WHAT IS A DISASTER?

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INTRODUCTION

The experience of Hurricane Floyd and the deployment of Virginia Critical Incident Stress Management resources to North Carolina has highlighted for many in the community the realization that disaster response is both a role of Critical Incident Stress Management and a different role from normal response to local critical incidents. Although Virginia regularly experiences disaster events, we have been fortunate that such incidents have not generated wide areas of destruction or large numbers of deaths and injuries in recent memory. Our most severe Virginia natural event during most of our lives was the impact of hurricane Camille in the western part of the Commonwealth in 1969, with the death of 113 people (USA Today 1999). In contrast, the event that many of us use as a benchmark, the Tri-Cities Tornado in 1993, killed four persons (Old Dominion Emergency Medical Services Alliance 1993).

This is not say that there is no potential for major events in Virginia. The last medical hazard assessment conducted by the Office of Emergency Medical Services points out that we live in a hazard rich environment (see Table 1). At the same time it is important to realize that Virginia does have a history of catastrophic Category 4 or Category 5 hurricanes during the Colonial period (Brinkley 1999). These caused extensive damage to settlement and agriculture that was primarily distributed along inland rivers; the same events given today’s coastal development would have incredible impacts.

Table 1.
1997 Medical Hazard Analysis

<table>
<thead>
<tr>
<th>Natural Hazards</th>
<th>Man Made Hazards</th>
<th>National Security Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>hurricanes</td>
<td>industrial accidents</td>
<td>terrorism</td>
</tr>
<tr>
<td>flooding</td>
<td>nuclear power plant</td>
<td>attack</td>
</tr>
<tr>
<td>severe winter storms</td>
<td>accidents</td>
<td></td>
</tr>
<tr>
<td>tornadoes</td>
<td>transportation accidents</td>
<td></td>
</tr>
<tr>
<td>earthquakes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


And disasters do not have to be in Virginia for Virginia resources to be used. The deployment on October 1999 of Critical Incident Stress Management resources to North
Carolina was conducted under the provisions of the Emergency Management Assistance Compact, signed by Governor Wilder in 1993. The Compact is a state-to-state mutual aid agreement that commits signatory states to provide resources on request (Southern Governors’ Association 1993). Under the provisions of the Compact Virginia resources can be requested for service in any of 32 states and one territory (Emergency Management Assistance Compact 2000).

**WHAT IS A DISASTER**

The combination of the disaster threat and the reality of Emergency Management Assistance Compact deployments means that those of us who may be called to do disaster response require an understanding of what it is we are talking about. The traditional definition of a disaster in the emergency medical services is more patients than there are available ambulances, care providers, and hospital beds. A slightly more comprehensive version of the definition adds that a disaster is an unexpected event, that it requires a rapid response to save life and reduce injury, and that it requires the use of unusual procedures for its resolution (Commonwealth of Virginia 1998).

Drabek (1991) suggests that the issue of unusual procedures is the critical one in distinguishing a disaster from a routine emergency of the type that emergency services agencies respond to every day. A disaster requires that emergency responders and managers move beyond the standard operating procedures to apply non-standard approaches to dealing with the situation. And a disaster requires assistance from people and organizations which are not normally part of the response. This approach highlights the difficulty of saying that a particular event is a disaster. Some cities might be able to absorb the impact of a major event that would completely overwhelm a smaller jurisdiction. On the other hand, a snowstorm that is crippling in Richmond, Virginia in January would be a normal day’s snowfall in the small town of Valdez, Alaska, and might not even cause the snowplows to come out of the barn.

However, under any conditions, a disaster is not actually a disaster until someone who is authorized to say that it is one does so. Legally a declaration of a Local Emergency (by a city or county) or a State of Emergency (by the Governor) creates authorities to suspend certain regulations, allows the spending of money in a sum sufficient to control the effects of the disaster, allows purchasing and hiring as needed to meet disaster requirements, grants authority to order evacuations, and puts in place extensive liability protections (Commonwealth of Virginia). Most importantly the declaration of an emergency creates the expectation that the primary business of government is to control the impact of the event.

The process of disaster declarations is intended to be an orderly one. Local jurisdictions declare a Local Emergency when their resources are no longer adequate to manage an emergency using normal authorities. The state will provide assistance until its resources are no longer adequate under normal statutory authority and a Governor’s declaration of a State of Emergency is required to allow response to continue. A
Presidential declaration of Disaster is only made on request of a state for significant Federal Government assistance.

**THE DISASTER CYCLE**

The Federal Emergency Management Agency has defined a four phase disaster life cycle of Mitigation, Preparedness, Response, and Recovery. Two phases of this cycle are of importance to Critical Incident Stress Management disaster responders, Response and Recovery. The Response Phase starts with the first impact of disaster effects and continues until immediate life and property preservation actions are completed, initial damage assessment has been completed, and critical lifelines are being restored. For a major disaster event in Virginia, the Response Phase will last from three to five days; within this period the emergency services in an affected community may respond to hundreds of specific incidents.

