arrived at the burning bulk of the fuselage and started to blanket the plane with foam.

Body Recovery

On 20 July, a co-ordinate baseline method of measuring was used on the main and crossing runways to establish victim location. Spray paint was used to mark the runways at 30 foot intervals. Three victim collection teams were formed to deal with the bodies on the runways and in the fields. Each team had a pathologist, a scribe, a photographer, a measurer, two body handlers and a tagger.

Identification

A temporary morgue was set-up in an Iowa Air National Guard aircraft hanger located in the airport. Nine steel bedded refrigerated trucks were parked just outside the morgue. Six-foot, portable walls were constructed around six work areas. The flow pattern for the morgue included a reviewing area, body X-ray, FBI fingerprinting, dental area, autopsy area, and an embalming area. Gurneys were used to transport the bodies throughout the identification process. Volunteer trackers followed the bodies throughout the identification process to maintain accurate files.

Critical Incident Stress

Critical incident stress was a factor affecting most of the disaster workers. Some experienced acute critical incident stress at the scene, but most experienced delayed critical incident stress after returning home. General signs of stress that surfaced included general irritability, depression, anger, difficulty concentrating, nightmares, numbness, flashbacks, increased substance use, etc.

Those assumed to be immune from critical incident stress, such as, pathologists, morticians, dentists, and police, also were affected. The American Red Cross sent 20 teenage volunteers to work in the morgue. These volunteers had no experience with death and were not briefed on what to expect in the morgue. These individuals experienced acute critical incident stress, and required many months of therapy to help them recover from this experience.

Debriefings were offered at the scene and later after returning home. A debriefing is a time for people to share their experiences with others and receive stress education in the hope of accelerating a normal recovery and avoiding post traumatic stress disorder.

Critical incident stress debriefing teams primarily consisted of volunteer mental health professional and peer support personnel drawn from the fire, emergency medical services, police, medical, and other emergency response organizations.

It is suggested that all emergency services organizations utilize the critical incident stress debriefing method for all personnel involved in large or small critical incidents. This method includes: 1) on scene, one-on-one interventions if needed; 2) stress education or a short debriefing immediately after workers are released from the scene; 3) and formal debriefings for all emergency workers 24 to 72 hours after the incident. Critical incident stress teams also could be used to advise command personnel on worker stress problems.

Conclusions

1) Mock disasters should be utilized for training disaster workers and should involve all agencies that would respond to a disaster. It is very important to know the "players" who are to be involved in the rescue and identification process.
2) Critical Incident Stress Teams should be called-in during and after the disaster.
3) Volunteer personnel should be screened carefully for those who have experience in dealing with the dead.
4) A comprehensive system of disaster-worker identification is imperative.
5) Comfortable accommodations should be secured by command personnel for all disaster workers immediately after the disaster occurs.
6) Disaster workers need to take frequent breaks in an area away from the scene, and should work no longer than 12 hour days.
7) A mutual-aid system should be established with agencies in the area; large scale disasters require more emergency personnel and equipment than many agencies have available. Military bases tend to have a wealth of personnel and equipment resources that should be utilized.
8) The recognition and commendation of all persons assisting in the disaster is essential.
9) Assign an individual to the press and have frequent press releases with accurate information.

Stages of Recovery: Community Level
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I. Introduction
A. A disaster, by definition, is something that occurs to a community of people.
B. It is not always clear who comprises the "community."
C. *Personal responses to a disaster take place in the context of the individual's community.*
D. The community provides the resources that are most accepted by the individuals and families in the community to aid in their recovery.

II. Stages of Disaster
A. *Standard* stages of a disaster
   1. Impact
   2. Response
   3. Recovery
B. *Expanded* stages of a disaster
   1. Stages
      a. Warning
      b. Threat
      c. Impact
      d. Inventory
      e. Rescue
      f. Remedy
      g. Recovery
   2. Notes on expanded stages
      a. Not all stages have to occur in a disaster
      b. There can be considerable overlap of stages

C. Impact of disaster on a community during the standard stages of a disaster
1. General
   a. A "social disaster" or "second disaster" should be distinguished from the physical disaster or event (tornado, hurricane, flood, fire, earthquake, etc.).
   b. The social disaster is the rolling series of disruptions to the social fabric of a community resulting from the effects and implications of the disaster.
   c. Experience in communities affected by disaster suggests that we can expect a series of crises in different parts of the community social fabric during the recovery process.
   d. The evolving process of the social disaster can be traced through the stages of impact, response, and recovery.
2. Impact
   a. In a community, the network of relationships and bonds that exists before a disaster provides the basic means through which people receive and react to warnings. The first effect is an intensification of bonds. People tend to turn to those they know for confirmation of warning regardless of whether these people are better informed then they are. Cooperation and mutual concern are seen as disaster approaches, demonstrating strengthening bonds.
   b. As a disaster strikes, existing relationships and bonds give way and are replaced by efforts to survive and relationships that are not responsive to the situation. Relationships are indiscriminate. People feel a sense of anonymity.
   c. The prevailing order of relationships can be suspended. Authority relations may become suspended. People may not follow orders of law enforcement officials. The young may control and direct parents.
   d. Following impact, there is a short period where a process of de-bonding takes place.
3. Response
   a. Very soon after de-bonding occurs, the community's social fabric begins to reassert itself.

