Review

Case Management Activities in Palliative Care for Cancer: A Scoping Review

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Abstract

Introduction. Case Managers have long been deployed in palliative cancer care, but the heterogeneous nature of this role makes it difficult to gather evidence of its effectiveness and consequently foster standardized implementation by health policies. We explore the models, characteristics, and specific activities that Palliative Care Case Managers perform in oncology.

Methods. This scoping review was performed and reported according to the PRISMA-ScR checklist. Seven electronic databases (Cochrane Library, PubMed, Scopus, EMBASE, CINAHL, PsycINFO, and Web of Science) and Google Scholar, were searched for relevant papers until June 2024. Studies were included if they reported Case Management interventions for patients with cancer receiving palliative care. Charted data included study characteristics, Case management activities, Case management models, and intervention delivery.

Results. Twelve studies were included. A total of 38 activities emerged from the analysis and five themes were identified across them, including "Information, education and self-management", "Support and counselling", "Patient centredness", "Network", "Quality of care". In all studies, the CMs role was performed by a nurse, with a specific experience or training in palliative care or oncology, with multidisciplinary teams acting as support or as possible consultants. Activities were provided by phone, by hospital visits, via homecare visits or a combination of all above models. Only seven studies reported outcome measures related to patient or health care system dimensions, while data regarding case load were reported in four studies. Research gaps include impact and feasibility methodology, informations about referral criteria for case management service, the satisfaction of patients and health care providers with the service, barriers and facilitators, and the investigation of the most suitable professional to perform the case management role.

Discussion and Conclusions. It is important to standardize the description of case management activities in the literature and establishing a shared definition of this role in diverse contexts, including its modes of multidisciplinary integration. A standardized reporting framework for studies on this topic is needed to guide future research. Further studies are needed to describe case management activities in palliative care for cancer. This is the first scoping review to systematically explore and summarize Case Management activities and models in Palliative Care for Cancer. These findings will support nursing organizational policies in the design of Case Management services in Cancer Palliative Care, address key issues in case management practice and proposing examples for personalized implementation of this service across clinical contexts. Nursing researchers can foster studies on this topic to improve the body of evidence at our disposal.

Keywords: Cancer, Case Management, Health Service Research, Healthcare Teams, Nursing, Palliative care, Scoping Review

Introduction

Patients with advanced cancer face higher burdens of healthcare needs which are driven by increased diagnostic testing or intensive treatments and persistent symptoms such as pain and fatigue.[1] These needs are complicated by existing health disparities that disproportionately affect patients based on socioeconomic status, access to care, and geographic location.[2] Health disparities in cancer care have been well-documented where data show that minority and low-income patients facing barriers to accessing timely, high-quality palliative care services.[3] Addressing these disparities is critical for improving overall patient outcomes and quality of life, predominantly as patients transition into palliative care. In response to these challenges, palliative care emphasizes multi-professional models that integrate various specialists and services to enhance care quality.[4] Within this model, Case Managers (CMs) have become integral members of the healthcare team, guiding patients through the complexities of oncology care. CMs reduce disparities through their role in communication with patients and family caregivers and with providers; additionally, they help address psychosocial needs that come with long-term cancer treatments.[5] The process applied by CMs is multidimensional, which covers an assessment process, planning, implementation, coordination, monitoring, and evaluation that ensures the receipt of correct services for patients.[6] Case Management (CMG) roles vary widely while licensed professionals such as nurses and social workers or counsellors often take on formal CMG responsibilities and there is evidence that non-licensed or lay workers can also play a role in providing support.[7] It is critical for clarifying the scope of non-licensed professionals' involvement in this scoping review as their roles may contribute meaningfully to CMG but lack the formal certification that licensed professionals possess. Experts argue that certification is important for ensuring consistent and evidence-based practice and protecting both patients and caregivers.[7] Further complicating the definition of CMG is the overlap with related terms such as care management and care coordination, disease management, and patient navigation.[5] Current studies often lack a standardized method for defining and reporting the characteristics of CMG interventions and their related results, which complicates outcomes research in the field.[5] For this review purpose, CMG is defined as a grouping of specific activities derived from a role which is evidenced by Tahan and Campagna,[8] who focused on assessment and coordination of patient care in the context of palliative oncology; these activities can help in optimizing clinical outcomes or may reduce health disparities to improve overall patient satisfaction.

While CMs have indicated positive benefits for patient outcomes, cost-efficiency, and patient experience in various studies[9,10] evidence for their effectiveness is still lacking due to heterogeneity in roles and interventions. Standardized reporting would help with future research and inform practice about the reporting framework of CMG activities and outcomes.[9] This scoping review systematically examines a variety of models of CMG in the context of palliative oncology care for patients with cancer. The primary objective of this research is to identify and synthesize the activities performed by oncology palliative care case managers, while secondary outcomes are to define the main characteristics of existing models and their associated caseload, and to explore the outcomes currently considered for their evaluation, while highlighting any gaps in the existing research. Addressing these points will increase the understanding of how CMs impact palliative care delivery and where future research should be directed to strengthen the field. It also offers a valuable synthesis of information for stakeholders interested in implementing this service within their healthcare contexts.

