease when illumination is dimmed or glare is increased. Consequently pain scales should use large, clear letters/numbers, preferably with high contrast (ie black and white rather than mid-tones) and should be presented under good lighting.

Recommendations

Use a simple Verbal Rating or Numerical Rating Scale in routine practice to asses and monitor the intensity of pain and response to treatment. SEE APPENDIX 2

Choose a standardised intensity scale to suit each individual person and continue to use this for sequential assessment in that individual.

Scales should use large clear letters/numbers, using black and white rather than mid-tones and be presented under good lighting.

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ii. Location of pain

Evidence based statement

The location of pain can be defined by self-pointing in cognitively intact older people.

Pain maps can be used to help locate the site and extent of pain.

Pain maps can be used in nursing home residents with and without cognitive impairment to identify location(s) and extent of pain with reasonable test-retest reliability[54]. In a small study of 46 nursing home residents assessed repeatedly over a one year period, patients could point to indicate pain on themselves on 86% of occasions, could point to a diagram on 78% of occasions and could point on a doll on 73% of occasions[55].

> *Recommendations:*
>
> *An attempt to locate pain should be made by asking the patients to point to the area on themselves.*
>
> *Pain maps should also be used to help locate the site (s) of pain*

iii. Impact of pain

> *Evidence based statement*
>
> *Pain has an impact on mood, sleep, mobility, function and quality of life*

Pain is associated with poor global function, depression, sleep problems and reduced life satisfaction in older people[56]. The classic patient profile of high pain, high impact and high mood disturbance (persistent pain syndrome) identified in younger to middle-aged adults may not be as common in older patients[57]. Older people with persistent pain are heterogeneous, some have less pain, less depression and high activity, others have high pain and high impact and others are mixed [58,59].

Mood should be assessed in all older people with pain. The Royal College of Physicians working party on assessment scales in older people recommended using the Hospital Anxiety and Depression Scale and the Geriatric Depression Scale [60,61].

The pain-movement cycle is important in older adults with conditions such as arthritis; pain interferes with physical functioning and acts as a barrier to use of diversional activities in pain management [62]. Pain related interference with moving about is more common in women than in men and increases with advancing age. The degree to which pain interferes with day to day function is influenced by comorbidities as well as intensity[63]. Mobility may need to be assessed particularly in response to interventions, a standardized measure being the Timed-Up-and-Go [64].

Functional ability in older people can be measured using activities of daily living (ADL) scales. The Barthel Index[65] is the most commonly used simple ADL scale in use in hospitals and institutional settings. It scores patients in their ability / dependency level for feeding, bathing, personal grooming, dressing, bowel control, bladder control, mobility from bed to chair, ability to get on / off toilet, walking on even surfaces and climbing the stairs. It omits tasks of daily living such as cooking and shopping and therefore needs to be supplemented with an extended ADL measurement scale when assessing patients living in the community. The Nottingham Extended Activities of Daily Living Scale

assesses activities within four domains: mobility including walking outside and use of public transport; kitchen; domestic including shopping and clothes washing; leisure activities including gardening, driving and going out socially[66]. It was originally developed for use with stroke patients in the community but it has also been validated for use in older people with dyspnoea and chronic airways disease[67, 68].

The multi-dimensional assessment should include details of individual beliefs and strategies used by older people to cope with and relieve pain.

Recommendation

Consider assessment of mood, sleep, mobility, function.

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iv   Tools for the multidimensional assessment of pain

Evidence based statement

There is no evidence that any one multi-dimensional assessment tool is better than another

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The McGill Pain Questionnaire (MPQ) is a standardised scale for the assessment of pain in cognitively intact adults. It assesses the sensory, affective and evaluative dimensions of pain[69]. Evaluation of the psychometric properties of the scale in a sample of young and older people supports its use in older people[26]. However concerns persist about the time required for completion, with regard to application in a busy clinical setting[70] and also, patients' abilities[50]. As the short form of the MPQ is reported as performing equally as effectively as the long version, its simpler format may be preferred for use with frail older people[71, 72].

