



A36 Forensic Pathology, Identification, Morgue Operations, and Management of the Camp Fire Victims

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Learning Overview: After attending this presentation, attendees will understand some of the principles of forensic pathology utilized in examining wildfire victims, cause of death and certification, issues surrounding identifications, and the task of operating a morgue after a mass fatality event.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by emphasizing the issues faced and the solutions that were utilized when processing, examining, identifying, and certifying human remains after a wildfire. This presentation will also emphasize the need for a change in the way remains have been historically processed and examined to facilitate faster identification.

Mass fatality incidents are fraught with difficulties, from recovery to examination to identification. The larger the incident, the larger the issues encountered. On the morning of November 8, 2018, a wildfire, dubbed the Camp Fire, started in Butte County, CA, and quickly became the biggest mass fatality incident in California's recorded history for any wildfire. Butte County Sheriff Coroner requested assistance from Sacramento County with the examination and identification of the victims. The remains were transported to Sacramento County and were processed, examined, and various methods of identification were utilized. A team of Sacramento pathologists and two pathologists from surrounding counties examined 84 of the 86 victims. All examinations were completed within two weeks of the fire and the identification process began immediately. The causes of death ranged from fire-related injuries to gunshot wounds.

Within three months of the fire, 87% of the victims were positively identified despite the extremely poor condition of the remains. Five of the victims were able to be identified quickly by fingerprints; 15 were identified by dental comparisons; and 2 victims were identified by hardware. The majority of the fire victims were identified by rapid DNA, which had not been utilized in a mass fatality in the United States prior to this event.

The inclusion of rapid DNA into the identification process highlighted issues that had to be addressed. The conventional DNA testing, which is by nature a lengthy process, was replaced with rapid DNA, resulting in very quick identifications. Traditionally, DNA testing takes so long that the exams are completed and the causes of death are determined long before the DNA results are known so death certification is quick once the person is identified by DNA. With rapid DNA, the identification was completed before the cause of death was determined in most of the cases. This issue led to families having to wait to receive a death certificate to complete burial arrangements and complete federal paperwork for aid. Steps had to be taken to help expedite cause-of-death determinations and rushes were placed on toxicology in order to help the families with this process.

Another issue faced was the lack of anthropologists to handle examinations in the field and at the morgue. Some of the identification attempts were delayed due to this issue.

In the end, the lessons learned from this event will aid other agencies in similar mass fatality events. This incident is a real example of crossing borders with multiple agencies working together on so many levels, and the results were extraordinary.

Mass Fatality, Identification Methods, Forensic Pathology