

Knowledge and Attitudes of Emergency Medical Service Nurses Toward Palliative Care: A Cross-Sectional Study in Šibenik-Knin County, Croatia

Znanja i stavovi medicinskih sestara Hitne medicinske službe u Šibensko-kninskoj županiji o palijativnoj skrbi: presječno istraživanje

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Sažetak

Uvod: Opseg intervencija hitne medicinske pomoći obuhvaća i hitne slučajeve povezane s palijativnom skrbi. Intervencijom hitne pomoći može se značajno smanjiti patnja pacijenata s intenzivnim simptomima pružajući ključnu podršku u kritičnim trenucima kako bi se pacijentu osigurao dostojanstven život do smrti.

Cilj: Cilj istraživanja bio je ispitati znanja i stavove medicinskih sestara Hitne medicinske službe u Šibensko-kninskoj županiji o palijativnoj skrbi.

Metode: Provedeno je presječno istraživanje putem anonimnog anketnog upitnika od siječnja do listopada 2022. godine u Šibensko-kninskoj županiji. Istraživanjem su obuhvaćena 54 ispitanika, zaposlenika Hitne medicinske službe. Upitnik je sadržavao sociodemografska pitanja, 10 pitanja iz validiranog instrumenta *Palliative Care Quiz for Nurses* (PCQN) te dodatno konstruirana pitanja o stavovima ispitanika prema palijativnoj skrbi za potrebe ovog istraživanja.

Rezultati: U istraživanju su sudjelovala 54 ispitanika, od kojih 36 žena i 18 muškaraca. Samo jedan ispitanik postigao je više od 75 % točnih odgovora (dobro znanje), dok je 37,03 % imalo dostatno znanje o palijativnoj skrbi. Stavovi ispitanika većinom su pozitivni.

Zaključak: Rezultati ukazuju na nedostatno znanje o palijativnoj skrbi među ispitanicima, što može utjecati na kvalitetu pružene skrbi. Preporučuje se kontinuirana edukacija iz područja palijativne skrbi za djelatnike hitne medicinske službe. Takav pristup mogao bi doprinijeti boljem razumijevanju potreba bolesnika i njihovih obitelji te osigurati kvalitetniju skrb.

Ključne riječi: sestrinstvo, palijativna skrb, hitna služba

Kratak naslov: Znanje o palijativnoj skrbi

Abstract

Introduction: Palliative care is an increasingly important aspect of healthcare, particularly in emergency medical services (EMS), where professionals often encounter patients with advanced illnesses and complex symptoms. The role of nurses is crucial in identifying needs and providing appropriate interventions.

Aim: This study aimed to assess the level of knowledge and review the attitudes of nurses in the Institute of Emergency Medicine of the Šibenik-Knin County regarding palliative care.

Methods: A cross-sectional study was conducted from January to October 2022 using an anonymous questionnaire. The study included 54 EMS employees. The questionnaire consisted of three parts: sociodemographic data, 10 questions from the validated *Palliative Care Quiz for Nurses* (PCQN), and a set of author-designed questions assessing attitudes towards palliative care.

Results: Only one respondent achieved over 75% correct answers, while 37.03% showed sufficient knowledge. The majority of respondents demonstrated a positive attitude towards palliative care.

Conclusion: Findings reveal insufficient knowledge of palliative care among EMS nurses, which may compromise the quality of care. Additional training in palliative care is recommended to enhance the effectiveness of EMS teams in supporting palliative patients.

Keywords: nursing, palliative care, emergency medical services

Short title: Knowledge about palliative care

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Introduction

Palliative care is a specialized medical approach aimed at improving the quality of life for patients with serious, life-limiting illnesses. This care addresses not only physical symptoms but also psychosocial and spiritual concerns. The World Health Organization's definition emphasizes the prevention and relief of suffering through early identification, accurate assessment, and treatment of pain and other

distressing problems. Such an approach is widely endorsed and is considered an integral part of holistic, patient-centered care across diverse healthcare settings [1].

As global health systems face the increasing burden of chronic, life-limiting diseases—partly driven by an aging population—there is a pressing need to embed palliative services within mainstream healthcare. Recent research

indicates a rising global demand for palliative care, essential for meeting complex patient needs through innovative and patient-centered interventions [2]. Additionally, the importance of aligning medical interventions and care planning with the specific goals and values of patients and their families has been highlighted, establishing a framework for enhancing access to high-quality, holistic care [3]. Current evidence supports the view that palliative care addresses physical, psychosocial, and spiritual suffering and is a critical component of modern healthcare. Integrating palliative care into healthcare delivery systems enhances the quality of life for patients facing severe illnesses and optimizes resource utilization in increasingly strained global health environments [4].

