

A unique operational response



Karen Collins warns that the terms ‘mass fatality’ and ‘mass casualty’ are not interchangeable, highlighting the profound differences in operational response to the two different types of incidents

The operational response to a mass fatality incident (MFI) is unique and markedly different from the traditional operational response to a mass casualty incident (MCI). When first responders are dispatched to an MCI, police, fire and paramedics rush to the scene. When local emergency managers become engaged, they establish an emergency operations centre (EOC) to support the responders at the scene. The first receivers at the hospitals respond by activating code orange procedures to triage and manage the influx of casualties who self-present, are transported to hospitals via ambulance or converge en masse to emergency departments as the worried-well. It stands to reason that when any disaster

occurs, the initial operational response objectives all place priority upon responder safety and on saving lives. So how does an MFI response differ? How do traditional first responders, emergency managers and first receivers begin to comprehend where the line begins to blur and traditional operational response starts to intersect with the MFI operational response?

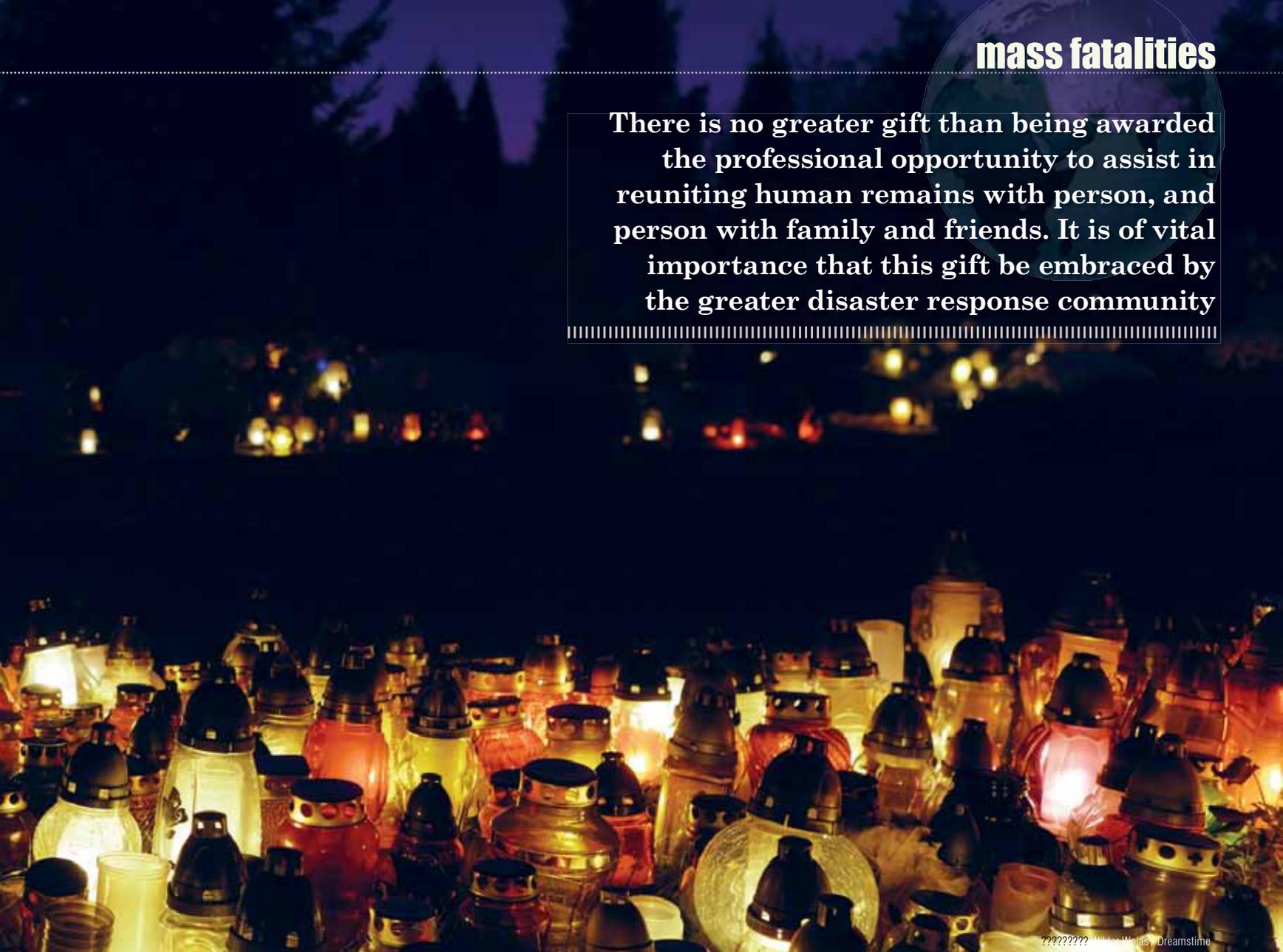
There are three key ways in which the traditional operational response differs from the MFI operational response. First, an MFI response does not fully activate until the chaos of the traditional response phase begins to subside and the objective of saving lives has been achieved. By virtue of this reasoning, the