The Geriatric Pain Measure (GPM) [73] is a 24 item multi-dimensional pain assessment tool designed for use with older people. It has been successfully tested for validity and reliability in subjects attending 'ambulatory geriatric clinics', but does not appear frequently in subsequent research. Recently a modified version has been used in cognitively impaired adults[74]. Items on the GPM reflect the multiple dimensions of pain including pain intensity, pain on activity, the impact on mood and independence.

The Brief Pain Inventory (BPI) can also be considered as part of a multidimensional assessment of pain in older people. It consists of 15-items that assess severity of pain, interference of daily activities due to pain, and impact of pain on mood and enjoyment of life.   Its psychometric properties have been favourably evaluated in a sample of people with arthritis and low back pain sufferers, including but not specific to, older people[75].

Recommendations

All older people in whom pain is detected should have a clinical assessment of the multi-dimensional aspects of pain including:
> *A sensory dimension which describes the intensity and nature of pain e.g. crushing, sharp.*
> *An affective/evaluative dimension which describes the emotional component of pain and how pain is perceived (e.g. dangerous, exhausting, frustrating, frightening)*
> *The impact on life including physical, functional and psychosocial effects.*

Health care professionals should familiarise themselves with relevant assessment tools and use them routinely. Assessors should consider the use of one tool or a combination of tools to assess the differing dimensions of pain

4.Cognitive Impairment

Evidence-based statements

Self reporting of pain is the gold standard method for identifying pain in those with mild to moderate cognitive impairment. When people with severe cognitive impairment can self-report pain, these reports are valid

In the older person with severe cognitive impairment, carers who are familiar with patient may detect the presence of pain and the changes in pain.

Assessing for the presence of pain and quantifying the experience of pain in older people with cognitive impairment is particularly challenging and important.

Detecting Pain

Cognitively impaired older people under report pain. However, when older people with cognitive impairment report pain, their self-reports of pain are no less valid than those of cognitively intact individuals[17].

Intensity of pain

A systematic review of 18 self-report instruments in patients with cognitive impairment found very variable completion rates for instruments that require individuals to discriminate between adjectives or numbers corresponding to adjectives (Verbal Rating / Descriptor Scale, Memorial Pain Assessment Scale). Completion rates are highest for instruments assessing the intensity dimension of pain (e.g. Pain Thermometer, Numerical Rating Scale). None of the self-report instruments demonstrated excellent reliability or validity[49].

Of the non-verbal scales, Faces Pain Scale (60%) and Facial Affective Scale (50%) were poorly understood in patients with early Alzheimer's Disease (AD) and very poorly understood in mid-stage AD (30% and 70%) [76]. The Coloured Visual Analogue Scale was understood by 100% patients with early AD and 80% with mid stage AD[76], and it has been recommended in the consensus paper by Hadjistavropoulos 2007[45].

In a study of 130 long-term care residents in Canada, only 24% mildly cognitively impaired and 11% moderately cognitively impaired subjects put the faces of the Faces Pain Scale in correct order[48].

Observational assessment of pain

In the presence of cognitive impairment, behavioural measures of pain can be used with moderate to reasonable interrater reliability, but even in cognitively intact older adults they are not a good measure of intensity[77].

Several systematic reviews have recently reviewed behavioural pain assessment tools for use in non-verbal older adults and older adults with dementia [35,49,78.] Results indicate that behavioural pain assessment tools are still in the early stages of development and evaluation. Reliability and validity data are limited or still unavailable for many instruments.

The Discomfort Scale-Dementia of Alzheimer Type (DS-DAT) was developed and evaluated in nursing home residents in whom the tool had reasonable reliability and validity. Significant increases in scores were noted during fever[79].

However, the administration and scoring of DS–DAT is quite complex and requires considerable training. There are no observations of the patient during activity which is a further limitation of this particular tool.

The Abbey Pain Scale, developed for end-stage dementia, was built on the DS-DAT and used the Delphi technique across experts from the US and Australia to identify parameters. It was piloted in 52 residents, modified and evaluated in 61 residents. Internal consistency reliability was reasonable (Cronbach's alpha 0.74), but interrater reliability poor[80].

