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10.4103/jehp.jehp 462 24

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Received: 10-03-2024 Accepted: 09-05-2024 Published: 31-01-2025

Challenges faced by doctors and nurses in the emergency department: An integrated review

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Abstract:

Healthcare professionals in emergency departments (EDs) navigate multifaceted challenges, including strenuous environments and complex situations inherent to this high-pressure setting. This research examines the dynamics of emergency medicine, highlighting issues such as ED overcrowding, resource constraints, the emotional and ethical dilemmas of end-of-life care, and the implications of integrating advanced technologies like Radio Frequency Identification (RFID). The study payes the way for potential policy reforms, educational advancements, and administrative strategies to enhance healthcare delivery in emergencies by analyzing these challenges in detail. We used thorough review methodology to analyze global evidence from 2002 to 2023, systematically searching databases like MEDLINE, Web of Science, ProQuest, and Google Scholar with a blend of search terms, Medical Subject Headings (MeSH), refining the search strategy with Boolean operators "AND" and "OR" to improve search results. A PRISMA flow diagram aided the careful selection of studies, while Zotero-6 helped remove duplicates. This collaborative process pinpointed key areas of interest, such as workload, burnout, ethics, and technology in emergency care, ensuring comprehensive review. We focused on including peer-reviewed English articles from the last twenty years, covering review articles, original research, systematic reviews, and meta-analyses. We excluded unpublished theses and nonrelevant studies. This approach provided detailed overview of the challenges and complexities characterizing the emergency care landscape, suggesting ways to enhance practice and policy.

Keywords:

Burnout, communication barriers, emergency medical services, ethics, triage, workload

Introduction

The ED stands at the forefront of healthcare, quickly and precisely responding to acute medical emergencies. It operates continuously, 24 hours a day, throughout the year, managing a range of patient emergencies. The ED remains perpetually operational and prepared to address any urgent or nonurgent emergency. The ED is a unique hospital section that faces an unpredictable number of patients and constantly fluctuating workload. The emergency healthcare team and their management cannot control

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How to cite this article: Charan GS, Kalia R, Dular SK, Kumar R, Kaur K. Challenges faced by doctors and nurses in the emergency department: Integrated review. J Edu Health Promot 2025;14:2.

patient admissions and discharges in the

ED.[2] However, evidence suggests that

extended wait times, delayed quality care,

higher likelihood of errors in medical care,

postponed critical treatments, and high risk

of mortality harm patients in overcrowded

EDs.[3] In this high-stakes environment,

healthcare professionals blend clinical

acumen with strong interpersonal skills to

effectively manage medical complexities

and patient interactions. Serving often

as the initial contact point for serious

conditions, the ED plays a pivotal role where

rapid assessment and decision making

significantly impact patient outcomes.

The constant influx of patients demands

exceptional organizational capabilities

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and the ability to perform under pressure. Effective communication and teamwork in the ED ensure efficient collaboration among the multidisciplinary team, which is vital for delivering timely and effective care. Healthcare workers excel in conveying critical patient information succinctly and empathetically, balancing technical expertise with compassion. Especially in emergencies, the quick relay of essential updates on patient status to colleagues is fundamental, supporting the EDs mission to provide lifesaving interventions. This demanding environment highlights the importance of comprehensive training in medical and interpersonal skills to navigate the unique challenges of emergency care. [4]

Aim

This review examines the challenges healthcare professionals face in the ED. It emphasizes the importance of communication and interpersonal skills in improving patient care. In addition, the review provides valuable insights for policymakers, educators, and administrators on enhancing ED operations, including adopting RFID technology and addressing ethical dilemmas and end-of-life care challenges.