Method

We conducted a scoping review, consistent with the objectives of mapping available evidence related to case management models for cancer. Scoping reviews are designed to explore the breadth of available literature without aiming for a detailed assessment of quality unlike systematic reviews that focus on appraising specific interventions. Following PRISMA-ScR guidelines,[11] our scoping review follows a structured and transparent approach to selection, analysis, and presentation of the evidence, while according to Joanna Briggs Institute (JBI) guidelines for scoping reviews[12] we used Population, Concept, Context framework to structure the inclusion criteria:

Population

We included healthcare providers for adult cancer patients across different professions. Studies involving lay workers were excluded unless they were supervised by a healthcare provider.

Concept

We looked at both monodisciplinary and multidisciplinary CMG models that help cancer patients. Studies that did not provide a detailed description of the interventions were excluded, although those that did not report how the interventions affected patients, their families, or the healthcare system were included but were not considered in the analysis of the secondary outcome.

Context

Studies carried out in primary care and community care settings, specifically in advanced cancer care were included. Acute, residential, and home care settings were also eligible. Because of disparities in healthcare systems and resources, studies conducted in developing nations were not included.[13]

Study Design

Experimental and observational studies using qualitative, quantitative, or mixed methods were eligible, secondary studies were excluded.

The protocol for this scoping review was uploaded on Open Science Framework (OSF) registry with the identification https://doi.org/10.17605/OSF.IO/5ZM8D. The review protocol can be accessed at https://osf.io/5zm8d.

Search Strategy

A systematic literature search was performed in the electronic databases Cochrane Library, MEDLINE (via PubMed), Scopus (via Elsevier), EMBASE (via Elsevier), CINAHL (via EBSCOhost), PsycINFO (via Ovid) and Web of Science (Table 1) up to 03 June 2024.

Search strings consisting of keywords, index terms, and main headings as synthesized in Table 1; the complete search strategy, as well as the date of consultation of each database, are provided in Appendix 1. In addition we manually screened references of included studies and prior reviews to identify additional eligible studies. Google Scholar was used for grey literature. No language or time restrictions were applied. Research that included interventions addressed to a cohort of non-cancer patients only, or a cohort with low or unspecified prevalence of cancer patients (<50%), were excluded based on full-text review by two authors.

Table 1. Literature search strings.

Keyword	Alternative forms*
Case Management	Patient navigation, Critical Pathways, Care management, Nurse navigator
AND	
Palliative Care	Palliative medicine, Palliative treatment, Terminal, Treatment Withdrawal, Palliative therapy, Palliative supportive care
AND	
Cancer	Tumor, Tumour, Neoplasm, Carcinoma, Malignancy
*Text limitators, subheadings and truncation were applied if appropriate. See Appendix 1 for the complete search string for each database	