Emergency Medical Services (EMS) traditionally prioritize life-saving interventions; however, recent studies underscore their emerging role in addressing palliative care needs during acute exacerbations of advanced chronic illnesses. This dual role is becoming increasingly important as patients experiencing severe, life-limiting conditions may present with pressing symptom burdens that require more than resuscitative measures [5]. Research indicates that palliative emergencies, although relatively uncommon in frequency—with one study reporting approximately 2.8% of callouts being palliative care-related—demand a nuanced approach that goes beyond aggressive interventions [5]. In such contexts, emergency teams are increasingly tasked with managing symptoms and ensuring comfort for patients and their families. The integration of palliative care expertise into emergency departments (EDs) is a growing trend, exemplified by models such as the Emergency Department Palliative Care (ED-PALS) initiative.

These models have demonstrated the potential to enhance patient care through expedited symptom management, appropriate patient placement, and coordinated follow-up care. Current evidence supports the assertion that this structured integration not only improves the overall experience for patients with serious illnesses but also aligns treatment strategies with patient goals and values [6].

Surveys and interviews with emergency physicians have consistently highlighted the benefits of enhanced palliative care training, indicating that greater expertise in symptom management, end-of-life communication, and decision-making can significantly improve patient and caregiver experiences [7, 8]. Recent literature reinforces that emergency interventions rooted in palliative care practices can facilitate advanced care planning and adherence to patients' wishes during crises, ultimately contributing to more humane and tailored care delivery [9].

While EMS continues to serve as the frontline for acute interventions, there is a clear and growing impetus to incorporate palliative care strategies into their practice. The development of palliative care in Croatia has become more intensive and structured after the National Strategy for Palliative Care was issued by the Ministry of Health in 2014, which emphasizes its integration across all levels of the healthcare system, including primary care and emergency services. This strategic framework was designed to enhance interdisciplinary collaboration and build a scalable

model for palliative care delivery. However, despite these policy initiatives, the literature reveals a gap in empirical data regarding the preparedness of Emergency Medical Services (EMS) professionals—particularly nurses—to deliver palliative care in prehospital settings [10]. Emerging evidence from international studies underscores the imperative of formal educational interventions for EMS professionals to overcome identified barriers, such as limited exposure to palliative care scenarios and a predominantly curative care mindset [11]. This gap in preparedness is particularly significant given the evolving role of prehospital care in addressing not only acute clinical crises but also the broader palliative needs of patients with advanced chronic illnesses.

Nurses play a vital role in the delivery of emergency healthcare services. Their knowledge, competencies, and attitudes significantly influence the quality of care provided to patients requiring palliative care and support. Improving EMS personnel's preparation for challenging situations within palliative care could lead to enhanced patient comfort, more attuned symptom management, and improved overall quality of care [12, 13].

Therefore, this study aimed to assess the knowledge and attitudes of nurses working in the Emergency Medical Service of Šibenik-Knin County regarding palliative care. It was hypothesized that most participants would demonstrate adequate knowledge and that the majority would support the role of emergency medical interventions in alleviating the suffering of palliative patients.

Methods

Study design

This study employed a cross-sectional, quantitative design to examine the knowledge and attitudes of nurses regarding palliative care.

Participants

Participants were nurses employed by the county's EMS at the time of the study. Inclusion criteria were current employment in the EMS and voluntary consent to participate in the study. A total of 54 participants completed the questionnaire. Participation was anonymous and voluntary.

Data collection and study tool

The research was conducted within the Emergency Medical Service (EMS) of Šibenik-Knin County, Croatia, between January and October 2022. The questionnaire was distributed in printed form to eligible participants during regular work shifts. All participants received written information about the purpose of the study and provided implied consent by returning completed questionnaires.

Data were collected using a structured, three-part questionnaire. Part 1 gathered sociodemographic data, including age, gender, educational background, and years of work experience. Part 2 assessed knowledge using 10 selected items from the validated *Palliative Care Quiz for Nurses* (PCQN), a widely used instrument developed to evaluate

nurses' theoretical knowledge of palliative care [14]. Each item required a true/false response, with an option to select "I don't know". A score of 75% or higher was classified as "good knowledge," while 50–74% was considered "sufficient knowledge." Part 3 explored participants' attitudes and opinions regarding palliative care through a set of statements developed specifically for this study. These items focused on perceptions of the EMS role in palliative care, ethical considerations, and professional responsibilities. Responses were measured using a Likert-type scale ranging from "strongly disagree" to "strongly agree."

Ethical considerations

The study was approved by the Emergency Medical Service (EMS) of Šibenik-Knin County. Anonymity and confidentiality were maintained throughout the research process.

Data analysis

Collected data were analyzed using descriptive statistics. Frequencies and percentages were calculated for categorical variables. Data analysis was performed using MS Excel software.

Results

Participant characteristics

A total of 54 participants were included in the study, comprising 36 women (66.7%) and 18 men (33.3%). The majority held a secondary nursing education, while a smaller proportion had completed higher education. Participants' years of professional experience varied widely (Table 1).

