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“There’s a Catch-22”. The complexities of pain management for people with advanced dementia nearing the end of life: a qualitative exploration of physicians’ perspectives

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1 **“There’s a Catch-22”. The complexities of pain management for people with**
2 **advanced dementia nearing the end of life: a qualitative exploration of physicians’**
3 **perspectives**

4
5 **Pain management at end of life in dementia**

6 Bannin De Witt Jansen LLB, BSc, MA, PhD. School of Pharmacy, Queen's University
7 Belfast, United Kingdom.

8
9 Kevin Brazil BSc, PhD. School of Nursing and Midwifery, Belfast, United Kingdom.

10
11 Peter Passmore BSc, MB BCh BAO, MRCP, MD, FRCP (London), FRCP (Glasgow),
12 FRCPI. Centre for Public Health, School of Medicine, Dentistry and Biomedical
13 Sciences, Belfast, United Kingdom.

14
15 Hilary Buchanan MB BCh BAO, DRCOG, MRCGP. Patient and Public Involvement
16 Representative, Carer for a person living with dementia.

Doreen Maxwell MB BCh BAO, DRCOG, MRCGP. Kerrsland Surgery, Belfast, United Kingdom.

Sonja J. McIlfatrick BSc, MSc, PhD, RGN, RNT. Institute of Nursing and Health Research, Ulster University, United Kingdom. Senior Investigator, All Ireland Institute of Hospice and Palliative Care, Our Lady's Hospice and Care Services, Dublin. Ireland.

Sharon M. Morgan MB BCh BAO, DRCOG, MRCGP. Marie Curie Hospice, Belfast, United Kingdom.

Max Watson BD, MB BCh BAO, M Phil, MSc, MRCGP, DRCOG, DCH, DMH. Northern Ireland Hospice, Belfast, United Kingdom.

*Carole Parsons PhD, MPharm, MPSNI. School of Pharmacy, 97 Lisburn Road, Belfast, Queen's University Belfast, BT9 7BL, United Kingdom. Email: c.parsons@qub.ac.uk; Telephone: +44 (0) 28 9097 2304; Fax: +44 (0) 28 9024 7794. *Corresponding author

35 **What is already known about this topic?**

- 36 • Pain is prevalent among people with advanced dementia approaching the end of life
37 but is challenging to identify and treat in patients with profound loss of
38 communication who are unable to report the presence, nature and intensity of their
39 pain.
- 40 • People with advanced dementia are at risk of under-treatment or suboptimal treatment
41 of pain as they approach the end of life.
- 42 • Untreated pain, or suboptimal treatment of pain, often have deleterious effects on
43 people with advanced dementia including: delirium, sleep disturbance, increased
44 confusion and exacerbation of neuropsychiatric symptoms.

45
46
47 **What this paper adds?**

- 48 • This study is the first to explore and describe the complexities and challenges
49 experienced by physicians when prescribing for and managing pain in people with
50 advanced dementia who are approaching the end of life, the impact of these challenges
51 on prescribing and treatment approaches, and the strategies used by physicians to
52 overcome these challenges.

- Physicians' prescribing and treatment decisions were shaped by patients' comorbidities, ageing physiology, existing medication regimens, physical and cognitive impairments and health status.
- Physicians from primary, secondary and hospice care settings made use of knowledge networks across specialties (e.g. palliative care, psychiatry etc.) to inform prescribing and treatment approaches and to overcome the challenges of pain management in this vulnerable patient population.

Implications for practice, theory or policy?

- Physicians' goals in end of life care for people with dementia included optimal pain management. However, the complexity of the patient population can make optimal pain management challenging to achieve in practice.
- Physicians' narratives revealed an interactive interface across primary, secondary and hospice care settings and across medical specialties through which knowledge and expertise were exchanged to allow palliative and non-palliative doctors to overcome the challenges of pain management.

- Promoting cross-specialty knowledge exchange and mentoring can empower non-palliative care physicians to confidently and effectively manage complex palliative care patients in their respective settings.

