Critical Issues Faced by MRC in a Special Needs Shelter

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When the initial stage of a powerful North American storm started, on 31 January 2011, meteorologists predicted that within the first three days the system would affect over 100 million people throughout the United States. The storm brought cold air, heavy snowfall, blowing snow, and mixed precipitation on a path that stretched from New Mexico and northern Texas all the way to New England and Eastern Canada.

The greater Ohio Valley region experienced a potentially lethal mixture of snow, sleet, and freezing rain. Significant ice accumulations were observed north of the Cincinnati Tri-State region, into the Miami Valley region in Southwest Ohio. The national effects of the storm included: numerous power outages; flight, rail, and bus cancellations; airport, road, school, government, and business closures; and mail stoppages. The storm was blamed for an estimated 30 or more deaths, and damages totaled well over $1 billion – and possibly, depending on the cost parameters used, as much as $3.8 billion. The ice and snow, mixed with high winds, brought hundreds, probably thousands, of tree branches down and caused numerous power outages throughout the Miami Valley.

On February 2, the American Red Cross (ARC) opened six shelters across the Dayton area for persons affected by the storm and without electricity at their homes. The following day, the ARC requested support from the Greene County Medical Reserve Corps (MRC) for approximately 30 residents. When MRC volunteers arrived at the shelter, however, they found that the shelter staff had already been overwhelmed by the number of special-needs clients. All 30 of them were hypertensive, and one was epileptic. In addition, the shelter cots did not meet the oversized needs of a number of obese clients.

In addition, one client suffering from severe edema of the lower extremities required medical intervention. She could not get out of her wheelchair, and the height of the cots available prevented her not only from lying down but also from elevating her legs – so she slept in the chair. (Fortunately, the MRC volunteers were able to arrange for her to be transported to a hospital.)

Cognitive Impairments + Limited Privacy = Unlimited Frustration

Meanwhile, the local ARC agency was reasonably well prepared with both medical and emergency supplies, but many of the people brought to the shelter had left their homes without bringing with them their medications (insulin, for example), oxygen equipment, adult diapers, and similar necessities. In addition, many of the more elderly clients suffering from various cognitive impairments were unable to inform volunteers about their specialized health conditions and/or medications. To make matters worse, the shelter bathrooms were not wheelchair-accessible, so the MRC volunteers had no choice but to ask some of the clients to use bedpans and urinals (in corners of the room with limited privacy). In short, the shelter was simply not equipped to properly care for the special-needs population that it housed.

To make matters worse, the MRC volunteers encountered additional difficulties in transferring clients out of the shelter and into better equipped facilities, such as nursing homes and assisted-living facilities. The coordinating and support agencies needed to authorize and/or provide for such transfers were closed after 5:00 p.m., so the shelter staff could not immediately access the resources needed to remedy an already difficult situation. (Some other facilities were in fact open, but were unable to admit the new clients because their own guidelines required incoming clients to have with them not only their recent medical histories but also physician orders and payer information, none of which were readily available.)

Additional MRC volunteers were first placed on standby to assist with shelter operations, and shortly thereafter were activated. Because of the limited space at the original shelter, an additional shelter, at a local university, also had to be opened. MRC nurses were assigned to both locations to help transport the clients, unload material, and check in the clients. However, because of various communication problems, some volunteers had to shuttle back and forth between the two shelters. The shelter originally planned was closed – after all materials and clients had been transported, of course – because it simply was not capable of providing the quantity and quality of care needed. In the meantime, scheduling was coordinated through both the ARC chapter and the MRC unit leader. Local

emergency-management and state public-health agencies also were notified of the problems encountered and the remedial actions that had been taken.

The Standard Reasons for Limited Success

The "standard" ARC shelter medical kit is a relatively large first-aid kit, but is not equipped with all of the medications and specialized medical devices and equipment required to meet the needs of medically complex patients. For example, the standard kits available in Dayton had no blood pressure cuffs or stethoscopes, and there were no strips available for the glucometers used by diabetic patients. The MRC responders therefore had to supply, and use, some of their own medical equipment. However, to meet the special needs of a number of the more medically fragile clients, the MRC responders tried to arrange for them to be sheltered elsewhere – but, unfortunately, were unsuccessful in that effort.

Additional communication errors were encountered when the MRC responders were informed, erroneously, that other support agencies had been called and arrangements for transferring some patients to nursing homes had been made. However, after contacting the case managers of those agencies, the MRC responders discovered that the agencies had not yet been notified of the problems that had been encountered. That belated discovery further delayed nursing-home and assisted-living placement by at least one day. Nonetheless, the ARC staff maintained a positive work ethic and continued to go "the extra mile" despite the numerous hurdles encountered. Meanwhile, the MRC responders continued to care for the patients – but by that time many of the clients had been without essential medications and/or specialized treatment for several days.

