Evidence-Based Disaster Planning: Dispelling Common Public Health and Healthcare Myths and Misconceptions

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Objectives

- Identify assumptions about disaster response and management
- Compare assumptions with research findings
- Discuss the implications for planning and possible interventions
- Recognize perpetual myths of public health disasters and disaster education
Disaster Research Limitations

- Sudden, single-impact disasters
- Limited control of variables
- Data are often fleeting
- Recordkeeping frequently abandoned in favor of patient care
- Qualitative data and case/case series design primarily
- Lack of documented methodology and peer review
- Some case series are dated
ASSUMPTION #1

- DISPATCHERS WILL HEAR OF THE DISASTER AND SEND EMERGENCY RESPONSE UNITS TO THE SCENE.
ASSUMPTION #1

- RESEARCH OBSERVATION
  - Local and distant emergency response units will often self-dispatch.

- IMPLICATIONS FOR PLANNING
  - Intercommunity level disaster planning is essential.
  - Anticipate that more help than needed will arrive.

- POTENTIAL INTERVENTIONS
  - Plan for coordinating unsolicited responders
  - Establish intercommunity mutual aid plans & training.
  - Use staging/check-in areas outside security perimeters.
ASSUMPTION #2

- TRAINED EMERGENCY PERSONNEL WILL CARRY OUT FIELD SEARCH AND RESCUE (SAR).
ASSUMPTION #2

- **RESEARCH OBSERVATION**
  - Most initial SAR is carried out by the survivors.

- **IMPLICATIONS FOR PLANNING**
  - Planners incorrectly assume that they will have control over response.
  - Disaster SAR is often ad hoc and uncoordinated.
  - Survivors often have best information.

- **POTENTIAL INTERVENTIONS**
  - Train first responders (including law enforcement) how to coordinate with survivors.
  - Designate personnel to obtain information from survivors about the location of the missing.
Rescuers brave horrific scene

Witnesses rushed through dust and smoke to help bring the injured to safety as emergency workers organized the rescue effort.

Star Tribune Staff
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On Wednesday evening, Jamecca Cohee was talking on her cell phone to her best friend, who had just picked up Cohee's mother at the airport. Suddenly the friend said to Cohee, "I can hear some cracking."

And then the phone went dead.

About the same time, Jeisy Aguiza, 13, and her brother Ronal, 7, and about 60 children were riding back to the Waite House Neighborhood Center after a day of swimming in Coon Rapids when their bus "just fell," she said.

Aguiza closed her eyes and grabbed hold of her brother as the bus dropped through the air.

Seconds later, the bus landed on all four wheels on the broken bridge deck. Rocks rained through the windows, Aguiza said. Some of the kids got the emergency door opened, and they rushed out.

"We were all just screaming," she said. "We all ran away."

Brandon Andreen, 20, of Blaine, was driving down University Avenue when he saw a huge cloud of dust and smoke, and people running.

He parked his car and scrambled to the water. He saw dust, smoke and fire. Cars were crushed, sunken, floating and hanging from the bridge. A car exploded in front of him. Screams echoed down the river.

"It was the worst thing I've seen in my entire life," Andreen said. "You couldn't breathe."
ASSUMPTION #3

- TRAINED EMS PERSONNEL WILL CARRY OUT TRIAGE, PROVIDE FIRST AID OR STABALIZING MEDICAL CARE, AND – IF NECESSARY – DECONTAMINATE CASUALTIES BEFORE PATIENT TRANSPORT.
ASSUMPTION #3

RESEARCH OBSERVATION
- Casualties are likely to bypass on-site triage, first-aid, and decontamination and go directly to hospitals.

IMPLICATIONS FOR PLANNING
- Hospitals should not assume casualties have been triaged, decontaminated, or given first aid in the field.
- Patients arriving in private vehicles may need to be carefully extricated to ensure injuries are not aggravated.

POTENTIAL INTERVENTIONS
- Develop real-time instructions for survivors.
- Provide courses on first aid, SAR & disaster care to the public.
- Send first responders to hospitals to extricate casualties from private vehicles.
ASSUMPTION #4

- Casualties will be transported to hospitals by ambulance.
ASSUMPTION #4

- **RESEARCH OBSERVATION**
  - Most casualties arrive at hospitals by a variety of nonambulance vehicles (e.g., private cars, police vehicles, buses, taxis, or foot).

- **IMPLICATIONS FOR PLANNING**
  - EMS authorities often have little control over time of transport or hospital destination for disaster casualties.
  - Transport outside of the EMS system poses challenges for patient tracking.