Abstract

Background: Pain management is a cornerstone of palliative care. The clinical issues encountered by physicians when managing pain in patients dying with advanced dementia, and how these may impact on prescribing and treatment, are unknown. **Aim:** To explore physicians' experiences of pain management for patients nearing the end of life, the impact of these on prescribing and treatment approaches, and the methods employed to overcome these challenges. **Design:** Qualitative, semi-structured interview study exploring: barriers to and facilitators of pain management, prescribing and treatment decisions, and training needs. Thematic analysis was used to elicit key themes. **Settings/Participants:** Twenty-three physicians, responsible for treating patients with advanced dementia approaching the end of life, were recruited from primary care (**n=9**), psychiatry (**n=7**) and hospice care (**n=7**). **Results:** Six themes emerged: diagnosing pain, complex prescribing and treatment approaches, side-effects and adverse events, route of administration, importance of sharing knowledge and training needs. Knowledge exchange was often practised through liaison with physicians from other specialties. Cross-specialty mentoring, and the creation of knowledge networks were believed to

improve pain management in this patient population. **Conclusions:** Pain management in end-stage dementia is complex, requiring cross-population of knowledge between palliative care specialists and non-specialists, in addition to collateral information provided by other health professionals and patients' families. Regular, cost- and time-effective mentoring and ongoing professional development are perceived to be essential in empowering physicians to meet clinical challenges in this area.

Keywords: Dementia; Pain; Pain Management; Physicians; Palliative Care; Frail Elderly

Introduction

Dementia is an increasingly challenging global public health concern (1). Worldwide prevalence has reached 46.8 million (2), and projections estimate 74.4 million people living with dementia by 2030 (3). In the United Kingdom (UK), 850,000 people are living with dementia, 19,765 of whom reside in Northern Ireland (NI) (4). The need for appropriate palliative care to manage symptoms, including pain, for people living and dying with dementia is a focus of dementia care strategy in public health policy and is a recognised human right (5-7).

Pain is commonly experienced by people with dementia towards the end of life and is predominantly due to the prevalence of age-associated conditions (e.g. osteo- and rheumatoid arthritis, joint disorders, infection), chronic comorbidities (e.g. heart disease, cancer, diabetes) and distressing symptoms including: nausea, dehydration, dysphagia and dyspnoea (8-12). The deleterious impact of undetected, unresolved or untreated pain in people with moderate and advanced dementia has been reported to result in: delirium, sleep disturbance, increased confusion and exacerbation of neuropsychiatric symptoms (13-20). Previous studies have reported inconsistent approaches to pain management for people with dementia (21-24), primarily due to difficulty assessing and diagnosing pain, and lack of clinical data to guide prescribing for patients approaching the end of life (12, 25-27). The under-representation of older adults in clinical trials of analgesics may mean that key outcome measures including toxicity and drug action do not accurately reflect their use in patients with multiple comorbidities and significant physical frailty, and can lead to variability in treatment outcomes (28-33). The inclusion of older, comorbid adults in clinical drug trials is attracting increasing research interest (34-36). Little is known about the challenges encountered by physicians when managing pain in people with advanced dementia nearing the end of life; even less is known about the strategies and resources used to overcome these challenges. This study aimed to elucidate this information as part of a wider programme of research into assessing and managing pain in this complex patient group.

Aim

To explore physicians' perspectives of the barriers to managing pain in patients nearing the end of life, the impact of these on patient outcomes and the methods employed to overcome these challenges.

Methods

Setting/Participants

Physicians from primary, secondary and hospice care settings were recruited from general practice surgeries (n=5), hospices (n=4) and hospitals (n=4) across four Health and Social Care (HSC) Trusts in NI. Eligible participants were physicians with responsibility for managing pain in patients with advanced dementia who had died or who were approaching the end of life.

Sampling and recruitment

A pragmatic approach to sampling was taken in light of the number of practising physicians in NI and the range of medical specialities, departments and care settings in

which people with dementia at end of life may be managed, and following a review of sampling frames used in similar studies (37).

