

GUIDELINES

The Assessment of Pain in Older People: UK National Guidelines

PAT SCHOFIELD

Positive Ageing Research Institute
Anglia Ruskin University
Chelmsford, Cambridge

Executive summary

We are facing a huge increase in the older population over the next 30 years. This brings an anticipated increase in the prevalence of chronic pain and with this comes the challenge of assessment of pain in many varied settings. Our first iteration of this document was published in 2007. But there has been a proliferation of literature and research since then, so we have developed a new set of guidelines.

- (1) Different patterns and sites of pain were seen in men and women.
- (2) Age differences suggest that pain prevalence increased with age up to 85 years and then decreased.
- (3) The available studies on barriers and attitudes to pain management point towards an adherence to bio-medically orientated beliefs about pain, concern amongst clinicians in relation to activity recommendations, and a negative orientation in general towards patients with chronic painful conditions.
- (4) A multidisciplinary approach to the assessment and treatment of pain is essential, but the assessment is a complex process which is hampered by many communication issues, including cognitive ability and socio-cultural factors. Such issues are part of the UK ageing population.
- (5) Structured pain education should be implemented that provides all health professionals (whether professionally or non-professionally trained) with standardised education and training in the assessment and management of pain according to level of experience.
- (6) Although subjective, patient self-report is the most valid and reliable indicator of pain and it may be necessary to ask questions about pain in different ways in order to elicit a response.
- (7) A number of valid and reliable self-report measures are available and can be used even when moderate dementia exists. The Numerical Rating Scale or verbal descriptors

can be used with people who have mild to moderate cognitive impairment. For people with severe cognitive impairment Pain in Advanced Dementia (PAINAD) and Doloplus-2 are recommended.

- (8) PAINAD and Doloplus-2 scales continue to show positive results in terms of reliability and validity. There has been no recent evaluation of the Abbey pain scale although it is widely used throughout the UK.
- (9) There is a need for more research into pain assessment using the collaborative role of the multidisciplinary team in all care settings.
- (10) Self-report questionnaires of function are limited in their ability to capture the fluctuations in capacity and ability. The concentration on items of relevance to the population of interest means that issues of personal relevance can be obscured.
- (11) Strong associations were seen between pain and depressed mood with each being a risk factor for the other. Additionally, loneliness and social isolation were associated with an increased risk of pain.
- (12) Clinicians should be cognisant that social isolation and or depressive signs and symptoms may be indicators of pre-existing pain or a predictor of future pain onset.
- (13) There are a number of evidence based guidelines on pain assessment in older people with or without cognitive impairment from around the world, including Australia and Europe.

Editor

Professor Patricia Schofield – RGN PhD PGDipEd DipN
Deputy Dean, Research & Income Generation, University of East Anglia

Contributing Authors

Dr Rachael Docking MA(Hons) PhD
Senior Evidence Manager, Centre for Ageing Better, London

The Assessment of Pain in Older People: UK National Guidelines

Ms Felicia Cox FRCN MSc (ECP) RN
Lead Nurse Pain Management, Royal Brompton &
Harefield NHS Foundation Trust, London
BPS representative

Ms Karin Cannons MSc RGN
Nurse Consultant Pain Management, Frimley Health NHS
Foundation Trust, Camberley, Surrey, RCN representative

Dr Aza Abdulla FRCP(UK) FRCP(I) MSc (Brunel) MSc
(Med Ed - Cardiff)
Consultant Physician, South London Healthcare NH Trust,
Kent
BGS representative

Dr Gary Bellamy BN(Hons) MA PhD
Research Fellow, Centre for Positive Ageing, University of
Greenwich, London

Ms Sonia Cottom BA(Hons)
Deputy Director Pain Association Scotland, Perth, Scotland

Dr Jonathon Davis BA(Hons) DipSW MA PhD
Sessional Instructor, School of Social Work, University of
British Columbia, Vancouver, BC, Canada

Ms Anneyce Knight FRSA MSc BA(Hons) PGCE RN
SFHEA
Senior Lecturer in Adult Nursing, Bournemouth University,
Bournemouth

Prof Denis Martin DPhil MSc BSc(Hons) - Professor of
Rehabilitation, Health and Social Care Institute, Teesside
University, Middlesbrough

Dr Carlos Moreno-Leguizamon BA MA PGCHE PhD -
Senior Lecturer and Programme Leader MSc Research in
Health and Social Care, University of Greenwich, London

Dr Louise Tarrant DCLinPsych MSc BSc(Hons) CPsychol -
Senior Clinical Psychologist,
Bath Centre for Pain Services, Bath

Literature Review Update – 2017
Miss Joanna Malone
Dr Brendon Stubbs

Declarations of interest

Members of the group have registered all competing interests as follows:

Aza Abdulla, Gary Bellamy, Sonia Cottom, Jonathon Davies, Rachael Docking, Anneyce Knight and Denis Martin have reported that they have no conflicts of interest.

Karin Cannons has declared that she is a member of the editorial board of the *British Journal of Pain*, and has received honoraria as an advisor and speaker to Napp Pharmaceuticals, White Pharmacy, Dallas Burston Ashbourne, Grunenthal, Smiths Medical and Pfizer.

Felicia Cox has declared that she is a Co-Editor of *The British Journal of Pain*, has acted as Editor for e-learning modules

and professional publications for Napp Pharmaceuticals, has co-authored e-learning modules for King's College London, and has received honoraria as an advisor and speaker to Napp Pharmaceuticals, Grunenthal, Cephalon, Dallas Burston Ashbourne and Pfizer.

Patricia Schofield has received honoraria for acting as a speaker and advisor to Napp Pharmaceuticals.

This publication was supported by an unrestricted educational grant from Bupa.

Declaration of sources of funding

Funding for this document has been made possible through Anglia Ruskin University. We are grateful for an unrestricted educational grant from the Bupa Foundation which has enabled us to publish this supplement on an open access basis.

Timetable

Dissemination; These guidelines will be distributed to all stakeholders as described in the *Publication Process Manual* [1] and as an electronic version available for download from the British Pain Society and British Geriatrics Society websites. An executive summary of these guidelines will be published in *Age & Ageing*.

Review of this edition to commence: March 2019

External peer review of draft next edition to commence (Anticipated): July 2019

Reissue date: Anticipated: December 2019

Foreword from Prof Pat Schofield

This guidance highlights the problems in assessing and managing pain in an ever increasing older population. The prevalence of pain has been established to be in the order of one in four of the adult population, with between 25–30% having pain that leads to other co-morbidities, resulting in a very poor quality of life.

