G23   Mass Disaster Victim Identification: The Tsunami Disaster

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After attending this presentation, the attendee will understand how to organize, implement, and utilize the Interpol Disaster Victim Identification Protocol in mass disaster. Attendees will learn the various identification techniques used in the tsunami disaster in Thailand.

This presentation will impact the forensic community and/or humanity by demonstrating the importance of an organized approach to victim identification in mass disasters.

The Interpol Disaster Victim Identification Protocol has frequently been utilized in mass disasters like earthquakes, fires, and hurricanes however, never in a tsunami. The victim identification process in Thailand was challenging due to multiple factors including, rapid decomposition of bodies due to heat, significant number of foreigners, unprecedented number of victims, and lack of prior fingerprint and dental records. The death toll in Thailand included over 5,395 persons (1,953 foreigners) dead and 2,932 (909 foreigners) missing.

Three sites were established in Southern Thailand for the processing of victims, two in Khao Lak, Thailand, and one in Krabi, Thailand. Victims were then identified as either Thai or foreigner. All foreigners were processed by the International Disaster Victim Identification (DVI) Team while all Thais were processed by the Thai Victim Identification Team. Utilizing the Interpol Disaster Victim Identification Protocol, bodies were numbered and photographed. Forensic pathologists examined victims noting birthmarks, tattoos, scars, jewelry, clothing, height, weight, and other distinguishing characteristics. Due to the tropical environment and lack of initial refrigeration, many bodies rapidly decomposed before a forensic pathologist could examine the victim. Dentition was photographed and documented by forensic dentists for comparison to prior dental records. If possible, fingerprints were obtained from victims and recorded in the Automated Fingerprint Identification System (AFIS). In a few countries, fingerprints are part of the national ID card however, in most cases, anti-mortem fingerprints were difficult to obtain. Molar teeth and femur DNA samples were obtained for DNA profiling. According to the Interpol protocol, victims can be identified utilizing four methods: 1) Dental Records 2) Fingerprints 3) DNA 4) Property. All postmortem information was forwarded to the Thai Tsunami Victim Identification Information Management Center (TTVI-IMC) and entered into a database.

Concurrently, embassy officials were obtaining anti-mortem records such as DNA, fingerprint, dental, clothing, and victim characteristics from victim's families around the world. The international scope of the disaster initially limited victim identification due to the logistics involved in obtaining dental and fingerprint records.

All anti-mortem information is entered into a database and cross-matched with postmortem information utilizing PLASDATA, a software database program. Of the 721 victims at the Krabi site, 560 (77.6%) were identified. 357 (63.8%) were of Thai nationality and 203 (36.3%) were foreign citizens. Utilizing property, location, and distinguishing physical characteristics identified 511 victims (91.3%). Dental records identified 49 victims (8.8%), primarily foreign citizens. DNA and fingerprints did not identify any of the victims.

At the Krabi site, identification of Thai nationals proved more successful than foreign citizens for multiple reasons. Family members physically identified Thai victims through clothing, property, and tattoos prior to body decomposition. Dental records, fingerprints, and DNA were rarely used for Thai victims. Foreign citizens were identified through property, clothing, and dental records. To date, DNA has not proven effective for Thai victim identification.

The Interpol Disaster Victim Identification System can be utilized in tsunami disasters where resources, technology, and personnel may be limited and multiple nationalities are involved.

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