Materials and Methods

Search strategies

We utilized a comprehensive review methodology to evaluate the global evidence for this integrated review. We systematically searched the databases from 2002 to 2023 to gather extensive and relevant information, including MEDLINE, Web of Science, ProQuest, and Google Scholar. We crafted our search strategy carefully, combining significant and similar terms, accessible terms, and truncations. We searched databases using Medical Subjective Headings (MeSH). In addition, we included a variety of relevant keywords, such as "emergency service," "workload," "burnout," "communication barriers," "triage," "ethics," "hospital emergency medicine," "health personnel," "patient care management," "organizational policy," "healthcare quality," and "technology." We used Boolean operators 'AND" and "OR" to maximize our results and systematically improve the search.

Study selection

We employed PRISMA flow diagram for the careful selection of studies [Figure 1]. Two authors independently conducted exhaustive searches across databases and used the reliable tool Zotero-6 to remove duplicates. They then meticulously assessed the studies' titles and abstracts to check their eligibility against the predefined criteria. For studies whose eligibility was uncertain, the authors reviewed the full texts. In cases of disagreement, the authors collaborated to resolve these through discussion or consulting with a third reviewer.

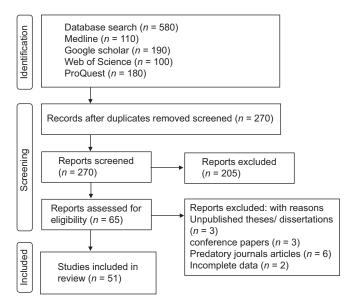


Figure 1: PRISMA flow diagram of the study selection

Selection criteria

Inclusion

- Published in the last two decades.
- Types of studies included review articles, original research, systematic reviews, and meta-analyses.
- Published in the English language.
- Publication in a peer-reviewed scientific journal.

Exclusion

- Unpublished theses, dissertations, and conference papers.
- Predatory journals articles.
- Studies do not encompass both emergency department and casualty aspects.

Effective communication and interpersonal skills

In the ED, where urgency is paramount, healthcare professionals must balance the role of effective communication and interpersonal skills. These skills are crucial for ensuring patient safety, facilitating teamwork and enhancing patient care. Clear communication among healthcare providers is essential for accurately exchanging patient information, treatment decisions, and medication plans, directly impacting patient outcomes and reducing the risk of medical errors—a leading cause of harm in healthcare. Moreover, efficient communication in the fast-paced ED setting supports swift decision making and coordinated team efforts, significantly improving the efficiency and effectiveness of patient care. [5] Effective communication in the ED is crucial for clinical efficiency and reducing patient and family stress by clearly explaining diagnoses and treatments, enhancing comfort and care. Studies suggest that medical improvisation boosts healthcare professionals' confidence and empathy, which is vital in the dynamic ED environment.[6]

Factors affecting communication in emergency departments

Doctors and nurses in the ED face many challenges that significantly impact their communication ability. This communication is critical because it influences the quality of patient care and the efficiency and morale of the healthcare team. The following factors significantly shape the communication dynamics in the ED.

Language and cultural barriers

The diversity of ED patients, with varied linguistic and cultural backgrounds, presents significant communication challenges, impacting patient care. Language barriers hinder the collection of accurate patient histories and understanding of diagnoses and treatments, while cultural differences can lead to misdiagnoses and noncompliance, especially in nondominant cultures. This underscores the need for healthcare professionals to possess robust cross-cultural communication skills.[6] Overlooking cultural and linguistic factors in emergencies can result in miscommunication, diagnostic errors, treatment misunderstandings, and disparities in healthcare outcomes. [6] Non-English speakers, including Francophone dementia patients, encounter healthcare access issues and longer hospital stays due to communication barriers and cultural differences. In London, GPs need training to address the varied communicative styles of culturally diverse patients. [7,8] The EDs dynamic, reflecting global migration trends, hosts variety of cultural backgrounds among patients and staff, creating communication hurdles, especially with nondominant cultures. Overseas nurses encounter language and cultural obstacles, underscoring the need for strong multicultural skills and teamwork. [6] Communication barriers also impact Global Health Engagement (GHE), with studies showing that local translations, like Malagasy in Madagascar, greatly improve GHE efforts.^[9] Enhancing Emergency Medical Language Services (EMLS) through collaborative effort among hospitals, government, and civic organizations is essential. Developing a dedicated EMLS center could improve communication in medical emergencies.^[6] In addition, increasing training in humanistic practice and self-management for nurses could further enhance patient care, as studies suggest a need for improved skills in these areas.[10]