MFI response is not concerned with dealing with the living; it is only concerned with managing the dead. Second, there is the matter of legality: a coroner or medical examiner can only become engaged at such time that fatalities are confirmed and formally reported. Third, there is the issue of operational objectives: the greater disaster response community must come to recognise that the term ‘mass casualty’ should not be used interchangeably with the term ‘mass fatality’, because the operational response objectives for each are vastly different. One set of objectives is focused upon saving lives and treating the injured, while the other concentrates upon the search and recovery of human remains (and body parts), victim identification and repatriation.

In order to gain a better understanding of the operational response requirements for an MFI, we must first embrace this grand philosophical difference between MCI and MFI operational objectives.

From a Canadian perspective, an MFI can be defined as an incident where more deaths occur than can be handled by the local coroner/

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medical examiner and fatality management resources. It may involve a single incident or multiple incidents. This definition does not exclude multiple deaths that could be handled within existing local resources, but which have circumstances that demand a disaster victim identification (DVI) approach for the integrity of the identification process. It is equally important to acknowledge that DVI is the term used internationally to represent the overall process for the identification of disaster victims. It represents the accepted international standard and originates from INTERPOL, which promotes the interdisciplinary approach to victim identification.

Ethical considerations

For coroner/medical examiner agencies to fulfil their general medico-legal mandates and investigate a death appropriately, they must answer the five basic fact-finding questions of: who died; when; where; why; and how. In a disaster, we are most concerned with answering the 'who' (ie identifying human remains). In Canada, the

legal responsibility to identify the dead, as in an MFI, thus falls to the coroner or medical examiner agency with provincial or territorial jurisdiction; it is not a police responsibility.

If an MFI were to occur anywhere in Canada, the Chief Coroner or Chief Medical Examiner with jurisdiction would be in charge of the overall MFI operational response and DVI process. In an MFI, the coroner/medical examiner agency will be tasked with leading the following MFI Operational Response Branches (or versions thereof as laid out in individual mass fatality plans):

- Response planning and ethical considerations;
- Search and recovery of human remains;
- Morgue operations branch (post-mortem data collection);
- Family assistance centre branch (ante-mortem data collection);
- Reconciliation and identification branch (matching and formal identification);
- Personal effects management branch (as items relate to identification); and
- Demobilisation and debrief branch.

The majority of emergency response agencies in Canada already use, or are in the process of implementing, the Incident Command System (ICS), which utilises a command and control structure to manage emergency incidents. Because most coroner/medical examiner agencies in Canada will require significant resource assistance from entities such as police, victim services, fire departments, search and rescue, funeral services, emergency management partners, forensic subject matter experts and other external stakeholders in responding to an MFI, it makes sense that coroner/medical examiner MFI operations should align with ICS, so that all team members, regardless of their 'home agency' can communicate, interface and intersect with each other effectively during operations.

To illustrate the points made so far, let us imagine an accidental (ie no criminality involved), fiery crash of an inbound, international aircraft at a major airport somewhere in Canada: 150 people on board; 140 eventually confirmed dead. The condensed (and extremely simplified) ▶

► operational process spanning the first 12-24 hours would be likely to unfold as follows. First responders will be notified and the media will converge at the periphery of the crash site. Life-saving measures take place, relevant emergency plans and EOCs are activated and fires (wreckage) extinguished.

Affected airport operations are identified and attended to, the airline manifest is located by the airline in question and the police begin their investigations. The police also work with the airline in question and begin the process of notifying/gathering the friends and family of affected passengers. They determine which passengers are missing persons and which are survivors. Additional authorities attend the site, as required, and fulfil their individual mandates.

