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The challenges and opportunities for cancer pain management in primary and community care services: a scoping review

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Cancer pain, primary care, community care, complex intervention, scoping review

Author contributions

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Carole Paley: Conceptualization (supporting), methodology (equal), literature screening, data curation and analysis (equal), preparation, review and editing of manuscript (equal), agreement of final manuscript proof (equal).

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The challenges and opportunities for cancer pain management in primary and community care services: a scoping review

Abstract

Uncontrolled cancer pain remains one of the most common reasons for unscheduled medical care in the UK, yet primary and community care services often lack standardized approaches to management. This scoping review explored existing evidence on cancer pain management within primary and community care settings, focusing on integration strategies, barriers to access, and facilitators of equitable pain management, particularly in underserved populations. Six electronic databases were searched for studies published between 2000 and 2025. Thirty-two articles were included, encompassing systematic reviews, qualitative and quantitative studies, randomized controlled trials, and mixed-methods research. Findings were synthesized narratively under broad thematic headings. Considerable variability in pain management practices, limited GP training, workforce constraints, and fragmented communication between generalist and specialist services were identified. Digital technologies and patient education promoted better access, empowerment, and self-management, although adoption remained inconsistent. Socioeconomic inequities and digital exclusion continue to impede equitable pain control. Cancer pain management in primary care is hindered by systemic, educational, and structural barriers. Integration of pain and palliative care services, standardized assessment protocols, and targeted digital and educational interventions could enhance equity and effectiveness. Future research should evaluate integrated care models and the role of digital health in supporting community-based pain management.

Plain language summary

Understanding and improving cancer pain support in the community

This review looked at the published research evidence about how people with cancer pain are supported by GPs and community health services. Many people with cancer live with ongoing pain, and when it is not managed well, they often need emergency or out-of-hours medical help.

The review found that there is no single, consistent way to manage cancer pain in GP and community settings. Doctors, nurses and other healthcare professionals often do not have enough training or time to assess and treat pain properly. It can also be hard for them to get advice from pain or palliative care specialists. This means some people wait too long for the right treatment and often access to care is unequal across different sections of the community. People living in poorer areas or rural communities may find it harder to get help, especially if they have difficulty travelling to appointments or using online health services.

We found that cancer pain can be managed better when patients, families, and healthcare teams work together. Education and support can help people understand their pain, use their medicines safely, and know when to ask for help. Digital tools such as online appointments or pain-monitoring apps can also make care easier to access if people are given the right support to use them.

The review concludes that cancer pain care should have a more joined-up approach across different services, with clearer guidance, more training for healthcare staff, and fair access for everyone, wherever they live.

Article highlights

- There is a lack of standardised guidance and a limited understanding of how cancer pain management is embedded in care pathways.
- This scoping review explores cancer pain management within primary and community care pathways. This included 32 studies were (2000-2025) across 11 countries. Study designs included RCTs, qualitative, quantitative, mixed-methods, and systematic reviews.
- Several key themes were identified:

    Cancer pain guidelines and assessment tools.

    Education and training of healthcare professionals.

    Integration of services across primary, community, and specialist care.

    Supported self-management approaches.

    Digital and telemedicine technologies.

    Barriers to equitable pain management.

- It was found that there are major inconsistencies in applying multimodal cancer pain guidelines in primary care and limited GP training in opioid prescribing, neuropathic pain, and long-term symptom control.
- We also found that poor communication and coordination between generalist and specialist services hinder continuity of care.
- Telemedicine and eHealth tools show promise in supporting remote assessment and management. Interoperable digital health systems should be adopted.
- Educational interventions for patients and caregivers improve knowledge, self-efficacy, and pain control but socioeconomic inequities and digital exclusion persist as barriers to equitable care.

- We have highlighted a need for functional and psychosocial assessment tools (e.g., EORTC QLQ-C30, HADS, IADL, Katz Index) alongside pain intensity scales, along with interdisciplinary collaboration between primary care, pain medicine, and palliative care and enhanced GP and community nurse training.
- Patients and caregivers need to be empowered through self-management programmes.
- Standardized triage, assessment, and referral frameworks are needed, and there is a need for policy-driven initiatives to support equity and digital inclusion.
- Effective cancer pain management in the community requires integrated, multimodal, and equitable models that combine education, technology, and coordinated care pathways.
- It is recommended that further research explores integrated care models, digital health adoption, and targeted interventions addressing systemic and individual barriers in underserved populations.

1.0 Introduction

Uncontrolled pain is the most frequent reason for cancer patients requesting unscheduled, out-of-hours medical treatment in the UK [1,2]. Primary care services are the first point of contact for many patients experiencing chronic cancer pain [3]; yet in the UK, there is no standardized guidance for managing chronic pain due to cancer or its treatment in primary care services. Moreover, primary care services face significant challenges in delivering effective and timely chronic pain management; workforce shortages, increasing patient demand, and limited access to specialist pain services place considerable strain on general practitioners (GPs) and other primary care providers [4]. Additionally, GPs receive insufficient training in the complexities of cancer pain management, including opioid prescribing, neuropathic pain, and long-term symptom control. Time constraints during primary care consultations can hinder comprehensive, mechanisms based, assessment of cancer pain and individualized treatment planning [5]. These systemic pressures contribute to inconsistent integration of cancer pain management strategies into primary care pathways, often resulting in delayed pain relief, fragmented care, and disparities in service provision, particularly for patients from underserved communities [6,7].

Cancer pain is a prevalent and often debilitating symptom, with significant implications for an individual's well-being and quality of life [8]. Best practice guidelines emphasize the importance of multimodal pain management approaches, including pharmacological and non-pharmacological interventions, delivered in a coordinated manner across healthcare settings [2,9]. Primary care has the potential to be a key setting for the ongoing management of cancer-related pain, facilitating timely intervention, medication management, and patient-centered care. However, the integration of cancer pain management into primary care pathways varies widely, with gaps in knowledge, training, and resource allocation contributing to suboptimal care [6,10].

Access to effective cancer pain management is influenced by multiple factors, including healthcare system structures, provider expertise, and patient-related barriers [11,12]. Individuals from underserved, underrepresented, and deprived communities often face additional challenges, such as socioeconomic constraints, health literacy barriers, and limited access to specialist services [13,14]. Structural and systemic inequities further exacerbate disparities in pain management, leading to avoidable suffering and reduced quality of life for individuals living and accessing healthcare in deprived communities [11]. Identifying facilitators to equitable access, such as enhanced primary care training, community-based interventions, and policy-driven initiative, is critical to addressing these disparities [15].