There were several other difficulties and problems that had to be resolved. To begin with, MRC responders eventually were able to locate some pharmacies in the area, but could not get approval from insurance companies for the additional medications needed. In addition, certain U.S. Department of Veterans Affairs (VA) policies unintentionally hindered the MRC efforts, in two ways: (a) MRC nurses were not allowed to pick up medications from the VA without the client present; and (b) the VA was not able to authorize local pharmacies to provide "a temporary fill" of prescriptions because many of the VA physicians did not possess local licenses, and that unforeseen circumstance meant that local pharmacies were not legally permitted to process their orders.

Because of their lack of medical training, the standard shelter workers did not fully comprehend the needs of the clients brought to the shelter. Only one of the shelter managers, for example, had any incident training. The workers obviously wanted to do their best, and to help the clients in any and every way possible, but were feeling overwhelmed, understandably, because their training did not adequately prepare them for special-needs cases. The increased attention needed for the special needs of the shelter clients caused additional confusion about the incident command on the scene.

Access to adequate transportation was also lacking at the facility. The ARC and NCOA (National Council on Aging) volunteers continued to move clients out of the shelters. However, transportation was problematic because the shelter did not have the ability to transport obese and/or wheelchair-bound clients. In fact, a local EMS agency had to be called to help with one patient with high blood sugar – a bariatric client who had not left his home in years other than by medical transport (in an ambulance fitted with a specialized lift) and therefore required transport to the emergency room.

Many of the patients had already been in very tenuous health even before the storm, so the shelter staff had to deal with a situation that was already bad and rapidly becoming worse and worse. By Sunday morning (February 6), the MRC and ARC staff helped initiate transport of the remaining clients and were able to close the shelter by midday. Meanwhile, Dayton Power and Light reported that its own repair crews – working with some 1,500 mutual-assistance personnel from Ohio and four other states – were working to restore power to the final 24 customers who had lost electrical service during the ice storm.

The Long Laundry List of Lessons Learned

Among the numerous lessons learned, the following are among the most important:

(a) Public health nurses should be used in shelter operations only as a last resort. A better role for them would be to coordinate and support the medical aspects of a response or to lead MRC volunteers.

(b) The activation of local MRC nurses/volunteers to support standard shelter operations should not be automatic but, rather, an action given serious consideration after all relevant circumstances have been taken into consideration. In

emergency situations, a properly designated unified command should manage resources in accordance with National Incident Command System (NICS) principles.

(c) MRC units should strive to support (not run) a “Federal Medical Station” shelter in whole or in part because of the unit size involved. (The state-level assets of the Greene County MRC Unit assigned to a 50-bed facility were more easily supported than would have been possible in a situation involving a 250-bed medical shelter.)

(d) During large-scale events, the ICS structure should be established as early as possible. During the ice storm, the “location” of the event was not only constantly changing but also had no fixed boundaries; the same will be true of many other public-health emergencies for the foreseeable future. Nonetheless, the ICS structure itself should be clear to all personnel involved. Local MRC units probably should not automatically be considered lead agencies in the planning and/or development process. Increased attention must be paid to logistics requirements, though – and should include specific instructions on: (1) how to requisition supplies; and (2) how to initiate and supervise shelter activities. The guidelines for both of these important tasks should be developed (or adapted from existing sources) by the properly designated lead agencies involved.

(e) Many special-needs residents are in a tenuous state of health. Inadequate sheltering may make matters worse by causing those with disabilities to slip more easily from a stable to an unstable health status, thereby adding to the already heavy burden imposed on the shelter staff and social support systems. More specifically, this additional burden includes, among other particulars, the need for shelter staff to access resources, extend required services within the shelter, and/or transport clients to outside services.

(f) Nurses provide particularly valuable services, covering a broad spectrum of both general and special care, during a public health emergency. Among the many difficult issues overcome during the ice storm were several changes of shelter location, client transport, direct-care issues, outdated medicines, the inadequate equipment available for bariatric clients, and delayed notifications to the decision makers and participating organizations involved that were authorized to resolve problems. There also were a number of problems related to the admission and discharge procedures used to help medically stable (but physically fragile) clients into and out of the shelter. In short, during a public-health emergency, having the right volunteer in the right place at the right time can dramatically affect the health outcomes of clients being cared for in a shelter.

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Footnote: Following the massive February 2 ice storm event, one of the Greene County MRC volunteers was awarded the 2011 Office of the Civilian Volunteer Medical Reserve Corps (OCVMRC) MRC Responder Award for outstanding service, following the MRC activation, in support of the ARC shelter activities. The ice storm and accompanying winds that left 80,000 Dayton Power and Light customers in the Greater Dayton region without power also left the shelter staff in the same area without the supplies and specialized equipment needed to prepare both properly and effectively for the sudden inflow of special- needs clients.

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