- **POTENTIAL INTERVENTIONS**
  - Educate the public about transporting casualties and whom not to move.
  - Establish procedures for collecting information from hospitals about what casualties they have received.
ASSUMPTION #5

- Casualties will be transported to hospitals appropriate for their needs and in such a manner that no hospitals receive a disproportionate number.
ASSUMPTION #5

- RESEARCH OBSERVATION
  - Most casualties are transported to the closest or most familiar hospitals

- IMPLICATIONS FOR PLANNING
  - All hospitals must be prepared to decontaminate.
  - It may be possible to influence or plan around inefficient casualty distribution.

- POTENTIAL INTERVENTIONS
  - Ambulances can bypass hospitals closest to disaster.
  - EMS/Hospital mutual aid plans and radio systems.
  - Use “First-Wave” protocol to divide initial casualties among area hospitals.
ASSUMPTION #6

- AUTHORITIES IN THE FIELD WILL ENSURE THAT AREA HOSPITALS ARE PROMPTLY NOTIFIED OF THE DISASTER AND THE NUMBERS, TYPES, AND SERVERITIES OF CASUALTIES TO BE TRANSPORTED TO THEM.
ASSUMPTION #6

RESEARCH OBSERVATION
- Hospital disaster notification may be from first arriving victims or the news media rather than from authorities in the field. Often, information and updates about incoming casualties are insufficient or lacking.

IMPLICATIONS FOR PLANNING
- Initial hospital response may depend on the in-house resources.
- Time consuming hospital procedures before casualty arrival may not be practical.

POTENTIAL INTERVENTIONS
- Base initial hospital response plans on in-house rather than on-call resources.
- Provide in-house staff with authority to activate/modify plan.
- Develop plans for expedient decontamination of unannounced casualties until more sophisticated decon can be set up.
ASSUMPTION #7

- THE MOST SERIOUS CASUALTIES WILL BE THE FIRST TO BE TRANSPORTED TO HOSPITALS.
ASSUMPTION #7

- RESEARCH OBSERVATION
  - The least serious casualties often arrive first.

- IMPLICATIONS FOR PLANNING
  - Emergency departments may not know of the most serious patients yet to come. Therefore, when they arrive, they may find all beds occupied.

- POTENTIAL INTERVENTIONS
  - Assign field responders to communicate casualty information to hospitals.
  - Hold beds open at hospitals for the possibility of later-arriving more serious casualties.
Summary

- Emergency response units often self-dispatch.
- Most initial SAR is carried out by the survivors.
- Most casualties are . . .
  - likely to bypass on-site triage, first-aid, and decontamination stations and go directly to hospitals.
  - not transported by ambulance.
  - Transported to the closest and most familiar hospitals.
- Hospital notification may be from first arriving victims or the news media, rather than authorities.
- The least serious casualties often arrive first.
Public Health Disaster Myth #1 –
Dead bodies cause epidemics
Reality!

Disaster victims’ bodies pose little or no threat to public health.
Public Health Disaster Myth #2 – Any kind of assistance is needed, and right away!

- “Send any type of donation. It’s needed immediately.”

- “any kind of international assistance is needed, and it's needed now.”
Reality!

A hasty response that is not based on an impartial evaluation only contributes to the chaos.
Public Health Disaster Myth #3 –

*Epidemics and plagues are inevitable after every disaster*
Reality!

Epidemics do **not** spontaneously occur after a disaster.
Public Health Disaster Myth #4 – *Disasters bring out the worst in human behavior*
Reality!

The majority of disaster victims respond spontaneously and gratuitously.
Public Health Disaster Myth #5 –
Affected populations are too shocked and helpless to take responsibility for their own survival
Reality!

Many find new strengths during an emergency.
Myth #6 – *Disasters are random killers*
Disasters strike hardest at the most vulnerable group, the poor – especially women, children, the elderly, and disabled.
Myth #7 – Locating disaster victims in temporary settlements is the best alternative.
Reality!

It should be the last alternative.
The Myths of Disaster Education

- Myth 1: People Need to Know “Special” Things for Disasters
- Myth 2: We Are Smart; Hearing It Once Is Enough
- Myth 3: A Drill Now and Then Is Enough
- Myth 4: The Government Will Take Care of It
- Myth 5: It is Impossible to Be Prepared
“Planning should take into consideration how people and organizations are likely to act, rather than expecting them to change their behavior to conform to the plan.”

- E.L. Quarantelli, Professor Emeritus University of Delaware Disaster Research Center
References


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QUESTIONS?

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