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Review Article

Climate Change and Emergency Health Care: Emerging Challenges and Responses in Mogadishu, Somalia

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ABSTRACT

Climate change is a escalating global threat with significant impacts on acute health outcomes and emergency healthcare systems. This paper explores the emerging challenges from climate-driven events such as heatwaves, droughts, and floods in Mogadishu, Somalia. The study highlights how these events lead to increased emergency department visits due to heat-related illnesses, injuries, vector-borne diseases, and malnutrition. Key challenges include limited infrastructure, resource scarcity, and coordination gaps within emergency health services. Recommendations focus on building capacity, improving infrastructure, integrating early warning systems, incorporating climate policy, and engaging communities to enhance climate resilience in emergency care.

Keywords: Climate Change; Emergency Medicine; Health Care; Mogadishu; Somalia; Heatwaves; Drought; Floods; Health System Resilience

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Introduction

Climate change represents one of the most urgent public health challenges of the 21st century. Increasing temperatures and the rising frequency of extreme weather events such as heatwaves, floods, and droughts disproportionately affect vulnerable populations, especially in low-resource settings like Mogadishu, Somalia [1]. These events result in a surge of acute health problems, including heat-related illnesses, injuries, malnutrition, and outbreaks of vector-borne diseases, which heavily burden emergency healthcare services. Emergency departments are on the frontline in managing these acute presentations; however, in Mogadishu, emergency care systems face significant limitations, including insufficient infrastructure, a lack of trained personnel, and inadequate coordination with disaster and climate agencies. Understanding these emerging challenges and developing appropriate responses is critical for building resilient health systems capable of coping with the health impacts of climate change. This manuscript aims to analyze the relationship between climate change and emergency healthcare in Mogadishu and to propose strategies to enhance the emergency response capacity.

Climate Change and Acute Health Impacts in Mogadishu

Heatwaves and Heat-Related Illnesses

Mogadishu has experienced increasing temperatures and prolonged heatwaves, which have contributed to a rise in cases of heat exhaustion, heat stroke, and aggravated cardiovascular and respiratory conditions. These conditions often require urgent medical attention, increasing pressure on emergency departments.

Floods and Injuries

Seasonal flooding from intense rainfall has led to injuries, drownings, and waterborne diseases, often overwhelming emergency services. Floods also disrupt healthcare access, further complicating treatment [2].

Drought and Malnutrition

Recurring droughts have severely impacted food security in Somalia, leading to increased rates of malnutrition, particularly among children under five. Malnourished children are more vulnerable to severe infections, resulting in higher emergency admissions [3].

Vector-Borne Diseases

Changing climatic conditions have expanded the habitats of disease vectors such as mosquitoes, leading to outbreaks of malaria and dengue fever that result in a higher number of acute cases requiring prompt medical intervention.

Challenges to Emergency Health Care Systems in Mogadishu

- **Limited Infrastructure:** Emergency departments are often under-equipped and lack climate-resilient facilities.
- **Resource Constraints:** There is a shortage of trained emergency personnel, essential medications, and diagnostic tools.
- **Coordination Deficiencies:** Weak integration exists between health services, climate monitoring, and disaster response agencies.
- **Data Gaps:** Absence of real-time surveillance data limits the ability to predict and prepare for climate-related emergencies.
- **Population Vulnerability:** High numbers of internally displaced persons and poverty exacerbate healthcare demands.

Emerging Responses and Recommendations

1. **Capacity Building:** Implement targeted training programs for emergency healthcare workers on climate-related health risks and management protocols.
2. **Infrastructure Development:** Invest in climate-resilient emergency facilities and ensure availability of essential medical supplies.
3. **Early Warning Systems:** Establish integrated data systems linking meteorological forecasts to health surveillance to enable timely response.
4. **Policy Integration:** Incorporate emergency health preparedness in national climate adaptation and disaster management policies.
5. **Community Engagement:** Educate communities about climate risks and preventive measures to reduce emergency health burdens.

Conclusion

The health impacts of climate change are intensifying, posing significant challenges to emergency healthcare in Mogadishu, Somalia. Addressing these challenges requires a multisectoral approach focused on strengthening infrastructure, enhancing workforce capacity, improving data systems, and fostering policy integration. Building climate-resilient emergency care is essential to safeguard the health of vulnerable populations and ensure effective responses to climate-driven health emergencies.

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Competing Interests

The author declare that there is no competing interests.

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Ethical Considerations

Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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