Will Health Care Personnel be Willing to Work in a Disaster?

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Disclaimer

The contents of this presentation are those of the presenter and are not necessarily the official views of the U.S. Government, the Department of Defense, or the Department of the Navy.
How can I even raise this issue?
Why should we be concerned with willingness to work?

Nations with Most Natural Disasters (2005)

- China P Rep: 31
- India: 30
- United States: 16
- Afghanistan: 13
- Bangladesh: 12
- Pakistan: 11
- Vietnam, Indonesia, Romania: 10
- Iran (Islam Rep), Russia: 9
- Haiti: 8
- Mexico, Turkey: 7

Centre for Research on the Epidemiology of Disasters, Brussels, Belgium (2007)
Why should we be concerned with willingness to work?

San Fernando VA Hospital; 47 deaths when hospital collapsed after San Fernando earthquake (1971)

Sumter Regional Hospital after March 1 in Enterprise, AL (2007)
Mosdok, Russia hospital – target of terrorist bombing; 50 killed, 65 injured (2005)

Why should we be concerned with willingness to work?
Surge capacity: The ability to expand routine patient care capabilities in response to an overwhelming patient influx.
Florida Nurses Abandoned Their Jobs

- 25 nurses at Florida Hospital Ormond Memorial were fired or suspended for not working during Hurricane Frances in 2004

- Nurses were fired for not calling in, not showing up or refusing to work, while others were suspended for not completing a shift or coming late, said hospital spokeswoman Desiree Paradis-Warner

Why should we be concerned with willingness to work?
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Law Enforcement Personnel in New Orleans Abandoned Their Jobs

- 76 New Orleans police officers were fired for abandoning their positions during Hurricane Katrina in 2005

A New Orleans police officer in the French Quarter (AP Photo/Eric Gay)
**The Port Chicago Disaster**

- Two fully loaded Navy munitions ships exploded at Port Chicago in 1944
- 320 Navy enlisted killed and 390 injured
- A few weeks later they were ordered to begin loading ammunition again
- **300 Navy enlisted personnel refused to return to duty** despite the threat of mutiny charges punishable by death during wartime
- 50 were charged and convicted of mutiny

**Why should we be concerned with willingness to work?**
Why should we be concerned with willingness to work?

- Policy, plans and decisions need to be evidence-based
- Science in this area is not mature
- Initial study findings demonstrate that health care workers will not be willing to report to work in some circumstances
Study #1: Willingness of Israeli Hospital Staff to Report to Duty

• **Purpose:** To assess adequacy of Israeli hospital disaster plans during the Persian Gulf War

• **Participants:** 1,374 hospital workers (all levels)

• **Scenario:** “You are at home with your family when a chemical warfare missile attack occurs. Your home has not yet been cleared when you are asked to report to your workplace. Will you report to work?”

• **Findings:** 42% of respondents indicated they were WTR
  – Males more willing to work than females (61% v. 34%)
  – Parents less WTR (40%) than non-parents (45%)

Study #1: Willingness of Israeli Hospital Staff to Report to Duty

- Staff unwilling to report to work cited these reasons:
  - Concern for personal safety (75%)
  - Transportation difficulties (65%)
  - Fear to open the family’s sealed room (64%)
  - Necessity to care for their family (63%)
  - Vision impairment due to wearing gas mask (57%)

- 75% of ‘Unwilling to work’ staff indicated they would if:
  - Provided with a complete protective suit
  - Gas mask inserts
  - Transportation was provided
  - An announcement that the roads to the hospital were not contaminated

Study #2: Florida Nurses’ Needs/Concerns Following a Hurricane

- **Purpose:** To explore the needs and concerns of emergency nurses related to working during a hurricane

- **Participants:** 30 nurses employed at community hospitals on Florida’s east coast (qualitative study)

- **Findings:**
  - Primary concerns: Family safety, pet care and personal safety while at work
  - Secondary concerns: Basic needs (food, water, sleep, shelter, rest)

Focus Group Responses:

- “My commitment to work depends on how safe I feel my family is.”
- “If my family is secure, then I would come to work.”
- “I do not like leaving my family behind.”
- “If my dogs are not welcome, I am not coming either.”
- “Safety is my biggest concern.”
- They need to provide food, pillows, scrubs, something to sleep on and a shower.
- “There should not be a double standard for some employees.”