Despite growing recognition of the need for integrated pain management within primary care, there remains a lack of comprehensive understanding regarding how cancer pain management is currently embedded in primary care pathways [16]. Additionally, research on the specific barriers and facilitators to accessing these services in underserved communities is limited [11]. This scoping review aims to fill these gaps by systematically identifying and summarizing existing research on cancer pain management within primary care settings. By focusing on integration strategies and accessibility issues, the review will provide valuable insights for policymakers, healthcare providers, and researchers seeking to improve equitable access to cancer pain management services in primary care.

2.0 Methods

A protocol for this scoping review was developed but not registered on any electronic database.

Electronic database searches were carried out using Embase, Ovid MEDLINE, APA PsycInfo, Leeds University Library's Journals@Ovid, Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews limited to articles published between 2000 and January 2025. Grey literature was not included.

Searches were based on the inclusion criteria set out in the PICO statement below (Table 1) and the search strategies developed for each database (supplementary information).

<Insert table 1>

The selection criteria in Table 1 were used to identify potentially relevant articles. Titles and abstracts of search results were screened by two authors (CP and MM) and then by full text (CP and MM).

Each article was narratively summarized from full text articles based on methodology, subject area and ordered by year of publication. The narrative summaries were then grouped into broad themes for descriptive synthesis. Any disagreements were resolved through discussion.

3.0 Results

The results of this scoping review were reported using the PRISMA-ScR checklist (supplementary information).

In total, 174 articles were identified across all databases. Thirty-two articles were included in the scoping review (Figure 1), 10 from the USA, 10 from the UK (two specifically from Scotland), 2 Netherlands, 2 Canada, 2 Australia, and one each from Ireland, Sweden, Colombia, China, Italy and Portugal. These included systematic and narrative reviews, qualitative studies, quantitative studies, including randomized controlled trials (RCTs), mixed-methods studies and surveys.

All identified articles were added to an EndNote bibliographic database, which was also used to sort articles into included/excluded groups and deduplicate the references.

The heterogeneous nature of the studies, many of which predominantly contained qualitative data or systematic review evidence, did not lend itself to standard data extraction and analysis techniques. Therefore, the findings were presented and discussed under broad theme headings.

The characteristics of the included studies are Summarised in Table 2, including study type, focus and methodology.

<Insert Table 2>

3.1 Cancer pain guidelines including triage, assessment and screening

In the included studies there was a dearth of information about triage for patients with cancer pain in primary care and community settings; although, literature was included which related to cancer pain guidelines, including pain assessment.

A 2008 systematic review explored organisational models in cancer pain management which used integrated care processes [17]. The authors recommend the development of policies which would promote referral to a specialist pain management service. This would be integrated into a clinical pain pathway, using an interdisciplinary approach and providing continuity of care. This type of integrated pathway for patients is still not standard across the UK, although steps are being taken to develop new guidance and frameworks for service delivery [2].

In the USA, guidelines for the management of cancer pain were published in 2016, giving key recommendations for screening and assessment, treatment and care options [18]. The emphasis was on enhancing function and involving family or carers along with the wider multidisciplinary team. In Australia, the use of guidelines for cancer pain assessment amongst community nurses has been surveyed, revealing issues similar to those found in the UK, such as difficulty in accessing non-pharmacological treatments, lack of coordination between providers and problems associated with access to pain services due to geographically remote locations [14].

Within the UK, inconsistencies between the specialties of pain medicine and palliative care have been identified, and over the past decade there have been efforts to address this. Recommendations to develop and support a properly integrated pain management service for the management of cancer patients have been published [19]. Early in 2025, the UK Faculty of Pain Medicine produced a framework for the provision of pain services for adults with cancer or life-limiting disease [2] which noted that provision of adequate pain relief for patients in the community was often uncontrolled and frequently the primary reason for use of unscheduled and out-of-hours services. A major barrier preventing early access to specialised pain management services is the timing of referrals to palliative care services. Late referral to these services does not allow patients to benefit optimally from pain management programmes, and this occurs more often in older people and people with life-limited illnesses. Recommendations, based on the Faculty of Pain Medicine's standards on cancer pain [9] are summarised below:

- People with a history of cancer must be routinely screened for pain at every engagement with a healthcare professional.
- People identified with cancer-related pain must receive a pain assessment which, as a minimum, classifies the cause and intensity of pain, and establishes its impact on quality of life.
- A multimodal pain management plan must be agreed with the patient explaining the causes of their pain, its prognosis, the need for further investigations and options for treatment.
- Patients should have a treatment plan tailored to the individual to reduce pain and its impact on daily living. This will include a combination of pharmacological and non-pharmacological interventions, functional rehabilitation and psychosocial or spiritual support. Self-management advice and support should be provided.
- Regular review of the pain management plan is recommended to help with advance care planning. Specialist advice must be sought if pain is not improving within a short time or if patients are experiencing intolerable adverse effects of analgesia.

The education and empowerment of cancer patients was a recurring theme across much of the included literature. As an example, in Portugal, the PECT/CP-Pain Management intervention helped improve patients' knowledge and skills in managing their pain, resulting in better symptom control[20]. This study echoes earlier findings which recommended patient education and empowerment as a means of modifying beliefs and fears about opioids and giving them the confidence to ask healthcare professionals for help if pain is not controlled [21,22].

3.1.1 *Outcome measures*

ElMokhallalati, et al highlighted that there is little consensus around which measures are most appropriate to measure the outcomes of most importance to patients with cancer pain [15]. The authors discuss a systematic review of educational interventions for cancer-related pain which revealed improvements in pain knowledge, medication adherence and self-efficacy occurring as a result of patient education programmes [23]. These could potentially provide modifiable outcomes for self-management strategies [15].

Within the reviewed literature, several other outcome measures were suggested, with the primary emphasis on retaining functional capacity, optimal pain management and quality of life. Outcome measures to evaluate the effectiveness of pain management in older adults with cancer were explored in a review in 2010 [24]. This concluded that functional assessments should be used alongside pain intensity measurement to assess the effectiveness of analgesia. Functional measures for assessment include physical performance, psychological and quality of life measures. Examples include the timed get up and go test [25], the Assessment of instrumental Activities of Daily Living (IADL) score (https://www.cgakit.com/f-1-lawton-scale), the Katz index [26] the Geriatric Depression Scale [21] and the European Organization for Research and Treatment for Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30) [27,28].

