H42 Central Italy Earthquake: A Disaster Victim Identification (DVI) Experience

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After attending this presentation, attendees will better understand the different approaches of DVI, taking into account the challenges and pitfalls that may occur using the same standard protocols in different and complicated cases.

This presentation will impact the forensic science community by sharing the multidisciplinary experiences regarding the earthquake that hit Italy during the night of August 24, 2016. The 6.0-magnitude earthquake caused the death of 297 people, hitting the central part of Italy in the regions of Lazio, Umbria, and Marche. The cities and villages which experienced the worst damage were Amatrice, Arquata del Tronto, Peschiera del Tronto, and Accumuli. Those cities and villages were close to the epicenter of the earthquake.

The DVI forensic team included a biologist, a fingerprint expert, a forensic anthropologist/odontologist, a forensic photographer, and general assistants. The situation was complicated by the fact that, between the ruins, there was not enough space for a mortuary camp, and the examinations had to be performed on the ground, in an extremely hot environment, and during continuous tremors due to the aftershock. The logistic DVI center was set up in Amatrice, one of the most badly hit areas, with very limited road and bridge access, the majority of which collapsed during the earthquake or just after. Because of the limited amount of space available (approximately 3,000 square meters), the family liaison officers had to work very close to the postmortem examination area, rendering their job extremely difficult.

The bodies recovered from the ruins were placed in body bags and sent to the camp with an identification number, precise address of the recovery, and a "possible ID" (i.e., the name or the names of missing people from that address). All the data were collected in a database. The relatives and the next of kin in the immediate area were interviewed in order to collect relevant data for identification, such as photographs, information about clothing, personal belongings, prosthetic implants, scars, tattoos, and distinguishing marks. The names of the family doctor and dentist were also collected to obtain further medical information and, if possible, a dental chart.

During the initial examination, forensic photography of the body, clothing, and personal belongings was performed; fingerprints, DNA samples, and a dental chart were obtained; and a preliminary examination was conducted of the trauma on the bodies. A quick networking system between the forensic anthropologist/odontologist and the victims' doctors and dentists was set up to obtain medical information as quickly and efficiently as possible. This system could not be applied to those medical practitioners whose offices were affected by the earthquake or located in areas that could not be reached.

Since the earthquake occurred at 3:36 a.m., the location that victims were recovered was crucial for identification; in fact, the majority of victims died in their sleep, as a quick escape was nearly impossible.

Despite the many problems encountered, the hot climate, and the limited space, all identification processes were completed within two days by means of anthropological profiles, dental charts, and the examinations of personal belongings. The identification of the remaining bodies (3% of the victims) was conducted by DNA analyses and the further acquisition of dental charts, requiring a few more days. Fingerprint analyses were only performed on immigrants.

Reference(s):

1. www.interpol.int/INTERPOL-expertise/Forensics/DVI-Pages/DVI-guide.

DVI, Identification, Mass Disasters

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