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Research Article

Gaps in Palliative Care Education in Medical Residency Programs: An Integrative Review

Lacunas no ensino de cuidados paliativos em programas de residência médica: uma revisão integrativa

Lagunas en la Enseñanza de Cuidados Paliativos en Programas de Residencia Médica: Una Revisión Integrativa

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Abstract

Introduction: The practice of palliative care has become essential for providing comprehensive patient care, driven by increased life expectancy and, consequently, a higher prevalence of chronic, potentially life-threatening diseases. Despite this growing need to manage patients at the end of life, many medical residents feel insecure both regarding the indication of palliative care for their patients and the care to be provided to them and their families. This is due to palliative care education during undergraduate and residency programs, in Brazil and worldwide, still being scarce and insufficient to foster the proper development of competencies in this area. **Objective:** To identify the main learning gaps in palliative care that require improvement during medical residency. **Methods:** An integrative literature review was conducted, including articles published from 2018 to 2023 in PubMed, the Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO), and Latin American and Caribbean Literature in Health Sciences (LILACS). The following descriptors were used: "medical residency," "medical internship," "palliative care," "palliative medicine," "clinical skills," "clinical competency," "clinical competencies," "learning," and "education." Articles were summarized according to study type, year of publication, objectives, methods, and results, with all analyzed critically. **Result:** The search identified 371 articles, of which 27 were selected based on the applied eligibility criteria. The competency most frequently cited as deficient in medical residencies was communication between physicians and family members and/or among healthcare professionals, followed by pain management and management of other symptoms. **Conclusion:** The study highlights the insufficiency of palliative care education in medical residency programs, emphasizing the urgent need to integrate essential educational tools to enhance the competencies of physicians in training.

Keywords: Education, Medical; Palliative care; Medical residency; Clinical competence.

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Resumo

Introdução: A prática dos cuidados paliativos tem se tornado essencial para a execução da atenção integral ao paciente, impulsionada pelo aumento da longevidade e, consequentemente, pelo número de doenças crônicas potencialmente ameaçadoras à vida. Apesar dessa crescente necessidade de saber conduzir pacientes em fim de vida, muitos médicos residentes se sentem inseguros quanto à indicação de cuidados paliativos para seus pacientes, assim como quanto aos cuidados que devem ser prestados a eles e a seus familiares. Isso é decorrente de o ensino dos cuidados paliativos na graduação e nos programas de residência, no Brasil e no mundo, ainda ser escasso e insuficiente para promover o desenvolvimento adequado de competências relacionadas ao tema. **Objetivo:** Identificar as principais lacunas de aprendizado em cuidados paliativos que requerem aprimoramento durante a residência médica. **Métodos:** Revisão integrativa da literatura, envolvendo artigos publicados no período de 2018 a 2023 nas plataformas *PubMed*, Biblioteca Virtual em Saúde (BVS), *Scientific Electronic Library Online* (*SciELO*) e Literatura Latino-Americana e do Caribe em Ciências da Saúde (Lilacs), utilizando os seguintes descritores: "medical residency", "medical internship", "palliative care", "palliative medicine", "clinical skills", "clinical competency", "clinical competencies", "learning", "education". Os artigos foram sumarizados conforme tipo de estudo, ano de publicação, objetivos, métodos e resultados, sendo todos analisados de maneira crítica. **Resultados:** A busca identificou 371 artigos, dos quais 27 foram selecionados conforme os critérios de elegibilidade aplicados. A competência mais citada como deficiente nas especializações médicas foi a comunicação entre médicos e familiares e/ou entre profissionais, seguido por manejo da dor e manejo de outros sintomas. **Conclusão:** A pesquisa evidencia a insuficiência do ensino de cuidados paliativos em programas de residência médica, destacando a urgente necessidade de integrar ferramentas educacionais fundamentais para aprimorar as competências dos médicos em formação.

Palavras-chave: Educação médica; Cuidados paliativos; Residência médica; Competência clínica.

