

ROLE OF PHARMACISTS IN SUPPORTING NURSING CARE IN PALLIATIVE AND END-OF-LIFE CARE: SCOPING REVIEW

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Abstract

The role of pharmacists in palliative and end-of-life care is increasingly recognised as critical to improving patient-centered care. This scoping review investigates pharmacists' contributions to nursing care in palliative settings by combining findings from five significant research done between 2018 and 2024. The review focuses on how pharmacists optimize prescription regimens, improve symptom management, and facilitate interdisciplinary collaboration with nursing staff, resulting in better patient outcomes and satisfaction. According to the studies, early access to pharmacy services leads to shorter hospital stays and improved care procedures. However, considerable constraints, such as limited access, insufficient training, and a lack of institutional accreditation and certification in palliative pharmacy, prevent pharmacists from fully integrating into healthcare teams. These findings highlight the need of focused interventions that encourage collaboration between pharmacists and nursing staff, thereby improving the quality of palliative care for patients with life-limiting conditions. The research concludes by arguing for structural improvements that would expand pharmacists' responsibilities in palliative care, so benefiting patients, families, and healthcare teams while addressing the complexity of end-of-life care.

Keywords: Pharmacists, Palliative Care, End-of-Life Care, Nursing Care, Interdisciplinary Collaboration, Medication Management, Patient Outcomes, Healthcare Team, Symptom Management, Quality of Life.

Introduction

Caring for patients at the end of life is a common element of the critical care team's responsibility, as adult intensive care unit (ICU) mortality is reported to be more than 20% (Sloss et al., 2022). Palliative care aims to enhance quality of life by addressing the medical, psychological, social, and spiritual needs of persons with life-threatening illnesses and their family (Brighton et al., 2019). More than 19 million persons worldwide are anticipated to require palliative care at the end of life (EOL) (Wong et al., 2020).

Palliative and end-of-life care are critical but often disregarded components of comprehensive, personalized diabetes care (Dunning & Martin, 2018). According to the World Health Organization, palliative care is "an approach that improves the quality of life of patients and their families facing the problem[s] associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual." (Naidu et al., 2018).

Early incorporation of specialty palliative care has been demonstrated to improve a wide range of outcomes for patients with advanced solid tumors, including quality of life, mood, symptom load, illness comprehension and coping (El-Jawahri, et al., 2020). To build outpatient palliative care programs, doctors need advice on the critical components of delivering treatment for patients in the ambulatory care setting from diagnosis to death (Hoerger et al., 2018).

Palliative care is delivered by a multidisciplinary team that includes physicians, nurses, social workers, chaplains and pharmacists, the pharmacist's role in palliative care teams is growing, and first positive results have been recorded (Atayee et al., 2018). The collaboration of pharmacists and nurses in palliative care has a direct and significant impact on patient outcomes. Patients benefit from improved symptom control, higher quality of life, and greater overall satisfaction with their care as a result of their collaborative efforts (Alenazi et al., 2022).

Pharmacists play an important role in optimising medication regimens and promoting medication safety (Kuruvilla et al., 2018). Specialist pharmacists' roles as members of the multidisciplinary palliative care team, particularly in primary care, are not well appreciated (Kuruvilla et al., 2018). Critical care Pharmacists play a crucial role in ICU patient care, as data shows that they reduce drug prescribing errors, adverse drug events, and costs while also improving clinical outcomes, their involvement in the ICU end-of-life process involves medication selection, dosages and titration, and the prevention of potentially errors (Sloss et al., 2022). One study indicated that pharmacists play an important role in community palliative care by improving patients' quality of life, the study advised that pharmacists receive additional education and training, that communication between professions improve, that patient information be made more accessible, and that sustainable funding be provided to encourage community palliative care (Thrimawithana et al., 2024). One study indicated that interactions between pharmacists and nurses in palliative care extend beyond the clinical context and embody the principles of compassion, creativity, and communication. Together, they foster a supportive environment in which patients receive comprehensive treatment, families find comfort, and the healthcare team thrives in its quest of excellence (Alenazi et al., 2022).

