



### **D60 Disaster Victim Identification After Mass Fatality Events: Lessons Learned and Recommendations for Disaster Response Planning**

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After attending this presentation, attendees will understand some of the challenges associated with the Disaster Victim Identification (DVI) aspect of three specific mass fatality incidents, the issues that are common between these events, and the lessons that can be learned from critical comparisons of the DVI response to these incidents.

This presentation will impact the forensic science community by highlighting areas that have been challenging in past DVI efforts and providing recommendations for procedures and protocols that should be incorporated into future disaster response planning in order to better prepare for DVI in the wake of an incident with mass fatalities.

The identification of deceased victims of a disaster is an essential aspect of disaster response. Although disaster response plans usually account for the recovery of a small number of victims in the immediate aftermath of a disaster, identification in the wake of a large-scale disaster can be much more complex and long term. Often disaster response plans do not comprehensively address this aspect despite warnings from experts about the lack of preparedness and useable guidelines to address this issue. Protocols need to be established prior to an event to overcome the challenges and facilitate an organized response to DVI in the aftermath of a mass fatality. These protocols should incorporate lessons learned from earlier events, which thereby necessitates critical comparisons of the response to past mass-fatality events to identify areas for improvement. In the past, a failure to document and learn following mass-fatality disasters has resulted in similar mistakes occurring time and time again, including a lack of appropriate planning for mass fatalities and a lack of operational protocols to address the needs of a mass-fatality situation.

This research was conducted through a comparative analysis of three contemporary incidents that resulted in mass death including: the World Trade Center attack in the United States in 2001, the tsunami disaster in Southeast Asia in 2004, and Hurricane Katrina in 2005, also in the United States. Literature and case studies on the DVI process of each incident was analyzed for specific factors and concepts that were challenging to each in order to develop categories that were common to all three disasters. For the tsunami, research was limited to the experience in Thailand because much of the published research is concentrated on this context; and for Hurricane Katrina, the experience in Louisiana was concentrated on for the same reason. Each of the incidents was analyzed to determine the main issues that were encountered in the DVI aspect of the disaster response. In order to consistently compare the incidents, the data was initially organized according to the number of victims, the breakdown of nationalities represented within the victims and the major issues and/or difficulties in the DVI process. All literature was reviewed using this approach. The data from the three incidents was subsequently compared to identify if there were similar problematic factors across the events. As a result of the analysis, problematic factors experienced by the different events could be categorized into three main fields: planning and preparedness, collection of antemortem data, and identification methodologies.

This research has resulted in key lessons and recommendations in a number of areas for practical actions to improve the capacity of authorities to deal with a mass-fatality situation. These include: (a) consideration of the logistical requirements of the DVI efforts; (b) development of SOP's to guide the process; (c) training of key players in the response efforts; (d) establishment of methods for the creation of an accurate manifest list of deceased individuals; (e) development of a system to track and label information prior to an incident; (f) establishment of guidelines for the collection of relevant, accurate, and standardized antemortem data; (g) access and training in data- management systems prior to an incident; (h) development of operating protocols and procedures to guide the selection of the most efficient and effective identification technique; and (i) establishment of the details related to DNA analysis prior to an incident. Preparedness in these areas will result in a smoother identification process that will facilitate quicker and more efficient identification and return of human remains to the respective families.

**Disaster Victim Identification, Mass Fatality, Disaster Response**