These problems become more frequent with advancing years, and are often associated with difficulty in conveying the intensity and quality of the pain, as well as the impact that it has on the patient's life. As we describe pain as the 'fifth vital sign' a fundamental principal underpinning this is that we should measure the pain alongside routine observations.

Just because someone does not have the ability to tell us that they have pain in a language that we can understand, does not mean that we should not measure it, as we would with any other adult or patient in our care.

These guidelines provide a range of tools which demonstrate good validity and reliability for clinical practice in assessing pain in older people. There is permission to use them and so they should be implemented from this formal documentation by all healthcare providers in every care setting across the UK.

8. Communication

Carlos Moreno-Leguizamon and Pat Schofield

The literature on pain in older people acknowledges the fact that the process of communication between those in pain and their care givers, either professionals or family, is a complex and difficult process to be grasped. In this context the strong tendency in the literature is to generate tools, mainly scales, which would contribute to an effective diagnosis, expression, assessment and management of chronic pain. Some studies have focused on legitimising the validity and reliability of those scales [14, 15].

A second emerging trend in the literature reviewed is to recommend the inclusion of a more comprehensive concept of communication, which includes important and complementary components such as nonverbal communication (facial expressions), kinesics (body movement), and proxemics (use of space) [16]. There are difficulties when health professionals conceptualise the process of communication as only verbal communication [17]. Again, the latter is, in many ways, the one with which professional caregivers and families are more familiar. Thus a frequent recommendation in the literature is the integration of various components (bio-psycho-social) of the communication process in order to grasp the experiences of those in pain [18]. In turn, this recommendation translates practically to training and education for professional (nurses, physicians and others) and family caregivers in how the communication process works [14, 16, 18, 19].

In the particular case of those with pain in advanced age, with cognitive impairments or from different cultural backgrounds, the process of communication by caregivers becomes even more complex and uncertain. This is because caregivers face more challenges in grasping the process of communication, the consequence of which is that the probability for those in pain to be undertreated or underdiagnosed becomes higher. Jorge and McDonald [20] highlighted this issue in particular in their study, working with 24 Hispanic community dwellings for elder adults in the United States. They found that, when given the opportunity to do so, these groups are able to describe their pain successfully.

The issue we face in the United Kingdom, given the limitation of time for consultation, is that it is difficult for health care professionals to spend time on discussion or consultation. We need not only to understand how the communication process works between vulnerable groups and their caregivers (professional or family), but also to realise that pain is more than mere biology; it is also a bio-psychological (subjective) and social force [18]. Similarly, [21] highlighted in their study that, by providing older

adults with time to discuss their pain through open-ended questions, more success was achieved in completing the Brief Pain Inventory (BPI). Thus, the key message of both of these studies as well as some others [22] is that, assessment is not just about the completion of scales; it should also emphasise that individuals should have an opportunity to talk about their pain experience. In other words, the challenge is how to obtain their pain stories within short time frames.

Finally, while discussing the issue of a multidisciplinary team, Boorsma et al. [23] pointed out the need for a systematic multi-disciplinary approach to managing and treating pain. However, this study did not clarify who those professionals should be. It is recommended that a multi-disciplinary team should comprise not only health professionals but also social scientists. The latter are trained to understand the cultural, social, political, economic and communicational aspects of pain and can, therefore, enrich the clinical views.