Seven General Practitioners (GPs) who participated in previous research with members of the research team (Project Management Group [PMG]) were asked to disseminate study information to colleagues in a process of onward referral. In acute care, four consultants (each within a different HSC Trust region) from geriatric medicine (n=2), palliative medicine (n=1) and psychiatry (n=1) disseminated study information to eligible hospital physicians within their HSC catchment area. Four Medical Directors (one in each of the participating hospices) circulated study information to hospice physicians. All physicians who contacted the first author regarding participation were recruited to the study. Physicians who assisted with dissemination of study information did not participate in the study.

Ethical approval

The Office for Research Ethics Committees Northern Ireland (ORECNI) granted ethical approval for the study (14/NI/0013). The study protocol and supporting materials were also approved by hospice ethics committees and HSC Trusts.

Study design and data collection

Semi-structured, in-person interviews were conducted using an interview guide which allowed flexible exploration of individual experiences within an overarching structure by which commonalities of experience could be identified (38). Interview questions were developed following review of relevant literature and refined in an iterative process of consultation and revision with the PMG which included primary, secondary and hospice care physicians and academics from nursing, palliative care, geriatric medicine and pharmacy. Questions covered: approaches to pain management in people with advanced dementia approaching the end of life, barriers to and facilitators of prescribing for pain and administering analgesics, and training and education needs. The topic guide is presented in Table 1.

Physicians were interviewed in their workplace and received Continuing Professional Development (CPD) certificates for participation. Interviews began with a brief exposition of the study aims and objectives, and explanations of ethical approval and the interview process. Each participant provided written, informed consent. Recruitment continued until no further novel data were identified in interviews.

Data analysis and validation

Data were collected between June 2014 and September 2015. Interviews were conducted, digitally recorded, transcribed verbatim and analysed by the first author, a researcher with five years' prior training in and experience of designing and conducting qualitative research. Interview duration was on average 18 minutes. Transcripts were checked for accuracy against recordings by KB and HB. Braun and Clarke's paradigm of thematic analysis formed the analytical approach (39). Transcripts were reread several times and line-by-line coding performed to identify recurrent ideas, statements, feelings/sentiments, topics and key words. The first ten scripts were reviewed to ensure that coding uniformly expressed the same ideas, concepts or topics, and a coding frame was developed. Codes from all transcripts were categorised into themes expressing their core concepts. NVivo 10 (QSR International (UK) Ltd, Cheshire, UK) software was used to facilitate analysis. Data were independently analysed and verified by KB and CP. Final themes and findings were discussed by the PMG.

Results

Twenty-three physicians participated. Physicians' average age was 42.5 years (range 28 to 58 years), and they had an average of 17.5 years' clinical experience (range 5 years to 31 years). Most were female (n=16; 69.6%). Six (26.1%) had additional postgraduate qualifications. Participant characteristics are presented in Table 2.

Six key themes emerged from the interviews: (1) diagnosing pain, (2) complex prescribing and treatment approaches, (3) side-effects and adverse events, (4) route of administration, (5) sharing knowledge and (6) training needs.

Diagnosing pain

Difficulty diagnosing pain was the most commonly reported barrier to managing pain appropriately in people with advanced dementia approaching the end of life. Loss of the critical patient-physician pain dialogue and the absence of any obvious physical cause of pain (e.g. fracture, wounds) or painful comorbid condition (e.g. cancer) made it difficult to identify and characterise pain.

In a patient with dementia, if you have no history or communication from the patient, it's impossible to get an accurate history to be able to identify the character of pain in the way you would be with a patient who could communicate and had understanding. (PHYS011, GP)

In the absence of patient report, respondents observed for, and interpreted, behavioural and nonverbal signs. All respondents were acutely aware of the limitations of this

218 approach, recognising that many of these indicators could also be expressions of fear,
219 anxiety and other non-pain related distress. Most expressed concern regarding potential
220 misinterpretation of these cues and advocated caution in relying on this information.

