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The Burning Global Issues in Emergency Medicine: A Narrative Review

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Abstract

Objectives: To synthesise and critically examine the most urgent global challenges facing Emergency Medicine (EM), including system pressures, workforce vulnerabilities, climate-related threats, conflict-driven emergencies, infectious disease risks, inequities in access, and gaps in digital and research capacity. The review aims to identify cross-cutting determinants and propose system-level strategies to strengthen resilience and equity in emergency care worldwide.

Design: Narrative review.

Methods: A thematic narrative review was conducted using literature from PubMed, WHO and UN agency reports, global emergency medicine organisations, and international policy documents. Sources were selected for relevance to global emergency care, with emphasis on Low and Middle-Income Countries (LMICs). Themes were identified through iterative synthesis and conceptual mapping.

Results:

Ten major global issues emerged:

1. Emergency department overcrowding and access block, driven by rising demand, inadequate inpatient capacity, and weak primary care integration.
2. Workforce shortages and burnout, exacerbated by migration, violence against healthcare workers, and gender inequities.
3. Climate change, contributing to heat-related illness, extreme weather events, and shifting disease patterns.
4. Conflict, displacement, and humanitarian crises, increasing trauma burden and complex emergency needs.
5. Infectious disease threats and antimicrobial resistance, revealing persistent gaps in preparedness and stewardship.
6. Rising non-communicable disease burden, increasing demand for time-critical interventions.
7. Digital transformation gaps, including inequitable access to digital tools and concerns around AI ethics and cybersecurity.
8. Prehospital care deficiencies, particularly in LMICs lacking organised EMS systems.
9. Financial and structural inequities, limiting timely access to emergency care.
10. Global research disparities, with LMICs under-represented in EM research and clinical trials.

Conclusions: Emergency medicine is at a pivotal moment, shaped by converging global pressures that threaten system capacity, equity, and resilience. Addressing these challenges requires coordinated

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investment in infrastructure, workforce protection, climate-resilient systems, equitable digital innovation, and strengthened global research capacity. Emergency care must evolve from a reactive service to a proactive, system-shaping discipline central to global health security.

Keywords: Emergency Medicine; Global Health; Health Systems; Emergency Department Overcrowding; Access Block; Workforce Burnout; Climate Change and Health; Humanitarian Emergencies; Conflict and Displacement; Infectious Disease Preparedness; Antimicrobial Resistance; Non-Communicable Diseases; Prehospital Care; Emergency Medical Services (EMS); Health Inequities; Digital Health; Global Research Capacity; Low and Middle-Income Countries (LMICs)

Summary Box

What is already known on this topic

1. Emergency medicine (EM) is experiencing rising global demand driven by ageing populations, chronic disease burden, and increasing frequency of climate-related disasters.
2. Many health systems - particularly in low and middle-income countries (LMICs) - lack robust emergency care infrastructure, prehospital systems, and trained EM workforce.
3. The COVID-19 pandemic exposed longstanding vulnerabilities in emergency preparedness, surge capacity, and global coordination.

What this study adds

1. Provides a comprehensive synthesis of the ten most urgent global challenges in EM, spanning clinical, environmental, geopolitical, and structural domains.
2. Highlights cross-cutting determinants such as inequity, digital divides, and research under-representation that exacerbate emergency care gaps worldwide.
3. Emphasises the interconnected nature of global threats - climate change, conflict, infectious disease, and workforce strain—and their cumulative impact on EM system resilience.

Strengths and Limitations of this Study

1. Provides a comprehensive, globally oriented synthesis of the most urgent challenges facing emergency medicine, integrating clinical, environmental, geopolitical, and structural determinants.
2. Highlights perspectives from Low and Middle-Income Countries (LMICs), where emergency care systems are often under-developed and disproportionately affected by global crises.
3. Draws on multidisciplinary sources, including global health agencies, emergency medicine organisations, and international policy documents, to capture the breadth of contemporary threats.
4. Offers a conceptual framework that links overcrowding, workforce strain, climate change, conflict, infectious disease threats, and inequities as interconnected pressures on emergency care systems.
5. As a narrative review, the study is limited by potential selection bias, as it does not follow systematic review methodology or include formal quality appraisal of included sources.
6. Global data variability and gaps - particularly from LMICs - may limit the precision of comparisons, and some themes rely on heterogeneous or incomplete reporting.
7. The review synthesises existing knowledge but does not generate new empirical data, which may limit the ability to quantify the relative impact of each global issue.