Resumen

Introducción: La práctica de los cuidados paliativos se ha vuelto esencial para la atención integral del paciente, impulsada por el aumento de la longevidad y, consecuentemente, por el número creciente de enfermedades crónicas potencialmente amenazantes para la vida. A pesar de esta creciente necesidad de manejar pacientes al final de la vida, muchos médicos residentes se sienten inseguros sobre la indicación de cuidados paliativos para sus pacientes, así como sobre los cuidados que deben brindarse a ellos y a sus familias. Esto se debe a que la enseñanza de cuidados paliativos en la formación de grado y en los programas de residencia, tanto en Brasil como a nivel mundial, sigue siendo escasa e insuficiente para promover el desarrollo adecuado de competencias relacionadas con el tema.**Objetivo:** Identificar las principales lagunas de aprendizaje en cuidados paliativos que requieren ser mejoradas durante la residencia médica. **Métodos:** Revisión integrativa de la literatura, abarcando artículos publicados entre 2018 y 2023 en las plataformas PubMed, BVS, Scielo y Lilacs, utilizando los siguientes descriptores: "medical residency", "medical internship", "palliative care", "palliative medicine", "clinical skills", "clinical competency", "clinical competencies", "learning", "education". Los artículos fueron resumidos según el tipo de estudio, año de publicación, objetivos, métodos y resultados, siendo todos analizados críticamente. **Resultados:** La búsqueda identificó 371 artículos, de los cuales 27 fueron seleccionados conforme a los criterios de elegibilidad aplicados. La competencia más mencionada como deficiente en las especialidades médicas fue la comunicación entre médicos y familiares y/o entre profesionales, seguida por el manejo del dolor y de otros síntomas. **Conclusiones:** La investigación evidencia la insuficiencia en la enseñanza de cuidados paliativos en los programas de residencia médica, destacando la urgente necesidad de integrar herramientas educativas fundamentales para mejorar las competencias de los médicos en formación.

Palabras clave: Educación médica; Cuidados paliativos; Residencia médica; Competencia clínica.

INTRODUCTION

Despite the global increase in the number of individuals with serious and life-threatening illnesses, training in palliative care during medical residency remains insufficient to adequately prepare physicians to provide high-quality end-of-life and death experiences for their patients.[1]

Death is an integral component of the natural life cycle of every human being; however, with scientific advancements and the elucidation of the etiology of various diseases, it has come to be viewed from a different perspective. For the first time, humankind became capable of intervening in the natural course of illness. Subsequently, scientific studies and research enabled the prevention and treatment of diseases that were once considered incurable.[2]

Although many diseases remain incurable, survival rates have increased among individuals who are able to maintain disease stability through the use of novel treatments. In the context of this expanding

therapeutic arsenal, modern Western culture is grounded in the biomedical model, which tends to dissociate the individual from the disease, as well as life from death, thereby, to some extent, denying death as a natural stage of the biological cycle.[3]

Within the current care model, population aging and the pursuit of prolonged survival at any cost are not always compatible with the maintenance of quality of life.[4] In this context, medicine is required to move beyond an exclusive focus on disease cure and to provide comprehensive support aimed at improving the quality of life of individuals with incurable conditions, as well as ensuring a dignified death. This perspective underlies the concept of palliative care (PC), which did not emerge to replace curative treatments but to be integrated alongside them, offering care focused on the relief of physical, psychological, social, and spiritual symptoms in patients and their families.[5]

For this to occur, healthcare professionals, particularly physicians, require adequate training in this area to accurately identify the stage of a patient's illness and implement the most appropriate treatment plan. Although early recognition of patients eligible for PC is recommended[6], there remains a significant gap in the teaching of this competency in medical schools and residency programs in Brazil and worldwide.[1,2]

At the postgraduate level, an unsatisfactory level of knowledge regarding end-of-life care can be observed among many resident physicians. This gap may be attributed to several factors, including the absence of specific rotations during specialization and a lack of preceptors adequately trained in the subject.[1]

Although internships and training in PC remain limited during medical specialization, studies indicate that residency constitutes the primary period for acquiring knowledge in this area, even across diverse specialties such as surgery, internal medicine, and their subspecialties, through daily clinical exposure to patients at the end of life.[1,4]

The lack of basic education and training in PC among medical residents negatively affects the quality of care provided to patients across various settings, encompassing biomedical, emotional, and communication-related aspects. This deficiency may result in dissatisfaction among patients and their families, in addition to generating significant additional suffering at the end of life.[7]

Accordingly, there is an ongoing international discussion regarding the need to develop competencies in PC not only during undergraduate medical education but also throughout medical specialization. Actively contributing to this debate, the European Association for Palliative Care (EAPC) has proposed a set of core competencies to be acquired by healthcare professionals, particularly physicians in training and specialization, to ensure the provision of dignified care to patients at the end of life.[8]

With regard to the advancement of this discussion in Brazil, the Ministry of Health established, in May 2024, the National Palliative Care Policy within the scope of the Unified Health System (*Sistema Único de Saúde* – SUS). Among its guidelines is the promotion of the production and dissemination of knowledge on PC by all teaching and research institutions.[9]

Thus, considering the relevance of the new national policy and guided by the competencies in PC proposed by EAPC, this review aimed to identify the main deficiencies requiring improvement in the teaching and learning of PC during medical residency.