Inclusion and Exclusion of Alternative Terms

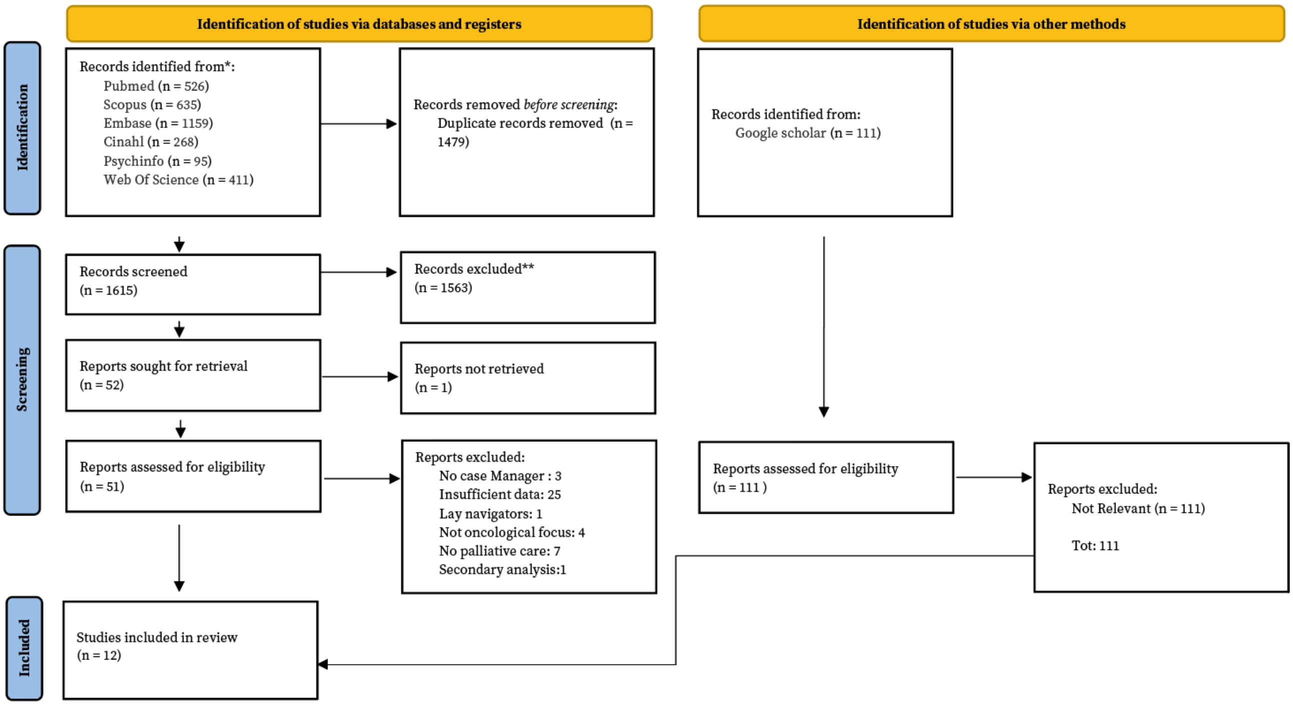
We have included in the search strategy alternative terms such as care management and patient navigation. Rationale for this inclusion make sure no relevant studies are missed, given the lack of consensus on naming conventions for these roles in the healthcare literature. We did not restrict the search to CMG terminology alone, as these overlapping terms may refer to interventions functionally equivalent to case management. Inclusion of alternative terms (e.g., care management, critical pathways, and patient navigation) was strategic and aligned with scoping review broader goals. Even though different terminology is used in different research, our decision to include studies despite these discrepancies demonstrates our intention to cover all pertinent models, traits, and actions that fall under the purview of CMG.

Evidence Collection, Data Graphing, and Reporting

The search results were imported into RefWorks (ProQuest), where duplicate entries were automatically removed. Two independent reviewers (XXX and XXX) screened the obtained titles and abstracts according to the inclusion criteria. Full-text reviews were conducted for remaining records and any disagreements were resolved by consulting a third reviewer (XXX). The PRISMA-ScR flow diagram was used in this scoping review to reflect the study inclusion procedure (Figure 1) summarizes the precise exclusion reasons (e.g., irrelevant population, insufficient data); it shows the number of eliminated studies, broken down by categories such as “Insufficient data – 25” and “No case manager – 3”. Data extraction was conducted using a pre-defined charting form in Excel (Microsoft Corporation), capturing first author, year, country, study design and setting, population characteristics (e.g., healthcare provider professions), CM models, intervention details, and CM activities, outcomes, main results case load and research gaps, and this data was independently verified to extracted data to ensure consistency. When additional material was available upon request but not included in the published article, we contacted the study’s authors for further details.

The PRISMA-ScR checklist was followed while presenting the data.[11] Employing inductive thematic analysis, the data were categorized into emerging functions identified in the studies with subthemes derived from patterns in the coded data. The narrative summary was complemented by tabulated results.

Figure 1. PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).
**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.
Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.

The search across seven databases yielded 3205 records including 111 from grey literature. Two additional studies[14,15] were identified from reference lists of excluded papers. After full-text review only Bookbinder[15] met inclusion criteria. The final selection process is detailed in PRISMA diagram (Figure 1) and resulted in twelve studies included for analysis. Appendix 2 outlines the excluded reports and reasons for their exclusion. Appendix 3 summarizes the key details of the included studies. One study[16](1%) was experimental, one(1%) reported a secondary quantitative analysis[17] and one (1%) was an implementation design,[18] while nine studies (75%)had a descriptive design, comprising one pilot study[15], two case studies [19,20], three retrospective studies [21-23], and one cross-sectional study[24], one qualitative study[25], and one model description.[26] These studies originated from the United States (5; 41,7%)[15,18,19,21,26], Europe (6; 50%)[17, 20, 22-25], and Asia (1; 8,3%)[16]. The participant numbers ranged from one[19] to 8843,[20] totaling 104,887 participants. Six (50%) studies[15,16,19–22] involved patients and caregivers, totaling 9319 participants. Kuhn's[23] study focused on requests received by the CMG service without specifying participant numbers, and Lockhart's model description did not involve direct participants. Van der Plaas[24] included 687 patients and 448 healthcare professionals (HCPs) who referred patients to CMG services. Eight studies[15–18,21–23, 25] evaluated hospital-based CMGs, while two were home services,[22,24] and two[19,20] did not specify the setting. Eight (66,7%) studies[16–21,22,25] focused on cancer patients, while Van der Plaas[24] and Kuhn[23] included both oncological and non-oncological patients, with over 80% being cancer cases. Lockhart[26] and Bookbinder[15] did not specify cancer patient proportions. CM interventions were delivered either in person, by mail or by telephone.