Introduction

Emergency medicine has evolved into a cornerstone of modern health systems, providing time-critical care for acute illness, trauma, and public health emergencies [1, 2]. Yet, the global landscape in which EM operates has become increasingly volatile. Ageing populations, climate-driven disasters, pandemics, and geopolitical instability have intensified demand for emergency care while exposing structural weaknesses in health systems worldwide [3, 4, 5, 6].

The COVID-19 pandemic revealed both the indispensability of EM and the fragility of emergency care infrastructures [1, 7]. As the world transitions into an era of polycrisis where multiple global threats interact - EM must adapt rapidly. This review examines the most pressing global issues shaping the future of emergency medicine and identifies opportunities for strengthening resilience and equity [2, 3].

Methods

This narrative review synthesised literature from PubMed, WHO reports, global health agencies, and EM professional bodies. Themes were identified through iterative thematic analysis. The review prioritises global perspectives, with emphasis on Low and Middle-Income Countries (LMICs), where emergency care systems remain underdeveloped.

Results

Emergency Department Overcrowding and Access Block

ED overcrowding is a universal crisis. Contributing factors include:

- Rising patient volumes due to ageing populations and chronic disease burden
- Insufficient inpatient capacity leading to access block
- Inadequate primary care and community services
- Delays in diagnostic pathways
- Social care gaps leading to “boarding” of vulnerable patients

Consequences include increased mortality, delayed treatment, clinician burnout, and reduced patient satisfaction. LMICs face additional challenges such as limited triage systems, inadequate infrastructure, and lack of prehospital care.

Workforce Shortages and Burnout

The global EM workforce is under severe strain. Key issues include:

- Shortages of trained emergency physicians, nurses, and paramedics
- High rates of burnout, moral injury, and psychological distress
- Violence against healthcare workers
- Migration of skilled clinicians from LMICs to high-income countries
- Gender inequities in leadership and career progression

Workforce resilience is now recognised as a core component of emergency system preparedness.

Climate Change and Climate-Sensitive Emergencies

Climate change is reshaping the epidemiology of emergency presentations. EM systems are increasingly confronted with:

- Heat-related illness and heatwaves
- Extreme weather events (floods, cyclones, wildfires)
- Vector-borne disease expansion
- Air-quality–related respiratory crises
- Water scarcity and food insecurity

Climate-related disasters disproportionately affect LMICs, where emergency care infrastructure is least equipped to respond.

Conflict, Migration, and Humanitarian Crises

Armed conflict, political instability, and forced displacement have surged globally. Emergency medicine plays a critical role in:

- Trauma care in conflict zones
- Management of mass-casualty incidents
- Care for refugees and asylum seekers
- Addressing gender-based violence
- Delivering emergency obstetric care in unstable settings

Humanitarian EM requires specialised training, cross-sector collaboration, and culturally sensitive care models.

Infectious Disease Threats and Pandemic Preparedness

COVID-19 exposed gaps in global emergency preparedness. Ongoing threats include:

- Emerging zoonotic diseases
- Anti-Microbial Resistance (AMR)
- Vaccine-preventable disease resurgence
- Weak surveillance systems
- Limited isolation and surge capacity in EDs

AMR is particularly concerning, as emergency departments are major sites of antibiotic prescribing.

Rising Burden of Non-Communicable Diseases

NCDs - cardiovascular disease, diabetes, stroke, cancer - now dominate emergency presentations worldwide. Challenges include:

- Delayed diagnosis and poor chronic disease control
- Limited access to essential medications
- Fragmented care pathways
- Increased demand for time-critical interventions (e.g., stroke thrombolysis, PCI)

LMICs face a dual burden of NCDs and infectious diseases, straining already fragile systems.

Digital Transformation and the Global Digital Divide

Digital health innovations - AI triage, telemedicine, electronic health records - offer transformative potential. Yet major barriers persist:

- Limited digital infrastructure in LMICs

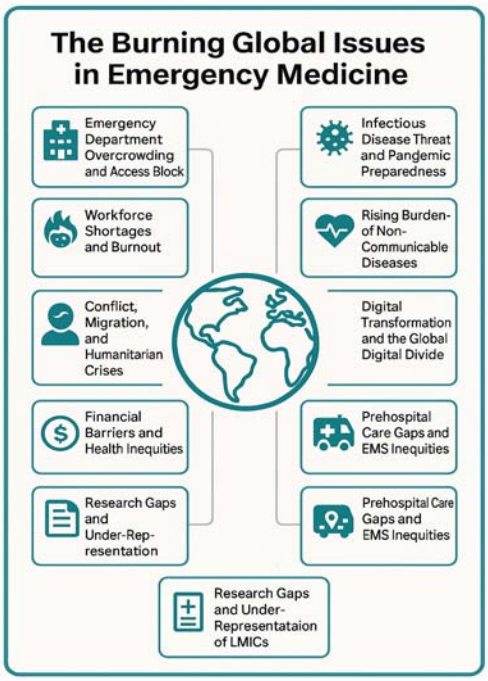

Figure 1: The Burning Global Issues in Emergency Medicine. This infographic illustrates ten interconnected global challenges facing emergency medicine systems worldwide. Each issue is represented by a distinct icon and label, arranged around a central globe symbolising the global scope of emergency care pressures. The issues include:

1. Emergency department overcrowding and access block
2. Workforce shortages and burnout
3. Climate change and climate-sensitive emergencies
4. Conflict, migration, and humanitarian crises
5. Infectious disease threats and pandemic preparedness
6. Rising burden of non-communicable diseases
7. Digital transformation and the global digital divide
8. Prehospital care gaps and EMS inequities
9. Financial barriers and health inequities
10. Research gaps and under-representation of Low and Middle-Income Countries (LMICs).

The visual layout emphasises the systemic and interdependent nature of these challenges, highlighting the need for coordinated global action to strengthen emergency care resilience and equity.

Figure 2: Burning Global Issues in Emergency Medicine. This infographic highlights six critical challenges currently facing emergency medicine worldwide. Each issue is represented by a distinct icon and label, arranged in a visually engaging layout. The depicted issues include:

1. Overcrowding & Access Block – rising patient volumes and limited inpatient capacity strain emergency departments.
2. Evolving Prehospital Care – variability in emergency medical services and prehospital protocols across regions.
3. Toxicology & Public Health Threats – increasing presentations related to environmental toxins, substance misuse, and emerging public health hazards.
4. Contrast Allergy Management – growing need for safe imaging practices and allergy protocols in acute care settings.
5. Stroke Systems of Care – demand for rapid triage, imaging, and intervention in time-sensitive neurological emergencies.
6. End-of-Life Care & Workforce – ethical complexity in emergency end-of-life decisions and rising clinician burnout. The figure underscores the multidimensional nature of global emergency medicine challenges and the need for coordinated system-level responses.

- Interoperability challenges
- Cybersecurity threats
- Ethical concerns around AI in emergency decision-making
- Risk of widening inequities if digital tools are unevenly deployed

Digital transformation must be equitable, evidence-based, and clinician-centred.

Prehospital Care Gaps and EMS Inequities

Emergency medical services (EMS) vary dramatically worldwide. Many countries lack:

- Universal emergency numbers
- Trained paramedics
- Ambulance networks
- Trauma systems
- Prehospital triage protocols

Strengthening EMS is essential for improving outcomes in trauma, cardiac arrest, stroke, and obstetric emergencies.

Burning Global Issues in Emergency Medicine

Legend: Icon Meanings & Issue Descriptions

Icon	Issue Title	Description
	Overcrowding & Access Block	Patients face delays due to emergency department congestion and limited resources.
	Evolving Prehospital Care	Advances in ambulance services and early interventions before hospital arrival.
	Toxicology & Public Health Threats	Risks from environmental toxins, drug misuse, and emerging health crises.
	Contrast Allergy Management	Managing allergic reactions to contrast agents used in diagnostic imaging.
	Stroke Systems of Care	Rapid response systems for stroke diagnosis and treatment to improve outcomes.
	End-of-Life Care & Workforce	Challenges in palliative care and the strain on healthcare professionals.

Figure 3:

Financial Barriers and Health Inequities

Millions of patients face catastrophic health expenditure when seeking emergency care. Key inequities include:

- Urban–rural disparities
- Gender-based barriers
- Racial and ethnic inequities
- Lack of insurance coverage
- Delayed care due to cost

Universal access to emergency care is increasingly recognised as a human right.

Research Gaps and Under-representation of LMICs

Emergency medicine research remains dominated by high-income countries. LMICs face:

- Limited funding
- Lack of research training
- Inadequate data systems
- Under-representation in clinical trials

Strengthening global EM research capacity is essential for context-appropriate solutions.