METHODS

An integrative literature review was conducted to synthesize and evaluate the evidence presented in studies addressing palliative care competencies requiring improvement during medical residency across various specialties that involve end-of-life care.[10]

To ensure the methodological rigor of this type of research, the present review followed the six-phase framework of an integrative review: development of the guiding question; establishment of inclusion and exclusion criteria and literature search; definition of the information to be extracted from the selected studies; evaluation of the included studies; interpretation of the results; and presentation of the review.[10]

The literature search was conducted between June and July 2024 and was guided by the following research question: "What are the main competencies in palliative care that should be improved in medical residency programs?"

For this review, the following Health Sciences Descriptors (*Descritores em Ciências da Saúde* – DeCS) and Boolean operators OR and AND were used: ("medical residency" OR "medical internship") AND ("palliative care" OR "palliative medicine") AND ("clinical skills" OR "clinical competency" OR "clinical competencies" OR "learning" OR "education"). These descriptors were applied in the databases PubMed, Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO), and Latin American and Caribbean Literature in Health Sciences (LILACS).

The studies identified were selected according to the following inclusion criteria: original articles published in Portuguese, English, or Spanish between 2018 and 2023. Studies that, after critical appraisal of the title and abstract, did not align with the research topic, as well as duplicate records, were excluded. Additionally, theses, dissertations, case reports, perspective articles, viewpoint articles, opinion articles, review articles, and letters to the editor were not considered for inclusion in the review.

Subsequently, the studies were categorized to enable the extraction, organization, and synthesis of the information they contained (author, year, country, objectives, methods, main weaknesses identified, and conclusions related to the topic under investigation).

RESULTS

A total of 371 studies were identified across the searched databases (229 in PubMed and 142 in VHL), of which 48 were duplicates and were therefore excluded. The article selection process is illustrated in Figure 1.

The synthesis of the 27 studies included in the integrative review is presented in Chart 1 below.