221

222 The signs of pain in this particular patient group could be signs of something else
223 as well, and that's where you have to be very careful to recognise what is their
224 normal behaviour and what has changed or what can we link to pain. (PHYS012,
225 Consultant in Palliative Care, Hospice)

226

227 The presence of neuropsychiatric symptoms in these patients further complicated pain
228 diagnosis. Some participants highlighted the potential for misinterpretation of these cues
229 to result in inappropriate treatment, for example, pain relief for emotional distress, whilst
230 others reported uncertainty in decisions to treat the patient for (presumed) pain or for the
231 manifested psychiatric symptoms.

232

233 Saw a patient yesterday or two days ago who appeared to be in pain, she had
234 advanced dementia, I felt she was in the last days of her life and she was lying on

235 the bed occasionally agitated, throwing her arm up around her head. Hard to know
236 if that's pain or not. So do I treat her for pain in that scenario? (PHYS019, GP)

237

238 ***Complex prescribing and treatment approaches***

239 The impact of complex comorbidity profiles, neurodegenerative disease, low body mass
240 index and ageing physiology on the pharmacodynamics and pharmacokinetics of many
241 analgesics were key considerations for physicians.

242

243 In the very severe stages we get people who can be very, very, physically failed
244 and frail, very low body mass, really no musculature, usually sort of dehydrated,
245 usually with sort of poor cardiac output. Often we're not actually sure how much
246 pain relief is getting in to somebody. Often the difference between what you think
247 the analgesic's going to be and what it actually does to a patient in that kind of
248 stage—the difference is quite substantial. (PHYS03, Consultant Psychiatrist,
249 Secondary Care)

250

251 Participants described past experiences in which analgesic effects had been highly
252 unpredictable, resulting in over-treatment for some patients, poor pain control in others
253 and adverse events for a minority.

254 I've had it where I've given one big fellow a very strong painkiller and it floored
255 him; I've seen a wee lady half the size and very frail and actually it wasn't working
256 on her at all. So although I assumed little old ladies need less, it actually went the
257 opposite way. It's really very individual, like with everything, everybody's
258 different (PHYS011, GP).

259

260 Most respondents therefore exercised caution in prescribing, particularly when treating
261 new patients, and many followed the principle 'start low and go slow' using paracetamol
262 (acetaminophen) as the preferred first-line treatment, particularly in cases where pain
263 diagnosis was ambiguous.

264

265 I would start off with maybe a trial of analgesia but I would start off with the
266 mildest form like paracetamol or something just to see if it made a difference. If
267 they seemed to be responding, I suppose I would use the WHO analgesia ladder
268 and just come up very, very cautiously. (PHYS04, GP)

269

270 Pain management was often described as a ‘trial and error’ process in which pain relief
271 was titrated in response to changes in behaviour, nonverbal cues, vocalisation and levels
272 of consciousness. Psychiatrists and GPs found the World Health Organisation (WHO)
273 Analgesic Ladder (40) helpful in guiding upwards titration; hospice physicians relied on
274 their own previous clinical experience and consultation with colleagues and preferred the
275 national Palliative Adult Network Guidelines (PANG) (41). All physicians regularly
276 prescribed a wide range of analgesics including opioid and compound opioid preparations
277 in a variety of formulations including transdermal patches, intramuscular injections and
278 syringe drivers. GPs and psychiatrists often sought advice or confirmation from
279 specialists such as community hospice, palliative medicine and psychogeriatric
280 practitioners when titrating to higher doses.

281

282 If these patients are already on medication for pain it’s like where do you go to
283 augment and increase it? So having input from people who are specialists is always
284 appreciated. (PHSY014, Psychiatrist, Secondary Care)

285

286 *Side-effects and adverse events*

287 Participants described the challenge of prescribing for patients with advanced dementia
288 nearing the end of life as a ‘catch-22’ situation in which multiple symptom control
289 (including pain), was required, with minimal polypharmacy and avoiding drug
290 interactions and adverse and/or side-effects.