Up to our knowledge, no scoping review has been published that comprehensively describes the role of pharmacists in supporting nursing care in palliative care and end-of-life care through the results of previous studies. Accordingly, our study aimed to discover the role of pharmacists in supporting nursing care in palliative care and end-of-life care, and to provide a reference source for researchers to make recommendations and conduct studies based on the gaps that appeared in the results of previous research.

Methods

The extant literature was systematically reviewed to identify and summarize the function of pharmacists in assisting nursing care in palliative and end-of-life care settings. This review adhered to known protocols such as PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses of Scoping Reviews) to achieve a systematic and complete approach. The goals of this scoping review were to identify pharmacists' various contributions to these essential areas of nurse health care, estimate the effects of their activities on patient outcomes, and identify gaps in current research that could guide future investigations.

Search Strategy

A comprehensive search strategy was executed to identify relevant literature. The search terms comprised combinations of keywords and Medical Subject Headings (MeSH), including "pharmacists," "nursing care," "palliative care," "end-of-life care," and "pharmaceutical care." Between 2018 and 2024, databases such as PubMed, CINAHL, Scopus, and the Cochrane Library were thoroughly searched. Boolean operators (AND, OR) were used to narrow down the search, and filters were applied to include papers published in peer-reviewed journals and written in English. The search found a wide set of papers, including both qualitative and quantitative research designs.

Inclusion Criteria

To ensure the relevance and quality of the research included in this scoping review, precise inclusion criteria were developed. Studies were considered if they discussed the role of pharmacists in palliative or end-of-life care settings, particularly in terms of collaboration with nursing staff. Only studies published in peer-reviewed publications between 2018 and 2024 were assessed to reflect current practices and insights. Furthermore, articles were to focus on adult populations and show direct contacts between pharmacists and nursing practitioners, either in clinical or instructional settings.

Exclusion Criteria

To ensure the review's integrity, studies were removed based on certain criteria. Articles were omitted if they did not expressly address the role of pharmacists in palliative or end-of-life care, or if they lacked a nursing component. Commentaries, editorials, and case reports, as well as literature focusing primarily on theoretical frameworks without actual evidence, were removed. Furthermore, studies involving pediatric populations or conducted outside of hospital settings were ruled ineligible for inclusion.

Selection Process

In 2024, the review search returned 80 results. After deleting duplicates, 60 studies remained. Following an evaluation of the titles and abstracts, 30 studies were removed for not meeting the inclusion criteria. Thus, 30 studies were thoroughly examined to assess eligibility; 25 studies were excluded since they did not adequately describe the role of pharmacists in supporting nursing care in palliative and end-of-life care. As a result, our systematic review comprised five papers (see Table 1 and Figure 1).

Data Extraction

Data extraction for the selected studies was carried out using a uniform extraction form designed to collect critical information across all investigations. This form includes information about the study's features (authors, year of publication, study aim, and results) the specific roles and duties of pharmacists who assist nursing care, patient outcome findings, and identified barriers and facilitators of collaboration. To reduce bias, two independent reviewers extracted data in duplicate, and any differences were resolved through discussion or contact with a third reviewer. Qualitative data were evaluated thematically, and quantitative results were presented to offer an overview of trends seen across investigations. This rigorous extraction method sought to achieve a thorough grasp of pharmacists' activities and the data supporting their impact on nursing care in the context of palliative and end-of-life care.

Results

According to Atayee et al. (2018), a retrospective study discovered that a part-time palliative care pharmacist greatly improved patient care in an academic context by optimizing prescription regimens and giving education. Patients who met with the pharmacist stayed longer, but those who received early access had better outcomes. This emphasizes the need of pharmacists' participation in palliative care teams.

Kuruvilla et al. (2018) conducted qualitative focus groups with patients, caregivers, and healthcare professionals to assess community palliative care service gaps, particularly medication management. Access to resources, polypharmacy, and communication were major issues. A trained palliative care pharmacist could assist close these gaps and improve patient drug safety and availability, according to the study.