The Recovery Phase starts as efforts begin to return the community to normalcy. Recovery accepts that it cannot return the community to its predisaster state; instead, Recovery is complete when everyone is in reasonably permanent housing, the social and economic structure of the community has started to function again, and assistance programs have fulfilled their missions. This may be a period of six months to a year. Beyond this a long term recovery process may extend for a decade until the community is able to return on its own efforts to the predisaster condition.

It is important to understand that the impact of a major disaster event causes deep wounds to a community. A portion of the predisaster population may simply leave. Business that have been damaged by the event will either not reopen or fail at a rate of 50 percent to 75 percent in the first three years. With losses in population and business revenue the tax base will be severely impacted, resulting in reduced ability of government to provide services. And the event will generate stresses that bring into the open existing, underlying rifts in the social fabric.

**WHAT IS THE WORST CASE**

Disasters in the rest of the world routinely are catastrophic events, with huge losses of life and vast property destruction. To frame this in context arguably the worst natural disaster in United States history was the Great Galveston Hurricane of 1900. That event resulted in between 6,000 and 12,000 deaths (Longshore 1998). The Great Okeechobee Flood, a September 1928 hurricane and the fifth largest natural disaster in United States history resulted in between 1,836 and 3,500 deaths, with remains being recovered to this day. In that incident the search for the dead continued from September 18th to November 1st, and was finally terminated due to a lack of funds (Barnes 1998). In one of the most widely reported disaster events of history, the bombing of the Murrah Federal Building, 168 people lost their lives (Oklahoma City Management Document Team 1996). In contrast, Table 2 presents several major disasters from around the world with death tolls.
Table 2.
High Impact Disasters

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Type</th>
<th>Number Killed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1883</td>
<td>Krakatau, Indonesia</td>
<td>volcano, tsunami</td>
<td>36,000</td>
</tr>
<tr>
<td>1970</td>
<td>Bangladesh</td>
<td>cyclone</td>
<td>500,000</td>
</tr>
<tr>
<td>1976</td>
<td>Tangshan, China</td>
<td>earthquake</td>
<td>240,000</td>
</tr>
<tr>
<td>1988</td>
<td>Spitak, USSR</td>
<td>earthquake</td>
<td>100,000</td>
</tr>
<tr>
<td>1995</td>
<td>Kobe, Japan</td>
<td>earthquake</td>
<td>6,310</td>
</tr>
</tbody>
</table>


**WHAT IS LIKELY**

Catastrophic events with large numbers of dead and injured have always been rare, and are becoming rarer in the United States. Improved communications and warning systems eliminate the possibility of a great storm truly approaching undetected (a major contributing factor in the Galveston event). Better detection and prediction capabilities are reducing the impact of rapid onset events such as tornadoes and volcanic eruptions (the evacuation and resulting small loss of life in the Mount St. Helens and Mount Pinatubo eruptions set the standard). Better construction practices, diligent code enforcement, and land use policy mean that people are less likely in some areas to build in harm’s way and that buildings themselves are more likely to be able to absorb the impact of a disaster. The Federal Emergency Management Agency’s new Safe Room initiatives are a step in increasing survivability.

However, at the same time the number of people exposed to disasters is increasing and the cost of disaster events is now routinely in the billions of dollars. Because the population continues to grow in an era of relatively good wages and high disposable income, more people are willing to pay to live in beautiful places. Unfortunately, those beautiful places expose them to landslides and avalanches (the mountains), forest fires (any forested area), and hurricanes (the coastal zone). As a result expensive homes and recreational facilities are being constructed in dangerous areas, with resulting increases in losses. At the same time populations in rural areas are expanding, forcing more people to move into risky areas that are not desirable, simply because that is where inexpensive land is available. The combination of more people in higher risk areas suggests that individual disasters may actually demand longer response and recovery phases.

This means that we can expect several characteristics that impact Critical Incident Stress Management in any future disaster:

1. Actual fatalities and injuries will be low in comparison to the severity of the event. However, even one or two fatalities will attract significant attention.
(2) Displaced populations will be large and will continue to grow. The affluent part of the population (those with significant wealth and the ability to both provide for their immediate comfort and to replace lost belongings) will be relatively large, but will generate few demands for service.

(3) The lower income end of the population, including a significant portion of the emergency services workers, may be increasingly stressed by two parts of the event: first the loss of their own homes and belongings with few resources to recoup such losses, and second the stress from assisting other residents.

(4) For everyone, the increasing level of stress in the workplace means that disaster victims start out with a significant stress level before the disaster adds its own component to the total.

(5) For the emergency services, the changing nature of volunteer and rural agencies may also generate stress issues compounded by the disaster.

A CONCLUSION

The need for Critical Incident Stress Management involvement in disaster response is growing. Critical Incident Stress Management practitioners need to understand the chronic nature of disaster events, and that their interventions may well be delivered as the event is in progress. This demands that we be able to mobilize responders who understand the disaster environment and who can intervene effectively with individuals seen only in passing and who will go right back into the cauldron of the disaster. And it means that further research is needed to better understand what those interventions are.

WORKS CITED


Commonwealth of Virginia. The Code of Virginia. Title 44. The Emergency Services and Disaster Law.