18. References

1. British Pain Society. Publication Process Manual December 2010 v1.2. London: British Pain Society, 2010. Available from http://www.britishpainsociety.org/pub_process_manual.pdf [Accessed 7.07.2014].
2. Registered Nurses' Association of Ontario (RNAO) *Assessment and management of pain in the elderly: Self-directed learning package for nurses in long-term care*. 2007. Available from: http://www.pulserx.ca/docs/Assessment_and_Management_of_Pain_in_the_Elderly.pdf [Accessed 22.7.14]
3. Scottish Intercollegiate Guidelines Network. SIGN 50 A guideline developer's handbook. Edinburgh: SIGN, 2011. Available from <http://www.sign.ac.uk/guidelines/fulltext/50/index.html> [Accessed 8.07.2014].
4. National Health and Medical Research Council *How to review the evidence; systematic identification and review of the scientific literature*. 1999. Canberra, NHMRC. Available from http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/cp65.pdf [Accessed 8.07.2014]
5. Liddle J, Williamson M, Irwig L. Method for Evaluating Research Guideline Evidence. Sydney: NSW Health Department, 1996.
6. National Health and Medical Research Council. A guide to the development, implementation and dissemination of clinical practice guidelines. Canberra, NHMRC: © Commonwealth of Australia, 1999.
7. Merskey H, Bogduk N (eds) *Classification of chronic pain: Descriptions of chronic pain syndromes and definition of pain terms*. 1994. International Association for the Study of Pain. Available from: <http://www.iasp-pain.org/files/Content/ContentFolders/Publications2/FreeBooks/Classification-of-Chronic-Pain.pdf> [Accessed 22.7.14]
8. Elliott A. Prevalence of pain in older adults. In: P Schofield (ed) *The management of pain in older adults*. Age Ageing 2013; 42: 1.
9. Royal College of Surgeons, Faculty of Anaesthetists. Report of the Working Party on Pain after surgery. London: RCSENG - Professional Standards and Regulation, 1990.
10. 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, RCP, 2007. Available from: http://britishpainsociety.org/book_pain_older_people.pdf [Accessed 20.7.14]
11. Abdulla A, Adams N, Bone M *et al*. Guidance on the management of pain in older people. Age Ageing 2013; 42(Suppl 1): 1–57. http://ageing.oxfordjournals.org/content/42/suppl_1.toc. [Accessed 1.07.14].
12. Dionne CE, Dunn KM, Croft PR. Does back pain prevalence really decrease with increasing age? A systematic review. Age Ageing 2006; 35: 229–34. Epub 2006 Mar 17.
13. Thomas E, MotTram S, Peat G, Wilkie R, Croft P. The effect of age on the onset of pain interference in a general population of older adults. Prospective findings from the North Staffordshire Osteoarthritis Project (NorStOp). Pain 2007; 129: 21–7.
14. Carr ECJ. Evaluating the use of a pain assessment tool and care plan: a pilot study. J Adv Nurs 1997; 26: 1073–9.
15. Haskard-Zolnierik K. Communication about patient pain in primary care: Development of the Physician-patient Communication About Pain scale (PCAP). Patient Educ Couns 2012; 86: 33–40.
16. Blomqvist K, Hallberg I. Recognising pain in older adults living in sheltered accommodation: the views of nurses and older adults. Int J Nurs Stud 2001; 38: 305–18.
17. Machado AC, Bretas CA. Comunicacao nao-verbal de idosos frente ao processo de dor (Nonverbal communication of elderly patients facing the pain process). Rev Bras Enferm 2006; 59: 129–33.
18. Hadjistavropoulos T, Craig DK, Duck S *et al*. A biopsychosocial formulation of pain communication. Psychol Bull 2011; 137: 910–39.
19. Blomqvist K. Older people in persistent pain: nursing and paramedical staff perceptions and pain management. J Adv Nurs 2003; 41: 575–84.
20. Jorge J, McDonald D. Hispanic older adults osteoarthritis pain communication. Pain Manag Nurs 2011; 12: 173–9.
21. McDonald D, Shea M, Rose L *et al*. The effect of pain question phrasing on older adult pain information. J Pain Symptom Manage 2009; 37: 1050–60.
22. De Rond MEJ, Van Dam F, Muller M. A pain monitoring program for nurses: Effects on communication, assessment and documentation of patient's pain. J Pain Symptom Manage 2000; 20: 424–39.
23. Boorsma M, Frijters DHM, Knol DL, Ribbe ME, Nijpels G. Effects of multidisciplinary integrated care on quality of care in residential care facilities for elderly people: a cluster randomized trial. Can Med Assoc J 2011; 183: E724–732.
24. Horgas A, Dunn K. Pain in nursing home residents. Comparison of residents' self-report and nursing assistants' perceptions. Incongruencies exist in resident and caregiver reports of pain; therefore, pain management education is needed to prevent suffering. J Gerontol Nurs 2001; 27: 44–53.
25. Martin R, Williams J, Hadjistavropoulos T, Hadjistavropoulos H, MacLean M. A qualitative investigation of seniors' and caregivers' views on pain assessment and management. Canad J Nurs Res 2005; 37: 142–65.
26. van Herk R, van Dijk R, Biemold N, Tibboel D, Baar F, de Wit R. Assessment of pain: can caregivers or relatives rate pain in nursing home residents? J Clin Nurs 2009; 18: 2478–85.
27. Hall-Lord M, Johansson I, Schmidt I, Larsson BW. Family members' perceptions of pain and distress related to analgesics and psychotropic drugs, and quality of care of elderly nursing home residents. Health Soc Care Commun 2002; 11: 1365–2524.
28. Bradford A, Shresthna S, Snow L *et al*. Managing pain to prevent aggression in people with dementia: A non-pharmacologic intervention. Am J Alzheimer's Dis Other Demen 2012; 27: 41–7.
29. Cheung G, Choi P. The use of the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) by caregivers in dementia care facilities. N Z Med Assoc 2008; 121: 21–9.
30. Ghafoor V. Management of painful conditions in the elderly. J Pharm Pract 2003; 16: 249–60.
31. Couilliot MF, Dares V, Delahaye G *et al*. Acceptability of an acupuncture intervention for geriatric chronic pain: an open pilot study. J Integr Med 2012; 11: 26–31.
32. Allen R, Haley W, Small B, McMillan S. Pain reports by older hospice cancer patients and family caregivers: The role of cognitive functioning. Gerontologist 2002; 42: 507–14.
33. Shega J, Hougham G, Stocking C, Cox-Hayley B, Sachs G. Management of noncancer pain in community-dwelling persons with dementia. Am Geriatr Soc 2006; 54: 1892–7.

