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RECEIVED 13 December 2024
ACCEPTED 20 December 2024
PUBLISHED 14 January 2025

CITATION

Dahlmann P, Böbel S, Elsenbast C, Ristau P, Reuter-Oppermann M and Tremml B (2025) Editorial: Patient safety and patient-centred care in emergency medical services and adjoining care settings. *Front. Disaster Emerg. Med.* 2:1544998. doi: 10.3389/femer.2024.1544998

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Editorial: Patient safety and patient-centred care in emergency medical services and adjoining care settings

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KEYWORDS

emergency medical services, emergency care, patient-centered care, patient safety, health care

Editorial on the Research Topic

Patient safety and patient-centred care in emergency medical services and adjoining care settings

1 Introduction

This Research Topic on *Patient Safety and Patient-Centred Care in Emergency Medical Services and Adjoining Care Settings* aims to encompass the already existing and evolving challenges modern emergency medical services (EMS) systems face. As medical, technological, and organizational progress meets demographic changes and staff shortages ensuring patient safety is still one of the biggest tasks for all healthcare systems worldwide (1). Against this background, improving patient safety should not end at the sector boundaries of outpatient or clinical patient care, but should encompass the entire patient journey, including emergency care. There are many possible approaches to this (2). Moreover, we were interested in highlighting emergency medical services challenges from the perspective of decision-makers, policymakers, payers, stakeholders, and system responses. To advance research in patient-centered care and patient safety, we were especially interested in areas with low levels of evidence.

2 Publications included in this Research Topic

In total, eight publications were accepted for this Research Topic, addressing various aspects of patient centered care in EMS and adjoining health care services. [Ayenew Mekuria et al.](#) demonstrated a high mortality rate of 58% in 386 septic shock patients in Northeastern Ethiopian ICUs. Predictors included age over 60, delayed ICU

admission, low mean arterial pressure, comorbidities, complications, and lack of pathogen identification. Early recognition and adherence to sepsis treatment guidelines remain crucial for improving outcomes. [Murphy et al.](#) explored socioeconomic factors and spatial inequalities in pregnancy-related ambulance calls in Greater London. Interestingly, neighborhoods with lower adult education levels had higher ambulance demand, suggesting that socioeconomic factors, rather than health outcomes alone, drive demand. Addressing these could improve service equity. [Bauernfeind et al.](#) reviewed the impact of 67 studies on advanced practitioners (APs) in acute care and showed improved patient outcomes, reduced mortality, and shortened hospital stays. Compared to physicians, APs achieved similar patient outcomes. [Zhang et al.](#) demonstrated a low-to-moderate vulnerability in 983 prehospital emergency patients in China, increasing with older age and severe disease. Addressing these factors through tailored interventions could improve care. [Imperio et al.](#) studied clinical team debriefings after critical events with a focus on learners and their expectations and experiences. In their commentary, [Zhao et al.](#) discuss a previously proposed Nurse Intuition Patient Deterioration Scale and suggest potential improvements. [Koch et al.](#) and [Koch and Suffeda](#) analyse invasive measures performed by German emergency paramedics and physicians. In [Koch et al.](#), paramedics were shown to use invasive medical and pharmacological measures only in 11.9% and 13.8% of 10,102 German rescue missions, with the primary focus on diagnostics and patient transport. In the publication by [Koch and Suffeda](#), physicians performed invasive (81.3%) and pharmacological (100%) measures in 684 German emergency missions, mostly involving intravenous access and electrolyte solutions. The authors recommend updating care protocols to reduce unnecessary interventions.

3 Discussion and future perspectives

The papers from Africa, Asia and Europe published on this Research Topic in *Frontiers in Disaster and Emergency Medicine* show the full range of patient safety and patient-centered research in emergency medical services and adjoining settings - ranging from epidemiological issues to application-related research all the way to secondary data analyses. They thus demonstrate how research can contribute to finding solutions to practice-related issues across and within specific healthcare systems. While the principles of patient-centeredness and patient safety may apply around the world, there are regional determinants that significantly shape their implementation. Nevertheless, it is important - not least

in terms of best practice - to exchange ideas, discuss them, and learn from each other.

In conclusion, advancing patient safety in EMS systems demands further development and implementation of concrete tools that translate safety principles into actionable practices. While inpatient emergency settings like emergency departments and hospitals have made strides in integrating safety frameworks such as checklists, EMS systems remain underserved, especially in prehospital and out-of-hospital contexts. Evidence-based protocols, robust training programs, and systematic quality monitoring are essential to mitigate risks and ensure quality care. Further research is needed to identify unique safety challenges in EMS and develop tailored strategies.

Author contributions

PD: Conceptualization, Writing – original draft, Writing – review & editing. SB: Conceptualization, Writing – original draft, Writing – review & editing. CE: Conceptualization, Writing – original draft, Writing – review & editing. PR: Conceptualization, Writing – original draft, Writing – review & editing. MR-O: Conceptualization, Writing – original draft, Writing – review & editing. BT: Conceptualization, Writing – original draft, Writing – review & editing.

Acknowledgments

The topic editors want to thank all authors of submitted manuscripts and all reviewers for their support.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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