Various tools to assess the intensity or interference of pain are used, such as visual analogue scales (VAS) and numerical rating scales (NRS). However, the importance of evaluating the impact of pain management services on spiritual and psychological issues has also been highlighted [29]. Psychological distress screening, using tools such as the Hospital Anxiety and Depression Scale (HADS) or Patient Health Questionnaire-9 [29] is important. The correlation between pain severity and psychological status, especially depression and anxiety have been found to be associated with multiple health-related quality of life domains in cancer patients, especially those experiencing pain [30].

3.2 Education and training of healthcare professionals in managing cancer pain

Much of the reviewed literature identifies gaps in palliative care education and training for General Practitioners (GPs) in the UK. This lack of training impacts upon early identification of patients requiring palliative care and those with specific symptomatic needs, such as cancer-related chronic pain [31,32]. This problem is not unique to the UK; a prospective, longitudinal RCT from The Netherlands exploring the role of district nurses in the care of patients with chronic cancer pain highlighted problems with continuity of care and revealed that nurses rarely contacted patients’ GPs regarding pain [33]. Within the same study, when a Pain Education Programme was implemented, although knowledge about pain improved, the programme failed to change the nurses’ behaviour, highlighting the need for a multimodal and integrated approach

In a later systematic review, factors supporting partnership working between specialist and generalist palliative care providers within the UK found little consistency around the issue of collaborative working, including learning and education opportunities [34]. Similar issues have arisen in other developed western nations, as identified in a survey of 162 primary care physicians in Canada, which showed that most lacked knowledge about the effective management of chronic cancer pain [35]. This highlighted that a significant barrier to good partnership working between specialist and generalist providers is a lack of clearly defined roles.

3.3 Primary and community care as clinical settings for the provision of cancer pain management

Inconsistencies, lack of continuity and poor communication between generalist and specialist providers of palliative care, are highlighted in literature from within and outside the UK [12,33,34,36]. These studies highlight a need to integrate pain management services with palliative medicine to maximise the skills and experiences of both in the provision of effective cancer pain management [19]. Integration of these services is a major aim of the recent recommendations and Framework proposed by the Faculty of Pain Medicine in the UK [2], as previously discussed.

Cancer pain is the most frequent reason for community-based cancer patients requesting unscheduled and out of hours (OOH) medical treatment in the UK [1,2]. Cancer pain management is often under-treated in patients still living at home and this is compounded by difficulties in accessing OOH care [37]. Care provided via OOH services might be enhanced by improving anticipatory care and the completion of palliative care summaries to encourage patients to seek help when needed [37]. To make this effective, patients and carers need to know how to seek help when needed and HCPs need to be aware of factors such as prior beliefs about analgesics, previous experiences and worries about being a nuisance, which can influence whether help is sought [37]. Education has been found to empower patients and improve symptom control by increasing knowledge and skills, thus enabling patients to effectively self-manage their treatment at home, alongside community nurses and their general practitioners [20-22].

Scarborough and Smith conducted a narrative literature synthesis on the optimal assessment and management of cancer pain and provided a framework for this, whilst considering barriers to pain management (within a US context) [10]. They recommended the implementation of a multimodal pain management plan following a comprehensive pain assessment. This would include opioids, adjuvant medications and the provision of integrative therapies such as acupuncture or mindfulness. The authors stressed that pain should be assessed at each contact with a healthcare professional and that lack of knowledge and confidence amongst healthcare professionals needs to be addressed.

In 2018 Hackett, et al conducted a qualitative study exploring the perspectives and experiences of multidisciplinary primary care teams in North of England who care for patients with cancer [36]. This study identified differences in advance care planning within the community, especially with continuity and coordination of care, leading to differences in access to effective pain management. The study also highlighted that whilst the Gold Standards Framework [38] provides a useful guide to help ensure that patients die a ‘good’ death, it doesn’t provide a mechanism for change on its own. These findings echoed those found earlier by Gardiner, et al in 2012, who highlighted the importance of various key factors, such as clear definition of roles and responsibilities, coordinated care and good communication between providers [34].

3.4 Supported self-management of cancer pain

Supported self-management strategies are commonly used in chronic conditions such as arthritis and heart disease, but less so in chronic cancer pain [39]. The provision of education and professional support to achieve effective self-management of cancer pain is needed to empower patients and give them the skills and confidence needed to manage their symptoms [15]. Self-management activities should target outcomes such as self-efficacy and pain interference in daily life [15].

A feasibility study entitled ‘Self-Management of Analgesia and Related Treatments’ (SMART) produced a toolkit for self-management support and 4-step educational delivery approach for patients experiencing pain at end-of-life [40]. This was in recognition that between 45% and 56% of patients with advanced cancer experience pain of moderate to severe intensity before death and that their preferred place of death was at home. The findings of the SMART study indicated that a supported self-management programme yielded incremental quality-adjusted life-years for patients requiring analgesia. A health-economic analysis of the programme revealed that this approach was cost-effective. Self-management support was recognised as a continually changing dynamic process, resulting in varied patient or carer competencies and behaviours, and requiring careful healthcare professional assessment of both individual capacity and influencing factors [41].

The important role of family caregivers was highlighted in a mixed-methods systematic review conducted in 2018 [42]. The authors advised that self-management capabilities (and choices) of caregivers can fluctuate, and therefore this should influence the roles adopted by supporting healthcare professionals. They also highlighted that family caregivers often undertake various roles, such as providing psychological support and practical aspects of symptom management such as administering medication and monitoring symptoms. Caregivers were also found to assume the role of decision-maker and had a role in coordinating input from different health professionals which can put a great deal of pressure on these individuals.

Bennett, et al [12] conducted a mixed-methods programme of intervention development for pain self-management in advanced cancer within community settings. The supported self-management intervention included an educational component and used a web-based eHealth tool (PainCheck) for routine pain assessment and screening. The research provided insights into how patients with advanced cancer manage their pain and what challenges are faced by healthcare professionals in identifying patients needing more help. Significantly, supported self-management was found to reduce costs, but only resulted in marginal increases in quality-adjusted life-years compared with usual care. The study failed to show added benefit for existing community palliative care support. The researchers identified a need for further understanding of the triggers prompting integration of palliative care and pain management and the optimal time for introducing self-management technologies.

