



D32 Multiple Fatality Planning: Managing Mass Fatalities From a Variety of Causes, Including a Potential Bioterrorism Threat

William J. Lucas, MD*, Office of the Chief Coroner for Ontario, 24 Queen Street East, Ste 700, Brampton, ON L6V 1A3, Canada; James G. Young, MD, Office of the Chief Coroner, 26 Grenville Street, Toronto, ON M7A 2G9, Canada

After attending this presentation, attendees will understand a model for effectively dealing with a mass fatality incident at a provincial or state level, and to review the recent Toronto SARS experience as a model for a potential bioterrorism threat.

This presentation will impact the forensic community and/or humanity by assisting coroners and medical examiners who may be faced with the task of coordinating a mass fatality recovery operation. The Ontario model is based on an Incident Command structure and focuses on many of the critical areas that must be managed effectively in such an event. The development of this model has been assisted by field experience gained by our members in a variety of different settings: SwissAir Flight 111 crash, Eastern Ontario Ice Storm (2000), World Trade Centre, Bali Nightclub Bombing, Toronto SARS outbreak (2003). The SARS outbreak in Toronto serves as an excellent model for how an evolving bioterrorism incident, such as smallpox outbreak, would be effectively dealt with.

Because the scope of emergencies vary, and most are managed at the local community or municipal level, there is the potential for a catastrophic event to overwhelm the capacity of local authorities to carry out the extensive operations necessary to respond in a timely and appropriate manner. A multiple fatality incident could be such an overwhelming event, and hence the Ontario Provincial Multiple Fatality Plan has been developed to provide a structural framework for a systematic, coordinated and effective response in those circumstances.

Aimed at establishing mutual cooperation and assistance between agencies and organizations of varying jurisdictions, the plan allows for the investigation, reporting, recovery, identification, examination and disposition of human remains. Under the *Coroners Act*, coroners in the Province of Ontario investigate all unnatural deaths such as those where accident, suicide, foul play or suspicious circumstances may exist. Most mass fatality incidents would likely fall within the coroner's jurisdiction.

The authority for implementation of the Plan rests with the Chief Coroner for the Province of Ontario. Once initiated, a control group of senior administrators will be quickly convened to oversee operations in a number of different areas, including incident site investigation, morgue and forensic pathology operations, antemortem and postmortem records management, family liaison and assistance, liaison with other governmental disaster management agencies, and international liaison (where required), and media relations.

Although the traditional focus of mass fatality plans in the past has been on reacting to incidents such as plane crashes, explosions, or natural disasters, recent history has taught us that chemical, biological, radiological and nuclear events are also likely possibilities. These threats pose interesting and unique challenges to the safety and well-being of emergency responders, recovery personnel, and death investigators, including coroners, medical examiners, pathologists, and morgue assistants.

Careful consideration must be given to dealing with potentially contaminated remains, including those that may pose a threat of infection. Temporary morgue facilities or, as a minimum, a secure containment area may need to be established. In the early stages of an incident, autopsies may be necessary to establish the medical cause of death (MCD) or to help in understanding the etiology, or they may be able to assist Public Health officials in planning strategies for containment or quarantine. Once the MCD has been clarified, further autopsies may be necessary only to establish identities of the decedents, or to gather sufficient forensic documentation for future court proceedings.

The recent outbreak of SARS in Toronto, Ontario, has provided very useful insight into the types of problems that will likely arise for death investigators in the event of a bioterrorism event, such as anthrax, or smallpox inoculation of the population. Facilities must be in place for safely carrying out postmortem examinations with minimal risk to personnel in the early stages of an incident, including appropriate negative pressure ventilation systems, protective clothing, etc.

Once the correct diagnosis has been established that would likely apply to the majority of the deaths occurring in a multi-fatality incident, which may be an instantaneous event, or may be slowly evolving, criteria may need to be established to limit the ongoing risk exposure of pathologists, morgue attendants and the like. Screening tools which can be applied by knowledgeable and experienced personnel can be useful in determining who requires a postmortem examination and who does not. Protocols must be flexible and allow for limited autopsies and sampling of only those specimens that are essential.

Communication with other agencies, families of decedents, and with the public through the media from the earliest possible moment is instrumental in maintaining confidence in government officials and allaying irrational fears and even unnecessary panic. Daily media news conferences proved very successful in the



General Section – 2004

Toronto SARS experience to both inform the general public about progress in the evolution and containment of the epidemic, and to educate them about the nature of the disease and its methods of spread. This was particularly critical in a slowly evolving and ongoing crisis with this infectious disease, and would apply equally to a bioterrorism event in order to keep the public on-side and cooperative with Public Health containment initiatives.

In conclusion, Mass Fatality Planning must be flexible and take into consideration the variety and potential scope of threats that exist in our post-9/11 world. Coroners and medical examiners must be prepared to efficiently process large numbers of human remains that may be contaminated and therefore may place them at risk, and must be cognizant of the need to keep other agencies and the public fully informed during the event.

Mass Fatality Planning, Bioterrorism, SARS