EDITORIAL

Enhancing Disaster Preparedness

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Disaster preparedness in Emergency Departments (EDs), is critical in addressing the global vulnerability to both natural and anthropogenic disasters. It ensures timely and effective response to protect the affected communities.[1] A disaster cycle comprises four stages: (1) Mitigation, (2) Preparedness, (3) Response and (4) Recovery. While no country or city is immune to disastrous events, some regions have a higher propensity for specific disaster types. Saudi Arabia experienced severe flooding emergencies in Jeddah and Riyadh in the past 2 decades. Although the fatalities associated with these floods were relatively low, the economic and social impact was significant, causing widespread property damage and displacements. In addition, sandstorms are a recurring event in Saudi Arabia which reduces visibility drastically due to dust particles in air. The Riyadh sandstorm occurring in 2018 was one of the notable disasters, with hundreds of individuals hospitalized due to respiratory distress.[2] These events emphasize the necessity for well-coordinated disaster preparedness in the healthcare systems of Saudi Arabia, particularly in EDs, which are the frontline in medical response.

The Saudi Red Crescent Authority and General Directorate of Civil Defense have made commendable progress in improving preparedness and mitigation measures in response to these disasters. Some of these efforts include improving infrastructure and implementing safety measures on a wide scale.[3] However, some events of mass gatherings like Hajj pilgrimage present unique and complex set of risks and challenges. In 2024, 1.8 million pilgrims travelled to Mecca in extreme heat, with temperatures soaring to 45° C. In spite of the numerous precautions and government efforts, there is a possibility of overwhelming surge of patients with heatstroke, dehydration, and exhaustion during such practices.[4] A worst case scenario may also present, as experienced during the 2015 Mina stampede which claimed the lives of over 2,400 pilgrims.[2]

A recent cross-sectional study by Alhamaid et al. offers valuable insights into the current state of disaster preparedness among ED staff in Saudi Arabia.[5] The study surveyed 410 respondents from ED staff working in 92 hospitals across various regions of the country and revealed both the strengths and areas in need of improvement. It highlighted that while there is a general awareness of the importance of disaster preparedness, significant gaps remain, particularly the lack of uniform protocols across institutions. Also, though the majority of respondents expressed a positive attitude towards disaster management and preparedness, few participants believed that disasters were unlikely to happen in their hospital, and preparedness measures were not critically necessary. Even among staff with positive attitudes towards disaster management, the study highlights limited implementation of preparedness programs. Many hospitals do not conduct regular drills or enforce comprehensive disaster management protocols. Another striking observation was the regional variability in preparedness levels, with certain areas and facilities demonstrating better readiness than others.

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With advances in medical technology integrated with Artificial Intelligence, EDs are now better equipped to handle critical incidents, saving far more lives than was possible in the past.[1] As a result, the newer generation of healthcare professionals often exhibits a more relaxed attitude towards disaster preparedness compared to the older generation, who have witnessed the limitations of earlier systems and understand the importance of proactive readiness. The difference observed in the above study in attitudes toward disaster preparedness may be partly due to this reason.

Additionally, disaster management is frequently seen as secondary to routine hospital operations. While this may be a practical routine, it makes disaster management a reactive approach instead of the required proactive approach. Unless we consider Disaster Management as a moral obligation, instead of merely a challenge, building a strong healthcare system with the fewest vulnerabilities is impossible. This is because we cannot expect ED staff to only train from disastrous events. During extreme circumstances, every second counts and unless the ED staff is trained to respond swiftly and efficiently during routine operations, their performance will remain below average during the chaos of disastrous events. To bridge the gap between theoretical knowledge and practical execution, more frequent and realistic disaster drills should be mandated. These simulations can encompass scenarios such as (1) natural disasters (including floods, fires, and earthquakes), (2) mass-casualty incidents, and (3) pandemics. Such practices are necessary to develop coordination skills to connect with external agencies and make rapid life-saving decisions under stress and with limited supplies.[1]

A country that welcomes and manages millions of pilgrims annually and experiences natural disasters frequently, inconsistent

protocols can easily lead to confusions. Hence, standards implemented nationwide with a unified approach are absolutely necessary to prevent inconsistencies in preparedness observed across regions. Also, the indifference towards preparedness and mitigation measures among ED staff, even if present at low frequencies, could pose extensive dangers when disaster strikes. Hence, such gaps in attitudes should not exist. Instead, there should be uniformity in effort, attitude and practice.

Saudi is known for its huge investments in infrastructure improvements, particularly in cities like Jeddah and Riyadh, to better handle floods and heatwaves. They also invest heavily in Makkah and Madinah for comfort of Hajj pilgrims, and prevent emergency situation arising due to overcrowding or heat.[6] In addition to these investments and mitigation measures, resources can be generously allocated to the EDs, who often face shortages in specialized disaster response equipment's during mass-casualty and individual emergency situations.

Overall, Saudi Arabia needs a well-coordinated approach to managing emergencies, which can be achieved through structured training programs, regular drills and uniform protocols across all healthcare institutions in Saudi Arabia. These measures can begin with a national audit system to evaluate both the availability of necessary equipment and the proficiency of staff in handling disaster scenarios; thereby monitoring the level of preparedness in EDs across the country. Most importantly, clear communication channels should be created for emergency situations. With the right training, resources, and protocols in place, Saudi Arabia can enhance its resilience and readily respond to future crises situations. A robust Awareness Assessment and a Disaster Management Training protocol, if incorporated, can lead to better Disaster Preparedness in Saudi Arabia and globally.

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References

1. Khirekar J, Badge A, Bandre GR, Shahu S. Disaster preparedness in hospitals. Cureus 2023;15(12):e50073. DOI: 10.7759/cureus.50073.
2. Mani ZA, Sultan MAS, Plummer V, Goniewicz K. Navigating interoperability in disaster management: Insights of current trends and challenges in Saudi Arabia. International Journal of Disaster Risk Science 2023;14:873–885. DOI: 10.1007/s13753-023-00528-4.
3. Wathinani MA, Barten DG, Gołda P, AlDulijan NA, Alhallaf MA, Samarkandi LO, et al. Driving sustainable disaster risk reduction: A rapid review of the policies and strategies in Saudi Arabia. Sustainability 2022;15(14):10976. DOI: 10.3390/su151410976.
4. Abdelmoety DA, El-Bakri NK, Almowalld WO, Turkistani ZA, Bugis BH, Baseif EA, et al. Characteristics of heat illness during hajj: A cross-sectional study. BioMed Res Int 2018;2018:5629474. DOI: 10.1155/2018/5629474.
5. Alhamaid YA, Aljawi H, Alsughayyir G, Alshammari MH, Albatshan RS, Alabbad FE, et al. The knowledge, attitudes, and practices of emergency department staff to preparedness of disaster and emergency in Saudi Arabia: Multicenter cross-sectional study. Indian J Crit Care Med 2024;28(11):1023–1027.
6. Al Dakheel Z. Saudi Arabia's success in transforming Umrah, Hajj ecosystem. The Jordan Times. 2023. Available from: https://jordantimes.com/opinion/zayed-al-dakheel/saudi-arabias-success-transforming-umrah-hajj-ecosystem.