G28 The Yarnell 19: The Deadliest Wildfire in Arizona History and the Successful Implementation of Rapid Identification of the Granite Mountain Hotshots Firemen

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After attending this presentation, attendees will understand the importance of scientific identification protocols, mass fatality planning, logistics, and multidisciplinary coordination efforts to obtain antemortem identification data.

This presentation will impact the forensic science community by providing specific procedural guidelines for the identification process in a mass fatality and will also stress the significance of inter- and intra-agency coordination for management of a mass fatality event.

The Granite Mountain Hotshots are a specialized team within the fire department who are highly trained in fighting wildfires. On June 28, 2013, with the thermometer showing triple digits and ground conditions extremely dry, a wildfire was ignited by lighting near Yarnell, AZ. The Yarnell Hill Fire claimed the lives of 19 Granite Mountain Hotshots firemen and destroyed nearly 8,500 acres. The winds rapidly changed while the firemen where clearing away brush in the mountain area of a small town, trapping them as the fire came full circle around them, blocking their exit. The chief medical examiner for Maricopa County Medical Examiner's Office in Phoenix, AZ, was contacted by the Yavapai County chief medical examiner requesting assistance, due to Maricopa County having more resources — a full-time forensic odontologist, a forensic anthropologist, ample cooler space, larger staffing levels, and the ability to handle a surge incident while still maintaining daily operations.

Following guidance provided in the office draft mass fatality plan, along with the experience and expertise provided by staff with prior mass fatality knowledge, the office prepared for overseeing this event. The chief medical examiner and the chief medicolegal death investigator (mass fatality coordinator) established a work flow and oversight for the logistical coordination of this incident. Logistical considerations were made regarding staff, supply needs, response to a remote scene, transportation of remains to the office, coordination of release to the funeral home, grieving peers, safety issues, media, and the examination and identification process.

Establishing a single point of contact, the community liaison unidentified decedent coordinator, for the oversight of the identification process allowed for efficient organization and management of antemortem and postmortem identification data. This was essential during this incident because of the condition of the remains, which were classified as decomposed or burned. This was due to the fact that a number of the decedents were found in fire safety shelter tents while others were outside of the tents. Due to the condition of the remains, dental identification was the preferred method.

Communication between the community liaison unidentified decedent coordinator, police agencies, and families was essential. In this specific situation, it was advantageous to have all antemortem identifiers organized in a spreadsheet and ready to be compared to the postmortem findings. By working closing with families, law enforcement, and dental offices, the antemortem identifiers began to be collected immediately and were fully obtained in two days. Following a set standard, the autopsies for all 19 decedents were completed in one day, and the postmortem dental and anthropology exams were completed over the course of two days. This allowed the identification of all 19 firemen to be confirmed in two days.

The preparedness and oversight provided for this incident allowed the majority of identifications to be made using scientific methods. This included six decedents being identified by comparison of antemortem and postmortem dental radiographs, seven decedents being identified through written dental records that were consistent with the postmortem dental exam, and two decedents being scientifically identified by medical hardware radiographs. The remaining four decedents were identified presumptively though tattoos and demographic information. The rapid confirmation of identifications allowed the timely release of all 19 decedents for memorial services.

This presentation will illustrate the importance of mass fatality planning, identification protocols, and coordination between multiple agencies. This presentation will further include a review of the after-action report, which provides lessons learned, successes, and critical points for future planning and integration.

Dental Identification, Firemen, Multidisciplinary Effort