Case Management Activities

The details of palliative cancer care CMG activities described in the studies are summarized in Table 2. Of these, 23 activities were documented in four or fewer studies, while 15 activities were supported by five or more studies.

As activity description did slightly differ between studies, in order to present the results in the most conservative way, interventions were grouped only in the case of a minimal variation of the action or a clear resemblance of the categories (e.g. Psychological Support and Emotional Support). Since the study by Valenti 2022 declared the existence of a database of additional activities performed by the CMs, Table 2 was integrated through a telephone call with the author. Some interventions were synthesized, but were more detailed in the original studies. “Homecare organization” referred to both scheduling and organizing homecare visits of palliative care team and specialists and home interventions to assess safety and adapt the home and/or the daily routines to the increased needs of the patient. “Monitoring of pharmacotherapy” consisted in regular follow-up of the patient to assess both collateral and adverse effects of the therapy and signs of its effectiveness, while “Reviewing pharmacotherapy” required the CM to conduct an analysis of the therapeutic scheme to assess possible redundancy, inappropriateness or obsolescence of drugs within the needs of the patient.

Table. 2 - Number and detail of studies that include a specific Case Management activity

Case management activity	**Total Number of Studies**	**Studies**
Management of cancer-related symptoms	7/12	Valenti 2022, Lockhart 2003, Bookbinder 2005, Ozcelik 2013, Fusetti 2023, Gerhardt 2023, Madrigal 2023.
Medication and treatment education	5/12	Valenti 2022, Lockhart 2003, Head 2003, Ozcelik 2013, Fusetti 2023.
Medication refills	2/12	Valenti 2022, Madrigal 2023.
Tailored scheduling of appointments for patients	5/12	Valenti 2022, Kuhn 2012, Ozcelik 2013, Fusetti 2023, Gerhardt 2023.
Homecare organisation	3/12	Valenti 2022, Head 2003, Gerhardt 2023.
Hospice information	4/12	Valenti 2022, Wu 2014, Madrigal 2023, Shindel 2022.
Coordinating care	10/12	Valenti 2022, Head 2003, Kuhn 2012, Van der Plaas 2014, Wu 2014, Ozcelik 2013, Fusetti 2023, Gerhardt 2023, Madrigal 2023, Shindel 2022.
Management of interdisciplinary issues	4/12	Valenti 2022, Van der Plaas 2014, Wu 2014, Fusetti 2023.
Emergency Response plan	1/12	Lockhart 2003 .
Advance Care Planning	5/12	Lockhart 2003, Head 2003, Bookbinder 2005, Ozcelik 2013, Madrigal 2023.
Psychological, and emotional support and counselling	8/12	Lockhart 2003, Head 2003, Van der Plaas 2014, Wu 2014, Bookbinder 2005; Valenti 2022*, Ozcelik 2013, Fusetti 2023.
Spiritual support and counselling	5/12	Lockhart 2003, Head 2003, Van der Plaas 2014; Valenti 2022*, Fusetti 2023.
Community/specialists resource referral	7/12	Lockhart 2003, Wu 2014, Bookbinder 2005; Valenti 2022*, Fusetti 2023, Madrigal 2023, Shindel 2022.
Comprehensive assessment and development of individualized plan of care	4/12	Head 2003; Valenti 2022*, Fusetti 2023, Gerhardt 2023.
Advocacy within the system	5/12	Head 2003, Van der Plaas 2014; Valenti 2022*, Fusetti 2023, Madrigal 2023.
Cost savings interventions	5/12	Head 2003, Wu 2014; Valenti 2022*, Fusetti 2023, Shindel 2022.
Justification of individualized, patient-focused services within the managed care organization	2/12	Head 2003; Valenti 2022.*
Bereavement management (assessment for patient and caregivers, education and support)	3/12	Head 2003, Van der Plaas 2014, Bookbinder 2005.
Join the funeral service	1/12	Head 2003.
Secure preauthorization for home administration of blood products and medications	1/12	Head 2003.
Family meeting	4/12	Head 2003; Valenti 2022*, Ozcelik 2013, Fusetti 2023.
Arrangement of interdisciplinary meeting	3/12	Head 2003, Fusetti 2023, Madrigal 2023.
Assure healthcare resources provision in case of travel	2/12	Head 2003; Valenti 2022*.
Networking of healthcare providers through frequent communication for informations and advices	8/12	Head 2003, Kuhn 2012, Bookbinder 2005; Valenti 2022*, Ozcelik 2013, Fusetti 2023, Shindel 2022, Gerhardt 2023.
In-patient admission	3/12	Kuhn 2012; Valenti 2022*, Fusetti 2023