Geiger et al. (2022) examine the growth of pharmacists' involvement in palliative care, focusing on their critical contributions to multidisciplinary teams. The study highlights advances in palliative care pharmacy while pointing out the lack of a specialized board accreditation for pharmacists in this profession. Finally, the authors highlight this gap, despite two decades of pharmacist involvement in palliative care.

Alenazi et al. (2022) stress the importance of pharmacist-nurse teamwork in palliative care, emphasizing a comprehensive strategy that meets physical, emotional, social, and spiritual needs. Their collaboration promotes empowerment, innovation, and a strong sense of community, resulting in improved patient outcomes and experiences. Finally, this collaboration considerably advances compassionate care in palliative medicine.

Thrimawithana et al. (2024) underline the need of community pharmacists in improving palliative care through drug management and patient education. Their scoping research emphasizes the importance of better integrating pharmacists into palliative care teams by addressing hurdles such as inadequate training and limited access to patient information. Finally, additional support and resources for pharmacists can dramatically improve the quality of life for palliative patients.

Table (1): Summary of the related studies

Author	Aim	Study Design	Results
Atayee et al., (2018)	To identify patterns of interventions and outcomes associated with the involvement of a part-time palliative care specialist pharmacist in an inpatient setting, as well as to assess the impact of pharmacist participation on patient hospital length of stay (LOS), length from admission to palliative care consult (LTC), and time from consult to discharge or death (CTD).	Retrospective study conducted over a 15-month period	Palliative care pharmacists were on duty 35% of the time and engaged with 26.4% of patients (n = 341 out of 1293). Average patient interventions were 3.5, with 4.1 recorded outcomes. Most interventions focused on optimizing drug regimens and delivering information, and outcomes included medication regimen adjustments and healthcare personnel education. Pain was the main reason the pharmacist saw younger, female patients. LOS, LTC, and CTD were dramatically improved in patients receiving early palliative pharmacy access.
Kuruvilla et al., (2018)	To explore stakeholder perspectives on gaps in community palliative care services related to medication management and assess opinions on the role of a specialist palliative care pharmacist in addressing these gaps.	A qualitative study encompassing three focus groups with 20 stakeholders, including palliative care consumers and professionals, was evaluated thematically within the Chronic Care Model framework.	Five significant themes emerged: access to resources, collaborative care, polypharmacy problems, informal caregiver needs, and a palliative care pharmacist's possible involvement. Key concerns identified included pharmaceutical access limitations, poor training for general practitioners, and communication challenges, all of which have an influence on successful medication administration in community-based palliative care.
Geiger et al., (2022)	To provide an overview of pharmacists'	This article is a literature review that looks at pharmacists'	The analysis indicates that, despite the fact that pharmacists

	involvement in palliative care, highlighting advancements in palliative care pharmacy and the integral role pharmacists play within multidisciplinary palliative care teams.	historical and current role in palliative care, focusing on recent advances and contributions to the area.	have been part of palliative care teams for over 20 years, there is still a significant dearth of board certification particularly for palliative care in pharmacy, showing a gap in recognition and formal training within this critical area of healthcare.
Alenazi et al., (2022)	To explore the collaborative roles of pharmacists and nurses in providing holistic palliative care, focusing on how their partnership enhances patient outcomes and overall quality of care.	The study adopts a qualitative research design, conducting interviews and focus groups with healthcare professionals such as pharmacists and nurses to learn about their collaborative practices, problems, and new approaches to palliative care.	The findings show that pharmacist-nurse teamwork significantly improves patient care by addressing multiple needs, creating empowerment, and supporting new treatment strategies. The study also emphasizes the creation of a supportive network for patients and families, which will contribute to a legacy of compassionate palliative care practice.
Thrimawithana et al., (2024)	To identify and delineate the role of pharmacists in community palliative care and assess their impact on the quality of care provided to patients with palliative needs.	A scoping review was conducted, utilizing a systematic search strategy across multiple databases (PubMed, PsychINFO, CINAHL, and Embase). Articles were screened based on specific inclusion and exclusion criteria to identify relevant studies examining pharmacists' interventions in community palliative care.	The research found five studies (two from Australia, two from England, and one from Scotland) that described initiatives involving pharmacists in community palliative care. The findings revealed that the engagement of trained pharmacists improved the quality of treatment for patients with palliative requirements by conducting medication reviews and providing education on palliative care medications. The review also identified challenges such as underutilization of pharmacists, the need for