34. Ferrell B, Ferrell B, Ahn C, Tran K. Pain management for elderly patients with cancer at home. *Cancer* 1994; 74(7 Suppl): 2139–146.
35. Johnson P, Nay R, Gibson S. Assessing pain in non-verbal older people with cognitive impairment. *Anaesth Intensive Care* 2011; 39. [ASA Abstract].
36. Mentes J, Teer J, Cadogan M. The pain experience of cognitively impaired nursing home residents: Perceptions of family members and certified nursing assistants. *Pain Manag Nurs* 2004; 5: 118–25.
37. Buffum M, Haberfelde M. Moving to new settings: Pilot study of families' perceptions of professional caregivers' pain management in persons with dementia. *J Rehabil Res Dev* 2007; 44: 295–304.
38. Pautex S, Herrmann F, Le Lous P, Fabjan M, Michel JP, Gold G. Feasibility and reliability of four pain self-assessment scales and correlation with an observational rating scale in hospitalized elderly demented patients. *The Journals of Gerontology: Series A: Biological Sciences and Medical Sciences* 2005; 60A: 524–9.
39. Phillips SE. Pain assessment in the elderly. *US Pharm* 2007; 32: 37–52.
40. Jensen-Dahm C, Vogel A, Waldorff FB, Waldemar G. Discrepancy between self- and proxy-rated pain in Alzheimer's disease: results from the Danish Alzheimer Intervention Study. *J Am Geriatr Soc* 2012; 60: 1274–8.
41. Leong IY, Chong MS, Gibson SJ. The use of a self-reported pain measure, a nurse-reported pain measure and the PAINAD in nursing home residents with moderate and severe dementia: a validation study. *Age Ageing* 2006; 35: 252–6.
42. Pautex S, Herrmann F, Michel JP, Gold G. Psychometric properties of the Doloplus-2 observational pain assessment scale and comparison to self-assessment in hospitalized elderly. *Clin J Pain* 2007; 23: 774–9.
43. Stolee P, Hillier LM, Esbaugh J *et al.* Instruments for the assessment of pain in older persons with cognitive impairment. *J AM Geriatr Soc* 2005; 53: 319–26. Biennial Convention, *Sigma Theta Tau International Honor Society of Nursing*, 37th, Nov, 2003, Toronto, ON, Canada.
44. Zwakhalen S, Hamers J, Peijnenburg M. Nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia. *Pain Res Manag* 2007; 12: 177–84.
45. Manz BD, Mosier R, Nusser-Gerlach MA *et al.* Pain assessment in the cognitively impaired and unimpaired elderly. *Annual Midwest Nursing Research Society Conference*. 2000. 22nd, Mar, 1998, Columbus, OH, US 1(4) 106–15.
46. Gregory J. Identifying a Pain Assessment Tool for Patients with Cognitive Impairment in Acute Care. London: Foundation of Nursing Studies, 2011.
47. McAuliffe L, Nay R *et al.* Pain assessment in older people with dementia: literature review. *J Adv Nurs* 2008; 65: 2–10.
48. Brown D. A literature review exploring how healthcare professionals contribute to the assessment and control of post-operative pain in older people. *J Clin Nurs* 2004; 13: 74–90.
49. Cohen-Mansfield J. Nursing staff members' assessment of pain in cognitively impaired nursing home residents. *Pain Manag Nurs* 2005; 6: 68–75.
50. Blomqvist K, Hallberg I. Pain in older adults in sheltered accommodation between assessment by older adults and staff. *J Clin Nurs* 1999; 8: 150–69.
51. Yi-Heng C, Li-Chan L, Watson R. Validating nurses' and nursing assistants' report of assessing pain in older people with dementia. *J Clin Nurs* 2010; 19: 42–52.
52. Cadogan M, Schnelle J, Al-Sammarrai N, Yamamoto-Mitani N, Cabrera G, Osterweil D. A standardized quality assessment system to evaluate pain detection and management in the nursing home. *J Am Med Dir Assoc* 2005; March Supplement: S11–9.
53. Kaasalainen S, Coker E, Dolovich L *et al.* Pain management decision making among long-term care physicians and nurses. *Can J Nurs Res* 2007; 39: 14–31.
54. Layman YJ, Horton F, Davidhizar R. Nursing attitudes and beliefs in pain assessment and management. *J Adv Nurs* 2006; 53: 412–21.
55. Clark L, Fink R, Pennington K, Jones K. Nurses' reflections on pain management in a nursing home setting. *Pain Manag Nurs* 2006; 7: 71–7.
56. Gregory J, Haigh C. Multi-disciplinary interpretation of pain in older patients on medical units. *Nurse Educ Pract* 2007; 8: 249–57.
57. Mrozek J, Werner JS. Nurses attitudes towards pain, pain assessment and pain management practices in long term care facilities. *Pain Manag Nurs* 2001; 2: 154–62.
58. Weiner K, Rudy T. Attitudinal barriers to effective treatment of persistent pain in nursing home residents. *J Am Geriatr Soc* 2002; 50: 2035–40.
59. Yun-Fang T, Hsiu-Hsin T, Yeur-Hur L. Pain prevalence, experience and management strategies among the elderly in Taiwanese nursing homes. *J Pain Symptom Manage* 2004; 28: 579–84.
60. Liu J, Pang P, Lo K. Development and implementation of an observational pain assessment protocol in a nursing home. *J Clin Nurs* 2012; 21: 1789–93.
61. Jones K, Fink R, Hutt E *et al.* Measuring pain intensity in nursing home residents. *J Pain Symptom Manage* 2005; 30: 519–27.
62. Hadjistavropoulos T, Herr K, Turk D *et al.* An interdisciplinary expert consensus statement on assessment of pain in older persons. *Clin J Pain* 2007; 23: S1–S43.
63. Ustun TB, Chatterji S, Kostanjsek N *et al.* Developing the World Health Organisation Disability Assessment Schedule 2.0. *Bull World Health Organ* 2010; 88: 815–23. Available from <http://www.who.int/bulletin/volumes/88/11/09-067231/en/> [Accessed 11.09.2017].
64. Menz HB, Tiedemann A, Kwan MM, Plumb K, Lord SR. Foot pain in community-dwelling older people: an evaluation of the Manchester Foot Pain and Disability Index. *Rheumatology* 2006; 45: 863–7.
65. Roddy E, Muller S, Thomas E. Defining disabling foot pain in older adults: further examination of the Manchester Foot Pain and Disability Index. *Rheumatology* 2009; 48: 992–6.
66. Ong BN, Hooper H, Jinks C, Dunn K, Croft PJ. 'I suppose that depends on how I was feeling at the time': perspectives on questionnaires measuring quality of life and musculoskeletal pain. *Health Service Res Policy* 2006; 1: 81–8.
67. Wilson G, Jones D, Schofield P, Martin D (2013) The use of the Sensecam to explore daily functioning of older adults with chronic pain. *SenseCam 2013*, San Diego. Abstracts 76–77.
68. Wand BM, Chiffelle LA, O'Connell NE, McAuley JH, DeSouza LH. Self-reported assessment of disability and performance-based assessment of disability are influenced by