Management of requests for the home care or palliative care consultations service and related patients' allocation	2/12	Kuhn 2012; Valenti 2022*
Identification of patients in need of case management	2/12	Kuhn 2012; Valenti 2022*
Bed planning	1/12	Kuhn 2012
Management of pathway of care and transfer when patient is discharged	3/12	Kuhn 2012; Valenti 2022,* Madrigal 2023.
Participation in the multi-professional team meetings	4/12	Kuhn 2012; Valenti 2022*, Fusetti 2023, Madrigal 2023.
Home visits	1/12	Van der Plaas 2014.
Negotiation between patient and healthcare providers	3/12	Van der Plaas 2014; Valenti 2022*, Fusetti 2023.
Main family and patient referral and support	8/12	Van der Plaas 2014, Wu 2014, Bookbinder 2005; Valenti 2022*, Fusetti 2023, Shindel 2022, Gerhardt 2023, Madrigal 2023.
Monitoring of pharmacotherapy	5/12	Van der Plaas 2014, Wu 2014; Valenti 2022*, Fusetti 2023, Madrigal 2023.
Provision of medical/nursing/ pratical knowledge and informations	9/12	Van der Plaas 2014, Wu 2014, Bookbinder 2005, Lockhert 2003; Valenti 2022*, Ozcelik 2013, Fusetti 2023, Shindel 2022, Madrigal 2023.
Anticipating care needs	5/12	Van der Plaas 2014, Wu 2014; Valenti 2022*, Fusetti 2023, Madrigal 2023.
Reviewing pharmacotherapy	3/12	Wu 2014; Valenti 2022*, Fusetti 2023
*Integration of information through direct contact with the author		

Case Management Models

In all studies, the CMs role was focused on a nurse, who may have specific experience or training in palliative care,[18,19,21–25] or oncology.[20] Nine studies (75%)adopted a monodisciplinary CMG approach[18,20–26] where the care management lay on the nurse, which may refer to other health care provider consultants if needed. Three (25%) studies[15,16,19] adopted a multidisciplinary approach, where care coordination was planned in a synergic effort between the nurse and a social worker[19] or a whole team of health care professionals.[15,16] CMG activities were provided by phone[18,21,22] (3; 25%), by hospital visits[15,16] (2; 16,7%), via homecare visits[24] (1; 8,3%) or a combination of all above models[15,17,19,23,25,26] (6; 50%); Appendix 4 provides the detail of activities performed by chosen way to deliver intervention. Although the most of the articles did not state openly which model of CMG they adopted, an analysis of function through current literature[27] suggested that the main models used were: interdisciplinary team,[15,16,26] Nurse-social worker,[19] Arizona Model,[21,22] Broker model,[23] Patient advocacy model.[5,24,28]

Outcomes and Case loads

Regarding the outcomes of CMG interventions, only seven (58,3%) studies[15–20] reported measures related to patient or health care system dimensions, while five (41,7%) had a descriptive design that focused mostly on feasibility.[21–25]

Only four (33%) studies[18,22,24,26] provided sufficient data to define a caseload for CMs; all other studies failed to provide the total number of patients (as records or calls were used as the referral measure) or the number of CMs involved.

In Valenti's[22] study, the case manager provided assistance to 171 patients for six months. In Lockhart's[26] study, the initial patient-to-nurse ratio was deemed inappropriate and was subsequently reduced to 30-35 patients per nurse by the end of implementation. In Van Der Plas's[24] study, 687 patients were under the care of the CMs for 24 months, while in Madrigal's[18] 104 patients in 1 year and half.

Research gaps

Articles highlight the need for further research on various aspects related to the CMs role:

Impact. Four (33%) articles[15,18,22,23] suggested to investigate the impact of consulting CMs at the patient, family, and healthcare system levels, including clinical objectives and service expectations.

Feasibility. Four (33%) studies[15,16,22,23] proposed exploring the feasibility of CMG interventions, including healthcare team acceptance and economic sustainability.

Referral Criteria. Two (16,7%) studies[23,26] identified the need for standardized criteria for selecting patients who would benefit most from this service.

Satisfaction. Two (16,7%) studies[22,23] stressed the importance of measuring patient satisfaction regarding their care experiences with CMG.

Study Design. Six (50%) researches[15–17,20,21,25] highlighted the requirement for more robust prospective studies involving diverse patient populations to confidently assess the correlation between interventions and clinical outcomes.

Time to Treatment. Two (16,7%) studies[15,24] proposed the time taken for tests, visits, or interventions as an outcome of interest.