3.5 Use of digital technologies

Digital technologies are increasingly becoming important in healthcare, for assessment, monitoring and to aid communication between providers of care. Electronic patient records are now utilized across most primary and secondary healthcare settings in the UK [43,44]. In recent years, and especially since the COVID-19 pandemic, advances in telehealth and telemedicine have seen huge advances and enabled medicine to be taken remotely into institutions such as prisons, care homes and to patients within their own homes [45]. As an example, the Gold Line Service provides 24/7 care for patients with palliative care needs and their carers, giving instant access to specialised care and support [46]. Nevertheless, persistent barriers exist which restrict the potential of such technologies, such as poor interoperability and difficulties in getting real-time data to flow successfully between electronic systems and between patients and healthcare professionals [47]. The existence of several different electronic health records systems within the UK prevents continuity of care and communication between specialist and generalist providers [48]. Until these systems ‘talk’ to one another and provide real-time data it is hard to envisage full integration of services for cancer patients in the UK.

A systematic review of telemedicine for advanced cancer patients was conducted in 2022 [49] to establish a model for rural palliative care in patients experiencing difficulties in accessing healthcare. For rural areas, several barriers need to be considered, such as connectivity in the region, lack of technological knowledge in patients or carers and availability of equipment. However, telemedicine was seen as a means of improving access to healthcare for patients living in remote areas.

A 2023 systematic review of telemedicine in cancer pain management [50], presents a useful flow-chart showing how this technology can be integrated into primary care pathways to support patient assessment, monitoring and management through a combination of telemedicine and face-to-face activities. The advantage of telemedicine is that it has the potential to improve equity of access to high-quality care, enhance continuity of care, minimises costs and maximises human resources. It was shown to be moderately effective in relieving pain severity and improving other cancer-related symptoms including psychological problems. Another systematic review of telemedicine for patients with cancer carried out in 2023 also showed favorable results in cancer pain outcomes [51].

Mobile devices can also help cancer patients meet their needs for self-management of their condition. A review of literature in 2017 showed benefits in symptom management, patient empowerment and better patient-clinician communication [52]. The work completed by Bennett et al described above incorporated PainCheck; an electronic questionnaire tool to help cancer patients self-monitor and manage their pain using personalized pain management advice [12]. Healthcare professionals could also log in to the system to monitor patients' pain and take any necessary action. However, although patients understood the benefits of monitoring their pain using an electronic system, they had reservations about how this would easily integrate within the context of their daily activities and lives.

In future, the availability of these technologies will be paramount in ensuring equity of access to care; however, it might be necessary, especially in the case of older patients, to delegate the technical aspects of telemedicine access to care-givers who will require access to training and education programmes [50].

3.6 Barriers to equitable management of cancer pain in primary care settings

The under treatment of cancer pain is widely documented [53]. Several known barriers to the management of cancer pain in primary care settings exist and some have already been highlighted. From the viewpoint of the patient, age, geographical location, lack of knowledge [53] and socioeconomic status are known barriers to accessing healthcare generally and consequently these groups also have poorer outcomes in management of cancer pain [54]. Older patients have a higher prevalence of cancer pain, and receive poorer pain management, possibly due to living alone without support and being reluctant to seek help or unaware of how to receive additional care.

Patient beliefs as barriers to effective pain management in both cancer and non-cancer conditions were explored in telephone interviews by Dawson et al [55]. The findings showed that beliefs were not strongly associated with reporting pain or taking analgesia, but they did suggest that beliefs were formed because of the care received. For example, patients who had not found relief of pain following analgesic treatment were more likely to believe that pain medication could not control pain. Conversely, effective pain relief was more strongly associated with positive experiences. It was therefore recommended that healthcare professionals made efforts to strengthen accurate beliefs about pain management and empower patients to assert themselves with healthcare providers, which concurs with the educational components of the IMPACCT and SMART studies reported earlier [12,40] .

McDarby et al [13] explored barriers to adequate management of cancer pain amongst Irish GPs in a cross-sectional quantitative descriptive study. Barriers most frequently ranked as most important were inadequate knowledge of pain management (29.1%), inadequate consultation time 21.2%), inadequate assessment (13.6%) and patient reluctance to take opioids (13.4%). Even small deficits in pain management can result in uncontrolled cancer pain and therefore there is a need for more training of GPs to promote best practice in the management of cancer pain.

A 2016 systematic review on the role of the GP in follow-up cancer care [56] included 58 studies and found a wide variation across GPs in their relationships with patients. Whilst not specific to cancer pain, this review illustrated the important role of the GP in assessing, monitoring and providing continuity, coordination and management of symptoms. The review highlighted a need for better communication between primary care providers via sharing of records and coordination across specialist and generalist providers of care.

Bakitas et al conducted a synthesis of literature exploring provision of palliative care in remote areas of the USA which included ethnic, geographical, social and cultural barriers to care [57]. A table was constructed, in this case for indigenous populations, listing each issue, giving specific considerations and then possible solutions or areas for research to reduce disparities in care. Solutions included developing community-based partnerships to address the specific needs of local communities, and the use of digital technologies such as telemedicine.

Bennett et al highlighted several barriers to referral into palliative care [12]. These included an emotional barrier due to the association of palliative care with closeness of death. Reluctance to engage with the PainCheck electronic system was also found to be a barrier to self-management, particularly for those who did not regularly engage with technology. Interestingly, healthcare professionals believed that digital technologies would not replace current ways of working, despite their increasing popularity.

4.0 Discussion

The aim of this scoping review was to retrieve global evidence on the integration of cancer pain management systems into primary health care and highlight the current challenges and barriers to providing effective care pathways. We used this to inform our discussion and recommendations for change specifically within a UK context, but these will also be applicable to similar health care systems within other high-income countries.

The review highlights significant gaps in the integration of cancer pain management into primary care. The findings emphasise challenges in service accessibility, workforce constraints, variability in training and education and inconsistencies in clinical care pathways. Whilst existing guidelines support multimodal pain management approaches, their implementation remains inconsistent, particularly in underserved communities.

A key challenge is the lack of integration and continuity of care between primary care and specialist pain services, which leads to delayed identification of patients needing help, resulting in delays to specialist referrals and inconsistent pain relief strategies. Early intervention and proactive pain management can improve patient outcomes; however, barriers such as limited GP training, short consultation times, and insufficient interdisciplinary coordination persist. The lack of standardized triage and assessment tools further complicates the early detection and management of cancer pain within primary care. In addition, the interoperability of electronic health records remains a significant barrier to communication and continuity of care.

