Hurricane Sandy Research and Implications for Access to Care and Primary Care Policy and Operations

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What did we study?

- Research Goal: Minimize disruptions of access to primary health care services during recovery from major disasters.
- Studied the primary care sector in the Rockaway Peninsula, Queens, New York using an agent-based model that simulated the population, primary care providers, and dynamic interactions between these groups.

An Agent-Based Model for Addressing the Impact of a Disaster on Access to Primary Care Services
Why did we study that?

• **Simulation tool inputs:**
  – Pre-storm and post-storm capacity of primary care facilities
    • Survey at Primary Care Sites
  – Community profile

• **Simulation tool outputs:**
  – Information about the dynamics of who was affected, where, and when
  – Capacity and activity of primary healthcare sites

• **Goal:**
  – To shrink the access deficit as quickly as possible
How did we study that?

Research Team

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How did we study that?

- Created an agent-based model, HAZEL (HAZard Area REsource Locater) [http://www.phdl.pitt.edu/hazel/](http://www.phdl.pitt.edu/hazel/)
  - Simulates the population, and its evacuation and primary care access behavior after Sandy
  - Simulates the primary care providers, and their availability after Sandy
  - Identifies areas of high primary care access deficit
  - Tests the impact of alternative interventions on reducing the deficit
How did we study that?
HAZEL Attributes

• Individual attributes
  – Chronic conditions
  – Healthcare providers
  – Health Insurance
  – Evacuation and returning dates
  – Practice assignment limited by health insurance
  – Rate for visiting practices
  – Primary care site visiting rate

• Primary Care Site attributes
  – Location
  – Accepted insurance types
  – Closing and reopening dates (duration of closure)
  – Panel size
  – If they can exceed capacity
How did we study that?

Legal Component

• Legal data contextualized the HAZEL agents
  – Emergency Declarations and Waivers of Law
  – Practitioner Scope of Practice and Licensure Portability
  – Mobile Health Clinics
  – Pharmacies and Access to Prescription Medications
  – Crisis Standards of Care
  – Volunteer Health Practitioners Immunity and Liability

Legal Considerations for Health Care Practitioners After Superstorm Sandy
What did we find?
What practical and policy applications do we think these findings might have?

• Aid in decision-making in the aftermath of a disaster in any geographic area in the US to increase access to health care

• Highlight the importance of law and policy when addressing emergency response and recovery
Practical and Policy Applications

• HAZEL is a novel simulation tool using an open-source code base and publicly available population inputs → easy to use elsewhere
  – Health care provider location and panel size
  – Distribution of insurance type
  – Distribution of chronic illness prevalence
Practical and Policy Applications

- Thinking about legal challenges faced by providers after disasters *before* disasters
  - Planning and coordination among jurisdictions and facilities
  - Broader use of executive orders to expand scope of practice and licensure portability
  - Adopting legislation to expand licensure portability
  - More clarity for volunteers regarding immunity and liability
Thank you!

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