The PAINAD Scale is a simple 5 item observational tool, developed and validated in 19 residents with advanced dementia[81]. Validation studies have confirmed the potential for this scale[82]. The PAINAD covers only a limited number of non-verbal pain behaviours. It is short and easy to use but it needs to be evaluated more widely to assess its sensitivity for pain in clinical settings, as it doesn't appear to be comprehensive.

The Pain Assessment Check List for Seniors with Severe Dementia (PACSLAC) includes a total of 60 items covering subtle as well as common pain behaviours. The tool appears comprehensive and yet easy to use with good internal consistency[83]. A recent prospective evaluation in Dutch nursing home residents revealed good validity and reliability, and nurses considered it easy to use[84].

The NOPAIN tool involves observing patients' pain behaviours (verbalisation, vocalisation, face, bracing, rubbing and restlessness) during activities of daily living such as bathing and dressing[85]. The tool has been evaluated in the US and interrater reliability and construct validity appear to be reasonable. Herr et al felt that the tool shows promise in that it appears easy to use but it is not very comprehensive so further evaluation in clinical settings is needed[35].

DOLOPLUS 2 is a French tool developed for the multidimensional assessment of pain and includes items covering somatic, psychomotor and psychosocial reactions to pain[86]. The French version has been evaluated in several clinical settings and appears to have reasonable internal consistency, interrater reliability and test-retest reliability. However there has been a very limited evaluation of this tool in English and there may therefore be translation issues. It needs to be evaluated further in English speaking populations and this is currently underway.

All these instruments include different combinations of observations which are potentially indicative of the presence of pain [35,87]. Seven main types of observation occur within these pain assessment tools:

1. Physiological observations e.g. breathing pattern, sweating
2. Facial expressions e.g. wincing, grimacing, frowning, rapid blinking.
3. Body movements e.g. guarding, altered gait, pacing, rocking, hand wringing, repetitive movements.
4. Verbalisations / vocalisations e.g. moaning, groaning, asking for help, screaming, aggressive or offensive speech.
5. Changes in interpersonal interactions e.g. aggression, withdrawal, resisting care.
6. Changes in activity patterns or routines e.g. wandering, altered sleep pattern, altered rest patterns.
7. Mental status changes e.g. crying, tears, increased confusion, irritability.

There is as yet no single instrument that has been shown to have psychometric properties sufficient for it to be recommended for general clinical use. Detailed critiques can be found elsewhere [35,49,78.]

As indicators of pain, these observations/ behaviours will vary substantially between individuals. Familiarity with patients, together with information from carers about the significance of certain behaviours, should help clinicians to interpret them. We recommend that carers become familiar with these behaviours/observations in their patients and monitor carefully so that alterations in behaviour/observations are detected promptly. The presence of observational indicators of possible pain should prompt a more detailed clinical assessment.

Recommendations

In older people with cognitive impairment or with difficulty in communication, observational assessment becomes essential for assessing the presence of pain.

Carers familiar with older people with cognitive impairment should be included in the assessment of their pain.

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5. Algorithm for assessment of pain in older people

The evidence provided in this guidance document suggests that two different approaches to pain assessment are required in the older person, depending on their ability to communicate. The algorithm (appendix 3) illustrates two different pathways: one for those who are able to communicate successfully; and another for those who are not.

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APPENDIX 1   METHODOLOGY

Multi-professional working group:
The development of the guidance was overseen by a multi-professional working group including:

Professor J Closs	Nursing
Dr Beverly Collett	Pain medicine
Mrs Jean Gaffin	Patient representative
Mrs Joanna Gough	Administrative Support
Dr Danielle Harari	Geriatric medicine
Mr Lester Jones	Physiotherapy
Dr Sinead O'Mahony	Geriatric medicine
Dr Jonathan Potter	Clinical Effectiveness
Dr Pat Schofield	Nursing

With acknowledgement to Dr Amanda Williams

Scope
Questions addressed

1. What methods are available to assess the presence of pain in older adults.

2. What methods are available to assess the experience of pain in older adults

Methodology

Definitions
To facilitate literature searching older adults were defined as people over the age of 65.
Pain was defined as both acute and persistent, according to the IASP definitions but the focus was on persistent.(www.iasp-pain.org/terms-p.html).