Disciplines. One (1; 8,3%) study[24] suggested to comparing CMG interventions conducted by professionals from different disciplines to assess their effectiveness on various patient outcomes.

Barriers and Facilitators. Two (16,7%) studies[15,17] recommend investigating how factors related to professionals, patients, and the healthcare system can enhance or hinder the implementation of CMG services.

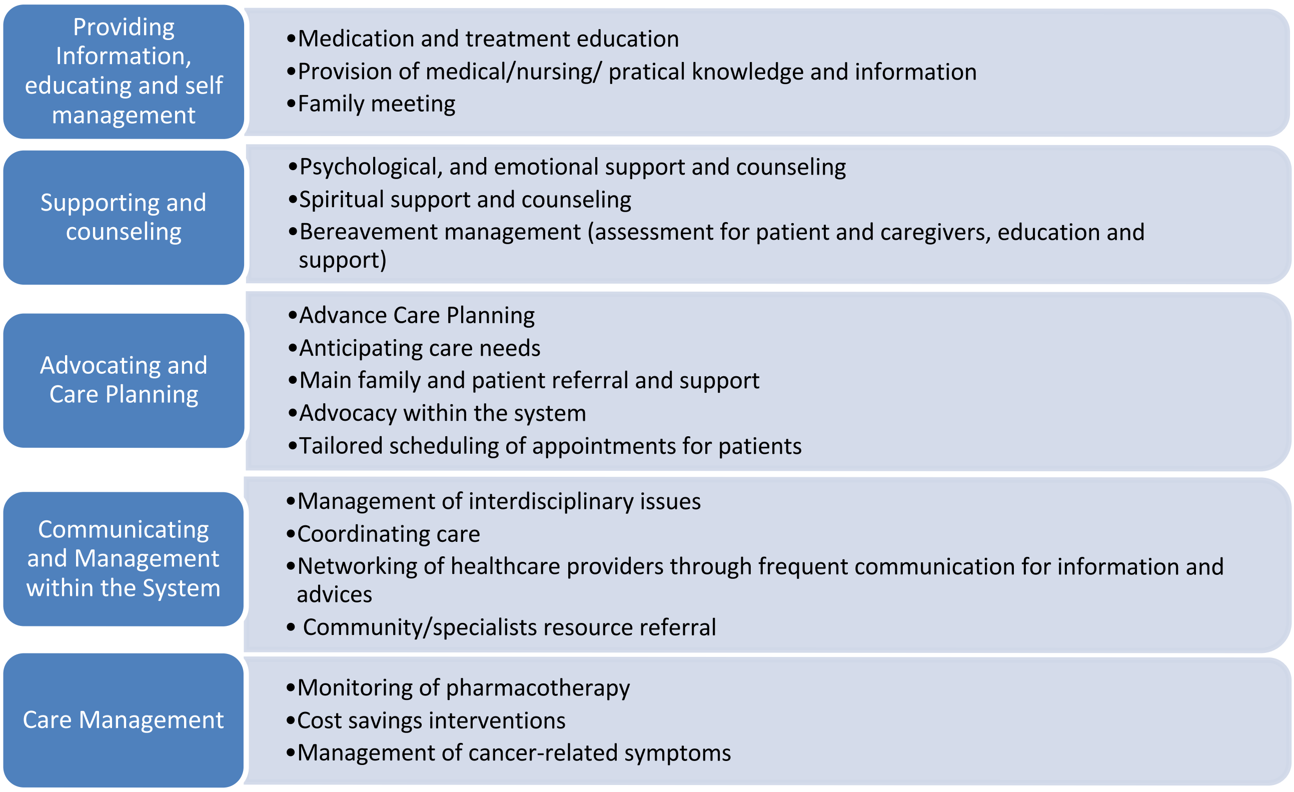
Discussion

The purpose of this review was examining the palliative cancer care CMG models described within the literature, identifying the main tasks performed by CM, defining the features of existing models, their caseload, and research gaps within the field.

The role of CMG is trending in cancer care, and the personalization of care derived from its involvement might improve many dimensions of the care process. The need for a precise description of CMG role arises from the high level of flexibility required in CMG. This precision is crucial for healthcare organizations to establish a high-quality service for effectively managing patient care pathways.

Our findings confirm that CMs engage in a broad array of activities that are essential for addressing the multifaceted needs of patients with advanced cancer. 23 activities were reported in less than one-third of the total articles, and can therefore be considered infrequent for this professional role. Otherwise, we identified 15 activities supported by five or more studies, suggesting they are relatively common practices in this context. Through thematic analysis most frequent activities were grouped in five categories (Figure 2): I*nformation, education and self-management* refers to activities addressed mostly to information provision to patients and their family about services, education to increase autonomy, symptom management and knowledge and coping with the specific clinical condition of the patient. *Support and counseling* included interventions focused mostly on the emotional dimension and coping with the condition. *Patien- centeredness* encompasses the main planning activities and tailoring of services and resources to the patient needs. *Network* included the role of coordination of care and connection of professionals within the system. *Quality of care* regarded the monitoring and management of clinical outcomes and health related costs.