Socioeconomic and demographic disparities remain a significant barrier to effective cancer pain management in community settings. Individuals from underserved communities experience difficulties in accessing specialist services, compounded by poor health literacy, financial constraints, and limited digital infrastructure for remote consultations. Digital health interventions, such as telemedicine and electronic pain monitoring systems, have shown promise in improving access to cancer pain management; yet telemedicine remains underutilised due to patients' or carers unwillingness to engage with technology and inconsistent adoption by healthcare providers.

Despite these barriers, several facilitators to improved access were identified. These include enhanced primary care training, interdisciplinary care models, and patient and carer education and empowerment strategies that encourage self-management of cancer pain. The empowerment of patients through supported-self management has been found to reduce out of hours and other unscheduled care episodes and provide better control of cancer pain. Our review has highlighted that even small deficits in pain relief can have significant negative impacts for patients. Uncontrolled cancer pain is also costly for the health service in terms of unscheduled and out of hours episodes of treatment.

Education of healthcare professionals has provided mixed results. Several studies highlight the importance of utilising digital technologies to support an integrated model of cancer pain management in primary care. The implementation of telemedicine technology has reduced admissions and out of hours medical care, as well as removing barriers to accessing effective cancer pain management, especially for patients living in rural areas.

The review was limited by our restriction to English-only articles due to time and resource constraints. Funding was not available for translation of articles, which potentially introduced a language bias.

5.0 Conclusions

This review highlights the positive impact of community-based interventions and policy-driven initiatives in promoting equity of access to effective cancer pain management, suggesting that future efforts should focus on the integration of primary and specialist care, utilising digital technologies to tailor educational programs for healthcare professionals, patients and carers to improve cancer pain management.

This review emphasises the need for better integration of cancer pain management within primary care in the UK, particularly for underserved populations. Whilst guidelines exist, a lack of implementation, training, communication and service accessibility continue to hinder equitable pain management. Addressing these challenges requires enhanced interdisciplinary collaboration, standardisation of pain assessment protocols, and policy initiatives to support vulnerable groups.

6.0 Future perspective

Future research should focus on evaluating the effectiveness of integrated care models, exploring patient and provider perspectives on digital health solutions, and developing targeted interventions that address both systemic and individual barriers to accessing cancer pain management in primary care. By prioritising equity and accessibility, policymakers and healthcare professionals can work towards a more inclusive and effective approach to managing cancer pain in the community.

7.0 References

Papers of special note have been highlighted as either of interest (*) or of considerable interest (**) to readers.

* Middleton-Green, et al, 2021 provide an evaluation of the 'Gold Line' nurse-led telephone and video-consultation support service for patients in their last year of life.
** Bennett, et al, 2021 reveal how patients with advanced cancer manage their pain and identify the challenges experienced by health professionals in identifying patients who need more help.
** The Faculty of Pain Medicine (UK), 2025, provides updated guidance on the provision of pain services for those with cancer or life-limiting disease, using a multidisciplinary and patient-centered approach.

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TABLES

Population	Adults ≥18 years Community dwelling (i.e. not on in-patient ward in secondary care, intermediate care or residential palliative care) Cancer patients or cancer survivors Living with chronic-cancer related pain Under primary care and/or community services (GP, district/community nursing, hospice-at-home)
Intervention	All screening, assessment and management “interventions”, “tools”, “guidelines”, “processes”, for managing chronic cancer pain within primary and community care settings, including digital strategies and solutions
Comparator	Any or no comparators
Outcomes	All outcomes – qualitative and quantitative: Quality of life (and health related quality of life) Pain intensity Pain interference Mood – anxiety and/or depression Barriers to management or self-management of cancer pain Health related illness perception Neuropathic pain (defined by NP screening tool, i.e. LANSS/DN4)

Table 1 PICO Statement

YEAR	REFERENCE	TYPE/FOCUS OF STUDY	LOCATION	METHODS
2015	Adam, R., et al (2015)[17]	Qualitative interview study to explore the experiences, views, and opinions of patients and their caregivers who have used out of hours primary care for help with managing cancer pain.	UK	Semi-structured interviews with 11 patients and four caregivers (n = 15), transcribed verbatim and analysed using framework analysis and, to a lesser extent, inductive thematic analysis.
2008	Al-Atiyyat, N. & Hussein, M. (2008)[18]	Integrative review to examine patient barriers to effective management of cancer pain.	USA	Narrative review of literature related to patient-related barriers to the management of cancer pain and interventions Eleven studies were included with sample sizes ranging from 38-655 adult cancer patients.
2006	Aubin, M., et al (2006)[19]	Quasi-experimental study of an educational homecare programme on pain relief in patients with advanced cancer.	USA	Quasi-experimental (pretest–post-test, non-equivalent group). Setting: Four community-based primary care centers providing social and healthcare services in the Quebec City region. Recruited 80 homecare patients.
2020	Bakitas, M., et al (2020)[20]	Synthesis of literature from studies and systematic reviews that examined palliative care delivery, challenges, and innovations in rural and remote cancer populations.	USA	Narrative review of literature to identify the challenges of integrating palliative care in rural and remote cancer care. Themes included rural culture; adaptation of delivery models to rural practices; and using novel palliative care education delivery methods.
2021	Bennett, M. I., et al (2021)[12]	Mixed-methods evaluation of pain self-management interventions for community-based patients with advanced cancer. Objective: To develop and evaluate pain self-management interventions for community-based patients with advanced cancer.	UK	A programme of mixed-methods intervention development work leading to a pragmatic multicentre randomised controlled trial of a multicomponent intervention for pain management compared with usual care, including an assessment of cost-effectiveness. The Supported Self-Management intervention comprised an educational component called Tackling Cancer Pain, and an eHealth component for routine pain assessment and monitoring, called PainCheck.