Strategy
The search strategy broke down the question as follows:

What methods in terms of assessors (self assessment/ clinical services/ professional groups/ carer-partner) in terms of assessment of the severity of pain (behavioural assessment, rating scales, instruments, tools) and in terms of assessing the cause of pain (clinical assessments, scales, tools, instruments) are available to assess pain in older people (in general/ in cognitive impairment/communication impairment/ ethnic groups)

How effective (in terms of reliability/sensitivity to change/ validity/ acceptability) are the assessment methods identified in: measuring the experience of pain (in terms of quality of life/mood/function/carer strain/ management of pain/effect of treatment) in older people.

Search Strategy

Relevant full length articles were identified using electronic searches in Medline, PubMed, OVID Medline, CINAHL, Embase, Amed, Scisearch & Cochrane. Evidence based reviews were identified from OVID, Cochrane, ACP Journal Club, DARE and CCTR. Psychological and social science literature was sought through PsychINFO and ASSIA. Conference papers

were searched via IASP, The British Pain Society and The European Pain Society. Relevant publications were included.

Inclusion Criteria
Papers describing original studies, evidence based guidelines or systematic reviews
Studies including older people with or without cognitive impairment
Studies including pain assessment
Papers published after 1990

Exclusion Criteria
Paediatric literature

Search Terms
Combination of search terms used included:
Pain or discomfort or agitation and assessment or scales or measurement or behavioural measures or multidimensional measures of pain or quality of life or depression or anxiety and older people or elderly or aged or dementia or cognitive impairment.

Qualitative and quantitative studies were included.

Critical Appraisal
The Scottish Intercollegiate Guideline Network (SIGN) (SIGN 2005) tool was used for critical appraisal. Two centres were identified - Cardiff and Sheffield. Three reviewers conducted the appraisal in Sheffield and one reviewer in Cardiff.

Results
Seventy-eight papers were identified as meeting the inclusion/exclusion criteria. At this stage a preliminary review discarded 36 papers that were not primary research. In total 42 articles were then reviewed by the team. The majority of papers were from USA (21) with 4 from Sweden, 3 from Canada/Australia and the rest from Europe. Only nine of the studies were methodologically sound and fifteen were weak.

Comments
It is important to note that this area of study does not lend itself to critical appraisal using current conventional appraisal tools e.g. SIGN and National Institute of Clinical Excellence (NICE)(NICE 2005). The nature of the condition is one where randomised controlled trials are impractical or unethical.

As indicated in the SIGN guideline methodology qualitative methods are increasingly being used to inform practice in some aspects of medical care. At present, there is no mechanism for incorporating such studies in the evidence base. Some progress has been made on methods of identifying qualitative studies, and in evaluating their methodological quality. The use of qualitative evidence to identify issues of concern to patients, and to help identify key questions to be addressed in the guideline is becoming an established part of SIGN methodology. Incorporation of qualitative evidence alongside quantitative evidence in supporting guideline recommendations remains an issue for further investigation (SIGN). The critical appraisers rated papers according to the quality of the research methodology and did identify a body of methodologically sound papers from which clinical recommendations could be made.

Consensus Review
The guidance was circulated to a multi-professional consensus group for expert peer review, prior to production of the final draft. Feedback from the peer review group was presented to the guideline development group in finalising the guidance.