Discussion

This review synthesises the most urgent global challenges confronting emergency medicine systems, clinicians, and policymakers - spanning overcrowding, workforce burnout, climate-sensitive emergencies, conflict and migration, infectious disease threats, digital transformation gaps, and structural inequities [1-4, 7].

Emergency medicine stands at a pivotal moment in global health. The COVID-19 pandemic, climate-driven disasters, and geopolitical instability have exposed deep vulnerabilities in emergency care infrastructure, particularly in Low and Middle-Income Countries (LMICs) [1, 3, 4, 5, 6]. Our review offers a conceptual framework that links these pressures and proposes system-level strategies to strengthen resilience, equity, and preparedness [2, 7].

This manuscript aligns with the mission to advance open-access, globally relevant research with practical implications for health systems and policy [7]. It is intended to support clinicians, educators, and decision-makers in anticipating threats and shaping emergency care reforms that protect the most vulnerable [3, 4].

The burning issues in global emergency medicine are interconnected and mutually reinforcing. Overcrowding, workforce shortages, climate change, and inequities create a cycle of strain that threatens system resilience [1, 2, 5, 8, 9]. Addressing these challenges requires:

- Investment in emergency care infrastructure [4]
- Strengthening primary and community care [2, 3]
- Workforce protection and mental health support [9]
- Climate-resilient health system design [5, 6]
- Equitable digital transformation [7]
- Global cooperation in research and preparedness [1, 7, 6]

Emergency medicine must evolve from a reactive specialty to a proactive, system-shaping discipline [2, 3].

Emergency medicine is at a pivotal moment, shaped by converging global pressures that threaten system capacity, equity, and resilience [1, 2, 3, 6]. Addressing these challenges requires coordinated investment in infrastructure, workforce protection, climate-resilient systems, equitable digital innovation, and strengthened global research capacity [4, 5, 7]. Emergency care must evolve from a reactive service to a proactive, system-shaping discipline central to global health security [2, 3].

Emergency medicine stands at a critical juncture. The global challenges outlined in this review demand coordinated action across clinical, policy, and research domains [1, 2, 3]. Strengthening emergency care systems is essential not only for acute care delivery but also for global health security, equity, and resilience [4, 7]. The future of EM will depend on our ability to anticipate threats, innovate responsibly, and build systems that protect the most vulnerable [2, 3, 6].

Conclusion

Emergency Medicine (EM) faces unprecedented global pressures driven by demographic shifts, climate change, geopolitical instability, infectious disease threats, and widening health inequities. This narrative review synthesises current evidence on the most urgent global challenges confronting EM systems, clinicians, and policymakers. Key themes include Emergency Department (ED) overcrowding, workforce shortages, climate-related disasters, migration and conflict-related emergencies, antimicrobial resistance, digital transformation gaps, and the rising burden of Non-Communicable Diseases (NCDs). The review highlights cross-cutting structural determinants and proposes system-level strategies to strengthen resilience, equity, and preparedness.

References

1. Hexom BJ, Quao NSA, Bandolin NS, Bonney J, Collier A, Dyal J, *et al*. Global Emergency Medicine: A Scoping Review of the Literature from 2022. Acad Emerg Med. 2024; 31(1): 71-85. doi:10.1111/acem.14816.
2. Hsia R, Razzak J. Placing emergency care on the global health agenda. Ann Emerg Med. 2019; 74(5): S1-S6. doi: 10.1016/j.annemergmed.2010.01.013.
3. Osei-Ampofo M, Razzak J, Donkor P. The burden of emergency medical conditions and the emergency care system in sub-Saharan Africa. Lancet. 2022; 400(10355): 2207-2219.
4. World Health Organization. Emergency care systems for universal health coverage: ensuring timely care for the acutely ill and injured. Geneva: WHO; 2019.
5. World Health Organization. Climate change and health. WHO Fact Sheet. Geneva: WHO; 2023.
6. United Nations Office for Disaster Risk Reduction (UNDRR). Global Assessment Report on Disaster Risk Reduction 2023. Geneva: UNDRR; 2023.
7. Aluisio AR, Waheed S, Cameron P. Global emergency care research: opportunities, challenges, and priorities. BMJ Glob Health. 2019; 4: e001558.
8. Morley C, Unwin M, Peterson GM, Stankovich J, Kinsman L. Emergency department crowding: a systematic review of causes, consequences, and solutions. PLoS One. 2018; 13(8): e0203316. doi:10.1371/journal.pone.0203316.
9. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences, and solutions. J Intern Med. 2018; 283(6): 516-529. doi:10.1111/joim.12752.