Technological challenges in communication

The integration of technology, such as electronic health records (EHRs), in EDs offers benefits such as centralized patient information and improved communication channels. However, this reliance on digital systems also presents challenges, including potential system failures, slow software operations, and intricate interfaces that may obstruct the urgent exchange of information during emergencies. In addition, the shift

toward digital documentation can diminish personal interaction between healthcare providers and patients, potentially weakening the trust and rapport essential for effective care.[11] On another front, healthcare professionals, especially from underresourced regions needing more advanced training, encounter difficulties in maintaining professional standards, particularly in humanitarian settings, underscoring the necessity for comprehensive training to ensure high-quality care in diverse environments.[12] Furthermore, studies highlight the significance of robust communication and teamwork in EDs, especially among trainees, pointing out the adverse effects of inexperienced leadership on novice doctors and suggesting the incorporation of specialized nontechnical skills training for paramedics to enhance patient care and team coordination.[13]

Challenges and barriers affecting the quality of triage in emergency departments

Triage in ED is a critical process where patients are assessed and prioritized based on the severity of their condition. This process ensures that those who need immediate care receive it promptly, while others with less urgent needs wait their turn. The effectiveness of triage directly impacts patient outcomes, the efficiency of the ED overall patient satisfaction. However, several challenges and barriers can affect triage quality in emergency settings.

Staff shortages and workload

Staff shortages in EDs critically undermine triage quality, leading to compromised patient assessments and increased errors, particularly during high-demand periods or health crises. This need for more personnel intensifies workloads, delaying patient evaluations and exacerbating ED overcrowding. [14] Effective triage hinges on nurses' decision making and interdisciplinary communication, requiring profound understanding of healthcare nuances and patient interaction. Challenges in ED communication stem from varied factors, including high clinician-patient ratios and the need for enhanced interpersonal skills, which impair the accuracy of medical records and knowledge transfer. Addressing these issues through improved communication strategies is essential for optimizing triage and patient care. [15,16]

Violence issues

Violence in EDs, including physical assaults and verbal threats toward healthcare staff, is a prevalent issue that negatively affects their mental health, job satisfaction, and the quality of patient care. The challenge of addressing workplace violence is compounded by the global lack of consistent definitions and reporting standards, making it difficult to fully understand the scope, causes, and effectiveness of interventions. Further research is needed to explore how patient and

visitor behaviors contribute to violence and the impact of social contexts on these interactions. Implementing safety measures and compassionate practices that acknowledge these social factors is crucial. Collaborative efforts, including patient and family involvement, are essential for preventing violence and enhancing the healthcare environment. [17] In addition, there is a need for detailed analysis of "white-code" alerts to inform policy and prevent violence. The underreporting of incidents, attributed to fears of legal reprisal and complex reporting procedures, suggests that the problem may be greater than acknowledged. Addressing these barriers could lead to safer workplace, benefiting both healthcare providers and patients. [18]

Impact of burnout on triage quality

Burnout among emergency healthcare workers, characterized by emotional exhaustion and diminished accomplishment, adversely affects triage quality due to stress and heavy workloads, impairing critical cognitive functions like decision making and efficiency, essential for quick and precise patient evaluations. It also leads to compassion fatigue, hindering empathetic interactions and lowering care standards.[19] Addressing staff shortages and burnout is vital for maintaining triage effectiveness in EDs. Enhancing staff levels, managing workloads, and implementing burnout prevention strategies are crucial for sustaining high-quality emergency care and ensuring swift, accurate, and patient-centered assessments, thereby improving emergency outcomes. Research underscores the link between physician burnout and longer patient wait times, highlighting the need for targeted interventions.^[20] Addressing burnout improves patient care and correlates with increased staff retention.[21] Research suggests that the perceived impact of workload on patient outcomes is most significantly affected by burnout, while personal accomplishment is least impacted. [22] The challenges in triage and emergency management are multifaceted, encompassing clinical competency and psychological, human resources, and structural performance-related issues. [23] By empowering triage nurses and addressing structural challenges in triage units, emergency administrators can improve the efficiency and quality of patient triage, leading to better healthcare outcomes.