TABLE 1. Distribution of participants by gender, work experience, and education level

Variable	N	%
Gender		
Male	18	33
Female	36	66
Work experience		
< 5 years	15	28
> 5 years	39	72
Education		
Secondary school	38	70,4
Undergraduate degree	16	29,6

Knowledge of palliative care

The results revealed generally low levels of knowledge regarding palliative care. A total of 20 participants (37.03%) demonstrated *sufficient knowledge* (50–74% correct answers), while the remaining participants scored below 50%, indicating *insufficient knowledge* (Tables 2 and 3).

TABLE 2. Knowledge levels on palliative care based on PCQN scores (N = 54)

Knowledge Level	Score Range	N (%)
Good knowledge	≥75%	1 (1.85%)
Sufficient knowledge	50–74%	20 (37.03%)
Insufficient knowledge	<50%	33 (61.11%)

Table 3. Distribution of responses to selected knowledge items (N = 54)

Statement	Correct (%)	Incorrect (%)	Not sure (%)
Palliative care is only appropriate when disease exacerbation occurs.	20 (37.04)	14 (25.93)	20 (37.04)
The extent of illness determines how pain should be treated.	12 (22.22)	22 (40.74)	20 (37.04)
People taking opioids must also take laxatives.	30 (55.56)	10 (18.52)	14 (25.92)
Drugs that may cause respiratory depression are appropriate for treating severe dyspnea in the terminal stage.	21 (38.89)	11 (20.37)	22 (40.74)
Men cope with grief more easily than women.	28 (51.85)	12 (22.22)	14 (25.92)
Suffering and physical pain are one and the same.	33 (61.11)	10 (18.52)	11 (20.37)
Dolantin (pethidine) is not effective for treating chronic pain.	28 (51.85)	14 (25.92)	12 (22.22)
The manifestations of chronic pain differ from those of acute pain.	29 (53.70)	13 (24.07)	12 (22.22)
The loss of someone we are not close to is easier to bear than the loss of a close person.	24 (44.44)	16 (29.63)	14 (25.92)
Anxiety or fatigue lowers the pain threshold.	20 (37.04)	20 (37.04)	14 (25.92)

Attitudes toward palliative care

Participants generally demonstrated positive attitudes toward palliative care. The majority agreed that EMS interventions aimed at alleviating suffering in palliative patients are justified and necessary. There was general support for the role of EMS in providing symptom relief and dignified care for terminally ill patients in acute situations (Table 4).

TABLE 4. Participants’ opinions and attitudes toward patients requiring palliative care

Statement	Agree	Disagree
Moral distress in nursing is the inability to act according to one’s moral beliefs.	50	4
Palliative patients experience more intense emotional reactions than other patients.	30	24
Nurses should advocate for the wishes of dying patients.	40	14
Nurses should have sufficient knowledge of symptom management during the dying process.	44	10
Dying patients should be provided with the best possible care.	50	4
Autonomy, justice, beneficence, and non-maleficence are fundamental principles of nursing ethics.	40	14
It is justified to call emergency services if a dying person experiences symptom exacerbation.	50	4
EMS intervention alleviates the suffering of palliative patients.	40	14

Discussion

This study aimed to assess the knowledge and attitudes of emergency medical service (EMS) nurses regarding palliative care in Šibenik-Knin County, Croatia. The findings revealed substantial knowledge gaps alongside generally positive attitudes, offering important insights into the current state of preparedness among EMS professionals to provide palliative care in urgent prehospital settings. The overall level of palliative care knowledge among participants was notably low. Only 1.85% of the participants achieved a “good” knowledge score ($\geq 75\%$), while 61.11% demonstrated insufficient knowledge (below 50%). These findings are consistent with evidence from previous studies that have documented limited palliative care education among healthcare providers working in acute care settings, particularly within Emergency Medical Services (EMS).

Previous research has shown that EMS personnel frequently operate within an environment that prioritizes life-saving interventions, with little formal integration of palliative care principles. Carron et al. [15] reported that most emergency providers express limited understanding and confidence when faced with scenarios within palliative care. Their study highlighted a significant educational gap: EMS professionals are generally not exposed to comprehensive palliative care training during their initial education or through continuing professional development. This lack of training contributes to uncertainty in decision-making, inconsistent practices, and inadequate symptom management when dealing with patients who have advanced, life-limiting illnesses.

Similarly, Gage et al. [12] examined the perspectives of paramedics in South Africa and found that a majority felt unprepared to provide palliative care in prehospital settings. The study documented concerns regarding end-of-life communication, management of distressing symptoms, and ethical dilemmas that frequently arise in acute settings. This study reinforces the notion that without structured educational interventions, EMS providers remain under-equipped to handle the palliative care needs of their patients. Additionally, Goldonowicz et al. [16] explored the level of palliative care competencies among emergency department clinicians. Their findings indicate that a lack of exposure to palliative care concepts during professional

training translates into diminished confidence and competence in addressing the holistic needs of patients in crisis. They further advocated for the implementation of focused educational programs to bridge this knowledge gap, a recommendation equally pertinent for EMS professionals.