Figure 2. Thematic analysis of the most frequent activities described in the studies



Providing Information, educating and self management

- Medication and treatment education
- Provision of medical/nursing/ pratical knowledge and information
- Family meeting

Supporting and counseling

- Psychological, and emotional support and counseling
- Spiritual support and counseling
- Bereavement management (assessment for patient and caregivers, education and support)

Advocating and Care Planning

- Advance Care Planning
- Anticipating care needs
- Main family and patient referral and support
- Advocacy within the system
- Tailored scheduling of appointments for patients

Communicating and Management within the System

- Management of interdisciplinary issues
- Coordinating care
- Networking of healthcare providers through frequent communication for information and advices
- Community/specialists resource referral

Care Management

- Monitoring of pharmacotherapy
- Cost savings interventions
- Management of cancer-related symptoms

The wide range of these activities shows the versatility of this role and suggests that, by considering the needs of different contexts, CMs can manage the integration of oncology palliative care, providing valuable support to patients and their families while enabling patient centered care. However, the variability in how these activities are defined and reported across studies, along with inconsistent terminology and overlap with related roles such as care coordination and patient navigation, complicate the mapping process. Standardizing the nomenclature and classification of CM activities would aid in producing clearer, comparable data and enhancing our understanding of their impact. A comprehensive, consistent framework for reporting and categorizing CM activities and interventions is still needed to inform future research and practice development.

Since the role of CMs is well established in certain geographical areas, such as the United States and the United Kingdom where it is widely implemented,[6] many studies omit detailed descriptions of their specific characteristics and activities. This lack of detail poses significant challenges for those aiming to replicate successful models, especially when reliable, positive results could be adapted to other healthcare settings. Additionally, the absence of standardized descriptions complicates comparative research, making it difficult to assess the effectiveness of CMG practices across different contexts.

Utilizing non-standardized terminology when describing an organizational intervention, such as introducing a new professional figure within an organizational system, may affect its implementation and evaluation. Clinically, different stakeholders (such as healthcare providers or policymakers) may encounter miscommunication; different people may interpret the same activity in various ways, leading to heterogeneous implementation of the interventions. This could result in differences in the efficacy of the designed CMG service.

Although it is clear that the CM role relies on high flexibility, and the use of broad and common terms such as “care coordination” or “advocacy” easily highlights the purpose of this figure, it is also true that umbrella terms are unable to fully clarify the level of responsibility and the specific perspective of the professional. Furthermore, the lack of standardized terminology influences the measurement and comparability of interventions across different settings. Data collection and analysis may be affected, as inconsistent terminology can cause discrepancies in outcome reporting, thus reducing the chance of performing robust meta-analyses or systematic reviews. Implementing a standardized framework for reporting case management interventions would improve the generalizability of best practice results from one setting to another. A common framework that thoroughly describes key components such as intervention goals processes, and outcomes would make it easier to adapt the results across clinical contexts.

A future framework should take into account lessons learned from implementation science, which suggest the use of Standards for Reporting Implementation Studies (StaRI) to improve the quality in science reporting,[29] and develop a clear nomenclature of activities that may allow researchers to uniformly report on the theme.

While mixed delivery modes, typically involving multidisciplinary units, provide a broader range of intervention options for activities, defining the actual contribution of the nursing CMs remains complex. Detailed explanations of function assignments for team components and the context-dependent execution of activities are often underdescribed in multidisciplinary approaches. However, it is evident that all in-person, telephonic, and mixed delivery modes maintain the execution of all five primary activities, encompassing educational, empowerment, and emotional support functions, with a focus on improving care quality, personalization, and enhancing multidisciplinary integration.

While CMG is not exclusively within the purview of nursing, all studies in the field of oncology palliative care examined here depict nurses as the primary actors, potentially supported by multidisciplinary teams. This scoping review identifies four fundamental service delivery approaches and a total of 38 activities conducted by CMs, with 15 recurring activities demonstrating consensus across at least five distinct operational settings.