2024	Bico, I., et al (2024)[21]	Quasi-experimental study to test an educational programme designed to help patients and caregivers manage pain at home.	Portugal	An educational program, PECP/C-Pain Management, was developed to empower family care- givers and cancer patients to manage pain at home. A quasi-experimental study involving 52 participants with advanced cancer was conducted to test the programme. Participants' skills, behaviors, and knowledge related to self-care and pain management were assessed before and after the intervention using the Pain Management Knowledge and Behavior Scale.
2008	Brink-Huis, A., et al (2008)[22]	Systematic literature review of organisational models in cancer pain management.	Netherlands	The review involved a systematic search of the literature, published between 1986–2006. Subject-specific keywords used to describe patients, disease, pain management interventions and integrated care processes, relevant for this review were selected using the thesaurus of the databases.
2023	Buonanno, P., et al (2023)[23]	Systematic review and meta-analysis of telemedicine in cancer pain management.	Italy	Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was used to conduct the review. Quality assessment and risk of bias were performed according to Cochrane criteria. Results were reported as mean differences and summarized using forest plots. A trial sequential analysis (TSA) was performed to assess the conclusiveness of the results.
2023	Chen, W., et al (2023)[24]	Systematic review and meta-analysis evaluating the efficacy of telemedicine for pain management in cancer.	China	Randomized controlled trials of the impact of telemedicine intervention regarding pain in patients with cancer were included, and the results related to pain were extracted. 21 RCTs were included.
2017	Chow, R., et al (2017)[25]	Needs assessment of primary care physicians in the management of chronic pain in cancer survivors to assess practice patterns and treatment barriers in the management of chronic cancer pain in primary care.	Canada	A survey using a 16-item questionnaire was sent to primary care physicians (PCPs) across Canada. A total of 162 responses were collected.
2009	Closs, S. J., et al (2009)[26]	Qualitative interview study to identify barriers to cancer pain management for older patients living at home.	UK	Patients newly referred to community-based palliative care services were interviewed about their pain and related issues. Data included pain impact (BPI), mood (HAD), health (EuroQol), and barriers to reporting of pain and analgesic use (Barriers Questionnaire). 58 participants were interviewed.
2009	Cormie, P. (2009)[27]	Summary of the recommendations	UK (Scotland)	Article discusses the management of severe pain (particularly cancer-related pain) in general practice,

		relevant to primary care from SIGN on the assessment and management of severe pain in patients with cancer		focusing on communication, spirituality and psychological issues in patients.
2005	Dawson, R., et al (2005)[28]	Telephone interview study to understand the role of cancer patients' beliefs in pain management within a primary care setting.	USA	Secondary analyses of data from the baseline phase of a randomized study. Setting: Eight of the largest primary care clinics in a managed care system. Telephone interviews were conducted with 342 patients with cancer who reported pain that would not dissipate on its own or when treated by over-the-counter medication.
2001	de Wit, R. and F. van Dam (2001)[29]	RCT study to investigate the role of district nurses in the care of cancer patients with chronic pain at home, as well as the effects of a Pain Education Programme for patients and their district nurses.	Netherlands	The Pain Education Programme consisted of a tailored multi-method approach in which they were educated about pain, instructed how to report pain, and how to contact health care providers. One hundred and four patients and their 115 district nurses were enrolled in a prospective, longitudinal, RCT. The primary outcome of interest was type of care provided by district nurses, satisfaction with the pain treatment, and agreement in estimating patients' pain intensity.
2012	Dempster, P. G., et al (2012)[30]	Qualitative study to investigate how perceptions of how IT is used in the management of cancer pain in the community.	UK	Healthcare professionals and patient representatives (n = 46) attended two meetings that explored perceptions of current and future provision of managing cancer pain in the community and the potential role of informatics in supporting this. Discussion was captured and analysed using qualitative methods.
2018	ElMokhallalati, Y., et al (2018)[15]	Report on interventions to support self-management in cancer pain.	UK	Interventions that target knowledge deficits and support self-management behaviours in patients, carers, and health care professionals can improve pain and quality of life outcomes for cancer patients.
2012	Gardiner, C., et al (2012)[31]	Systematic review exploring factors that support partnership working between specialist and generalist palliative care providers.	UK	A systematic review of studies relating to partnership working between specialist and generalist palliative care providers was undertaken. Six electronic databases were searched for papers published up until January 2011. 22 papers were included.
2018	Hackett, J., et al (2018)[32]	Qualitative study to understand variations in practice with reference to the Gold Standards Framework.	UK	Qualitative, semi-structured interviews, focus groups, and non-participatory observations involving 67 members of primary health care teams providing palliative care. Data were analysed using a grounded theory approach.

2007	Loftus, L. A., et al (2007)[33]	Qualitative interview study to determine a best-practice model for controlling pain in advanced cancer in the context of an evolving managed clinical network in palliative care.	UK (Scotland)	This paper discusses the realistic evaluation of an evolving managed clinical network (MCN) in palliative care. The primary focus of this community-based MCN was to improve cancer patients' pain by implementing clinical guidelines. The methods of evaluation included three case studies which featured interviews with patients, relatives and health professionals involved in their care.
2017	McDarby, G., et al (2017)[13]	Qualitative study exploring knowledge, attitudes and behaviours recognised as barriers to cancer pain management.	Ireland	All GPs registered with the GP regulatory body in one region of Ireland (n=138) were asked to complete a confidential validated questionnaire to assess specific knowledge, attitudes, behaviours, recognised as barriers to adequate management of cancer pain. A 76% response rate was achieved.
2016	Meiklejohn, J., et al (2016)[34]	Systematic review exploring the role of the GP in follow-up cancer care.	Australia	This systematic review explored primary research focussing on the role of the GP from the perspective of GPs and patients. Data were extracted using a standardised form and synthesised using a qualitative descriptive approach.
2010	Miaskowski, C. (2010)[35]	Literature/data search to identify the most appropriate outcome measures to determine the effectiveness of pain management plans in older adults with cancer.	USA	PubMed literature searches, medical and nursing textbooks, and clinical experience were used. Outcomes such as physical function, mood, endurance, sleep, appetite, and interpersonal interactions may improve with pain treatment and may better reflect the impact of analgesic therapy. The IMMPACT consensus recommendations were discussed.
2024	Moore, H., et al (2024)[36]	Descriptive exploratory analysis of a patient dataset to help understand the characteristics and symptom profiles of a group of urban patients experiencing socioeconomic inequity and receiving palliative care.	Canada	Descriptive exploratory analysis of a patient dataset. The patient dataset was generated through a pilot research study with patients experiencing socioeconomic inequity and life-limiting illness who received a community-based palliative care intervention. The setting was a Palliative Care Outreach and Advocacy Team based in an urban community serving people experiencing socioeconomic inequity. 25 participants were enrolled.
2001	Oliver, J. W., et al (2001)[37]	RCT to evaluate the effect of individualised education and coaching intervention on pain outcomes and pain-related knowledge among outpatients with cancer-related pain.	USA	Cancer patients with moderate pain were randomly assigned to the experimental (n=534) or control group (n=533). Experimental patients received a 20-minute individualized education and coaching session to increase knowledge of pain self-management, to redress personal misconceptions about pain treatment, and to rehearse an individually scripted patient physician dialog about pain control. Data on average pain, functional

