

## Planning for an Urban to Rural Evacuation Is Challenging but Necessary From EMS Connections

Since September 11th, 2001, the emergency services industry has changed rapidly. Gone are the days when the focus was a flood. Our country has opened its eyes to a multitude of new hazards, many of which are man-made. How many legitimate potential terrorist targets are present in our communities? Could we support our operation if 40% of our personnel roster was sick or caring for sick family members? What would happen if an individual detonated a dirty bomb in downtown Washington, D.C.?

Emergency personnel are now refining the “all-hazards” planning model for their community and starting to include hazard-specific annexes for such incidents as pandemic flu and business continuity. One such hazard that has seen interest is a phenomenon known as urban to rural evacuation. In West Virginia, urban to rural evacuation primarily manifests itself as a westward migration of residents from the national capital region of Baltimore and Washington, D.C. toward West Virginia.

### **Urban to Rural Evacuation**

“Urban to rural evacuation” has several definitions, the primary of which is simply stated as “the evacuation of a population from an urban area to or through a rural area(s)”. This definition, however, should include several caveats, including the size of the evacuated area, the hazard triggering the evacuation, the presence or absence of a government-mandated evacuation order, or whether the evacuation is spontaneous or planned. Research suggests that evacuating populations may travel as little as 50 miles or in excess of 250 miles (often contingent upon the hazard), making the determination of risk/host areas difficult. Consequently, preparing for an urban to rural evacuation places significant strain on the planning capabilities of our communities.

Urban to rural evacuation presents an acute problem for West Virginia emergency services providers. Many metropolitan areas, especially Baltimore-D.C., far surpass our entire state in population. Evacuees from the western portions of the national capital region may actually reach our eastern panhandle before encountering a major north-south thoroughfare. We live in a rural state; how many people that have lived in a city (or suburban area) their entire lives will be prepared to navigate our mountainous roadways?

Many of us may be skeptics about whether an urban to rural evacuation would actually occur. After all, Washington, D.C. was attacked on September 11th and we did not see a mass evacuation westward. Some reports have actually stated that emergency planners in Washington, D.C. are actually working diligently to provide enough services for their population so as to shelter it. We cannot, however, allow these types of reports to cause us to be unprepared. Several reasons come forward:

- History shows that, when faced with a disaster, a portion of the potentially-affected population will evacuate spontaneously and without direction;
- A behavioral study noted that West Virginia may receive 8 to 10% of the evacuees leaving Washington, D.C. (WVDHSEM, 2008);

- An incident in the capital region could be so catastrophic that emergency authorities feel it is best to evacuate the region;
- A large number of individuals may evacuate through rural areas, rather than to them, consuming fuel, food, water, and sanitation resources (Meit, et al, 2008);
- We cannot be sure of how evacuees will react and, as such, pre-planning and testing our capabilities to address the logistical aspects of the movement of thousands of people may allow some of our resources to focus on special circumstances that could arise during the evacuation; and
- “Urban to rural evacuation” does not exclusively refer to an evacuation of the national capital region – it can refer to a mass evacuation of any urban area.

### **Ramifications for Emergency Medical Services**

Urban to rural evacuation presents concerns to the entire emergency services community, but the ramifications for Emergency Medical Services (EMS) providers are particularly significant. Among these are an increased amount of traffic on rural roads that could lead to an increase in the number of traffic accidents; a difficulty is ascertaining important medical information from evacuees; the responsibility of staffing care and aid stations for evacuees; and continuing to provide an adequate service for our regular population.

According to Michael Meit of the Walsh Center for Rural Health Analysis at the University of Chicago, increased traffic could certainly lead to “sudden, unexpected traffic jams and blockages”. Further, while research on non-radiological risk of evacuations in the early 1990s by Aumonier and Morrey suggests that risks to evacuees from traffic accidents are actually less than under normal road conditions due to such factors as lower speeds and unidirectional traffic flow, the occurrence of minor accidents is likely to increase. EMS personnel are likely to be called to respond despite the presence of only minor injuries, thus straining local resources. The assumption that less severe accidents occur may hold true if evacuees stay confined to our interstates; however, a whole set of other problems may arise if evacuees take secondary routes such as US 50 or US 33. Many of us have encountered the semi or coal truck versus family car accident. Imagine if our roads were packed with not only usual daily commerce but also several thousand evacuees. Expect to see drivers unaccustomed to navigating mountainous, rural roadways that do not heed warnings of sharp curves and steep grades. Inclement weather may also create significant problems or compound the above scenarios.

Despite repeated encouragement and attempts on the part of emergency planners to prepare the population for potential mass evacuations, many residents will simply not take this advice. As a result, people may evacuate without gathering sufficient resources or vital information such as a medical card or insurance card. If a situation occurs where an evacuee needs emergency medical attention (e.g. traffic accident, seizure, heart attack, panic attack, asthma attack, etc.), EMS providers could have significant difficulty ascertaining a medical history so as to properly treat the patient. Under duress, it could be difficult for those accompanying an evacuee to remember his/her medical history (if they ever knew it). Further, according to Meit et al, if large numbers of evacuees have been exposed to radiation or chemical/biological contamination, local healthcare resources (including EMS) are likely to be overwhelmed. Such circumstances may also result in health consequences for your personnel. As such, EMS personnel may need to operate in an environment where contamination may not be readily known.

Many communities along potential evacuation routes are planning to establish “care and aid stations” for evacuees. These stations will provide access to such services as medical care, counseling, sanitary facilities, snacks, etc. with the intention of preparing evacuees for another leg of their journey. The staffing of these stations, however, could place a strain on several segments of the emergency services community, including EMS, public health, mental health, and volunteer agencies. Can your agency afford to dedicate a crew, especially if call volumes are high as a result of the evacuation, to staff a care and aid station? What priority do you assign to staffing an aid station? Have local emergency planners accounted for your potential absence or are they counting on your availability?

Finally, it can place a strain on your resources to fulfill your mission for a swelled evacuee population and still adequately serve your regular population. As with other emergency incidents, life in West Virginia will not stop just because an incident has occurred in Washington, D.C. and we are seeing an influx of thousands of evacuees. Accidents will still happen at our manufacturing facilities. Patients will still need transported from hospital to hospital. Our residents will still battle chronic health problems. A significant emergency of our own could occur, such as a hazardous material release, hospital fire, mine collapse, etc. How we continue to provide services to our own could ultimately shape the perception of our organization’s effectiveness.

### **Conclusion**

Many of these issues can be minimized with intensive planning. This planning should include realistic assessments of our available resources, pragmatic identification of resources that we may need, and on-going attempts to locate those resources and arrange for our access to them. Significant collaboration will be needed with all of our emergency services partners – not only law enforcement and the fire service, but also hospitals, the local health department, mental health providers, the local emergency management agency, volunteer agencies such as the American Red Cross, our own local government, and these same agencies in the counties around us.

Planning for an urban to rural evacuation is a worthwhile endeavor. It can better prepare your agency for not only the potential “westward migration” from the national capital region, but also for an evacuation from any of the urban areas near West Virginia such as Pittsburgh, Columbus, Charlotte, or Richmond. Planning may better prepare our rural counties for an evacuation from our own urban areas of Charleston, Huntington, Wheeling, Parkersburg, Morgantown, or Beckley. Finally, such efforts will help us better move our own county populations should one of our covered facilities leak a material or if a flood becomes imminent.