The Assessment of Pain in Older People: UK National Guidelines

- different patient characteristics in acute low back pain. *Eur Spine J* 2010; 19: 633–40.
69. Gnass I, Nestler N, Osterbrink J *Pitfalls of pain management in nursing homes*. Poster presented at 6th World Congress, World Institute of Pain, Miami, USA. 2012.
 70. Keane RA, Williams C, O'Neill D. Pain assessment in specialist services for older people: A national perspective. *J Am Geriatr Soc* 2010; 58: 1614–5.
 71. Rainfray M, Brochet B, de Sarasqueta A. Assessment of pain in elderly hospitalised patients a transversal descriptive survey. *Presse Med* 2003; 32: 924–9.
 72. Manias E, Gibson S, Finch S. Testing an educational nursing intervention for pain assessment and management in older people. *Pain Med* 2011; 12: 1199–215.
 73. Gregory J. Initial testing of a behavioural pain assessment tool within trauma units. *Int J Orthop Trauma Nurs* 2017; 24: 3–11.
 74. Pautex S, Michon A, Guedira M *et al*. Pain in severe dementia: Self-assessment or observational scales? *J Am Geriatr Soc* 2006; 54: 1040–5.
 75. Hølen JC, Saltvedt I, Fayers PM *et al*. Doloplus-2, a valid tool for behavioural pain assessment? *BMC Geriatr* 2007; 19: 29.
 76. Hutchison R, Tucker WF Jr, Kim W *et al*. Evaluation of a behavioral assessment tool for the individual unable to self-report pain. *Am J Hosp Palliat Med* 2006; 23: 328–31.
 77. Pickering G. Reliability study in five languages of the translation of the pain behavioural scale Doloplus. *Eur J Pain* 2010; 14: 545e1–10.
 78. Cheung G, Choi P. The use of the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) by caregivers in dementia care facilities. *N Z Med J* 2008; 121: 21–9.
 79. Schiepers P, Bonroy BC, Leysens A *et al*. On-site electronic observational assessment tool for discomfort and pain. *Comput Methods Programs Biomed* 2010; 99: 34–42.
 80. Zwakhalen S, van't Hof C, Hamers JP. Systematic pain assessment using an observational scale in nursing home residents with dementia: exploring feasibility and applied interventions. *J Clin Nurs* 2012; 21: 3009–17.
 81. Lints-Martindale A, Hadjistavropoulos T, Lix L, Thorpe L. A comparative investigation of observational pain assessment tools for older adults with dementia. *Clin J Pain* 2011; 28: 226–37.
 82. Horgas A, Miller L. Pain assessment in people with dementia. *Am J Nurs* 2008; 108: 62–70.
 83. Jordan A, Hughes J, Pakresi M *et al*. The utility of PAINAD in assessing pain in a UK population with severe dementia. *Int J Geriatr Psychiatry* 2009; 26: 118–26.
 84. Lane P, Kuntupis M, MacDonald S *et al*. A pain assessment tool for people with advanced Alzheimers and other dementias. *Home Healthc Nurse* 2003; 21: 32–7.
 85. DeWaters T, Faut-Callahan M, McCann J *et al*. Comparison of self-reported pain and the PAINAD scale in cognitively impaired and intact older adults after hip fracture surgery. *Orthop Surg* 2008; 27: 21–8.
 86. Turk D, Melzack R. *Handbook on Pain Assessment*. New York: Guilford Press, 1992.
 87. American Geriatrics Society. AGS Panel on Chronic Pain in Older Persons. The management of chronic pain in older persons. *J Am Geriatr Soc* 1998; 46: 635–51.
 88. American Geriatrics Society. AGS Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc* 2002; 50: S205–224.
 89. American Geriatrics Society. AGS Panel on the Pharmacological Management of Persistent Pain in Older Persons. Pharmacological management of persistent pain in older persons. *J Am Geriatr Soc* 2009; 57: 1331–46.
 90. Hanlon JT, Aspinall SL, Semla TP *et al*. Consensus guidelines for oral dosing of primarily renally cleared medications in older adults. *J Am Geriatr Soc* 2009; 57: 335–40.
 91. Herr K, Coyne PJ, Key T *et al*. Pain assessment in the non-verbal patient: Position statement with clinical practice recommendations. *Pain Manag Nurs* 2006; 7: 44–52.
 92. Chou R, Fanciullo GJ, Fine PG *et al*. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. *Journal of Pain* 2009; 10: 113–30.
 93. Australian Pain Society *Pain in Residential Aged Care Facilities: Management Strategies*. North Sydney, New South Wales, Australia. 2005.
 94. Edith Cowan University. The PMG Kit for Aged Care: An implementation kit to accompany the Australian Pain Society's Pain in Residential Aged Care Facilities: Management Strategies Commonwealth Copyright Administration Barton: ACT, 2007 Available from: [http://www.health.gov.au/internet/main/publishing.nsf/Content/347C7332D1D56A71CA257BF0001DAD8B/\\$File/PMGKit.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/347C7332D1D56A71CA257BF0001DAD8B/$File/PMGKit.pdf) [Accessed 11.09.2017].
 95. Sociedad (2012) Española de Geriatria y Gerontologia. Guía de buena práctica clínica en Geriatria. *Dolor crónico en el anciano* IMC, Madrid.
 96. British Geriatrics Society. Guidance on the management of pain in older people. *Age Ageing* 2013; 42: i1–i57.
 97. Ducloux D, Guisado H, Pautex S. Promoting sleep for hospitalized patients with advanced cancer with relaxation therapy: experience of a randomized study. *Am J Hosp Palliat Care* 2013; 30: 536–40.
 98. Sociedad (2001) Española de Geriatria y Gerontologia. *Dolor en el anciano Glosa Ediciones*, Barcelona.
 99. Borlion B, Lecart MP. Pijn en ouderen. Een praktische gids. Morlion: Lannoo Campus, 2010.
 100. Pautex S, Rexach-Cano L, van den Noorgate N, Cedraschi C, Cruz-Jentoft AJ. Management of chronic pain in old patients: Belgium, Spain and Switzerland. *Eur Geriatr Med* 2013; 4: 281–7.
 101. Allaz AF, Cedraschi C, Rentsch D, Canuto A. Chronic pain in elderly people: psychosocial dimension. *Rev Med Suisse* 2011; 7: 1470–10.
 102. Bagnara L, Colombo E, Bilotta C, Vergani C, Bergamaschini L. Il dolore cronico nel paziente anziano (Persistent pain in the elderly). *G Gerontol* 2009; 57: 262–6.
 103. Belin C, Gatt MT. Douleur et démence (Pain and Dementia). *Psychol Neuropsychiatr Vieil* 2006; 4: 247–54.
 104. Carnes D, Underwood M. The importance of monitoring patient's ability to achieve functional tasks in those with musculoskeletal pain. *Int J Osteopath Med* 2008; 11: 26–32.
 105. Cohen-Mansfield J, Lipson S. The utility of pain assessment for analgesic use in persons with dementia. *Pain* 2008; 134: 16–23.
 106. Jackson D, Horn S, Kersten P *et al*. Development of a pictorial scale of pain intensity for patients with communication impairments: initial validation in a general population. *Clin Med (Northfield Il)* 2006; 6: 580–5.
 107. McDonald D, Fedo J. Older adults pain communication: The effect of interruption. *Pain Manag Nurs* 2009; 10: 149–53.
 108. McDonald D, Shea M, Fedo J *et al*. Older adult pain communication and the brief pain inventory short form. *Pain Manag Nurs* 2008; 9: 154–9.

