

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



Shardul Tiwari *
Zoë Ketola
Chelsea Schelly
Eric Boyer-Cole



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

Project Overview



- 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



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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

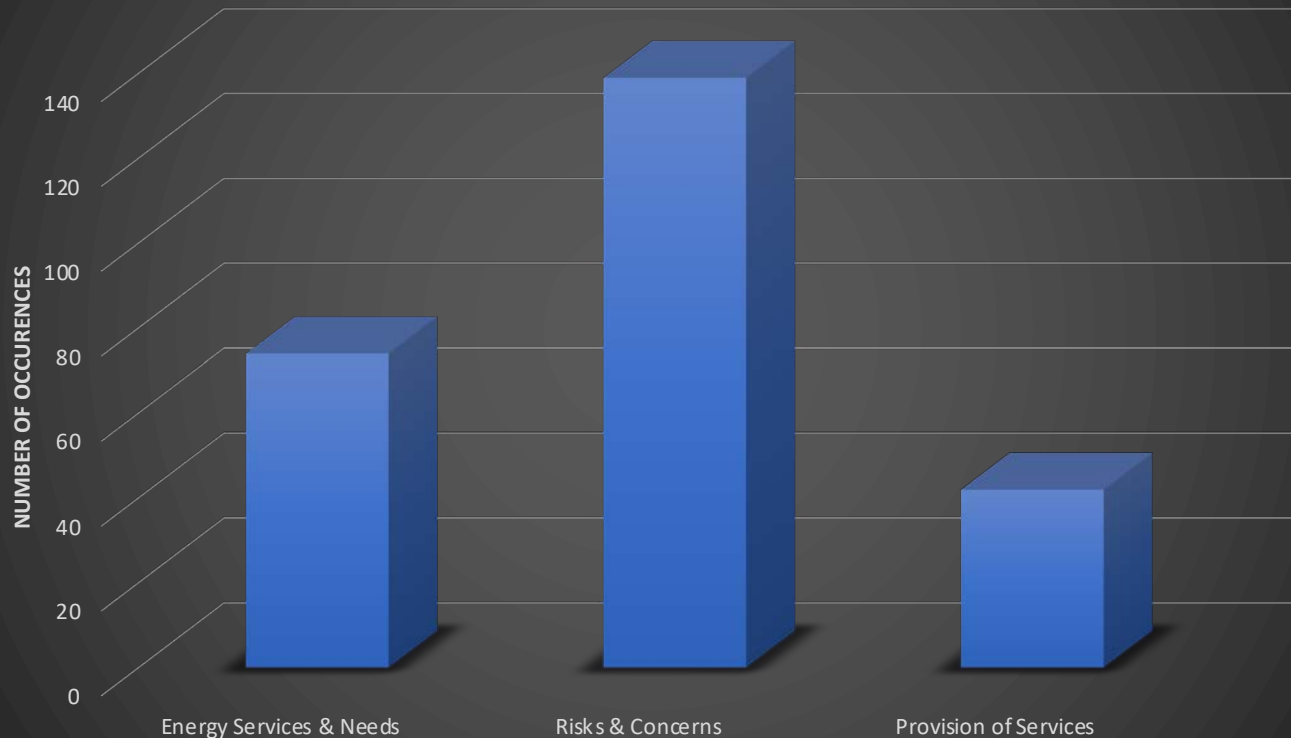
- Semi-structured, qualitative interviews
 - Snowball sampling
 - Eleven interviews, Fourteen interviewees
 - Facility administrators, non-profit leaders, emergency managers
 - Coded using Nvivo
- Two questions sets
 - Questions focused on weather, energy outages, community needs
 - 1 set of questions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



- 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

2

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

3

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

Acknowledgements



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Members in the Western UP

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