The airport continues to work towards implementing strategies to resume operations in areas adjacent to the crash site. Family and friends begin to converge at the airport and the site. They start to demand answers with respect to where their loved ones' bodies were located. Things increase in complexity as friends and family, representing numerous cultural groups and religions, begin to voice their expectations surrounding death rituals, burial and body disposition.

The coroner/medical examiner with jurisdiction is eventually notified, most often by the police, and advised that a validated list of presumed dead passengers has been created. The 140 deaths are, ultimately, formally reported to the coroner/medical examiner.

Enter the coroner/medical examiner MFI operational response.

By this stage of the incident, the traditional operational response has essentially reached its peak and has begun to wane. The EOC starts the transition into recovery and business continuity. There are still many outstanding issues and operational objectives being worked on, but the peak activity of the response is beginning to wind down for many of the agencies that have been operational since the time of the crash.

Realistically, most coroners and medical examiners would be engaged in advanced planning initiatives once they first become aware about a large-scale disaster with probable fatalities. Many times, word first comes via social media. The difficulty is that the coroner or medical examiner cannot exercise the powers bestowed upon them by their provincial or territorial legislation until such time that actual deaths have been reported to them (as in the example above).

Once notified of the MFI, the coroner or medical examiner agency would activate its mass fatality plan. It may or may not activate

its own in-house EOC. If resources are lacking, coroners or medical examiners may attend an already functioning EOC and operate from there (pending available space). The coroner commander would be represented at the incident command post as well. Regardless of where the coroner or medical examiner (and team) are situated, they would start to analyse the ethical considerations that permeate the MFI (for example, the number of dead, the state of the bodies or body parts, cultural groups represented among the dead, number of children, etc). In addition, they would start to work on logistical issues, such as where each of the MFI operational branches would be located. At least three separate physical locations would be required immediately (for example, a location for morgue operations and body storage, a facility for ante-mortem

data collection and a facility for the formal matching and identification process).

The Search and Recovery Branch would be the first to be engaged and would establish a formal mapping and gridding system. A methodological search of the crash site would be conducted over the next few days (or even weeks). Following the search would be the recovery of the located human remains and any associated exhibits (NB: 'recovery' has a very different definition than traditional EM sense of the word).

Once the human remains and exhibits were all recovered from the crash site, they would be brought to the temporary morgue site and prepared for transport to the operational morgue where the autopsies would be performed. After death, or post-mortem, data packages are maintained for each body or body part found.

Drawing upon lessons from the past



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A new resource aimed at helping partners to develop a detailed, well-organised plan to manage a surge of fatalities on a county-wide level and to transition effectively from normal to disaster operations, write Aislynn Turner and Michelle Constant.

Time and time again, disasters have demonstrated the reason why organised, comprehensive plans for managing a surge of decedents must be in place. From the 9/11 Twin Towers Attack, to the recent catastrophic typhoon in the Philippines, to countless other disasters (see Table 1), we have witnessed situations in which more deaths occurred than could be handled by the resources available.

These incidents have taught us valuable lessons regarding mass fatality management. For example, due to the nature of the 9/11 attacks, the condition of victims' remains posed a significant challenge to the identification of these victims.

Forensic technologies and multi-discipline experts had to be brought together to perform victim identification.

During Hurricane Katrina search and rescue activities, management of the deceased was complicated owing to the extensive floodwaters. A co-ordinated response effort was needed, as well as an integrated incident command.

Even smaller incidents prove the necessity for mass fatality management plans. In February 2013, a tour bus crashed on a mountainous road in Yucaipa, California, USA, when its brakes failed on a steep mountain road. Eight people were killed and more than 30 injured. In this incident, victims were transported to at least four different hospitals, which complicated both co-ordination efforts and family reunification.

In examining mass fatality management, we must plan for both large-scale and small-scale incidents, and should creatively consider all possible

The parallel process of pre-death, or ante-mortem, data collection would occur at the Family Assistance Centre Branch. DNA would be collected from family members, dental and medical records retrieved, family members would be interviewed and photographs of the decedents collected. Individual ante-mortem data packages would be maintained and upon completion, sent to the Reconciliation and Identification Branch to be married up and matched against the incoming post-mortem data collection packages.

