Security for Public Health Resilience in Michigan's Western Upper Peninsula

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Rhys-Jones, Z. (2022). Houghton, MI overlooking the Portage Canal. [Digital]. Houghton, MI.

Call 3 and Continuation Call: Public Health Disaster Research Award Webinar
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Project Overview

Research Site

• Michigan's Western Upper Peninsula

Purpose

• Examines the extent public health facilities in the Western Upper Peninsula (UP) of Michigan are prepared to navigate energy service disruptions
  • Region is historically, geographically, socially, and culturally unique
  • Focuses on disruptions caused by disasters, including severe inclement weather

• Considers how public health facilities can support community energy service needs during & after these disruptions

Timeline

November 2022 to March 2023

Research Questions

1 To what extent are health facilities in the Western UP prepared to navigate the increasing occurrence and intensity of storms with a high likelihood of power system disruption?

2 How can an evaluation of preparedness help inform decision-making that can enhance energy service access and promote health resilience in rural and Tribal communities in this region?
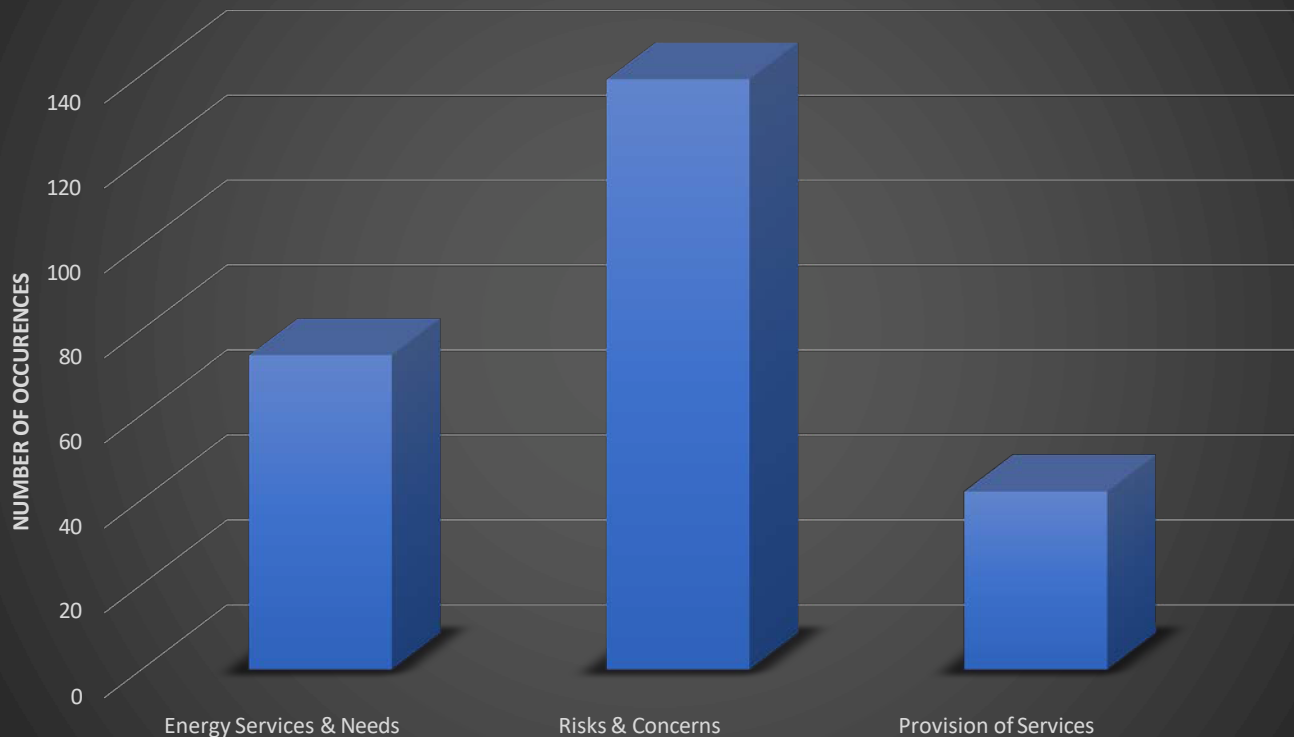
Methods

Interviews

- Semi-structured, qualitative interviews
  - Snowball sampling
  - Eleven interviews, Fourteen interviewees
  - Facility administrators, non-profit leaders, emergency managers
  - Coded using Nvivo
- Two questions sets
  - Questions focused on weather, energy outages, community needs
  - 1 set of questions was tailored for facility administrators
  - 1 set of questions was tailored for general public health stakeholders

Survey

- Online survey for facility administrators
  - Responses requested from health facility administrators following their interviews
  - 4 facility responses
  - Survey asked technical details related to health facility energy services

Preliminary Findings

References Across Interviews — Bar chart showing NUMBER OF OCCURENCES for three categories: Energy Services & Needs (~80), Risks & Concerns (~145), Provision of Services (~45)

- 14 initial codes, 3 main categories
  - Energy Services & Needs
  - Risks & Concerns
  - Provision of Services

- Self-Reliance – for better or for worse
  - "Just make it work"
  - Strong focus on community relationships, lack of expectation that outside entities will help
  - The Western UP is at the tail end for services, support, and severe weather

Public Health Implications

1 Heightened vulnerability to public health issues due to extreme weather, aging energy services infrastructure, and location.

2 Older, rural populations experience real issues accessing care at the best of times

3 Planning community energy service needs is imperative for public health during and after disaster

Public Health Implication

(1)

Heightened vulnerability to public health issues:

- Geography and rurality of UP leads to dependency on imported fuel

- Relationship between energy services/infrastructure and public health

- Access to health services can be further harmed during disasters and the long-term outages that accompany them

Public Health Implication

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Older, rural populations experience real issues accessing care at the best of times

- Limited proactive planning to serve energy service needs of community during/after disaster

- Quantifying needs and type of health service community needs

Public Health Implication

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Planning community energy service needs is imperative for public health during and after disaster

- Proactive planning for localized energy security

- Cultural, infrastructural, and institutional dynamics intersect to exacerbate vulnerabilities for public health

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