

BMJ Open Emergency medical services and palliative care: protocol for a scoping review

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ABSTRACT

Introduction The purpose of emergency medical services (EMS) is to preserve life and limb in emergency situations. Palliative care, however, is not concerned with ‘life-saving’ measures, but the prevention and relief of suffering. While these care goals appear to conflict, EMS and palliative care may be complementary if integrated. The aim of this scoping review is to map existing literature concerning EMS and palliative care by identifying literature types, extracting key findings and noting limitations using descriptive analysis.

Methods and analysis The framework of Arksey and O’Malley will direct this review. The following databases will be searched: MEDLINE via PubMed, Web of Science, CINAHL, Embase and PsycINFO. In addition, the University of Cape Town Thesis Repository and Google Scholar will be searched for relevant grey literature. Empirical studies concerning EMS and palliative care published between January 2000 and September 2021 will be included. Article selection will be performed and presented in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews checklist. Extracted data from included articles will undergo descriptive analysis with findings being reported in a discussion format.

Ethics and dissemination This review will identify and describe existing literature concerning EMS and palliative care, highlighting key findings and knowledge gaps in the subject area. Findings will be disseminated to relevant stakeholders through peer-reviewed, open-access journal publication. As no participants will be involved and selected literature is publicly available, no ethical approval will be required.

INTRODUCTION

The role of emergency medical services (EMS) in out-of-hospital patient management has evolved rapidly in recent years to include more intricate and integrated forms of healthcare beyond just emergency care.¹ For example, EMS systems have played increasingly important roles in the provision of community-based primary healthcare.² As part of this community care, there has recently been a greater recognition of the role EMS systems play in the provision of palliative care.^{2–5} The growing body of literature in this field recommends EMS and palliative systems should integrate to improve palliative care provision in the out-of-hospital setting.^{6–8}

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ A thorough search string will be piloted and employed in conjunction with a wide range of databases, meeting recommendations for optimal combinations and providing a comprehensive view of existing literature.
- ⇒ The performance and report of the review will be done according to the quality standards of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews checklist.
- ⇒ Limitations to this review may include those common to scoping reviews such as human error in article selection.
- ⇒ As a formal risk of bias assessment will not be performed, data reliability will not be evaluated.

The World Health Organisation (WHO) defines palliative care as ‘an approach that improves the quality of life (QoL) of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.’⁹ Typically, existing literature involving EMS and palliative care focuses heavily on end-of-life (EoL) care.^{10–13} Based on the WHO definition, however, palliative care includes a wide variety of situations such as chronic/life-limiting illnesses, EoL care and any condition (physical, psychosocial, spiritual) which may cause suffering.⁹

EMS systems are designed to manage patients in the out-of-hospital environment and provide transport to definitive care, as well as provide interfacility transfer services.^{14,15} The purpose of EMS is to preserve life and limb in medical and traumatic emergencies.¹⁶ EMS management of these emergencies involves application of immediate, ‘life-saving’ measures followed by conveyance to a medical facility for definitive care.^{17,18}

Unlike EMS systems, however, palliative care is not primarily concerned with ‘life-saving’ interventions or medical facility-based



definitive care.¹⁶ Rather, palliative care is focused on prevention and relief of suffering, thereby allowing patients to live, and die, with dignity.⁹ It does not seek to shorten or prolong life, but enhance its quality.^{9 19} This involves psychosocial and spiritual care, management of symptoms (ie, pain, nausea), support for complex decision-making (ie, advance care planning), respect of patient autonomy and coordination of care across multiple health settings making use of a multidisciplinary care team.^{9 20 21}

Despite recommendations, palliative care is rarely integrated with EMS systems. Typically, palliative care does not form part of EMS training or patient management and palliative care systems seldom make formal use of EMS to deliver care.^{10 13 20} This may be due to the apparent conflict between EMS and palliative care goals.

Although there is a disconnect between EMS and palliative care, the two often intersect.^{5 6 8 12} EMS are called to assist patients with palliative care needs in emergency situations and transfer these patients between facilities.⁵ As they progress towards EoL, patients receiving palliative care often experience increasingly worse symptoms.^{7 19} This has been shown to result in patient, family and caregiver distress.¹⁰

The problems arising from the lack of EMS and palliative care system integration become evident when EMS are called to manage palliative situations. These problems are disregarding of patient autonomy, performance of aggressive, futile interventions and overall poor management of those requiring a palliative approach to care by EMS providers.^{11 20 22}

While their respective care goals may seem to clash, EMS and palliative care may, in fact, complement one another if integrated.²² Potential benefits include delivery of early palliative care, provision of home-based care, respect of patient autonomy, improved patient and family QoL, satisfaction and confidence, decreased healthcare costs and setting of correct trajectory of care.^{3 6 16}

Given the growing body of literature concerning EMS and palliative care, as well as the potential benefits of integration, there is a need to review the existing research on the topic. Thus, the aim of this proposed scoping review is to map existing literature concerning EMS and palliative care by identifying literature types, extracting key findings and noting limitations using descriptive analysis. It is anticipated that the findings of this scoping review will provide a summary of current evidence, context for potential palliative care and EMS system integration and identify knowledge gaps for future research.