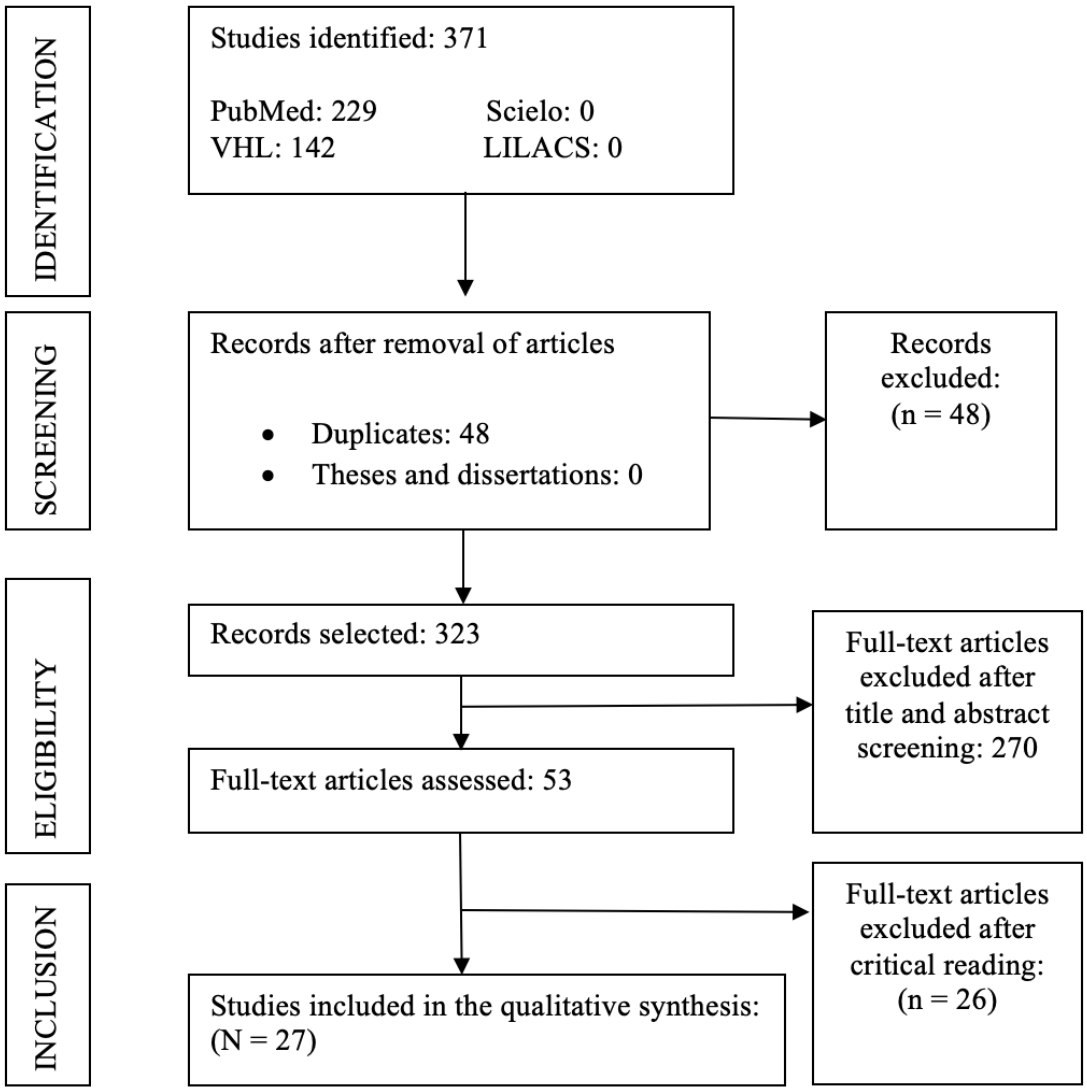
The quantitative distribution of the articles according to country of origin and medical specialty is presented in Table 1.

As presented in Table 2, the most frequently reported deficiency across medical specialties was the communication of bad news, followed by pain management and the management of other symptoms.

DISCUSSION

This integrative review demonstrated a consensus regarding the need to expand medical education in PC and examined the main gaps related to PC competencies in medical residency programs across various specialties.

Most studies addressing learning deficiencies in this area during residency originate from the United States, despite the country having one of the highest levels of coverage in PC education.[1] For example, Niehaus et al. (2020)[14] identified that only 32% of pediatric residents at Indiana University, between 2018 and 2019, considered their training to be adequate for managing end-of-life care.[14]



Source: Prepared by the authors.
Figure 1. Flowchart from identification to inclusion of articles for analysis.

Another North American study conducted by Bushunow et al. (2021)[34], involving residents in internal medicine and family medicine, demonstrated that 96% of participants considered PC education to be very important for their careers, which may reflect their direct contact with patients at the end of life. However, these same residents rated their PC education during residency as inadequate.[34] Similarly, more than 80% of pediatricians in training evaluated by Wilson et al. (2018)[36] reported having cared for at least one dying patient, yet fewer than half indicated that they had received any formal education in PC.[36]

Given these findings, low self-confidence in PC skills among residents in training becomes evident, as suggested by Harhara et al. (2022)[16], which may negatively impact the care provided to patients at the end of life.[16]

In Brazil, the situation regarding PC education in medicine appears to be consistent with the international scenario. In a self-assessment conducted among resident physicians at Hospital Universitário Lauro Wanderley (HULW), in Paraíba, 97% of participants reported the need to further develop their knowledge of PC through increased educational activities dedicated to the topic during their specialization.[37]

Chart 1. Summary of studies included in the integrative review.