109. Morello R, Alain J, Alix M *et al.* A scale to measure pain in non-verbally communicating older patients: The EPCA-2 study of its psychometric properties. *Pain* 2007; 15: 87–98.
110. Blomqvist K, Hallberg IR. Managing pain in older persons who receive home-help for their daily living. Perceptions by older persons and care providers. *Scand J Caring Sci* 2002; 16: 319–28.
111. Fuchs-Lacelle S, Hadjistavropoulos T. Development and preliminary validation of the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC). *Pain Manag Nurs* 2004; 5: 37–49.
112. Papadopoulos A, Wright S, Ensor J. Evaluation and attributional analysis of an aromatherapy service for older adults with physical health problems and carers using the service. *Compliment Ther Med* 1999; 7: 239–44.
113. De Andrade DC, de Faria JW, Caramelli P *et al.* The assessment and management of pain in the demented and non-demented elderly patient. *Arq Neuropsiquiatr* 2010; 69: 387–94.
114. Gagliese L, Melzack R. Age differences in nociception and pain behaviours in the rat. *Neurosci Biobehav Rev* 2000; 24: 843–54.
115. Caraceni A, Cherny N, Fainsinger R *et al.* Pain measurement tools and methods in clinical research in palliative care: Recommendations of an expert working group of the European Association of Palliative Care. *J Pain Symptom Manage* 2002; 23: 239–55.
116. Chatelle C, Vanhauzenhuysse A *et al.* Pain assessment in non-communicative patients. *Rev Med Liege* 2008; 63: 429–37.
117. Chibnall J, Tait RC. Pain assessment in cognitively impaired and unimpaired older adults: a comparison of four scales. *Pain* 2001; 92: 173–86.
118. Jensen MP, Karoly P, Braver S. The measurement of clinical pain intensity: a comparison of six methods. *Pain* 1986; 27: 117–26.
119. Jensen MP, Karoly P. Self-report scales and procedures for assessing pain in adults. In: Turk DC, Melzack R, eds. *Handbook of pain assessment*. New York: Guilford, 1992; pp. 135–51.
120. Jensen MP, McFarland CA. Increasing the reliability and validity of pain intensity measurement in chronic pain patients. *Pain* 1993; 55: 195–203.
121. Closs SJ, Barr B, Briggs M, Cash K, Seers K. A comparison of five pain assessment scales for nursing home residents with varying degrees of cognitive impairment. *J Pain Symptom Manage* 2004; 27: 196–205.
122. Davies E, Male M, Reimer V, Turner M. Pain assessment and cognitive impairment: part 2. *Nurs Stand* 2004; 19: 33–40.
123. Fisher SE, Burgio LD, Thorn BE *et al.* Pain assessment and management in cognitively impaired nursing home residents: association of certified nursing assistant pain report, Minimum Data Set pain report, and analgesic medication use. *J Am Geriatr Soc* 2002; 50: 152–6.
124. Fisher SE, Burgio LD, Burgio LD, Thorn BE, Hardin JM. Obtaining self-report data from cognitively impaired elders: Methodological issues and clinical implications for nursing home pain assessment. *Gerontologist* 2006; 46: 81–8.
125. van Herk R, van Dijk M, Biemold N *et al.* Assessment of pain: Can caregivers or relatives rate pain in nursing home residents? *J Clin Nurs* 2009; 18: 2478–85.
126. Herr K. Pain in the older adult: An imperative across all health care settings. *Pain Manag Nurs* 2010; 11(2, Suppl 1): S1–S10.
127. American Society for Pain Management 2006 *Pain assessment in the non verbal patient: Position statement with clinical practice recommendations*. Available from: <http://www.aspmn.org/organization/documents/nonverbaljournalfinal.pdf> [Accessed 11.09.2017]
128. Herr K. Pain assessment strategies in older patients. *J Pain* 2011; 12(Suppl 3): S3–S13.
129. Herr K, Coyne PJ, McCaffery M *et al.* Pain assessment in the patient unable to self-report: Position statement with clinical practice recommendations. *Pain Manag Nurs* 2011; 12: 230–50.
130. Coyn PJ, McCaffery M *et al.* *Pain assessment in the patient unable to self-report*. 2011. Available from: http://www.aspmn.org/organization/documents/UPDATED_NonverbalRevisionFinalWEB.pdf [Accessed 11.09.2017]
131. Horgas A, Miller L. Pain assessment in people with dementia. *Am J Nurs* 2008; 108: 62–70.
132. Horgas AL, Nichols AL, Schapson CA, Vietes K. Assessing pain in persons with dementia: Relationships among the non-communicative patient's pain assessment instrument, self-report, and behavioral observations. *Pain Manag Nurs* 2007; 8: 77–85.
133. Horgas AL, Elliott AF, Marsiske M. Pain assessment in persons with dementia: Relationship between self-report and behavioural observation. *J Am Geriatr Soc* 2009; 57: 126–32.
134. Hutchison RW, Tucker WF Jr, Kim S, Gilder R. Evaluation of a behavioral assessment tool for the individual unable to self-report pain. *Am J Hosp Palliat Med* 2006; 23: 328–31.
135. Jowers Taylor L, Herr K. Pain intensity assessment: A comparison of selected pain intensity scales for use in cognitively intact and cognitively impaired African American older adults. *Pain Manag Nurs* 2003; 4: 87–95.
136. Kaasalainen S, Crook J. An exploration of seniors' ability to report pain. *Clin Nurs Res* 2003; 13: 199–215.
137. Kamel HK, Phlavan M, Malekgoudarzi B, Gogel P, Morley JE. Utilizing pain assessment scales increases the frequency of diagnosing pain among elderly nursing home residents. *J Pain Symptom Manage* 2001; 21: 450–5.
138. Keane RA, Williams C, O'Neil D. Pain assessment in specialist services for older people a national perspective. *Journal of the American Geriatric Society* 2010; 58: 1614–5.
139. Manfredi PL, Breuer B, Meier DE, Libow L. Pain assessment in elderly patients with severe dementia. *J Pain Symptom Manage* 2003; 25: 48–52.
140. Ni Thuathail A, Welford C. Pain assessment tools for older people with cognitive impairment. *Nursing Standard* 2011; 26: 39–46.
141. Pautex S, Michon A, Guedira M *et al.* Pain in severe dementia: Self-assessment or observational scales? *J Am Geriatr Soc* 2006; 54: 1040–5.
142. Rodriguez CS. Pain measurement in the elderly: A review. *Pain Manag Nurs* 2001; 2: 38–46.
143. Scherder E, Bouma A. Visual analogue scales for pain assessment. *Alzheimer's disease. Gerontology* 2000; 46: 47–53.
144. Scherder E, Bouma A, Borkent M, Rahman O. Alzheimer patients report less pain intensity and pain affect than non-demented elderly. *Psychiatry* 1999; 62: 265–72.
145. Scherder E, Slaets J, Deijen J *et al.* Pain assessment in patients with possible vascular dementia. *Psychiatry* 2003; 66: 133–45.