				impairment because of pain, pain frequency, and pain-related knowledge were collected at enrolment and 2-week follow-up.
2016	Paice JA, et al (2016) [38]	To provide evidence-based guidance on the optimum management of chronic pain in adult cancer survivors.	USA	An ASCO-convened expert panel conducted a systematic literature search of studies investigating chronic pain management in cancer survivors. Outcomes of interest included symptom relief, pain intensity, quality of life, functional outcomes, adverse events, misuse or diversion, and risk assessment or mitigation.
2015	Phillips, J. L., et al (2015)[14]	Online cross-sectional survey. Aim to identify the barriers and facilitators to adult cancer pain assessment and management as perceived by Australian health professionals; identify if cancer pain guidelines are currently used; identify barriers and facilitators to guideline use; and establish the need for Australian cancer pain guidelines.	Australia	A cross-sectional survey was administered online. Invitations were circulated via peak bodies and clinical leaders seeking the views and experiences of health professionals involved in caring for people living with cancer pain. Descriptive statistics were used to summarise the quantitative data, and thematic content analysis were used to describe the qualitative data. 62 community nurses responded to the survey.
2018	Richards, R., et al (2018)[39]	Systematic review to identify studies that describe the use of mobile interventions to enable patients with cancer meet their cancer-related information needs in non-inpatient settings, and to describe the effects and feasibility of these interventions.	UK	Systematic review up to January 2017. Search terms related to “mobile devices,” “information needs,” and “cancer” were used. There were no restrictions on study type in order to be as inclusive as possible. Study participants were patients with cancer undergoing treatment. Interventions had to be delivered by a mobile or handheld device and be for use in non-inpatient settings. Critical Appraisal Skills Programme checklists were used to assess the methodological quality of included studies. A narrative synthesis was performed.
2023	Sánchez-Cárdenas, M. A., et al (2023)[40]	Systematic review of the literature to gather all palliative care telemedicine strategies tested so far on rural	Colombia	This systematic review uses the palliative care literature review iterative method (PALETTE) proposed by Zwakman et al in 2018. Three hundred and ninety-two articles were identified

		settings, to establish a telemedicine model of palliative care for patients with advanced cancer.		
2018	Scarborough, B.M., & Smith, C.B. (2018)[10]	Narrative review summarising evidence for the importance of controlling pain, the barriers to adequate pain management, strategies to assess and manage cancer-related pain, how to manage pain in patients at risk of substance use disorder and considerations when managing pain in a survivorship population.	USA	Narrative review/synthesis of literature. The authors provided a framework for safely and effectively managing cancer-related pain by summarizing the evidence on the importance of pain control, barriers to adequate pain management, assessment and management of cancer-related pain, risks of substance use disorder and managing pain in cancer survivors.
2024	Shen, M. J., et al (2024)[41]	Case-series study to test the feasibility, acceptability, and changes in pain outcomes from exposure to an adapted intervention, Cancer Health Empowerment for Living without Pain (CA-HELP).	USA	Older adults with cancer (aged 65 years) who were residing in a noninstitutional rural setting and receiving outpatient care at a rural-based clinic in Tennessee were enrolled in the study, in which everyone received the intervention, in May 2022. All patients were given assessments at baseline and 1 week after intervention.
2018	Ullgren, H., et al (2018)[42]	Systematic review to explore how family caregivers manage symptoms and side effects at home, in adult cancer patients throughout the disease trajectory.	Sweden	A systematic literature review was performed in PubMed, CINAHL, Web of Science and the Cochrane Central Register of Controlled Trials with a combination of keywords and MeSH terms for family caregivers, cancer, symptoms, side effects and management. Based on predetermined inclusion and exclusion criteria, a total of 1270 articles were screened, and 20 studies were included in the analysis.
2020	You, E. (2020)[43]	Mixed-methods systematic review to evaluate quantitative and qualitative studies, which were conducted using non-traditional self-management interventions for cancer pain.	USA	Databases were searched from 2011 to 2018. A total of 16 quantitative and 2 qualitative studies were included for this review. All interventions are divided into 3 types, which are educational and/or counseling programmes, complementary and alternative medicine (CAM) therapy, and exercise.

Table 2 Characteristics of included studies

SUPPLEMENTARY INFORMATION

Appendix 1
Search strategy
Embase <1996 to 2025 Week 01>
Ovid MEDLINE(R) ALL <1946 to January 06, 2025>
APA PsycInfo <2002 to December 2024 Week 5>
Leeds University Library's Journals@Ovid (full text)
EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>
EBM Reviews - Cochrane Database of Systematic Reviews <2005 to January 2, 2025>

#	Query	Results from 8 Jan 2025
1	(Screening or assessment or management or diagnos* or symptom* or clinical decision-making or clinical reasoning or diagnostic techniques or diagnostic procedures).mp. [mp=ti, ab, hw, tn, ot, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, ui, sy, ux, mx, tc, id, tm, tx, ct, sh, kw]	26,162,068
2	(Intervention or tools or guidelines or processes or procedures).mp. [mp=ti, ab, hw, tn, ot, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, ui, sy, ux, mx, tc, id, tm, tx, ct, sh, kw]	11,506,644
3	((cancer pain or neuropathic cancer pain or cancer survivor pain or treatment-related cancer pain or tumour-related cancer pain or tumor-related cancer pain or malignant pain) not non-cancer pain not non-malignant not nonmalignant).mp. [mp=ti, ab, hw, tn, ot, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, ui, sy, ux, mx, tc, id, tm, tx, ct, sh, kw]	43,762
4	(quality of life or health-related quality of life or pain intensity or pain interference or neuropathic pain or illness perception or mood or anxiety or depression).mp. [mp=ti, ab, hw, tn, ot, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, ui, sy, ux, mx, tc, id, tm, tx, ct, sh, kw]	4,562,438
5	(Community care or community services or primary care or district nursing or community physiotherapy or community pain management or social prescribing or hospice at home or GP* or General Pract*).mp. [mp=ti, ab, hw, tn, ot, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, ui, sy, ux, mx, tc, id, tm, tx, ct, sh, kw]	1,508,937
6	1 and 2 and 3 and 4 and 5	573
7	remove duplicates from 6	540
8	limit 7 to "all adult (19 plus years)" [Limit not valid in Embase,APA PsycInfo,Your Journals@Ovid,CCTR,CDSR; records were retained]	538
9	limit 8 to english language [Limit not valid in Your Journals@Ovid,CDSR; records were retained]	534