Author, year, and country	Study Type	Participants	Main identified weaknesses	Conclusion
Baylis et al. (2019).[11] Canada.	Cross-sectional.	26 emergency medicine residency programs.	- Prognostication. - Pain and symptom management. - Delivering bad news.	The studied programs cover few PC competencies.
Rodenbach et al. (2020).[12] USA.	Prospective qualitative experimental	42 internal medicine residents.	- Communication of bad news.	The "just-in-time" methodology used in the study improved PC skills among residents.
Moyer et al. (2019).[13] USA.	Cross-sectional.	144 residents from various specialties.	- Pain and symptom management. - Delivering bad news. - Principles of PC.	The instrument created and analyzed in the study shows promise in assessing PC knowledge in medical residency.
Niehaus et al. (2020).[14] USA.	Cross-sectional.	68 pediatric residents.	- Delivering bad news. - Pain and symptom management.	PC competencies acquired during residency were limited.
Schwill et al. (2020).[15] Germany.	Prospective longitudinal.	294 family medicine residents.	- Pain and symptom management. - Delivering bad news.	Lectures proposed in the study promoted a gain in PC competencies among resident physicians.
Harhara et al. (2022).[16] UAE.	Exploratory qualitative.	52 internal medicine residents.	- Pain and symptom management. - Delivering bad news.	Deficiencies were identified in education and confidence in PC skills.
Ibrahim et al. (2022).[17] UAE.	Exploratory qualitative.	7 internal medicine residency programs.	- Principles of PC. - Delivering bad news. - Pain management.	Most programs studied have gaps in the curricular structure regarding PC.
Drees et al. (2019).[18] Saudi Arabia.	Cross-sectional.	433 residents from various specialties.	- Principles of PC. - Pain and symptom management.	Low level of PC knowledge was found among the residents studied.
Benini et al. (2019).[19] Italy.	Cross-sectional.	116 pediatric residents.	- Pain management. - Communication of bad news.	Most residents lack training to handle life-limiting illnesses.
Arora et al. (2020).[20] Canada.	Cross-sectional.	95 intensive care residents.	- Communication of bad news.	Significant educational gaps regarding PC exist during intensive care residency.
Bonanno et al. (2019).[21] USA.	Cross-sectional.	94 general surgery residents.	- Delivering bad news. - Bioethical aspects.	Residents recognize the need for additional structured PC education.
Burmann et al. (2019).[22] Germany.	Cross-sectional.	17 residents from various specialties.	- Communication of bad news. - Pain and symptom management.	6–12 month PC rotations had a positive effect on residents' knowledge.
Harrington et al. (2020).[23] USA.	Prospective longitudinal.	98 residents from various specialties.	- Delivering bad news.	Structured PC training allowed residents to achieve competencies on the subject .
Whitsett et al. (2022).[24] USA.	Cross-sectional.	44 liver transplant residents.	- Bioethical aspects. - Management of psychological symptoms.	Significant gaps exist in PC education during liver transplant residency.

Continue...

Chart 1. Continuation.

Author, year, and country	Study Type	Participants	Main identified weaknesses	Conclusion
Mehta et al. (2018).[25] USA.	Cross-sectional.	49 neurology residency programs.	- Delivering bad news. - Bioethical aspects. - Prognostication.	Gaps in PC knowledge and barriers to improving skills were identified.
Miranda et al. (2020).[26] USA.	Cross-sectional.	62 neurosurgery residents.	- Delivering bad news. - Prognostication.	Additional PC training is needed, especially in communication.
Moyer et al. (2020).[27] USA.	Cross-sectional.	130 internal medicine residents.	- Principles of PC . - Delivering bad news.	A more focused curriculum is needed to help residents master PC competencies by the end of residency.
Nicotra et al. (2021).[28] USA.	Prospective longitudinal.	65 internal medicine residents.	- Prognostication. - Bioethical aspects.	A single didactic session significantly improved residents' PC knowledge.
Frydman et al. (2021).[29] USA.	Cross-sectional.	51 internal medicine residents.	- Pain and symptom management. - Prognostication. - Bioethical aspects. - Delivering bad news.	Significant gaps were observed in PC competencies in the residency curriculum.
Christensen et al. (2023).[30] USA.	Prospective longitudinal.	14 radiation oncology residents.	- Delivering bad news.	Communication skills improved significantly after a brief virtual course.
Wraight et al. (2021).[31] USA.	Cross-sectional.	66 neonatology residents.	- Delivering bad news. - Bioethical aspects. - Pain and symptom management.	PC education is insufficient during specialty training.
Sadigh et al. (2023).[32] Iran.	Prospective longitudinal.	40 emergency medicine residents.	- Prognostication. - Delivering bad news. - Pain and symptom management.	Residents' attitudes toward PC improved after the educational intervention.
Sirakis et al. (2021).[33] USA.	Prospective longitudinal.	25 pediatric residents.	- Principles of PC. - Delivering bad news. - Pain and symptom management.	Skills improved after application of the study's multimodal curriculum.
Bushunow et al. (2021).[34] USA.	Cross-sectional.	91 family medicine and internal medicine residents.	- Pain and symptom management (depression).	PC education was considered poor, while residents acknowledged the importance of learning more about the topic.
Suwanabol et al. (2019).[35] USA.	Cross-sectional.	119 general surgery residents.	- Prognostication. - Delivering bad news.	Various clinical barriers exist that hinder residents from providing effective PC.
Wilson et al. (2018).[36] USA.	Prospective longitudinal.	126 pediatric residents.	- Pain and symptom management. - Delivering bad news.	Most residents had no PC education; satisfaction increased significantly after implementation of the proposed curriculum.
Fernandes et al. (2020).[37] Brazil.	Cross-sectional.	99 residents from various specialties.	- Pain and symptom management. - Delivering bad news.	The study showed relative scarcity of PC knowledge among the residents.