Study #3: NYC Health Care Workers
Willingness/Ability to Report to Duty

• **Purpose:** To evaluate the ability and willingness of health care workers to report to duty in a catastrophic disaster

• **Participants:** 6,428 health care employees in 47 hospitals in greater NYC

• **Findings:** Depending on the type of disaster, 48% - 86% respondents would be willing to report to work

Study #3: NYC Health Care Workers Willingness/Ability to Report to Duty

- HCWs *most* willing to report:
  - Mass casualty incident: 86%
  - Environmental disaster: 84%
  - Severe snowstorm: 80%

- HCWs *least* willing to report:
  - Smallpox epidemic: 61%
  - Radiological event: 57%
  - SARS outbreak: 48%

Study #3: NYC Health Care Workers Willingness/Ability to Report to Duty

Barriers to Reporting to Work in Catastrophic Disaster:

- Transportation problems
- Childcare obligations
- Eldercare obligations
- Pet care obligations
- Fear and concern for family
- Fear and concern for self
- Personal health problems

Study #4: NYC Home Health Workers (2007)

- **Purpose:** To evaluate the ability and willingness of home health care workers to report to duty in an avian flu pandemic
- **Participants:** 476 home health workers in greater NYC
- **Findings:** In an avian flu pandemic:
  - 30% RNs willing to work
  - 12% home health aides willing to work


Preliminary Findings as of 9 Jan 07
Study #5: EMT’s Willingness to Respond to Terrorist Incidents

- **Purpose:** To assess the willingness of EMS providers to respond to terrorist events
- **Participants:** Random sample of 823 EMTs in the U.S.
- **Findings:**
  - 64% to 88% willingness to report depending on type of event
  - Recent training was associated with an EMT being twice as likely to report in a smallpox outbreak

Study #6: Willingness of Public Health Workers to Report to Work

- **Purpose:** To understand local public health workers’ perceptions toward pandemic influenza response.

- **Participants:** 308 Maryland health department employees

- **Findings:**
  - 54% indicated they would be willing to work in a pandemic
  - 66% felt they would be at risk if they worked in a pandemic
  - 33% felt knowledgeable about the public health impact of a pandemic
  - Perception of the one’s importance in the agency’s response was the single most influential factor in willingness to report

Study #7: Simulation of Intentional Rift Valley Fever Outbreak

- **Purpose:** To assess community needs for public information in bioterrorism
- **Participants:** Medical first responders and 3 other groups
- **Findings:**
  - 95% of first responders indicated they would remain on the job in a bioterrorism attack if:
    - Their work site was protected
    - They received information about health care
    - The community was unlikely to be exposed again
  - Only 78% of spouses supported responders staying at work

### What Do We Really Know?

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<thead>
<tr>
<th>Study #</th>
<th>% Willing to Report to Work in Disaster</th>
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<tbody>
<tr>
<td>1</td>
<td>42%</td>
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<tr>
<td>2</td>
<td>Qualitative Data</td>
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<td>3</td>
<td>48-86%</td>
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<td>4</td>
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<td>6</td>
<td>54%</td>
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<td>7</td>
<td>95% (with contingencies)</td>
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Why should we be concerned with willingness to work?
...and does it matter?

Disaster Occurs

Demand for health care

Routine Health Services Demand

- Decreased capacity if facility is damaged
- Decreased capacity if personnel unable to report
- Decreased capacity if personnel unwilling to remain at work
- Decreased capacity if personnel not willing to report
Proposed Study of Military Hospital Personnel

- First study of military health care workers is planned (2007-2008)
- Sample will be military and civilian hospital staff
- Web-based quantitative/qualitative exploration of how the decision to report or remain on duty in disaster is made
U.S. military hospitals are staffed by three personnel groups:

- Military Personnel
- Contracted Personnel
- Federal Civil Service Personnel
What’s Next?

• Develop more data – understand military health worker behavior and decision-making in disaster
• Identify barriers to willingness to report and remain at work during a disaster
• Mitigate barriers when possible
• Develop plans based on realistic assumptions

“Disaster planning is only as good as the assumptions on which it is based.”

-- Erik Auf der Heide (2006)
Comments? Questions?

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