The Assessment of Pain in Older People: UK National Guidelines

146. Soscia J. Assessing pain in cognitively impaired older adults with cancer. *Clin J Oncol Nurs* 2003; 7: 174–7.
147. Streffer ML, Buchi S, Mörgeli H, Galli U, Ettlin D. PRISM (pictorial representation of illness and self-measure): a novel visual instrument to assess pain and suffering in orofacial pain patients. *J Orofac Pain* 2009; 23: 140–6.
148. Tsai PF, Richards K. Using an osteoarthritis-specific pain measure in elders with cognitive impairment: a pilot study. *J Nurs Manag* 2006; 14: 90–5.
149. DeWaters T, Faut-Callahan M, McCann JJ *et al.* Comparison of self-reported pain and the PAINAD scale in hospitalized cognitively impaired and intact older adults after hip fracture surgery. *Orthop Nursing* 2008; 27: 21–8.
150. Weiner D, Pieper C, McConnell E *et al.* Pain measurement in elders with chronic low back pain: traditional and alternative approaches. *Pain* 1996; 67: 461–7.
151. Wheeler MS. Pain assessment and management in the patient with mild to moderate cognitive impairment. *Home Healthc Nurse* 2006; 24: 354–9.
152. While C, Jocelyn A. Observational pain assessment scales for people with dementia: a review. *Br J Community Nurs* 2009; 14: 438–42.
153. Wynne CF, Ling SM, Remsburg R. Comparison of pain assessment instruments in cognitively intact and cognitively impaired nursing home residents. *Geriatr Nurs* 2000; 21: 20–3.
154. Zwakhalen SM, Hamers JP, Berger MP. The psychometric quality and clinical usefulness of three pain assessment tools for elderly people with dementia. *Pain* 2006; 126: 210–20.
155. Kaasalainen S, DiCenso A, Donald F, Staples E. Optimizing the role of the nurse practitioner to improve pain management in long-term care. *West J Nurs Res* 2007; 29: 561–80.
156. Adams J, Cheng P, Deonarain L *et al.* Extinction of care-induced vocalizations by a desensitization routine on a palliative care unit. *Am J Hosp Palliat Med* 2012; 29: 318–20.
157. Agüera-Ortiz L, Failde I, Cervilla JA, Mico JA. Unexplained pain complaints and depression in older people in primary care. *J Nutr Health Ageing* 2013; 17: 574–7.
158. Andersson G. Chronic pain in older adults: A controlled pilot trial of a brief cognitive-behavioural group treatment. *Behav Cogn Psychother* 2012; 40: 239–44.
159. *Baker TA, Buchanan NT, Small BJ, Hines RD, Whitfield KE. Identifying the relationship between chronic pain, depression and life satisfaction in older African Americans. *Gerontology* 2011; 33: 426–43.
160. *van Baarsen B. Suffering, loneliness, and the euthanasia choice: an explorative study. *J Soc Work End Life Palliat Care* 2009; 4: 189–213.
161. Bergh I, Steen G, Waern M *et al.* Pain and its relation to cognitive function and depressive symptoms: A Swedish population study of 70-year-old men and women. *J Pain Symptom Manag* 2003; 26: 903–12.
162. Bunting-Perry L (2010) Pain in Parkinson's disease: Characteristics and responses in ambulatory care patients. *Dissertation Thesis – University of Pennsylvania.*
163. Carrington Reid M, Williams CS, Concato J, Tinetti ME, Gill TM. Depressive symptoms as a risk factor for disabling back pain in community-dwelling older persons. *J Am Geriatr Soc* 2003; 51: 1710–7.
164. Catananti C, Gambassi G. Pain assessment in the elderly. *Surg Oncol* 2010; 19: 140–8.
165. Chan WCH, Kwan CW, Chi I, Chong AML. The impact of loneliness on the relationship between depression and pain of Hong Kong Chinese terminally ill patients. *J Palliat Med* 2014; 17: 527–32.
166. Chan WCH, Kwan CW, Chi I. Moderating effect of communication difficulty on the relationship between depression and pain: a study on community-dwelling older adults in Hong Kong. *Aging Ment Health* 2015; 19: 829–34.
167. Craft L, Prahlow JA. From fecal impaction to colon perforation. *Am J Nurs* 2011; 111: 38–43.
168. Docking RE, Fleming J, Brayne C, Zhao J, Macfarlane GJ, Jones GT. Epidemiology of back pain in older adults: Prevalence and risk factors for back pain onset. *Rheumatology* 2011; 50: 1645–53.
169. Hairi NN, Cumming RG, Blyth FM, Naganathan V. Chronic pain, impact of pain and pain severity with physical disability in older people – Is there a gender difference? *Maturitas* 2013; 74: 68–73.
170. *Hart-Johnson TA, Green CR. Physical and psychosocial health in older women with chronic pain: comparing clusters of clinical and nonclinical samples. *Pain Med* 2010; 11: 564–74.
171. Hartvigsen J, Christensen K. Pain in the back and neck are with us until the end: a nationwide interview-based survey of Danish 100-year-olds. *Spine* 2008; 33: 909–13.
172. Hong EP, Margaret O, Leng CY, Kannuasamy P. The lived experience of older Chinese Singaporeans with life-threatening illnesses in an inpatient hospice. *Progress Palliat Care* 2012; 20: 19–27.
173. Hoover DR, Siegel M, Lucas J, Kalay E, Gaboda D, Devanand DP. Depression in the first year of stay for elderly long-term residents in the USA. *Int Psychogeriatr* 2010; 22: 1161–71.
174. Huang Y, Carpenter I. Identifying elderly depression using the Depression Rating Scale as part of comprehensive standardised care assessment in nursing homes. *Ageing Ment Health* 2011; 15: 1045–51.
175. Jacobs JM, Hsmerman-Rozenberg R, Cohen A, Stessman J. Chronic back pain among the elderly: Prevalence, associations and predictors. *Spine* 2006; 31: 203–7.
176. Lavin R, Park J. Depressive symptoms in community-dwelling older adults receiving opioid therapy for chronic pain. *J Opioid Manag* 2011; 7: 309–19.
177. *McNamara P, Stavitsky K, Harris E, Szent-Imrey O, Durso R. Mood, side of motor symptom onset and pain complaints in Parkinson's disease. *Int J Geriatr Psychiatry* 2010; 25: 519–24.
178. Mueller CA, Lielke RK, Penner E, Junius-Walker U, Hummers-Pradier E, Theile G. Disclosure of new health problems and intervention planning using a geriatric assessment in a primary care setting. *Fam Med* 2010; 51: 93–500.
179. Mystakidou K, Parpa E, Tsilika E *et al.* Geriatric depression in advanced cancer patients: The effect of cognitive and physical functioning. *Geriatr Gerontol Int* 2013; 13: 281–8.
180. *Sun X, Lucas H, Meng Q, Zhang Y. Associations between living arrangements and health-related quality of life of urban elderly people: A study from China. *Qual Life Res* 2011; 20: 59–369.
181. Tsatali M, Gouva M. The impact of pain anxiety on chronic pain among elders. *Eur Psychiatry* 2011; 26: 1006.
182. *Tse M, Leung R, Ho S. Pain and psychological well-being of older persons living in nursing homes: an exploratory