PC: palliative care.

Source: Prepared by the authors.

Table 1. Quantitative distribution of articles by country of origin and medical specialty.

Country of origin	N	N (%)	Medical Specialty	N	N (%)
United States	17	62.9	Internal Medicine	10	37.0
Canada	2	7.4	Pediatrics	6	22.2
Germany	2	7.4	Family Practice	5	18.5
United Arab Emirates	2	7.4	General Surgery	5	18.5
Brazil	1	3.7	Emergency Medicine	3	11.1
Saudi Arabia	1	3.7	Anesthesiology	3	11.1
Italy	1	3.7	Obstetrics and Gynecology	2	7.4
Iran	1	3.7	Intensive Care Medicine	2	7.4
			Radiation Oncology	2	7.4
			Psychiatry	2	7.4
			Oncology	1	3.7
			Liver Transplantation	1	3.7
			Neurology	1	3.7
			Neurosurgery	1	3.7
			Neonatology	1	3.7

N: absolute number of articles; N (%): percentage of total articles.
Source: Prepared by the authors.

Table 2. Distribution of palliative care topics most frequently cited as deficient in the reviewed articles.

Main PC topics identified as deficient during residency	N	N (%)
Delivering bad news	23	85.1
Pain management	16	59.2
Management of other symptoms	15	55.5
Prognostication	7	25.9
Bioethical aspects	6	22.2
Principles of PC	5	18.5

N: absolute number of articles; N (%): percentage of total articles; CP: palliative care.
Source: Prepared by the authors.

Regarding the main causes of this curricular scarcity in PC, Baylis et al. (2019)[11] identified limited time due to the demanding workload of residency programs, a finding consistent with that of Mehta et al. (2018)[25], who additionally highlighted the lack of adequately qualified faculty in palliative medicine.[25]

In contrast to this deficiency in training, it is recognized that, to provide high-quality care to patients with terminal illnesses, physicians must develop competencies across multiple domains of PC. In this context, in 2013, EAPC described a consensus, still widely used as a model in international studies, on the core PC competencies to be acquired by all healthcare professionals, regardless of their area of practice or specialization. These competencies include the ability to provide the best possible care in the context of life-threatening illness, to support patient autonomy, and to ensure dignity and quality of life and death. Furthermore, all professionals should develop effective communication skills, maintain strong interprofessional relationships, and engage in ongoing continuing education.[38]

Specifically regarding the medical field, the EAPC document was revised in 2020 through a large European multicenter study, which consolidated six essential domains of knowledge in PC for clinical practice. These domains can be described as the core competencies to be achieved[39]:

I. Acquiring knowledge of the principles of palliative care;

II. Performing appropriate management of pain and other symptoms;
III. Addressing spiritual and psychosocial aspects;
IV. Anticipating and addressing ethical and legal issues;
V. Developing interpersonal and communication skills for delivering bad news;
VI. Working in a multidisciplinary manner, engaging in self-assessment and promoting continuing education.

