



F14 Coordination: A Multidisciplinary Approach to Identification Utilizing the DPMU

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Attendees will learn how integration with different forensic specialists facilitates identification of remains using the Disaster Portable Morgue Unit (DPMU) of the Disaster Mortuary Operational Response Team (DMORT). This presentation will provide an appreciation of the multidisciplinary teamwork approach of the operating procedures of the DPMU in accurately and expeditiously identifying decedents in a mass fatality incident.

The objectives of the presentation are to provide the forensic odontologist with an appreciation of the synchronization of the operating procedures of the DPMU and its adaptability in rustic environments.

The DPMU concept was developed in the late 1980s by the National Funeral Directors Association in response to the need for equipment and personnel to be close to the site of a mass fatality incident. It was refined in 1997 in Guam at the Korean Flight 801 crash. By June 1998, FEMA had completed assembling the DPMU, storing it at the Logistics Center of FEMA in Rockville, MD. The morgue consists of 10,000 pieces of equipment, containerized and palletized ready for shipment by truck, rail, boat, or aircraft, requiring 8,000 square feet of working space. A second DPMU is now stored in San Jose, California.

In Guam, the morgue was placed in an airport hangar. The Hurricane Floyd Cemetery Flood of 1999 presented unique challenges. Most of eastern North Carolina was flooded and the municipal water and sewer systems were non-operational in Tarboro. The DPMU was set up in the back of a warehouse shared by a Red Cross feeding center. With no potable water locally, the personnel were bussed in from 30 miles away for the first 7 days. Security and a facility were issues in the tiny community of Noble, Georgia, location of the Tri-State Crematory in 2002. With no building available, 2 – 10,000 square foot tents were erected – one for the DPMU and the other for storage of remains until processing could be completed. The site was a Georgia Department of Transportation highway equipment maintenance and storage facility, surrounded by a high chain link fence. The information resources (antemortem) section was located in a mobile trailer adjacent to the postmortem section to facilitate computer communications via WiFi.

There are eight postmortem stations established in the DPMU: 1) Admissions, 2) Pathology, 3) Radiology, 4) Fingerprint, 5) Dental, 6) Anthropology, 7) DNA, and 8) Dismissal. The goal in postmortem is to gather as much information as possible on the remains in an accurate and efficient manner.

The admission section verifies there are remains to be examined and assigns a mortuary officer (usually a funeral director) to that set of remains. The officer is responsible for taking his charge to each station for proper examination and documentation. The admissions officer logs into the Victim Identification Profile (VIP) computer program a unique alphanumeric symbol for each set of remains. As the decedent is examined at each station, information is entered and sent to the server in the information resources area for comparison with antemortem records.

The pathologist checks for personal effects, height, weight, sex, race, unique markings, scars, tattoos, piercings, previous surgeries, joint replacements, etc. After noting all finds in the VIP program, the remains go to the x-rays section. Whole body radiographs are taken and if anything unusual is observed, the pathologist, anthropologist, or dentist may be consulted. For example, if a joint replacement is observed, the pathologist will remove the appliance, note the serial number, and call the national registry for identification. Even if a positive ID is received, the remains are never removed from the DPMU system until each station has completed its examination.

Depending on the flow of decedents, the next station is either fingerprint or dental. The fingerprint specialists may be able to lift prints off

remains that have been buried for several years as occurred during the cemetery flood.

In the dental station, the use of the Win ID3 program is critical in communicating and coordinating with the antemortem area for identification comparisons. A complete dental examination and charting is accomplished if possible, along with a full series of digital radiographs. Postmortem charting is entered into the Win ID3 program. Antemortem radiographs are scanned, digitalized, and entered into the program along with dental charting. All workstation data entry is communicated to the central server via WiFi. Comparisons for matching can begin immediately.

The anthropology station is utilized for evaluating whole body radiographs, skeletonized remains, and determination of age, race, sex, and separation of fragmented body parts from foreign material.

The most recent addition to the DPMU is the DNA area. DNA is harvested, catalogued, and stored for future comparisons. If the decedent is not identified by other means, then the DNA is tested and comparisons made.

The final station is dismissal. Paperwork is checked to verify all stations have signed off on each decedent. The remains are then placed in storage until identification is made. Using the data from this multidisciplinary approach, the medical examiner is able to identify and release the remains to the family.

Mass Fatality, Identification, DPMU