Emergency department crowding: causes, effects solutions

ED crowding, a significant issue in global healthcare, occurs when the demand for emergency services exceeds the EDs capacity to provide prompt and quality care. This challenge of ED overcrowding is gaining recognition worldwide, particularly affecting developing nations. ^[24]

This challenge is exacerbated by factors such as an ageing population, an increase in chronic conditions, and limited

access to primary care, leading to nonemergency visits. Hospital internal problems like insufficient inpatient beds worsen the situation. [25] The overcrowding leads to more referrals and extended patient stays, urging healthcare leaders to focus more on addressing this challenge. [26] In addition, operational inefficiencies, including delays in lab tests or imaging, ineffective triage, and staffing shortages, contribute to the crowding, with seasonal flu outbreaks causing further patient surges. Addressing these issues involves evaluating the cost-effectiveness of solutions like point-of-care testing and optimizing physician workloads through a collaborative, multidisciplinary approach to improve ED efficiency and patient care. [27] ED overcrowding results in ambulance diversions, dissatisfaction among patients and staff, and possibly worse health outcomes. Key factors include nonurgent visits, frequent patients, flu seasons, and lack of staff or beds, leading to higher mortality, delayed treatments, and increased costs. Solutions like additional staff, observation units, improved bed management, and referral strategies are essential for tackling this issue, emphasizing the need for varied and thorough approaches to alleviate crowding.[28,29]

Effects on patient outcomes and staff well-being

ED overcrowding detrimentally affects patients and healthcare workers. Patients face longer waits, leading to increased frustration and discomfort, while delays can worsen conditions in urgent cases, raising the chance of medical errors and compromising privacy and comfort. Staff stress and burnout from managing high volumes in pressurized conditions adversely impact mental health and job performance, thereby affecting care quality.^[30] Research indicates that nurse-led triage significantly boosts patient satisfaction when nurses deliver patient-centered care, communicate effectively, and show compassion and competence. Accessibility, clear communication without jargon, and encouraging patient queries are key to improving patient experiences in the ED.^[30]

Strategies and solutions for addressing crowding Addressing ED crowding requires multifaceted approach that tackles both the root causes and the immediate consequences of overcrowding.

Improving efficiency within the ED: Addressing ED crowding necessitates a comprehensive approach, focusing on both underlying causes and immediate impacts. Key measures include optimizing triage processes and boosting staff numbers during peak times to manage patient flow more effectively. The adoption of EHRs and telemedicine can significantly improve efficiency and shorten wait times. Training healthcare professionals to accurately interpret patients' and their

families' emotional cues, particularly in high-stress situations, can improve interactions and may be integral to violence prevention strategies. [31] Furthermore, innovative educational techniques, such as simulation exercises and evaluative checklists, are enhancing nursing students' critical thinking and communication skills, which are crucial for patient safety and care efficiency in the ER. This practical training prepares nursing students for the complexities of ER patient care, promoting more effective and safer healthcare practices. [32]

Enhancing hospital-wide patient flow: Optimizing hospital-wide patient flow is crucial for reducing ED crowding. Implementing strategies for efficient bed management and faster patient discharges can minimize boarding times and increase bed availability, significantly easing ED congestion. Daily multidisciplinary rounds on inpatient floors have been successful in enhancing hospital throughput, facilitating quicker bed turnover, and alleviating pressure on the ED.[33] Investing in new technologies and adopting innovative practices is essential for improving ED operations. Viewing the patient care journey as a seamless continuum requires coordination across all healthcare sectors, employing both proactive and reactive strategies to enhance capacity utilization and ensure efficient patient flow. This holistic approach aims to improve service for greater number of patients while balancing the operational load within the healthcare system.^[34]