Among the listed competencies, the one most frequently cited in the studies included in this review was number five: "Developing interpersonal and communication skills for delivering bad news." More than half of the authors emphasized the importance of effective interprofessional communication, as well as communication between physicians and patients or their family members. As reported by Suwanabol et al. (2019)[35], general surgery residents in Michigan, United States, reported feeling insecure when delivering bad news to patients with serious illnesses. They also perceived a lack of feedback from preceptors regarding residents' communication skills[35], findings consistent with those described by Miranda et al. (2019)[26] among neurosurgery residents in the United States.[26]

When considering clinical specialties, the identified studies further reinforce this discussion. Rodenbach et al. (2020)[12] investigated second- and third-year internal medicine residents at a large North American hospital and found that the most prominent demand presented in end-of-life discussion sessions was related to communication with patients and their families[12]

Consolidating the observations of other authors, Harrington et al. (2019)[23] demonstrated that the low level of comfort in communication is associated with the limited exposure of residents to environments that provide specialized end-of-life care. These findings underscore the urgency of curricular reform in medical residency programs, as the same authors emphasize that the Accreditation Council for Graduate Medical Education (ACGME), the body responsible for accrediting all postgraduate medical programs in the United States, identifies communication skills, the management of patients with serious illnesses, and advance care planning as mandatory learning components for virtually all medical specialties.[23]

The second and third most frequently cited themes in PC identified in this review were pain management and the management of non-pain symptoms, respectively. Considering the strong influence of not only physical factors but also emotional, social, and spiritual dimensions in the experience of pain and other symptoms, as originally proposed by Cicely Saunders, these themes can be framed within the second and third medical competencies defined by EAPC.[38,40]

In summary, these two competencies encompass the skills that healthcare professionals must possess to manage the physical, psychological, social, and spiritual symptoms experienced by patients throughout the course of illness, thereby ensuring the highest possible level of comfort.[38]

Drees et al. (2019)[18] observed that more than 40% of residents in core specialties (internal medicine, obstetrics and gynecology, general surgery, and pediatrics) in the eastern region of the United Arab Emirates lacked adequate skills in the appropriate management of pain. Furthermore, more than 50% of these residents identified the management of their patients' psychological symptoms as their greatest difficulty.[18]

In line with these findings, Moyer et al. (2020)[27] demonstrated that, among the competencies assessed in their study, pain and other symptom management yielded the lowest performance scores among residents in internal medicine and family medicine, which may compromise the quality of life of patients with advanced diseases.[13]

Conversely, Whitsett et al. (2022)[24] reported the perceptions of liver transplant fellows at the University of Pennsylvania, a subspecialty that requires prior residency training and greater clinical experience.

In this study, 69% of physicians in training reported having completed a rotation in a palliative care setting. Nevertheless, 30% did not feel comfortable managing anxiety and depression, and 34% did not feel prepared to address patients' spiritual distress. Another relevant finding was that most fellows expressed a desire for additional training in the management of emotional symptoms.[24]

Continuing this discussion, learning related to the fundamental principles of palliative care, emphasized by EAPC as its first core competency, was also addressed in the studies included in this review. Wraight et al. (2021)[31] reported an unsatisfactory educational experience among neonatology residents at the University of Wisconsin–Madison, 70% of whom indicated that they had not received formal instruction on the principles of PC during their specialization.[31] Similarly, in the study conducted by Moyer et al. (2020)[27], this competency was the second lowest-scoring domain among the residents evaluated[13].

A clear understanding of these fundamental concepts is essential for physicians to accurately identify and triage their patients' care needs. As highlighted by Nicotra et al. (2021)[28], few internal medicine residents were able to determine when a patient would be eligible for Hospice Care, that is, palliative care directed toward the final six months of life, thereby delaying early referral to specialized services focused on promoting quality of life.[28]

In addition to mastering the fundamental principles of PC, demonstrating effective communication, and appropriately managing symptoms in patients at the end of life, the care of individuals with serious illnesses requires physicians to develop skills aligned with competency number four of EAPC: "anticipating and addressing ethical and legal issues."[35] In this context, residents must demonstrate proficiency in diagnosis, prognosis, and therapeutic decision-making based on the preferences of patients and/or their families, while respecting the principles of bioethics.