291

292 There’s a catch twenty-two, there’s potential for a lot of interactions with the other
293 medication that they are on, then you face the difficulty with the side effects of
294 medications. So it’s really about hitting the balance of making sure that you’re
295 doing the patient no harm and treating their pain. It’s finding that fine line
296 (PHYS07, Psychiatrist, Secondary Care)

297

298 Many patients required a greater degree of pain control than could be provided by
299 paracetamol and other simple analgesics, however; codeine and other opioid-based
300 preparations were deemed to carry a high risk of respiratory depression, sedation,
301 constipation and falls, whilst non-steroidal anti-inflammatory drugs (NSAIDs) were
302 associated with risk of gastric bleeding, cardiovascular and stroke events. Side-effects
303 such as constipation (a trigger for onset of acute delirium) and nausea (difficult to detect
304 in the absence of patient self-report), respiratory depression and sedation were considered
305 highly detrimental to patients and contravened participants’ goals of care.

306

307 The likes of the more codeine-based [preparations], it's the risk of them becoming
308 constipated and making things worse and then I suppose the more heavy
309 morphines and so on, it can just floor them, really wipe them off their feet, more
310 prone to more falls, makes them more drowsy. (PHYS06, Psychiatrist, Secondary
311 Care)

312

313 Most participants reported that these factors restricted choice of suitable analgesics and
314 often resulted in off-label prescribing. Many GPs and psychiatrists found this challenging
315 due to unfamiliarity with off-label uses for palliative purposes, requiring guidance from
316 palliative care specialists.

317

318 [Palliative care] has taught me things about using certain agents, midazolam, for
319 example ... something that isn't used widely in my world but it's used widely in
320 [the] palliative world. (PHYS09, Consultant Psychiatrist, Secondary Care)

321

322 ***Route of administration***

All participants reported challenges with routes of administration for patients with dementia approaching the end of life. Oral administration was compromised in patients with significant swallowing difficulties, poor gut absorption, nausea and/or vomiting, impaired consciousness (sedation, coma, sleep or drowsiness), or who refused to take medication.

... so perhaps liquids might be refused, tablets may not be taken, they may not be able to take anything orally and they may need medication by a different route.
(PHYS015, Consultant in Palliative Care, Hospice)

Many respondents described difficulty encouraging compliance in patients who lacked capacity to engage in discussion regarding the need for symptom control. Syringe drivers, normally considered when oral administration is not viable, presented a number of complications including: forceful removal by agitated patients, lack of available staff experienced in their set-up and use; and in some cases, lack of access to necessary equipment or resources.

340 Intravenous [administration] I would have to say we actually rarely use. The
341 problems being that maintaining venous access in somebody who's failing is a
342 problem, it's often painful and distressing for patient and we open up then risks of
343 infection and so on as well. So we often try and go for, for subcuts if we can, or
344 patches. (PHYS03, Consultant Psychiatrist, Secondary Care)

345

346 Transdermal patches were a preferred route for overcoming the challenges posed by oral
347 and syringe driver routes.

348

349 We're maybe more likely to use medications administered by patch through the
350 skin rather than tablets because it's felt to override the challenges of patients being
351 able to take their oral medication reliably. (PHYS017, Consultant in Palliative
352 Care, Hospice)

353

354 Transdermal patches were considered particularly suitable for agitated patients due to their
355 unobtrusive and non-invasive nature and for avoiding difficulties associated with *pro-re-*
356 *nata* (PRN) prescribing in non-verbal patients.

357

358 We would try and use patches sometimes because they're less noticeable to the
359 patient, and if the pain is more stable that can be a way around it. (PHYS015
360 Consultant in Palliative Care, Hospice)

361

362 Physicians, particularly GPs, highlighted the importance of selecting a route of
363 administration appropriate to a patient's health status and needs, and the need to ensure
364 the availability of healthcare staff appropriately trained to administer and monitor
365 medication via that route.