10	limit 9 to human [Limit not valid in Your Journals@Ovid,CCTR,CDSR; records were retained]	528
11	limit 10 to humans [Limit not valid in APA PsycInfo,Your Journals@Ovid,CCTR,CDSR; records were retained]	528
12	limit 11 to yr="2000 - 2025"	503
13	limit 12 to (dissertation thesis or editorial or journal article or preprint or report) [Limit not valid in Embase,Ovid MEDLINE(R),APA PsycInfo,Your Journals@Ovid,CDSR; records were retained]	438
14	From 13 keep selected refs after removal of non-cancer, animal and unrelated studies	37

CINAHL<2000 to 2025 Week 01>
Query 08/01/2025:

(Screening OR assessment OR management OR diagnos* OR symptom* OR clinical decision-making OR clinical reasoning OR diagnostic techniques OR diagnostic procedures) AND (Intervention OR tools OR guidelines OR processes OR procedures) AND (cancer pain OR neuropathic cancer pain OR cancer survivor pain OR treatment-related cancer pain OR tumour-related cancer pain OR tumor-related cancer pain OR malignant pain NOT non-cancer pain NOT non-malignant NOT nonmalignant) AND (quality of life OR health-related quality of life OR pain intensity OR pain interference OR neuropathic pain OR illness perception OR mood OR anxiety OR depression) AND (Community care OR community services OR primary care OR district nursing OR community physiotherapy OR community pain management OR social prescribing OR hospice at home OR GP* OR General Pract*)

Database	Limiters Applied
CINAHL	English Language; Publication Date: 20000101-20250131; Exclude MEDLINE records; Human; Age Groups: All Adult; Language: English. Records 16 After removal of non-cancer studies and deduplication 5

Reference list and ResearchGate searches
Total additional records = 11

Secondary searches on cancer pain and telemedicine
Additional searches 20/01/25

Database:
Embase <1996 to 2025 Week 03>
Ovid MEDLINE(R) ALL <1946 to January 17, 2025>
APA PsycInfo <2002 to January 2025 Week 2>
Leeds University Library's Journals@Ovid (full text)
EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>

EBM Reviews - Cochrane Database of Systematic Reviews <2005 to January 15, 2025>

#	Query	Results from 20 Jan 2025
1	(Under*represented or minorit* or disadvantaged).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	559,897
2	(Communit* or group* or societ*).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	19,324,439
3	Cancer pain.mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	48,916
4	Chronic pain management.mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	7,344
5	(Cancer or oncolog* or malignan* or tumo*r or neoplasm*).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	12,215,767
6	1 and 2 and 3 and 4 and 5	42
7	remove duplicates from 6	40
8	limit 7 to english language [Limit not valid in Your Journals@Ovid,CDSR; records were retained]	40
9	limit 8 to yr="2000 - 2025"	36
10	from 9 keep 2,8,11	3

Database:
Embase <1996 to 2025 Week 03>
Ovid MEDLINE(R) ALL <1946 to January 17, 2025>
APA PsycInfo <2002 to January 2025 Week 2>
Leeds University Library's Journals@Ovid (full text)
EBM Reviews - Cochrane Central Register of Controlled Trials <December 2024>
EBM Reviews - Cochrane Database of Systematic Reviews <2005 to January 15, 2025>

#	Query	Results from 20 Jan 2025
1	(Inequalit* or inequit* or underrepresented or under-represented or under-served or minorit* or disadvantag*).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	1,401,646
2	(Chronic pain or persistent pain).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	264,624

3	(Cancer or oncol* or neoplasm* or tumo*r or metastast*).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	11,863,345
4	(Primary care or community or home-based or general practice).mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	2,986,248
5	1 and 2 and 3 and 4	2,087
6	remove duplicates from 5	2,062
7	limit 6 to english language [Limit not valid in Your Journals@Ovid,CDSR; records were retained]	2,062
8	limit 7 to human [Limit not valid in Your Journals@Ovid,CCTR,CDSR; records were retained]	2,061
9	limit 8 to humans [Limit not valid in APA PsycInfo,Your Journals@Ovid,CCTR,CDSR; records were retained]	2,061
10	limit 9 to yr="2000 - 2025"	1,925
11	limit 10 to (embase or medline) [Limit not valid in Ovid MEDLINE(R),APA PsycInfo,Your Journals@Ovid,CDSR; records were retained]	1,920
12	limit 11 to (journal or report) [Limit not valid in Ovid MEDLINE(R),APA PsycInfo,Your Journals@Ovid,CCTR,CDSR; records were retained]	1,914
13	limit 12 to "humans only (removes records about animals)" [Limit not valid in APA PsycInfo,Your Journals@Ovid,CCTR,CDSR; records were retained]	1,914
14	Cancer pain management.mp. [mp=ti, ot, ab, hw, kw, tn, dm, mf, dv, kf, fx, dq, bt, nm, ox, px, rx, an, ui, sy, ux, mx, tc, id, tm, tx, sh, ct]	4,317
15	13 and 14	48
16	from 15 keep 11,24,29,40	4

7 Additional references from additional searches (reference lists, ResearchGate)
TOTAL RECORDS IDENTIFIED = 114

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Click here to enter text.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Unstructured abstract included page 1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	2-4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	3-4
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Page 4-5, Table 1
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Page 4
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplementary information, Appendix 1
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Page 5
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Page 5

Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Page 4/5, Table 1
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	Narrative synthesis described, page 5
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Page 5
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Page 5
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Pages 5-29 and Table 2
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Pages 18-29
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Pages 5-29
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Pages 18-29
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Pages 29-30
Limitations	20	Discuss the limitations of the scoping review process.	N/A
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Pages 30-31
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	N/A