

Towards Disaster Resilient Hospitals: Investigating Perspectives and Opportunities for Empowering Healthcare Workers and Leaders

Heba Mohtady Ali, MD, PhD (1,2), Jamie Ranse, PhD (3,4), Anne Roiko, PhD (1,4), and Cheryl Desha, PhD (1,2)

1. Cities Research Institute, Griffith University, Gold Coast, Australia 2. School of Engineering and Built Environment, Griffith University, Gold Coast, Australia

3. Department of Emergency Medicine, Gold Coast Health, Gold Coast, Australia 4. Menzies Health Institute Queensland, Griffith University, Gold Coast, Australia



Background:

Climate change-related hazards increasingly threaten hospitals, leading to more frequent disasters that strain healthcare systems. Transformational leadership is critical for developing effective hospital disaster management strategies. Disasters disrupt hospital functions, affecting resources, healthcare worker performance, and safety. While enhancing hospital resilience is widely recognised as necessary, there needs to be more guidance for decision-makers. This study addresses how hospital leaders and decision-makers can enhance hospital resilience for healthcare workers during disasters.

Methods:

This study utilised systematic and integrative reviews, along with semi-structured interviews with two groups of hospital staff, to explore disaster resilience. Findings were synthesised and need to be comparatively analysed to identify effective resilience strategies for hospitals and healthcare workers, both as staff and leaders.

Results:

The study developed evidence-based tools for hospital leaders to enhance resilience. Phase 1 introduced resilience evaluation methods and a Decision-Support Model; Phase 2 created the Hybrid Resilience Learning Framework (HRLF), identifying nine critical resilience areas. Phase 3 highlighted factors affecting healthcare workers' performance and produced the Healthcare Workers' Conceptual Framework. Phase 4 provided an assessment checklist and competency framework, equipping leaders with essential tools for disaster management.

Conclusion:

Transformational leadership is essential as the foundation for building hospital disaster resilience. The HRLF and Healthcare Workers' Conceptual Framework offer practical tools to assess staff capabilities, highlighting the need for coordination between middle and senior management to strengthen disaster preparedness. This research provides evidence-based strategies to boost hospital disaster resilience and empower healthcare workers, emphasising the critical role of leadership in achieving resilience for both hospitals and staff.

References:

1. Ali HM, Desha C, Ranse J, Roiko A. Planning and assessment approaches towards disaster resilient hospitals: A systematic literature review. *International Journal of Disaster Risk Reduction*. 2021;61:102319.
2. Ali HM, Ranse J, Roiko A, Desha C. Investigating Organizational Learning and Adaptations for Improved Disaster Response Towards "Resilient Hospitals:" An Integrative Literature Review. *Prehospital and Disaster Medicine*. 2022;37(5):665–673
3. Ali HM, Ranse J, Roiko A, Desha C. Healthcare Workers' Resilience Toolkit for Disaster Management and Climate Change Adaptation. *International Journal of Environmental Research and Public Health*. 2022;19(19):12440.
4. Ali HM, Ranse J, Roiko A, Desha C. Enabling Transformational Leadership to Foster Disaster-Resilient Hospitals. *International Journal of Environmental Research and Public Health*. 2023;20(3):1-18.
5. Ali HM, Ranse J, Roiko A, Desha C. Developing a Healthcare Transformational Leadership Competency Framework for Disaster Resilience and Risk Management. *International Journal of Disaster Risk Reduction*. 2024:104898.