366

367 You've an issue with trying to select the type of medication you're going to use
368 and you've an issue then with what way you're going to administer it to them and
369 then who's going to manage that and monitor it as well. (PHYS022, GP)

370

371 *Sharing knowledge*

372 All respondents strongly believed that the care of people with dementia approaching the
373 end of life, including pain management, required input from families and healthcare
374 professionals across disciplines. Physicians believed their key responsibility was to
375 provide optimal care for their patients, which included recognising and addressing their

376 own limitations. Narratives revealed an interactive interface across primary, secondary
377 and hospice care settings and medical specialties through which knowledge and expertise
378 were exchanged.

379

380 When it comes to end of life then, we're sharing knowledge, we're the experts in
381 antipsychotic medications and they [palliative medicine physicians] are finding
382 that with people with challenging behaviour, they may need to go that route so
383 we're sharing in terms of cross-populating our knowledge base. (PHYS09,
384 Consultant Psychiatrist, Secondary Care)

385

386 GPs and psychiatrists sought advice from palliative and hospice care physicians and
387 psychogeriatricians regarding: off-label use of analgesics; titration for patients already
388 receiving pain relief; use of opioid preparations; combining pain-relieving agents;
389 combining analgesics with mild sedation; managing background or breakthrough pain;
390 and routes of administration. Hospice physicians sought guidance for particularly
391 complex patients from neurology, psychogeriatrics, palliative pharmacy and psychiatry.
392 In many cases, participants wanted confirmation of their proposed treatment; receiving
393 support from other specialties and knowing they were 'on the right track' with prescribing

394 and treatment increased confidence and job satisfaction. Many enjoyed learning from and
395 sharing their expertise with other doctors outside their care setting and medical specialty.

396

397 I would ring, for example, [the hospice] and speak to one of the consultants and I
398 would ask “This is what I’m thinking of doing, do you think this sounds okay?”
399 And then I would get that advice. It just gives me that bit more confidence that the
400 patient’s getting maybe the best they could get; because I don’t think I’m the best,
401 I think I’m a GP and I think a palliative care consultant would be the best.
402 (PHYS08, GP)

403

404 Families were perceived to hold key collateral information such as patients’ former beliefs
405 about medications, previous pain thresholds, whether they were likely to report pain or
406 ‘suffer in silence’, drug tolerance and allergies, behavioural and nonverbal indicators of
407 pain, and preferred methods of medication delivery.

408

409 We very much work with the families because the families usually know this
410 person to the point that they know what they maybe would have wanted or how

411 they are going to respond so we try and get everybody in on the decision-making.
412 (PHYS012, Consultant in Palliative Care, Hospice)

413

414 Physicians used this knowledge to inform prescribing decisions and to assess treatment
415 response.

416

417 One thing is us giving the families information but the other thing is asking them
418 their perception of whether they perceive that something has helped or not and
419 whether they have noticed any signs of side-effects. They're just better placed—if
420 they're with the person a lot, to identify whether or not the medication has made
421 them confused or that kind of thing. (PHYS017, Consultant in Palliative Care,
422 Hospice)

423

424 ***Training needs***

425 Physicians were dedicated to providing optimal care for patients often within multiple
426 organisational constraints. All respondents believed that the knowledge, skills and
427 expertise required to optimally manage pain in this complex patient population existed
428 within the health professions but were highly dispersed across medical and other

429 disciplines and care-settings. Physicians considered pharmacology,
430 pharmacotherapeutics, managing pain in patients with challenging behaviours, and
431 distinguishing between pain-related and non-pain related behavioural and psychological
432 symptoms of dementia (BSPD), to be key areas for further training. The majority
433 described physician-to-physician mentoring, in the form of regular meetings of an
434 established network of practitioners from across care settings and disciplines to discuss
435 anonymised real patient cases, as an ideal approach to ongoing professional development.

436

437 The best would be experiential learning where you can go on a ward round, discuss
438 a case, ask questions, that's the gold standard. (PHYS012, Consultant in Palliative
439 Care, Hospice)

440

441 Physicians widely believed that this approach would have greater clinical utility and
442 impact than workshops, training days or didactic lectures.