The literature indicates, however, that the development of these skills remains insufficient. Arora et al. (2020)[20], for example, described the difficulty experienced by resident physicians in establishing accurate prognoses and communicating this information during discussions with patients, which may compromise the care plan.[20] Similarly, Frydman et al. (2021)[29] reported that one-third of the internal medicine residents evaluated considered themselves to have insufficient skills in establishing prognoses, which was identified as a source of stress during patient encounters.[29] Furthermore, 23% of residents reported never having documented advance care planning in medical records, a proportion comparable to that identified by Whitsett et al. (2022).[24]

Finally, competency number six was also identified in the review, emphasizing the practice of critical self-assessment and a commitment to continuing education as essential elements for professional development and the consequent improvement in the care of patients at the end of life. Considering the importance of self-assessment during training, Moyer et al. (2019)[27] developed and validated an instrument composed of two components, a knowledge assessment and a self-efficacy measure, addressing fundamental PC competencies in residents, with the aim of monitoring professional development throughout medical specialization.[27]

With regard to continuing education, various teaching modalities have been described in the literature with the aim of expanding the knowledge of resident physicians. Active, passive, and mixed methodologies are among those analyzed in medical specialization programs. An example of an active methodology, applied by Rodenbach et al. (2020)[12], is the *just-in-time* approach, in which internal medicine residents presented questions arising from their clinical practice, in the form of specific topics, to be discussed with PC specialists during brief sessions. As a result of this intervention, a 57.3% increase in documentation in medical records related to care plans and the limitation of invasive procedures was observed.[12]

Using a different approach, Christensen et al. (2023)[30] provided twelve hours of virtual training for radiation oncology residents. The intervention consisted of brief didactic sessions, with an emphasis on guided practice in small groups using simulated patients in specialty-specific scenarios. The study concluded that residents demonstrated a significant improvement in communication skills following participation in the training.[30]

Adopting a more innovative approach, Sirakis et al. (2021)[33] implemented a PC curriculum for 25 pediatric residents in New York that incorporated methodologies such as seminars, role-playing, videos, case discussions, small-group activities, simulation, poetry, and reflective exercises. At the end of the training period, residents reported increased comfort and improved knowledge of the components of PC. Additionally, 74% of participants were able to identify, in the care of their patients, the application of at least one skill acquired during the training.[33]

In parallel, passive learning methodologies, such as lectures, as applied by Schwall et al. (2020)[15] and Sadigh et al. (2023)[32], have also demonstrated a positive impact on PC education. In both studies, more than half of the participating residents showed an increase in experience related to PC following the interventions.[15,32]

Considering the points discussed, it is evident that the increasing recognition of PC across medical practice necessitates that resident physicians acquire mastery of the essential competencies outlined in this study by the end of their specialization, in order to enhance comprehensive care for their patients — particularly those at the end of life. To achieve this goal, a variety of teaching and training methodologies can be incorporated into the curriculum of medical residency programs.[12,27]

Furthermore, the integrative review identified only a single Brazilian study that met the inclusion criteria, highlighting a significant gap in research on PC education within the context of medical residency in Brazil. In this regard, the recent approval of the National Palliative Care Policy represents a critical milestone for promoting research and, consequently, the development of more robust educational guidelines. These guidelines can be aligned with both the specific needs of the country and international evidence, thereby providing a consistent foundation for enhancing PC within medical residency curricula.[9]

CONCLUSION

Most of the medical residency programs analyzed in this review revealed curricular gaps in PC training. Consequently, residents reported feeling unprepared to care for patients with serious and life-threatening illnesses. Among the competencies identified as most in need of instruction and feedback during residency were the communication of bad news, pain management, and the management of other symptoms.

Given that the curricular content in PC remains substantially below what is required, this article concludes that it is essential to integrate fundamental educational tools into medical residency programs to enhance the competencies of physicians in training for addressing the challenges of end-of-life care.

Furthermore, it emphasizes the need to expand research on PC in Brazil, a country with a world-renowned healthcare system that nevertheless continues to occupy an unsatisfactory position in providing care during the dying process.

CONFLICT OF INTERESTS

Nothing to declare.

AUTHORS' CONTRIBUTIONS

BLVL: Conceptualization, Data curation, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing. JRDSJ: Conceptualization, Data curation, Methodology, Supervision, Validation, Visualization, Writing – review & editing. MMDSD: Conceptualization, Data curation, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing. ZDRC: Formal analysis, Methodology, Supervision, Validation, Visualization, Writing – review & editing. MJGDM: Conceptualization, Data curation, Formal analysis, Methodology, Supervision, Validation, Visualization, Writing – review & editing.

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