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A retrospective analysis of the long-term recovery of the healthcare system in Montserrat, West Indies

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Abstract

Introduction

We know little about the factors that influence successful disaster recovery and the processes and timeframes involved, yet there is a growing imperative to improve knowledge to inform post-disaster policy and decision-making (Chang 2010; Cutter et al. 2006; Reiss 2012; Rossetto et al. 2014; Smith and Birkland 2012). Empirical studies of recovery over long timescales are needed in order to better understand how disaster recovery processes unfold over a period of years and how recovery outcomes differ in various environments (Berke and Glavovic 2012; Reiss 2012; Smith and Birkland 2012). Such longitudinal studies may be prospective or retrospective, yet few follow a retrospective approach to gather data of historical cases (e.g. Johnson, 1999; Rubin, 1985). Concerns with the reliability of participant recall create challenges for research (Wolfe and Jackson 1987). Creative methodologies are required to facilitate the gathering of reliable retrospective data (Berney and Blane 2003).

Methods and context

This research adopts a systems thinking approach and qualitative methods to gather retrospective empirical data of post-disaster change and recovery processes. We developed an inductive timeline tool to elicit reliable retrospective recall to explore the recovery of the healthcare system on the island of Montserrat, where the sudden eruption of the Soufrière Hills Volcano in 1995 prompted a relocation of infrastructure and the population further from the volcano. The ongoing eruption context affords opportunities to explore processes of adaptation and recovery amid intermittent hazards, over a period of many years (1995-2012).



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Results

We find that relocation was not a static process, but healthcare departments continued to move for many years, lending a sense of impermanence to relocation sites. Drawing on empirical data we identify many different aspects of change for the healthcare system and derive a classification system to analyse its recovery. Different elements of the system show signs of recovery at different times. Integrating all elements of the healthcare system as a whole, we find that recovery is ongoing.

Conclusions

This case study brings new understanding of the complex and long-term nature of disaster recovery processes. This research provides an approach to gathering empirical data of historical cases and a framework for analysing the recovery of complex systems, which may be applicable in other hazard contexts. Additional case studies of complex systems over extended recovery timeframes, and triggered by single event hazards, will serve to better-understand post-disaster change and recovery processes within a range of specific contexts. This has implications for improved policies and decision-making.

Keywords: Long-term disaster recovery, relocation, retrospective method, systems thinking, complex systems

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