

EPIDEMIOLOGY

Monitoring the Health Status of Missourians in Response to the Great Flood of 1993

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In response to the Great Flood of 1993,
the Missouri Department of Health

measured the impact on the health of its citizens by three methods. During the flood event, we used initially passive and later active surveillance with hospital emergency rooms. We also actively sought reports of mortality and retrieved death certificates for flood-

related fatalities. A telephone interview survey was conducted in March of 1994 to learn more about the population's experiences, knowledge, and attitudes related to the flooding.

Monitoring the Environment

Disaster Mitigation: Relocation in Illinois

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Because of the long history of flood disasters in Illinois, acquiring homes and businesses along the rivers and returning the floodplain to public ownership always have been important mitigation objectives. None of the previously encountered disasters was as overwhelming or traumatic to the victims as was the 1993 flood, which historians labeled the "Flood of the Century." The personal choice of those individuals who loved the river and lived on its banks has been altered by the stress, trauma, and hardship that they endured when the Mighty Mississippi decided to reclaim its floodplain.

The Illinois Emergency Management Agency and the Federal Emergency

Management Agency (FEMA) worked as a team to coordinate many State and Federal programs with the local governments in order to implement the buy-out of more than 1,600 structures. The mitigation mission also included relocation of one entire village and portions of four others along with nearly 200 elevations. Participation in the mitigation program was voluntary on the part of the homeowner.

Some of the major hurdles that needed to be addressed by the State and Federal team were: 1) acquiring the monetary capability with adequate funding; 2) dealing with environmental assessments and the policies associated with salvageable items, underground storage tanks, and contaminated structures; settling the insurance controversies; 3) resolving the farm easement and development rights issues; 4) hiring appraisers, review appraisers; and

5) doing title searches and closings. All of these situations affected the buy-out participants, who were unaccustomed to dealing with the governmental bureaucracy.

It is said that the buying or selling of one's home can be traumatic, even under the best of circumstances. When it becomes necessary to "pull up roots" in the aftermath of a disaster, the process of relocating may be a more difficult experience.

This paper provided a critical look at the mitigation mission in Illinois, primarily the process of acquisition, relocation, and elevation on a large-scale following the Great Flood. It examined the process—what worked and what didn't—that will provide a better script for Illinois and for other States facing future floods. The spotlight is shining brightly on the successes, and the State will have learned from its mistakes.

ORGANIZING AND TRAINING FOR SERVICE DELIVERY-PREPAREDNESS, PREVENTION, AND PROTECTION

Introduction

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Introduction

A. Organization for service delivery in

large scale disasters

- 1) Warning and notification systems
- 2) Immediate responders (first hours to first two weeks). Who responds in communities, focus of immediate response
- 3) Post-acute responders (2 weeks to

3 months after disaster)

- 4) Long-term responders—community groups, agencies, government
- 5) Transition from one phase to another (personnel, information, data gathering, continuity issues).
- 6) What should be the emphasis for

- organization for long term service?
- B. Training for service delivery personnel
- 1) Formalized training of organizations and agency personnel (pre-disaster) immediate or acute phase vs. long term recovery
 - 2) Orientations (during disaster)
 - 3) "Supervised experience" systems (on the job training, mentoring, etc.)
 - 4) Focus of training of personnel for long term recovery programs

Effects of pre-disaster training and organization on service delivery personnel

- A. Level of expertise of worker
- 1) Trained vs. "off-the-street" personnel
 - 2) Organized delivery systems vs. ad hoc groups/systems
- B. Immediate responders vs. long term workers
- 1) Standard operating procedures and protocols, drills and exercises for immediate, acute response
 - 2) Plans, networks, meetings, problem-solving and strategy formation for long-term workers

Steps the American Red Cross has taken to better prepare its workers and chapters for "the long haul" of a major disaster.

- 1) Lessons learned from Hurricane Hugo (1989)
- 2) New service of Disaster Mental Health with a focus on workers
- 3) Guidance for chapters in preparing disaster plans to include the "recovery" phase
- 4) Collaborations with National Voluntary Organizations Active in Disaster, (NVOAD), and Unmet Needs committees regarding the longevity of disaster issues

MEDICAL-PSYCHOLOGICAL MANAGEMENT OF LARGE-SCALE DISASTERS

Mid- and Long-Term Effects of Disasters on Victims

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After a brief overview of various research studies on the mid- and long-term effects of disasters on victims, this discussion centered on the personal stories and experiences of individuals and business owners who were affected directly by the Des Moines Flood of 1993. The main focus was on psychological distress and its effect on behavior and relationships. There also was discussion of disasters as catalysts for positive change. Specific issues that were explored including the negative and positive effects of the flood.

Negative Effects

- 1) Continued grieving over lost memorabilia, etc.;
- 2) Significant events such as Christmas

bringing painful memories back as lost items are remembered and mourned once again;

- 3) Avoidance of discussing or thinking about the flood;
- 4) Persistent anger: e.g., seeing neighbors who had volunteers "replace and rebuild" items that never were there before or not damaged by the flood. Anger over the one year "celebration" that took place in Des Moines;
- 5) Increased substance abuse;
- 6) Increasing worry and fear all winter of 1994 that there would be another flood in the summer. Concern that this worry will start up again next winter;
- 7) Certain stimuli such as the smell of sewerage triggering memories;
- 8) "It's dangerous to think about it." Feelings of depression and anxiety arise;

- 9) Anniversary date nightmares; and
- 10) Development of poor money management and spending habits.

Positive Effects

- 1) Deep appreciation for the volunteer work which has caused a renewed belief in other people;
- 2) The disaster's effect on saving or collecting things;
- 3) The disaster as a catalyst for major life changes and decisions; and
- 4) Strong belief in survival potential.

Other Issues

- 1) Changing roles in relationships;
- 2) The relationship between having experienced other out of the ordinary events (such as combat) and the initial response to the disaster. Also, the relationship of the disaster to current level of functioning; and
- 3) Potential "at risk" groups.

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