

# ADVANCE Respiratory Care & Sleep Medicine

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## Getting Started - What A Disaster!

By Dave Swift, RRT

In the mid 20th century, disaster preparedness meant developing a response plan to deal with mass casualties from a local fire, flood, industrial accident or similar event. At the time, it seemed as if we were ready for anything.

And then came the beginning of the 21st century. In its first decade, the scale of mass casualty incidents (MCI) expanded to include previously unthinkable acts of terrorism, novel virus epidemics, and natural disasters of unprecedented scope.

Yet, many facilities still rely solely on the response plans they developed in the late 1990s. These are useful for dealing with small to midsize internal and local external disasters, but they are quickly overwhelmed when faced with large scale disasters. A new and updated approach is needed to develop a multi-tiered approach to dealing with MCI.

These "new" MCI have two very different characteristics - speed and duration. We must be prepared to effectively respond to three types of scenarios:

- sudden, short-lived small to midsize local MCI events
- sudden, intense short-lived local or regional MCI events (bombing, chemical spills, etc.)
- sudden, rapidly building but long-lived state or national MCI events (H1N1, H2N5, similar pandemic)

### **Sudden, short-lived small to midsize local events**

Each health care facility is an integral part of the local and regional response to a MCI. These facilities are expected to utilize their own internal physical and staffing resources for up to 72 hours. Beyond 72 hours, assistance with physical and staffing resources from local, regional, and state resources would be expected.

Unfortunately, one of the biggest issues will be insufficient staffing resources. Staffing shortages are a day-to-day reality, and this poses a challenge to successful MCI response. Most U.S. facilities routinely operate on an 80 percent to 85 percent occupancy level, and Canadian facilities operate on a 90 percent to 100 percent occupancy level. Addressing this difficulty realistically and building it into your MCI planning and response is essential. Think about how you could creatively shuffle staffing resources to allow for continuity of care.

### **Sudden, intense short-lived local or regional events**

The "you're on your own for 72 hours" philosophy would apply during the initial stages of this type of MCI. Although many levels of government have encouraged health-care facilities to expand their on-hand supplies to at least a 90-day maximum activity level, the reality is that the financial implications result in varying levels of success.

In addition to staffing challenges, the second bottleneck is the limitation of physical resources. For example, demand for your ventilator fleet is likely to be significant. High consumption items such as resuscitation equipment, ventilator circuits, and blood products will be quickly depleted and need urgent replacement. In the recovery phase, the demand for resources will continue to be high.

Supplier and vendor response to these demands is a significant part of your facility's rapid recovery and normalization of operations. A priority for your MCI planning is to establish an emergency purchasing agreement with vendors. Also, negotiate an inter-facility resource sharing agreement with health care facilities close to your region. Be sure to consider the financial implications of both the response and recovery phases.

### **Sudden, rapidly building but long-lived state or national events**

This type of MCI event presents serious challenges to health care facilities to sustain long-term operations at a normal level because it builds in its intensity and utilization of human and physical resources.

For example, the H1N1 pandemic presented incremental waves that never went back to baseline following each wave. The

increasing volume of patient numbers quickly threatened to exhaust available resources. Many large health care facilities and organizations planned ahead to ensure that they had access to a three-month stockpile of supplies. Small to midsize facilities, however, did not have the financial base to independently maintain a large stockpile. More often than not, they relied on the ability to transfer complex critical care patients to the larger tertiary centers, which did not expect this added demand for services.


As a lesson learned, many of these smaller facilities should consider forming a coalition between sister facilities to realize the benefits of large volume purchases and achieve the three-month stockpile of pandemic resources recommended by the governments. In addition, larger facilities should integrate a potentially large number of patient transfers into their MCI planning.

The biggest challenge remains staffing, and for this challenge, there is no way to stockpile resources. A realistic and open review of your service delivery models must include the development of a priority list of services - those that must be sustained and those that are deferrable. The implications of altering your service delivery models are significant and need the support of senior management.

The implementation of effective MCI planning, service review, training, and resource development represents a significant financial and human investment that is essential. In future articles, I'll cover in more detail the steps required in the development of an effective MCI response plan:

- facility survey of on-hand human and physical resources
- resource utilization on a day-to-day basis versus standby availability
- human resource planning and review
- initial steps in developing a MCI plan
- developing multiple MCI response plans that reflect the different types of response required
- policy and procedures required to support a disaster/emergency response plan
- equipment resources to facilitate MCI response activities
- staffing resources - our greatest resource and biggest bottleneck - alternatives, supportive measures, security and staff casualties
- supporting resources available in the development of an MCI plan
- "off-the-shelf" ready plans - just a skeleton that line staff "put the meat on"
- testing and development to refine realistic and workable plans.

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