This is a basic human need, and helps people to maintain their identity. As soon as the crisis passes, there is a substantial effort to re-establish bonds. As the community begins to come together, bonding intensifies indiscriminately. People have been through the same experience and have something in common. Intense camaraderie develops.
   b. Often the camaraderie that develops leads to such a strong sense of community that outsiders are rejected. The new bonds are based only on the intensity of the experience brought about by the disaster, and do not take into account pre-disaster differences. People who have experienced this describe it as a sense of euphoria, a high, a unique time in their life when people of all types are close to each other. This intensified fusion can be seen as a response to the de-bonding which occurred during impact.
   c. De-bonding and fusion are not discrete phases, though they involve the whole community. Individuals may experience them at different rates. Still, both experiences almost always are described by people later.
   d. A fused community is energetic and powerful, and well-suited to the initial or "heroic" phase of recovery. People feel that they are all one, that they work together, and that they support each other.
   e. Fusion, however, is unreal and is based on an artificial situation. It does not consider pre-disaster history, where many people may not have liked, respected, or paid much attention to each other. Fusion usually only lasts for a few hours or a few days, after which the need for all human groups to re-structure themselves in a complex set of subsystems based on a variety of factors and conditions re-asserts itself. This process can be called "differentiation," since it involves the sorting-out of a previously undifferentiated group.

4. Recovery
   a. The process of differentiation signals the beginning of the recovery phase. As fusion breaks down and pre-disaster community structures naturally begin to reassert themselves, confusion, disorientation, and turmoil are felt. Local agencies and organizations try to resume their work, social networks redevelop, and familiar customs and habits reappear.
   b. The community, however, has been changed radically by the disaster. Every individual, organization, business, and network now is faced with the need to adapt to the new environment and circumstances created by the disaster. Some individuals and institutions are well-suited to dealing with the changes, while others are not; this creates new differences and tensions.
   c. Differentiation also takes place along other lines. People tend to bond more closely with others who have had similar experiences, and feel somewhat alienated from those who have not. People who have lost family members in the disaster often bond closely with others with a similar experience. Those who have experienced total loss of their property often feel that people who sustained slight or no damage do not understand what they are going through. Other people can feel that their unique needs are not recognized by others, in relation to many other issues.
   d. At the same time that everyone has the need for recognition and understanding, they also have strong feelings of anger at the destruction and loss they have experienced, and can project this anger onto other individuals, families, organizations, objects, or circumstances.
   e. The need for people to differentiate is facilitated by anger, resentment, envy, competition, and other negative emotions. These emotions emerge soon after the euphoria of fusion, and mark a low, disenchantment, dis-

illusionment, or depression period. Viewed from the outside, though, these feelings can be seen as necessary to fulfilling the need for differentiation leading to the reorganization of community structures.

f. The issues on which differentiation are based are not consistent with pre-disaster community structures. Often, conflict develops between old structures reasserting themselves and emerging new structures. Emerging structures can cut across or generally be incompatible with existing structures, fostering competition for resources, opportunism, and political tensions. Sometimes old structures are destroyed in this process.

g. Because differentiation occurs around differences between people or community subsystems, it is possible to anticipate some differences and recognize others as they begin to emerge. These differences can be called community

"cleavage planes." These cleavage planes are issues differences or issues around which competition, rivalry, and conflict is generated, and through which groups and systems are likely to move apart.

h. Understanding the dynamics of communities in disaster recovery and identifying cleavage planes can provide the basis for recovery planning and intervention designed to enable and support constructive differentiation, and can minimize conflict and competition with pre-disaster community structures. Intervention can enable recovery by fostering appropriate differentiation and bonding, and by anticipating and defusing cleavages and conflict.

i. Communities have a very strong internal drive to recover from disaster. It is the existence of this drive that usually defeats attempts at successful recovery imposed from the outside. Instead, the dynamics of the recovery process must be under-

stood and accepted, and used to support the community's own recovery activity. Outside help can be effective in a community to assist people in identifying and understanding a larger view of their situation that goes beyond the understanding usually permitted by their personal experience and circumstances. Successful intervention can help a community develop and reform itself, carry-out recovery, and positively integrate the disaster into its history.

D. Recovery Strategies

1. An understanding of the dynamics and needs of communities in disaster recovery suggests several general strategies which can be effective in enabling recovery:

   a. Reducing isolation;
   b. Restoring a sense of self-control;
   c. Forming groups and networks;
   d. Enabling communication and information exchange;
   e. Community development; and
   f. Symbolic events.

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Ethical Issues for Agencies and Service Providers
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The Challenge

Disasters are extremely complex events that usually result in widespread destruction and distress. The ultimate aims of disaster intervention are first and foremost, humanitarian and compassionate. But, with our caring and good intentions, as professionals, we also must provide the highest caliber of knowledge and skills.

Providing service in the midst of a disaster is uniquely challenging. One is faced with the aftermath of such experiences as loss of home, food, utilities,

employment, other resources and property; dislocation from family and community; and even, physical injury and death. Working with experiences such as these-and perhaps more to the point, doing so in the very midst of the chaos-the professional also faces a myriad of ethical issues. The challenge is to maintain excellence in our actions even in the midst of this chaos.

Professional Versus Nonprofessional Relationships

Ethics are both the specific moral choices to be made by the individual in his/her relationship with others, as well as the rules or standards governing the

conduct of the members of a profession. We can volunteer our energies in a disaster as private citizens (e.g., a psychologist sandbagging in a flood), or offer our services as a professional. When we participate as professionals, certain responsibilities automatically ensue, and these will include certain ethical obligations. It is of utmost importance that we are clear in our understanding of what, in each of our disciplines, constitutes a "professional relationship." For example, a simple action, such as giving advice or an opinion to a disaster victim, may create a professional relationship. And, with this, a host of ethical responsibilities also are created.