Only four studies provided information that allowed us to approximate the caseload of patients for CMs. Among these, Valenti’s[23] study, in which the service was exclusively delivered via telephone, described the follow-up of 171 patients by a single CM over a total of 6 months, while Madrigal’s[18], performed in the same way, took care of 104 patients in one year and half. In a mixed delivery model (telephone + home-based), a caseload of 30-35 patients per case manager was described.[26] In a study where care was delivered in a home-based form by a team coordinated by a case manager,[5] access to the service was documented for 687 patients over a total of 24 months. Although the total number of CMs involved was not described, only the total number of units (13) was provided, allowing us to estimate a distribution of 53 patients per care team over 2 years. Clearly, workload calculation employs various methodologies, and a concise summary like this should not be seen as a substitute for a thorough, weighted evaluation of the chosen activity model. However, it can provide a rough reference point for future projects in this area.[30]

Despite having defined broad inclusion criteria and not imposing a time restriction, only 12 articles provided sufficient information to allow for a comprehensive analysis, highlighting the need for further research on this topic. Notably, the predominantly narrative approach and the lack of detailed characterization of CMG models were the main reasons for excluding many studies that had initially passed the title and abstract screening. This issue, however, is not the only aspect that should guide future research; valuable insights also emerge from the included articles, which point to the necessity of exploring specific areas within this field.

Investigating the feasibility and potential effectiveness of CMG is important, particularly in understanding its impact on patient and professional satisfaction, care quality, and economic implications within the healthcare system. Exploring specific outcomes related to the 15 most frequently mentioned activities, such as educational and self-management benefits, psychosocial support, personalized care, network efficiency (e.g., cross-referrals), and quality of care (including economic aspects and time-to-treatment), could provide useful data for future implementation. Employing robust research methodologies may help produce reliable findings across a range of cases, contributing to a more comprehensive understanding of this intervention. Additionally, identifying clear referral criteria for directing patients to CMG could aid in the effective allocation of resources, allowing CMs to focus on patients who might benefit most. This, in turn, could enhance satisfaction among patients and care teams and support better service organization.

The need to identify precise reference criteria for access to oncology palliative care[19] is a well-known topic in the literature, and it becomes more pressing when it concerns a specific service like a dedicated CMG service. Some attempts to identify reference criteria for different nursing roles employed in the management and follow-up of patients with chronic issues have already been made,[31] but for the figure of CMs in the oncology field, evidence is still lacking.[32]

The studies have identified another aspect deserving further examination: analyzing how the service functions in a hospital setting to improve multidisciplinary integration. Firstly, it is essential to conduct a more comprehensive investigation into the factors that could potentially give rise to resistance within the system or that may facilitate a positive reception by healthcare professionals, thereby yielding better outcomes for patients. Secondly, it is important to determine whether the range of activities associated with the role of CMs in oncology palliative care would benefit more from the involvement of a nursing professional or an expert from another specific discipline. Additionally, it would be useful to explore the training pathways that best support CMs in working independently and effectively to meet their objectives. In parallel or as an alternative to the nursing CMs, different settings have developed other roles that partially encompass the described functions. Some examples include the cancer coordinator in Scandinavian countries[32] or the district nurse in certain Anglo-Saxon contexts.[33,34] Studies exploring potential interactions between these services, collaboration opportunities, and their impact on both patients and professionals could contribute to a tangible improvement in the quality of oncological care.

Limitations

This study has several limitations. First, the number of included studies was quite limited, as most research on this role involved activities conducted in different contexts and lacked sufficient documentation to analyze CMG activities comprehensively. We adopted a conservative approach by including studies where CMG activities were performed by multidisciplinary teams, even when data were partial. However, the distribution of functions among specific roles was not always clearly described, which limited the generalizability of the results, as not all findings reflected contributions from the entire sample. Moreover we excluded studies from developing nations, thus affecting the generalizability of results into these countries. More studies are needed to investigate the needs of implementing CMG interventions within this specific context. Second, despite our efforts to conduct thorough research, it is possible that some relevant articles were missed, especially given the rapid evolution of the CMG role and the various terms used to describe it in different settings. Although we put our efforts into reporting the findings from results in the most detailed way, the variability in terminology across studies and the lack of a uniform framework for reporting might have influenced our accuracy, thus influencing the way we grouped activities within the analysis. Finally, we applied no restrictions in our literature search to avoid excluding potentially valuable models. As CMG continues to evolve, this may have introduced historical bias, as older studies might not reflect current practices or recent developments in CMG. The rationale for this choice was that our aim was to present a comprehensive overview of all activities performed by CMs, facilitating implementation in settings where the role is currently non-existent or still emerging. By including older studies, we aimed to capture the progression of implementation in these contexts, considering them intrinsically valuable for their insights into replicability.

Conclusion

Our scoping review presents a synthesis of the main activities performed by CMs in oncological palliative care. Within our analysis, we have identified both different options for the personalized implementation of such a service and various research gaps that warrant careful exploration by future studies. We believe that this data can be utilized to both corporate policies in constructing clinical pathways and personnel management, as well as to researchers interested in experimenting with new care models centred around the role of the CMs in the oncological palliative context. It is essential to reach consensus regarding the manner of describing these activities in the literature and establishing a shared definition of the role in diverse contexts, including its modes of multidisciplinary integration.

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