Increasing access to primary and urgent care: Enhancing access to primary and urgent care is crucial in diverting nonemergency cases from EDs, achievable by extending primary care hours, educating the public on alternative healthcare options, and refining referral processes. These measures can direct patients to suitable care settings, easing ED burdens. Organizational changes, effective communication, and interdisciplinary strategies are pivotal in resolving ED challenges, offering insights for more efficient operations. [35] In addition, national planning and coordination among all emergency care providers, along with patient education on healthcare services, are vital for streamlining emergency and urgent care, significantly contributing to the system's overall effectiveness and reducing ED congestion. [36]

Policy and infrastructure solutions: Addressing overcrowding in the ED requires a comprehensive strategy encompassing policy reforms, increased healthcare funding and infrastructure improvements, focusing on enhancing community health initiatives. This approach addresses the root causes of congestion by implementing efficient patient management protocols during high-demand periods and solving early warning system challenges. The main hurdles include policy, infrastructure, and management issues such as legal

gaps, inadequate protocols, resource shortages, and communication barriers, highlighting the need for improved coordination, education, and evaluation to mitigate overcrowding. Moreover, recent research emphasizes the necessity of adapting healthcare environments to foster learning, considering cultural and contextual factors critical for enhancing medical residents' education and advancing future healthcare professionals' capabilities. ED overcrowding, an ethical dilemma, calls for collective action from healthcare providers, policymakers, and professional associations to develop tailored, evidence-based strategies that enhance patient care, boost staff morale, and increase healthcare efficiency, ultimately leading to improved patient outcomes and more effective healthcare system. [39]

Ethical challenges

The high-pressure ED presents several ethical problems for healthcare practitioners. They must make quick, life-or-death judgements with minimal information. This circumstance raises significant ethical concerns beyond clinical decision making. There is very little literature on emergency doctors' ethical issues. Thus, comprehensive and context-specific ethical frameworks are needed to address these issues. Training programs must also improve moral problem-solving abilities to prepare residents for complicated ethical dilemmas.^[40]

The balance between patient autonomy and medical needs is a major ethical issue in emergency medicine. Medical ethics values patient autonomy, which allows patients to make healthcare choices. However, medical emergencies may prevent patients from making educated decisions, forcing healthcare providers to act on their behalf. This complexity increases when individuals refuse treatment due to religious convictions or procedural fear, forcing medical professionals to respect their decisions while saving lives. These scenarios demonstrate the complexity of emergency medical ethics.^[41]

Ethical evaluations of ED triage have also examined biological and care ethics, providing more comprehensive view of ethical issues. An integrated triage planning framework balances principles-based and care-oriented features for holistic ethical outlook. [42] The ethical issues in emergency medicine need varied solutions. ED staff must know medical ethics and human rights to handle complicated situations. Healthcare practitioners may overcome these problems with ethical decision-making training and standards support. In the hectic ED, medically sound and morally acceptable patient care is essential. [42,43]

Death, dying end-of-life care

End-of-life care in ED challenges healthcare providers to shift from life-saving actions to prioritizing patient comfort and quality of life. This transition is complex due to the EDs fast-paced nature and the focus on resuscitation. Furthermore, decisions for neurologically impaired patients often fall to family, complicating care. [44]

Integrating palliative care in the ED is challenging due to its fast pace and lack of private spaces, making discussions about end-of-life care difficult. Despite these challenges, providing such care, including pain and symptom management alongside emotional support, is essential. Healthcare providers face emotional and ethical dilemmas, transitioning from life-saving to palliative approaches, leading to potential burnout and impacting both staff and grieving families. [45] ED end-of-life care includes clinical, ethical, and emotional skills. The EDs emphasis on life-saving measures must coexist with dignified, empathetic end-of-life care. Healthcare personnel in the ED need more research, resources, palliative care, and ethical decision-making training to meet these difficulties. [44,45]

