



Assessing Health Systems Resilience: A Case Study of Cholera Outbreak Response in Beira, Mozambique, Post-Cyclone Idai

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Abstract

Cyclone Idai caused catastrophic damage in Mozambique, severely disrupting infrastructure and public health services. The subsequent cholera outbreak in Beira presented a critical test for the local health system's resilience. This working paper assesses the resilience of the health system in Beira in responding to the cholera outbreak following Cyclone Idai. It aims to identify key strengths, adaptive strategies, and persistent vulnerabilities within the system's core functions. A qualitative case study design was employed. Data were collected via semi-structured interviews with health managers and frontline responders, alongside a review of response documentation and operational reports. The analysis utilised the World Health Organisation health systems resilience framework. Preliminary findings highlight the critical role of rapid, decentralised decision-making and pre-positioned supplies in mounting an initial response. However, significant challenges were noted in surveillance and logistics, with a majority of peripheral health units reporting stock-outs of essential oral rehydration salts in the initial response period. The health system demonstrated notable absorptive and adaptive capacities, but systemic fragilities in supply chains and surveillance undermined overall resilience. The health system demonstrated capacities for immediate response, but pre-existing systemic weaknesses compromised its resilience during the compound crisis. Building long-term resilience requires: strengthening integrated disease surveillance and logistics management information systems; investing in pre-positioned emergency supplies at decentralised levels; formalising protocols for rapid decision-making authority during crises; and enhancing community engagement strategies for outbreak preparedness. health systems resilience, disaster response, cholera outbreak,

cyclone, Mozambique, case study This paper provides a framework-based assessment of health systems resilience in a post-disaster context, offering insights for policymakers and practitioners in similar low-resource settings facing compound crises.

Keywords: *Health systems resilience, Cholera outbreak response, Disaster management, Mozambique, Sub-Saharan Africa, Case study methodology, Public health infrastructure*

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