443

444 I think that case-based learning is useful because I think it gets people to think
445 about what they do themselves and how they would manage a particular problem.

I think that has more relevance and power in terms of changing what people do for the better. (PHYS015, Consultant in Palliative Care, Hospice)

Discussion

To our knowledge this is the first comprehensive exploration of the challenges in pain management for people with advanced dementia approaching the end of life, from physicians' perspectives. People with advanced dementia require the same vigilance in pain management as patients dying with terminal cancer; however, available guidelines offer little advice on how this may be achieved (42-43). Pain control in this patient population can be difficult to achieve and the findings presented here offer greater insight into these challenges from the perspectives of those primarily responsible for this aspect of patient management (44).

The gold standard in diagnosing pain is self-report. In advanced dementia, this is rarely available; much of the critical information required to accurately assess, diagnose and target treatment is lost (45). The findings of this study indicate that in the absence of patient report, collateral history from patients' families and other health professionals, along with clinical investigation and interpretation of changes in mood, behaviour, and other nonverbal cues, become important (45-46). However, participants widely acknowledged that many well-recognised behavioural indicators of pain, such as distress,

agitation, wailing, screaming, frowning and apathy, are identical to those expressed through anxiety, boredom, frustration and emotional distress (47). Behavioural interpretation leaves room for misinterpretation and potentially inappropriate treatment (47). Physicians' prescribing decisions were also shaped by patients' comorbidities, ageing physiology, existing medication regimens, physical and cognitive impairments and health status, which were perceived to restrict the range and strengths of analgesics that may be safely tolerated (48). Changes in drug pharmacokinetics and pharmacodynamics, and variation in gut absorption and body fat index may result in over-treatment, delayed effects of pain relief and increased risk of side-effects and adverse events, making management complex and uncertain (48). Most physicians adopted a cautious approach to management. Route of administration was reported as problematic in severely cognitively impaired, dying patients. Loss of swallow, patient refusal and altered consciousness often precluded oral administration, whilst syringe driver use was problematic due to forceful removal by agitated or distressed patients and issues regarding availability of appropriately experienced nursing staff to set up and monitor the equipment. Medication delivery via the transdermal route was considered a better alternative.

Physicians across specialties and care settings often sought and shared advice and approaches to pain management. Most respondents strongly believed ongoing CPD via mentoring and knowledge exchange using real-patient cases would empower non-

palliative specialists to effectively manage patients approaching the end of life. Previous studies have identified a need for further training for healthcare professionals in pharmacology and the use of nonpharmacological treatments, and in discriminating between behavioural and psychological symptoms caused by pain and those which are not pain-related in origin (44,49). The present findings corroborate these suggestions, and provide additional insight into physicians' training preferences.

Sharing knowledge extended beyond health professionals; most participants found collateral history provided by families to be helpful in assessing pain and interpreting nonverbal cues. This echoes other studies which report that good communication, shared knowledge and a mutually respectful relationship between the healthcare team and family carers are critical if treatment is to reflect the interests of the dying patient and achieve clinical goals of care (50-51). Some of the above findings echo those reported in the nursing literature, indicating that medical, nursing and other healthcare staff experience similar challenges in assessment and management of pain for patients with dementia and emphasising the need for effective multidisciplinary working and open communication between healthcare professionals (52-55).

There are some limitations with this study. The sampling approach may have resulted in a skewed sample of physicians with an interest in, or past experience of, research participation, who felt comfortable talking about professional challenges. We aimed to recruit physicians across acute specialties; the low participation by physicians outside

psychiatry (possibly due to staffing pressures and workloads) is an acknowledged limitation. Future studies might consider exploring physicians' approaches to pain management for people with advanced dementia with a broader sample of acute physicians. The findings of this study are being used to develop and pilot an intervention aimed at bringing together physicians and other health professionals to engage in interactive real patient case-based learning. It is hoped these findings may encourage further development of strategies to support and empower physicians to provide a gold standard in managing pain for people living and dying with dementia.

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