Our research findings indicate that only a quarter of participants correctly disagreed with the statement “The extent of illness determines how pain should be treated.” This result suggests a prevalent misunderstanding among EMS personnel regarding the fundamental principle of individualized pain management. In palliative care, the approach to pain management should be tailored to the patient’s symptoms, preferences, and overall clinical context rather than solely determined by the severity or stage of the underlying illness [15, 16]. The misinterpretation evident in our findings likely reflects broader educational gaps, where training does not sufficiently emphasize the nuances of pain assessment and the need to consider factors such as patient-reported outcomes and quality of life indicators. Furthermore, our study revealed high levels of uncertainty and frequent incorrect responses concerning the use of opioids and respiratory depressants in end-of-life care. This observation is particularly concerning given that these pharmacological agents are central to effective symptom control in palliative scenarios. The challenge is compounded by ethical considerations; for instance, the careful balancing act required when using opioids to alleviate pain while avoiding undue respiratory depression. Inadequate knowledge in these areas may result in hesitancy, inconsistent practices, and ultimately suboptimal patient care. Similar findings have been reported in other studies, wherein EMS personnel and acute care providers expressed discomfort with opioid use and a lack of confidence in managing the ethical complexities associated with end-of-life pharmacotherapy [13].

Despite evident deficits in formal palliative care knowledge among EMS personnel, the attitudes expressed in our study were notably positive. A majority of participants agreed that EMS interventions to alleviate suffering are both justified and necessary, and they supported the role of emergency services in ensuring comfort and dignity for terminally ill patients. This positive alignment with the core

goals of palliative care indicates that, even in the absence of comprehensive formal training, EMS professionals value and recognize the importance of integrating palliative principles into their practice. This finding aligns with previous research indicating that while EMS providers may lack extensive didactic preparation in palliative care, their experiential insights and compassionate commitment often drive them to support interventions aimed at alleviating patient distress [15]. For instance, studies have shown that EMS personnel frequently encounter situations involving end-stage illnesses and, in doing so, develop an inherent appreciation for the principles of comfort care and dignified patient management—even if their response strategies may not always be grounded in formal palliative care education [12].

In these contexts, the willingness of EMS providers to engage in palliative interventions can be seen as an intrinsic component of patient-centered care, emphasizing empathy and respect for patient autonomy.

Moreover, qualitative investigations into the perspectives of emergency clinicians have highlighted that ethical and compassionate considerations often motivate EMS professionals to intervene beyond traditional curative measures, especially when dealing with patients nearing the end of life [13, 16]. These studies suggest that positive attitudes toward palliative care are prevalent, even in settings where there is limited structured exposure to palliative care protocols. This convergence of positive attitudes and the overarching goal of palliative care underscores the potential for educational interventions to build on these intrinsic values. By leveraging the existing ethical commitment toward alleviating suffering, educators and policymakers might more effectively integrate palliative care competencies into EMS training curricula, ultimately enhancing the quality of care for terminally ill patients in their homes or nursing homes.

The findings of this study have several practical implications. First, they highlight an urgent need for the incorporation of structured palliative care education into both undergraduate and continuing professional development

programs for EMS personnel. Second, the observed openness to palliative care principles provides a strong foundation for the successful implementation of interdisciplinary care protocols in emergency settings. Finally, educational efforts should emphasize symptom recognition, ethical decision-making, and effective communication with patients and families in crises.

This study has several limitations. The sample size was relatively small and based on a convenience sampling method, which may limit the generalizability of the findings. Additionally, only a subset of ten items from the original Palliative Care Quiz for Nurses (PCQN) was used to assess knowledge, which may not fully capture the breadth of palliative care competencies. The questions in the questionnaire and the respondents' answers may point to some important facts related to the competencies required for work in general palliative care and the need for further education. However, the selected questions used in this study cannot provide an accurate frame of the level of knowledge about palliative care that nurses in emergency services should possess.

Conclusion

The findings of this study indicate that while emergency medical service (EMS) nurses in Šibenik-Knin County generally expressed positive attitudes toward palliative care, their overall level of knowledge was insufficient. The hypothesis that most participants would demonstrate adequate knowledge was not confirmed. These results suggest that current education and training may not adequately prepare EMS personnel to provide palliative care in urgent situations. The majority of the participants agreed that EMS interventions aimed at alleviating suffering are justified and necessary, confirming the hypothesis related to attitudes toward the role of EMS in palliative care.

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Authors declare no conflict of interest.

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