- study in planning and patient-centred intervention. *J Adv Nurs* 2011; 68: 312–21.
183. *Vanková H, Holmerová I, Andel R, Veleta P, Janecková H. Functional status and depressive symptoms among older adults from residential care facilities in the Czech Republic. *Int J Geriatr Psychiatry* 2008; 23: 466–71.
 184. Weaver GD, Kuo Y, Raji MA *et al.* Pain and disability in older Mexican-American adults. *J Am Geriatr Soc* 2009; 57: 992–9.
 185. *Wu B, Chi I, Plassman BL, Guo M. Depressive symptoms and health problems among Chinese immigrant elders in the US and Chinese elders in China. *Aging Ment Health* 2010; 14: 695–704.
 186. Wylde V, Hewlett S, Learmonth ID, Dieppe P. Persistent pain after joint replacement: Prevalence, sensory qualities and postoperative determinants. *Pain* 2011; 152: 566–72.
 187. Zarit SH, Griffiths PC, Berg S. Pain perceptions of the oldest old: A longitudinal study. *Gerontologist* 2004; 44: 459–68.
 188. Brown C. Pain in communication impaired residents with dementia: Analysis of Resident Assessment Instrument (RAI) data. *Dementia* 2010; 9: 375–89.
 189. Chang SO, Younjae OH, Park EO, Geun Myun Kim GM, Kil SY. Concept analysis of nurses' identification of pain in demented patients in a nursing home: Development of a hybrid model. *Pain Manag Nurs* 2011; 12: 61–9.
 190. Cohen-Mansfield J. Pain Assessment in Non-communicative Elderly persons – PAINE. *Clin J Pain* 2006; 22: 569–75.
 191. Curtiss C. Challenges in pain assessment in cognitively intact and cognitively impaired older adults with cancer. *Oncol Nurs Forum* 2010; 37: S7–16.
 192. Delac K. Pain assessment in patients with cognitive impairment is possible. *Top Emerg Med* 2002; 24: 52–4.
 193. De Waters T. An evaluation of clinical tools to measure pain in older people with cognitive impairment. *Br J Community Nurs* 2003; 8: 226–34.
 194. De Waters T, Faut-Callahan M, McCann JJ *et al.* Comparison of self-reported pain and the PAINAD scale in hospitalized cognitively impaired and intact older adults after hip fracture surgery. *Orthop Nurs* 2008; 27: 21–8.
 195. Epperson M, Bonnell W. Pain assessment in dementia: Tools and strategies. *Clin Excell Nurse Pract* 2004; 8: 166–71.
 196. Ersek M, Herr K, Neradilek M *et al.* Comparing the psychometric properties of nonverbal pain behaviours (CNPI) and the pain assessment in advanced dementia (PAIDAD) instruments. *Pain Med* 2010; 11: 395–404.
 197. Feldt K. Examining pain in aggressive cognitively impaired older adults. *J Gerontol Nurs* 1998; 24: 14–22.
 198. Feldt K. The complexity of managing pain for frail elders. *J Am Geriatr Soc* 2004; 52: 840–1.
 199. Herr K. Pain in the older adult: An imperative across all health care settings. *Pain Manag Nurs* 2010; 11: S1–S10.
 200. Herr K, Garand L. Assessment and measurement of pain in older adults. *Clin Geriatr Med* 2001; 17: 457–8.
 201. Herr K, Bjoro K, Decker S. Tools for assessment of pain in non-verbal older adults with dementia: A state of the science review. *J Pain Symptom Manag* 2006; 31: 170–92.
 202. Herr K, Bursch H, Ersek M, Miller L, Swafford K. Use of pain-behavioral assessment tools in the nursing home expert consensus recommendations for practice. *J Gerontol Nurs* 2010; 36: 18–29.
 203. Hsu KT, Shuman SK, Shuman SK, Hamamoto DT, Hodges JS, Feldt KS (2007) *The application of facial expressions to the assessment of orofacial pain in cognitively impaired older adults.* Available from: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Hsu+dental+pain+2007> [Accessed 11.09.2017]
 204. Husebo B, Strand L, Nilssen R *et al.* Mobilization-Observation-Behavior-Intensity Dementia pain scale (MOBID): Development and validation of a nurse-administered pain assessment tool for use in dementia. *J Pain Symptom Manage* 2007; 34: 67–80.
 205. Jordan A, Regnard C, O'Brien JT, Hughes JT. Pain and distress in advanced dementia: Choosing the right tools for the job. *Palliat Med* 2012; 26: 873–8.
 206. Kaasalainen S, Crook J. An exploration of seniors' ability to report pain. *Clin Nurs Res* 2004; 13: 199–215.
 207. Kunz M, Scharmann S, Hemmeter U, Schepelmann K, Lautenbacher S. The facial expression of pain in patients with dementia. *Pain* 2007; 133: 221–8.
 208. Lucas A, Schular M, Fischer TW *et al.* Pain and dementia. A diagnostic challenge. *Gerontol Geriatr* 2012; 45: 45–9.
 209. Mahoney A, Peters L. The Mahoney Pain Scale: Examining pain and agitation in advanced dementia. *Am J Alzheimer's Dis Other Dement* 2008; 23: 250–61.
 210. Manz B, Mosier R, Nusser-Gerlach MA *et al.* Pain assessment in the cognitively impaired and unimpaired elderly. *Pain Manag Nurs* 2000; 1: 106–15.
 211. Mezinskis PN, Keller AW, Schmidt Luggen A. Assessment of pain in the cognitively impaired older adult in long-term care. *Geriatr Nurs (Minneapolis)* 2004; 25: 107–12.
 212. Ni Thuathail A, Welford C. Pain assessment tools for older people with cognitive impairment. *Nurs Stand* 2011; 26: 39–46.
 213. Warden V, Hurley AC, Volicer L. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. *J Am Med Dir Assoc* 2003; 4: 9–15.
 214. Zwakhalen S, Hamers J, Huijjer H, Abu-Saad Martijn P, Berger F. Pain in elderly people with severe dementia: A systematic review of behavioural pain assessment tools. *BMC Geriatr* 2006; 6. <http://www.biomedcentral.com/content/pdf/1471-2318-6-3.pdf>. [Accessed 11.09.2017].
 215. Zwakhalen SM, Hamers JP, Berger MP *et al.* Improving the clinical usefulness of a behavioural pain scale for older people with dementia. *J Adv Nurs* 2006; 58: 493–502.
 216. 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. Available from <http://www.rcplondon.ac.uk/sites/default/files/concise-assessment-of-pain-in-older-people-2007.pdf> [Accessed 11.04.2017]
 217. Hadjistavropoulos T. Pain in older persons. *Pain Res Manag* 2007; 12: 176.
 218. Closs SJ, Dowding D, Allcock N *et al.* (2016) Towards improved decision support in the assessment and management of pain for people with dementia in hospital: a systematic meta-review and observational study. *Health Services and Delivery Research* 4 (30).
 219. Abdulla A, Adams N, Bone M *et al.* Guidance on the management of pain in older people. *Age Ageing* 2013; 42 (Suppl. 1): 1–57.

19. Appendices

Available in *Age and Ageing* online.