Members of the Peer Review included:

Victoria Goodwin MSc MCSP
Clinical Research Associate
Exeter

Dr Denis Martin
Reader in Rehabilitation
School of Health and Social Care
University of Teesside

Dr Andrew Severn
Consultant
Age Anaesthesia Association
Department of Anaesthesia
Royal Lancaster Infirmary
Lancaster

Dr Nick Allcock
Pain assessment and management, nurse education in pain management and assessment
University of Nottingham

Dr Clive Bowman
BUPA Care Services Medical Director

Dr Steven Levene,
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McGill University
Montreal, Canada

Dr G Pickering, MD,PhD, DPharm
Clinical Pharmacology Department
University Hospital/ Medical Faculty
Clermont-Ferrand – FRANCE

Professor Stephen J Gibson
Australian Pain Society

Dr Duncan Forsyth
Consultant in Elderley Medicine
Addenbrookes Hospital Cambridge

APPENDIX 2   **RATING SCALES**
Numerical rating scale

PAIN RATING SCALE

Title: .... Date:...
First Name:.................................. Patient number:......................................
Surname:..................................... Clinic: ....
_____

Please mark the scale below to show how intense your pain is.

A zero (0) means no pain, and ten (10) means extreme pain.
How **intense** is your pain **now**?

|｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜|

0 1 2 3 4 5 6 7 8 9 10
   no pain   **extreme pain**

How **intense** was your pain **on average last week**?

|｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜|

0 1 2 3 4 5 6 7 8 9 10
   no pain   **extreme pain**

Now please use the same method to describe how **distressing** your pain is.
How **distressing** is your pain **now**?

|｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜|

0 1 2 3 4 5 6 7 8 9 10
   not at all   **extremely**
   distressing   **distressing**

How **distressing** was your pain **on average last week**?

|｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜|

0 1 2 3 4 5 6 7 8 9 10
   not at all   **extremely**
   distressing   **distressing**

Now please use the same method to describe **how much your pain interferes** with your normal everyday activities.

|｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜｜|

0 1 2 3 4 5 6 7 8 9 10
does not interfere   **Interferes completely**

If you have had treatment for your pain, how much has this relieved (taken away) the pain?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
no relief   complete relief

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Verbal rating scale

A Verbal Rating Scale or a Categorical scale asks the patient to use a word from a list of adjectives to rate their pain intensity.
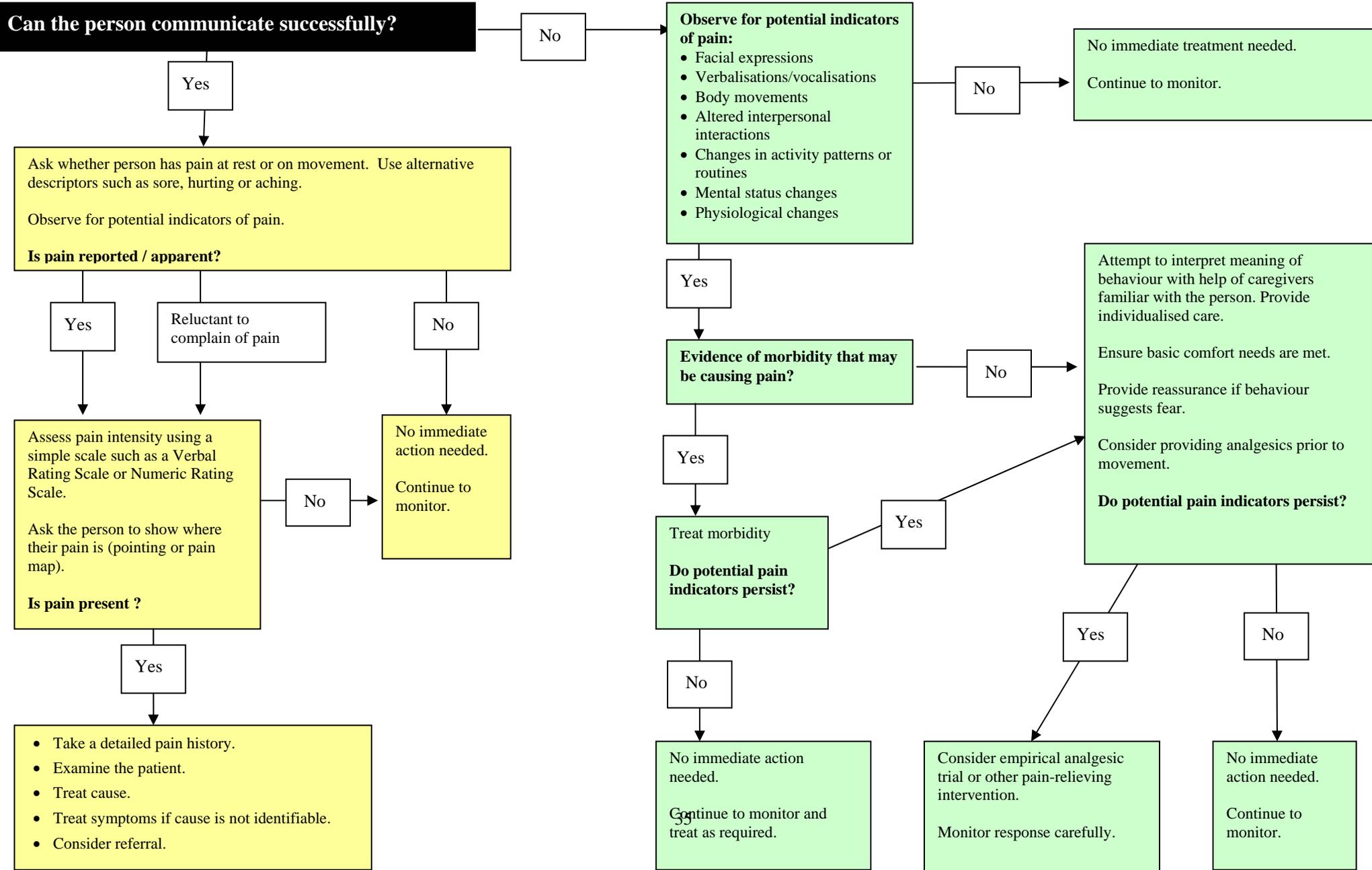Most use 4 words:

