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Road Traffic Accidents and Trauma Care in Pakistan: Lessons from the UAE

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ABSTRACT:

Road traffic accidents cause a very high number of deaths in Pakistan each year. Trauma care in the country is weak because there is no national trauma registry, pre-hospital services are limited, and hospital coordination is poor. In the United Arab Emirates, a trauma registry and organized emergency system have helped improve survival and reduce deaths. This short review looked at reports from the UAE trauma registries and published surveys from Pakistan. The UAE has shown significant improvements, while Pakistan still struggles with delays and a lack of basic facilities. To improve outcomes, Pakistan needs to build a trauma registry, train and expand emergency medical services, and introduce standard hospital protocols. Learning from the UAE model can help reduce preventable trauma deaths in Pakistan.

BACKGROUND:

Pakistan faces a severe trauma burden, with over 23,000 annual deaths from road traffic accidents. Trauma care remains fragmented due to the absence of a national trauma registry, weak pre-hospital emergency services, and poor enforcement of safety measures. The UAE's integrated trauma registry and structured emergency response system demonstrate how investing in data systems, rapid EMS, and coordinated trauma care can significantly reduce mortality and improve outcomes.

OBJECTIVE

This study compares the trauma care frameworks of the United Arab Emirates (UAE) and Pakistan, focusing on trauma registries, pre-hospital emergency response, and hospital coordination, and identifies actionable reforms to strengthen Pakistan's trauma system.

METHODOLOGY

A comprehensive literature review was conducted using PubMed, WHO, and official UAE and Pakistani health sources, with search terms including "trauma registry" AND "United Arab Emirates," "emergency medical services Pakistan," and "trauma care UAE Pakistan." Data were also extracted from Abu Dhabi Trauma Registry publications, Al-Ain trauma registry studies, and cross-sectional facility surveys of Pakistan's trauma and emergency care system. Articles were selected based on relevance to system-level policy, trauma data infrastructure, and emergency response capacity. They were organized into three

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thematic areas: trauma registry implementation, pre-hospital emergency response, and hospital-level trauma coordination.

RESULTS

The trauma registry system of the UAE was developed in Al Ain. Then it expanded across the country, reducing trauma incidence by 38.2% and hospital fatality by 56% between the years 2003 and 2017, with survival rates approaching 98.2% among the hospitalized patients[1,2]. Key modifications included the establishment of the Abu Dhabi Trauma Registry, standardized data collection, and integration of pre-hospital emergency services, which enabled monitoring of outcomes and rapid intervention. In contrast, Pakistan has no national trauma registry, and hospital data remain scattered. In Karachi, none of the 972 trauma patients arrived with pre-hospital EMS, and over half were critically injured upon admission[3].

In the UAE, the pre-hospital emergency systems are integrated with trauma pathways. In contrast, in Pakistan, only 11% of facilities have designated emergency rooms, and less than 10% of staff are trained in trauma care protocols[4]. Hospital coordination in the UAE allows centralized data tracking and standardized pathways, while Pakistani hospitals face infrastructural deficiencies like portable X-ray available in only 40% of centers and essential diagnostic testing in less than 20%[5].

CONCLUSION

Pakistan must establish a national trauma registry, empower pre-hospital emergency medical services, and standardize hospital-based trauma protocols to improve the outcomes for road traffic accident sufferers. Investments in EMS training, hospital coordination, and public safety implementation are essential to decrease preventable deaths. Adopting these changes, modeled on the UAE's trauma system, can build a sustainable and effective trauma care framework in Pakistan.

REFERENCES

1. Al-Ketbi LM, Grivna M, Al Dhaheri S, Al Neyadi FS, Al-Harthi M, Al-Mansoori H, et al. Decline in road traffic mortality in Al Ain City, United Arab Emirates, 2003–2017: Trends and contributing factors. *World J Emerg Surg.* 2020;15:27. doi:10.1186/s13017-020-00327-y.
2. Hashmi A, Al Hajeri A, Stassen N, Al-Ketbi LM, Alneyadi FS, Almarzouqi HM, et al. Development of trauma systems in Abu Dhabi, United Arab Emirates: Lessons from a high-income developing country. *World J Emerg Surg.* 2023;18:32. doi:10.1186/s13017-023-00501-y.
3. Jooma R, Hashmi ZG, Razzak JA. Injury patterns and outcomes at a large urban trauma center in Pakistan. *Cureus.* 2020;12(1):e6720. doi:10.7759/cureus.6720.
4. Hyder AA, Razzak JA. The challenges of injuries and trauma in Pakistan: An opportunity for concerted action. *Emerg Med Int.* 2011;2011:Article ID 278017. doi:10.1155/2011/278017.
5. Razzak JA, Kellermann AL. Emergency medical care in developing countries: Is it worthwhile? *Bull World Health Organ.* 2002;80(11):900–905.