Basic processes

As an aside, it is worth observing that if any passengers died in hospital, the coroner or medical examiner would be notified of their deaths and the same basic process, as above, would be followed (particularly if

the deceased patients were unidentified).

It is the job of the Reconciliation and Identification Branch to establish the identifications formally and match the ante-mortem data positively to the post-mortem data. There is no room for error or misidentification. Each identification must be presented to a formal Identification Board, which as a minimum, must include the coroner or medical examiner of record for the incident at hand. This coroner or medical examiner would ultimately decide whether the identification had been successfully established or not. If established, a death certificate would be issued and the body would be released to a funeral home for disposition (or for transport back to the home country). Any related personal effects such as luggage and jewellery, would eventually be returned to the family. Any unidentified

human remains would be stored indefinitely until such time that they could be identified.

MFI operations can continue for months or even years. Until the last body or body part is identified, the incident lives on and the coroner or medical examiner's job is not finished.

DVI and the overarching MFI operational response are complex. There are unique operational requirements and ethical considerations intertwined throughout the response that make it quite different from other traditional operational responses. I truly believe that there is no greater gift than being awarded the professional opportunity to assist in reuniting human remains with person, and person with family and friend. It is of vital importance that this gift be embraced by the greater disaster response community. For those of us who are fatality managers, we have a duty to mentor and coach our partners. There is no greater reason for the human voice than to speak for those who cannot.

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scenarios in order to develop effective solutions.

Without a co-ordinated mass fatality management plan, opportunities can be missed to identify the deceased and this, in turn, can lead to delays in the notification process. Additionally, cultural and religious preferences of the deceased and their families may not be carried out, causing further grief and stress during what is already an extremely difficult situation for family, responders and community members.

In partnership with a countywide, multi-disciplinary project oversight group, Los Angeles County Emergency Medical Services (EMS) Agency has completed a resource in January 2013 – The Los Angeles County Mass Fatality Management Guide for Healthcare Entities. Local, state, and federal levels of government, as well as numerous healthcare facilities and organisations, contributed to this guide, which is based upon lessons learned and best practice from past incidents. It includes guidance for hospitals, medical clinics, and nursing facilities to manage mass fatality operations within their scope as healthcare partners.

The Los Angeles County Mass Fatality Management Guide for Healthcare Entities was created to aid partners in the development of a detailed, well-organised and realistic plan to manage a surge of fatalities on a county-wide level and to transition effectively from normal to disaster operations. The guide includes directions for mass fatality plan development and successful activation, operation, and demobilisation strategies. As such, the guide seeks to provide a framework for mass fatality management during large-scale disasters (eg earthquakes); smaller, more localised incidents (such as an explosion or shooting); as well as long-term events, (widespread disease outbreaks, for example).

In order to develop and refine the guide, in-person project oversight group meetings were conducted, drafts were reviewed and vetted for comment, and interviews were conducted with contributors from across the country. The guide was also vetted via a table-top exercise and a

Table 1

Year	Incident	Fatalities
2001	9/11 Twin Towers attack, NYC, USA	2,996
2005	Hurricane Katrina New Orleans, USA	1,833
2010	Earthquake, Haiti	220,000
2011	Earthquake & Tsunami, Tohoku, Japan	15,883
2013	Typhoon Haiyan, Philippines	5,325+

countywide functional exercise, where review and testing of the guide was a primary objective. Numerous facilities throughout Los Angeles County have already developed their own mass fatality management plans using the guide.

This project is regarded as an innovative achievement, the first to approach mass fatality management on a countywide level, and has significantly improved Los Angeles County's ability to respond to mass fatality incidents.

Healthcare entities throughout the US and elsewhere are invited to use this guide as a resource for developing mass fatality management plans tailored to their own environment.

Establishing these plans will not only enhance response capabilities, but also mitigate the effects of disaster.

This free, comprehensive toolkit is available for download on the Los Angeles County EMS Agency website. Here, you will find an electronic copy of this guide, plan template, PowerPoint presentations, as well as multiple other resources for planners.

■ Aislynn Turner and Michelle Constant are from Constant and Associates

■ A full list of sources are available in CRJ's digital edition and online. For more information on The Los Angeles County Mass Fatality Management Guide for Healthcare Entities project, visit <http://ems.dhs.lacounty.gov/Disaster/MassFatality.htm>

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