None   Mild   Moderate   Severe

APPENDIX 3   ALGORITHM FOR ASSESSMENT OF PAIN IN OLDER PEOPLE

Can the person communicate successfully? → No →

Yes ↓

No →

Observe for potential indicators of pain:
- Facial expressions
- Verbalisations/vocalisations
- Body movements
- Altered interpersonal interactions
- Changes in activity patterns or routines
- Mental status changes
- Physiological changes

→ No → No immediate treatment needed.

Continue to monitor.

Yes ↓

Ask whether person has pain at rest or on movement. Use alternative descriptors such as sore, hurting or aching.

Observe for potential indicators of pain.

Is pain reported / apparent?

Yes — Reluctant to complain of pain — No

Evidence of morbidity that may be causing pain? → No →

Yes ↓

Attempt to interpret meaning of behaviour with help of caregivers familiar with the person. Provide individualised care.

Ensure basic comfort needs are met.

Provide reassurance if behaviour suggests fear.

Consider providing analgesics prior to movement.

Do potential pain indicators persist?

Assess pain intensity using a simple scale such as a Verbal Rating Scale or Numeric Rating Scale.

Ask the person to show where their pain is (pointing or pain map).

Is pain present ?

→ No → No immediate action needed.

Continue to monitor.

Treat morbidity

Do potential pain indicators persist?

→ Yes →

Yes ↓

No ↓

Yes ↓

No immediate action needed.

Continue to monitor and treat as required.

Yes — No

Yes ↓

- Take a detailed pain history.
- Examine the patient.
- Treat cause.
- Treat symptoms if cause is not identifiable.
- Consider referral.

Consider empirical analgesic trial or other pain-relieving intervention.

Monitor response carefully.

No immediate action needed.

Continue to monitor.

APPENDIX 4   PAIN MAP

Where is your pain?

Please mark with an X on the drawings below where you feel pain. Label S if near the surface, D if the pain is deep and DS if both.

RIGHT   LEFT   LEFT   RIGHT

FRONT   BACK