			additional training, and increased access to patient information.
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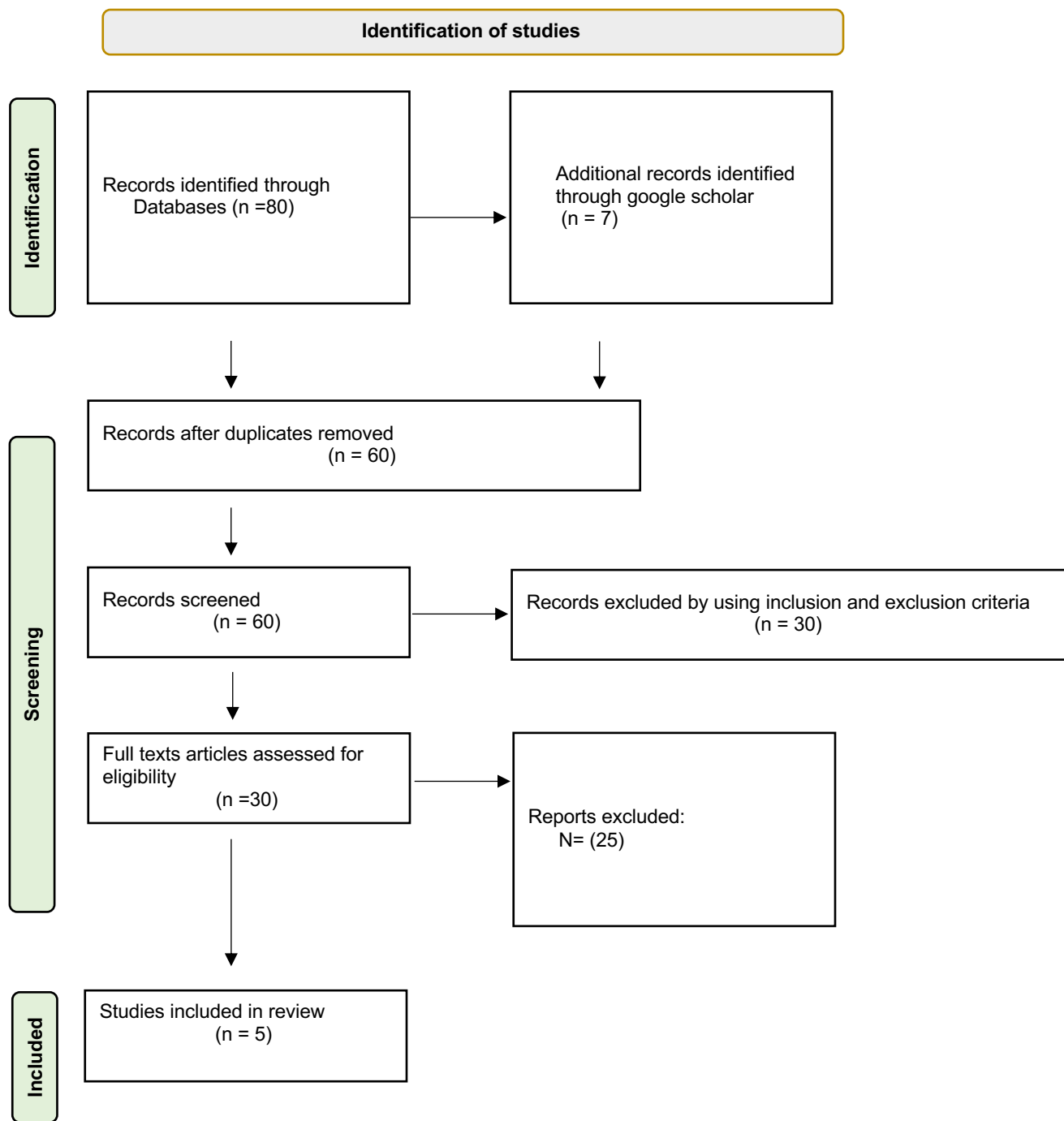