Advantages and disadvantages of radio frequency identification (RFID) in healthcare centers

RFID technology, using radio waves for tracking, holds promise for transforming ED operations by enhancing the management of medical equipment, supplies, and patients in real time. Its implementation in healthcare stems from the need for more efficient tracking systems. In the ED, where every second counts, RFID can streamline workflows by quickly locating essential items and tracking patient location and status, potentially reducing congestion. Strategies like optimizing intake processes, employing physician cubicles, and implementing patient identification systems alongside RFID could significantly improve ED efficiency and patient care. [46]

RFID technology offers the potential to reduce healthcare errors by automating the tracking of equipment and supplies, ensuring necessary tools are available and functional, thereby enhancing patient care. It can also integrate with EHRs for more accurate and efficient patient data management. However, RFID poses privacy concerns, with data security and patient confidentiality at risk without robust protections, highlighting the need for compliance with regulations like HIPAA in the United States. Implementation challenges include the need for strong IT infrastructure, potential interference with medical devices, and high deployment costs. Despite these obstacles, RFID has proven effective in improving operational efficiency, demonstrated by its ability to streamline data collection, reduce nurses' travel time, and optimize ED segment management, ultimately leading to 4% increase in nurse utilization and significant reductions in travel time and distance.[47,48]

RFID technology in healthcare, particularly in EDs, enhances operational efficiency through real-time tracking and error reduction, but it also introduces data security and implementation cost concerns. It streamlines processes for elderly and nursing home patient care and improves compliance in documentation and physician trauma activation by 14 to 20%. However, adopting RFID requires healthcare centers to navigate privacy issues and invest in robust security measures to maintain patient trust and confidentiality while leveraging its benefits. [49,50]

Implications for education, policy practice

The dynamic field of emergency medicine necessitates ongoing educational, policy, and practical advancements to meet the challenges in EDs. Education plays a critical role in providing healthcare professionals with up-to-date knowledge and skills, including clinical expertise, communication, ethical decision making, and stress management. Continuous and simulation-based training is vital for adapting to the evolving medical field and managing ED pressures effectively. Policy reforms are essential to tackle ED issues like overcrowding, resource limitations, and staff burnout, focusing on patient flow, resource distribution, and staff welfare. Improved staffing, infrastructure enhancements, and wellness programs can significantly better the ED atmosphere. Addressing wider healthcare system challenges, such as primary and mental healthcare access, can indirectly ease ED burdens. Best practice implementation, leveraging evidence-based protocols and multidisciplinary approach, is crucial for high-quality care. Collaboration, supported by technology like EHRs and advanced diagnostics, is key to enhancing care, with the necessary training for staff on these technologies. However, policymakers must cautiously approach reforms to avoid unintended consequences, especially in sensitive areas like end-of-life care and organ procurement.^[51]

Conclusion

The ED encounters significant challenges, including crowding, staffing shortages, and navigating complex ethical dilemmas, such as decisions surrounding end-of-life care. These challenges are especially prominent for nursing staff and doctors, who play vital role in managing patient flow, providing frontline care, and ensuring patient safety. The integration of technologies like RFID presents both potential benefits and challenges, notably in the realms of data security and patient privacy. Tackling these issues requires relentless innovation, the adoption of cutting-edge practices, and comprehensive training, with particular emphasis on equipping nurses with the tools and knowledge they need. Enhancing ED operations and care quality demands the development of educational programs, policy revisions, and the application of best practices.

This effort must be collaborative, involving healthcare workers—with focus on nursing—policymakers, and educational institutions, to ensure the delivery of efficient and empathetic care in this essential medical domain.

Ethical declaration and consent statement
This research did not involve human subjects or animals.

Financial support and sponsorship Nil.

Conflicts of interest
There are no conflicts of interest.

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