METHODS AND ANALYSIS

Scoping review

This protocol is for a scoping review of literature concerning EMS and palliative care. This methodology was selected as it outlines current evidence and identifies knowledge gaps. The methodological framework of Arksey and O'Malley will direct this review.²³ Their five

steps for scoping reviews will be followed: (1) identifying the research question, (2) identifying relevant studies, (3) selecting eligible studies, (4) charting data, (5) collating, summarising and reporting results.²³ The optional sixth step of expert consultation will not be included as this review forms the first part of an overarching thesis in which expert consultation will be subsequently performed. As this review aims to simply map existing literature, in-depth quality appraisal of eligible studies will not be performed, though limitations of eligible studies will be noted.

Identifying the research question

The primary research question is 'what literature exists concerning EMS and palliative care?'

The subquestions relating to eligible studies are:

1. What types of literature exist concerning EMS and palliative care?
2. What are the key findings in the literature concerning EMS and palliative care?
3. What knowledge gaps are present in the literature concerning EMS and palliative care?

Identifying relevant studies

An a priori search strategy, developed in line with the recommendations of Aromataris and Riitano, will be used.²⁴ This strategy will employ keyword (ie, palliative care, EMS, paramedic, out-of-hospital, hospice, end of life) combinations and their synonyms (see online supplemental material 1). Making use of this strategy, the following databases will be searched: MEDLINE via PubMed, Web of Science, CINAHL, Embase and PsycINFO. The University of Cape Town Thesis Repository and Google Scholar will be searched to include relevant grey literature. The searching of these databases will meet the recommendation of Bramer *et al* for optimal database combinations.²⁵ Furthermore, the inclusion of Embase, CINAHL and PsycINFO may provide access to unique palliative care literature not indexed in MEDLINE as highlighted by Tieman *et al*.²⁶ Additional relevant studies will be identified from hand-searching reference lists of eligible articles.

The search strategy will be piloted to ensure appropriateness of keyword combinations in the selected databases.

Selecting eligible studies

Selection of eligible studies will be performed against the following inclusion and exclusion criteria:

Inclusion criteria: empirical English studies involving human populations published between 1 January 2000 and 28 September 2021 concerning EMS and palliative care will be included in the study. Relevant grey literature will also be included. The combination of or interplay between EMS and palliative care should be the primary focus of included articles.

Exclusion criteria: studies involving the in-hospital setting, including emergency departments, those where the full text is unobtainable, editorial and discussion

articles, opinion papers and studies involving exclusively EMS or palliative care will be excluded.

All articles identified from the initial search will be uploaded to Mendeley reference software²⁷ where duplicates will be removed. After duplication removal, remaining articles will be exported to the Rayyan web application²⁸ where two authors (CHG and CS) will independently screen titles and abstracts for inclusion or exclusion. CHG and CS will then screen the full texts of included articles for final inclusion in the scoping review. This process will be overseen by authors LG and WS who will be consulted if discrepancies exist, which cannot be resolved by discussion between CHG and CS. The degree of agreement between CHG and CS will be calculated and reported.

This selection process will be performed and presented in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews checklist (see online supplemental files 2 and 3).^{29–30} Selection of studies is expected to be completed within 12 weeks.

Charting data

An a priori data extraction matrix will be used to gather the following data from each included study, which will be charted by CHG making use of Microsoft Word/Excel (Microsoft Corporation, Redmond, Washington, USA):

1. Title and authorship
2. Publication year
3. Origin/country where performed
4. Aims/purpose
5. Population and sample size where applicable
6. EMS palliative care training
7. Methodology
8. Outcomes/conclusions
9. Significant findings concerning the intersection of palliative care and EMS
10. Limitations

To ensure consistency in application of this data extraction matrix, CS and WS will double-code 10% of included articles.

Collating, summarising and reporting results

The extracted data from included articles will undergo descriptive content analysis identifying major topics through an inductive-dominant approach, with findings being reported in a discussion format with a supporting summary table. Findings will be reported in relation to the research question. Knowledge gaps will be identified and discussed.

Patient and public involvement

No patients will be involved in this study.

Ethics and dissemination

This scoping review will identify and describe existing literature concerning EMS and palliative care. In addition, this review will highlight key findings and knowledge gaps in the subject area. Findings will, therefore,

be of value to those involved in both EMS and palliative care systems as well as national health departments which oversee both systems. Findings will be disseminated to stakeholders within these fields through peer-reviewed, open-access journal publication.

Furthermore, this review will be the first part of an overarching study aimed at developing EMS and palliative care in South Africa (SA). As there is a lack of EMS and palliative care integration in SA,¹⁶ this review will provide foundational context for the broader study in the country, resulting in greater dissemination of results in future.

As no participants will be used in this study and identified literature is readily obtainable to the public, no ethical approval will be required.

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