Fig. 1. PRISMA 2009 Flow Diagram

Discussion

The inclusion of pharmacists in palliative and end-of-life care is a significant step toward improving patient-centered healthcare. Each examined paper adds new insights into the varied role that pharmacists can play within multidisciplinary palliative care teams, where their expertise not only enhances medication administration but also bridges large gaps in patient care. This discussion draws on findings from Atayee et al. (2018), Kuruvilla et al. (2018), Geiger et al. (2022), Alenazi et al. (2022), and Thrimawithana et al. (2024), highlighting areas of consistency and divergence in perceptions of pharmacists' contributions, particularly in nursing care.

The role of pharmacists in palliative care

According to Atayee et al. (2018), palliative care pharmacists' efforts mostly focus on symptom management and staff education, resulting in improved patient outcomes. The study found that early access to palliative pharmacy services correlates with shorter hospital stays (LOS) and faster consultation and discharge processes. In line with this, Kuruvilla et al. (2018) emphasize that pharmacists can address medication management gaps, particularly in community settings, by offering vital support to nonspecialist healthcare teams, hence improving shared care frameworks.

Geiger et al. (2022) and Thrimawithana et al. (2024) back up these findings by tracing the historical evolution of pharmacists' roles in palliative care. They claim that pharmacists have the required skills to provide appropriate medication administration and patient education, thereby directly supplementing the nursing care component in palliative settings. Geiger et al. (2022) emphasize the importance of board certification in palliative care pharmacy, claiming that formal acknowledgment can improve integration and support.

Collaboration of Pharmacists and Nurses

Alenazi et al. (2022) investigate the collaborative dynamic between pharmacists and nurses, emphasizing a comprehensive approach that considers patients' emotional and social needs as well as their physical symptoms. This concept is consistent with the findings of Thrimawithana et al. (2024), who believe pharmacists are essential to patient care not only through direct medication management but also through interprofessional collaboration that promotes communication and shared understanding among team members.

As shown by Alenazi et al. (2022) and Thrimawithana et al. (2024), incorporating pharmacists into nursing care practices in palliative contexts can lead to better accommodation of complex treatment regimens. Recognizing the emotional and psychological aspects of care enables a more holistic treatment paradigm, emphasizing the significance of connection and continuity of care, and ensuring that patients and their families feel valued and supported throughout their journey.

Barriers and Limitations.

While the studies all support for the inclusion of pharmacists in palliative care, they also emphasize ongoing hurdles to full fulfillment of this promise. Kuruvilla et al. (2018) raise worry about the accessibility of community pharmacists, citing major gaps in resources and education among generalist clinicians that can impede appropriate drug management. Furthermore, the

underutilization of pharmacists as critical members of the palliative care team, as reported by Thrimawithana et al. (2024), implies that systemic reform within healthcare frameworks is required to properly capitalize on pharmacists' experience.

Geiger et al. (2022) add to the issue by highlighting the lack of formal certification in palliative pharmacy, which may impede pharmacists' acceptance and integration into healthcare teams, particularly in primary care settings. Establishing such certificates may increase pharmacists' visibility and authority in providing end-of-life care, so boosting interprofessional relationships with nursing staff and other healthcare providers.

Conclusion

In conclusion, the reviewed literature clearly portrays pharmacists as essential members of palliative care teams, having a major impact on drug administration, patient education, and interdisciplinary collaboration to support nursing care. The collaboration of pharmacists and nurses not only fosters a responsive and adaptive healthcare environment, but it also emphasizes the significance of comprehensive approaches to patient care throughout end-of-life transitions. Nonetheless, addressing current barriers such as the need for professional recognition, training, and improved collaborative frameworks is crucial to realizing pharmacists' full potential in palliative care settings. Continued lobbying for the inclusion of pharmacists on these care teams, combined with formal educational programs and certifications, has the potential to significantly improve the quality of care provided to patients and their families confronting serious, life-limiting illnesses.

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