

DEPARTMENT OF DEFENSE ARMED FORCES INSTITUTE OF PATHOLOGY WASHINGTON, DC 20306-6000

AFIP-ZA

30 January 2002

MEMORANDUM FOR RECORD

- 1. This after action review is designed to identify strengths, weakness, and capture important lessons learned from Operation Noble Eagle.
 - a. Support Activity: General.
 - (1) Issue: Notification Phase.
- (a) Discussion: Initial notification was by television, which was monitored due to the preceding crashes at the world trade center. Immediate actions included an initial staff brief and telephonic notification of all regional medical examiners, placing them on stand-by. All equipment was staged for immediate deployment. Office staff screened all of the in-office consultation work, and completed all urgent requests. Initial jurisdictional concerns were raised, and the Virginia Medical Examiner was contacted. The Armed Forces Medical Examiner (AFME) and Chief Deputy traveled to the Pentagon on the 11th, inspected temporary morgues facilities and met with key players. Initially, jurisdiction was unknown, and on-site personnel responded to direction from the Virginia State Medical Examiner. Attempts at coordination appeared successful; however, confusion remained on-site. On the 12th, jurisdiction was decided, and plans for movement of remains were coordinated with the FBI, Army mortuary, and J-4. It took approximately 36 hours for the Military District of Washington to assert exclusive federal jurisdiction. Because of this initial confusion, coordination with on-site agencies was sub optimal.
- (b) Recommendation: Lands under exclusive federal jurisdiction need to be identified, catalogued, and published, along with legal references supporting that claim to jurisdiction.
 - (c) Point of Contact is Col , AFME.

- b. Support Activity: Office of the Armed forces Medical Examiner (OAFME).
 - (1) Issue: Deployment to Dover AFB.
- (a) Discussion: Equipment was deployed on the 12th, immediately after Jurisdiction was decided. OAFME personnel deployed by POV using blanket orders on the 13th, and were in-place approximately three hours before initial remains delivery. Regional Medical Examiners were contacted after initial assessment, and used POV, commercial air, and military travel. Air Force and Navy deployments were coordinated with the Air Force and Navy Pathology consultants. All regional medical examiners utilized blanket orders with the exception of Dr. Rouse, who had not yet had orders published. Two reservists deployed, both by request through their respective services. Processing time for these requests was approximately one week. Deployment of OAFME personnel was effortless, due to the frequent practice, blanket orders, and established tasking authority. Deployment of regional medical examiners was more problematic due to unclear tasking authority and due to the shutdown of the commercial air system. This task would have been much harder without blanket orders, and would have probably delayed deployment by a week. Reserve deployment took approximately one week
- (b) Recommendation: A mechanism, acceptable to the services, be developed for timely tasking and deployment of regional and reserve assets. See enclosure (2).
 - (c) Point of contact is Col AFME.
 - (2) Issue: Dover Mortuary Staffing.
- (a) Discussion: Dover operations were staffed with OAFME personnel, regional and reserve medical examiners. Anthropologists from the Smithsonian and Central Identification Laboratory Hawaii, autopsy assistants from AFIP and from the 436th Medical Group, photographers from AFIP and National Naval Medical Center (Bethesda) augmented the OAFME.
 - (b) Recommendation. See enclosure (2) for proposed staffing.
 - (c) Point of Contact is Col

(3) Issue: Records and Documentation.

- (a) Discussion: Due to the degree of fragmentation in many of the deceased, autopsy numbers could not be assigned at the time of autopsy for the majority of victims. Therefore, originally assigned, unique FBI numbers became the foundation for all data tracking by OAFME. The Dover mortuary on site computer tracking system did not use these numbers, and was not used by OAFME, although the mortuary staff used it. All recording of remains data was done using an excel spreadsheet, which was developed onsite by the AFIP epidemiologist. OAFME decided to use the records registrar provided by odontology for premortem medical, dental, personnel, and personal record registration. Once identifications were made, allowing re-association, these were confirmed by reference to original documents, and sources of documentation were present prior to physical re-association and reporting. All x-rays were stored immediately after autopsy in the order taken. Photography was on film. Post-mission analysis indicated these methods were remarkably accurate, with only minor correctable discrepancies found later in the operation.
- (1) No registrar existed for premortem data, resulting in our using the dental registrar. The registrar had no PAD experience and minimal administrative skills with regards to organizing medical records.
- (2) Radiography and photography were done using film methods. This caused extensive time-consuming efforts to catalogue, file and process.

(b) Recommendation:

- (1) A Patient Administration Officer should be assigned as a registrar for all premortem data during contingencies. The recent assignment two PAD personnel to the OAFME will allow greater flexibility when responding to Mass Disasters. See enclosure (2).
- (2) Current transition to digital radiography and photography can be accelerated. Interim filing plans are developed for handling large volumes of photographic and radiographic films.
 - (c) Points of contact are Col and COL
 - (4) Issue: Agency Interface.
- (a) Discussion: The FBI ERT was on-site throughout the operation. NTSB, Army and Navy Mortuary also had on-site representation. Therefore, interface with all pertinent agencies was excellent.

- (b) Recommendation: Continue without change.
- (c) Point of Contact is Col
- (5) Issue: Command and Control.
- (a) Discussion: The Director, AFIP was on-site throughout most of the Operation and was the overall site commander. OAFME direction was delegated from the AFME to the Chief Deputy, Operations Officer. Communication was through a daily morning meeting. Each autopsy room had one ME assigned as leader for that room. Triage was under control of anthropology, with ME assistance, and overall remains flow was coordinated by OSI.
 - (b) Recommendation: None
 - (c) Point of Contact is CAPT Wagner.
 - (6) Issue: Logistics.
- (a) Discussion: Initial supplies were inadequate for the scope of the operation and rapid re-supply was obtained using money supplied by OTSG. Our purchasing representative was on-site and locally available supplies were purchased real-time. Expendable items were bulk ordered and received with minimal delay in spite of vendor shortages due to competing requirements in New York and Pennsylvania. There was no dedicated storage for OAFME supplies. Supplies were staged in a much-used hallway, resulting in sub-optimal control and use of supplies.
- (b) Recommendation: Designate areas for bulk and daily-use supplies and ensure the are included in the plans for the new port mortuary facility at Dover.
 - (c) Point of contact is MAJ



- (7) Issue: Communication
- (a) Discussion: Much of the communication with outside agencies was done in-person on-site. External communication equipment included one analog telephone line in the doctor's area. A T-1 line was placed for our use; however, the local base systems shop disconnected it. A cellular phone and pager accomplished daily communications with AFIP, OAFME, and with each other. Cingular cell phones issued to OAFME personnel did not work inside the building.

- (b) Recommendation: Enhanced communication capabilities be included in the plans for the new port mortuary building. Switch to a carrier that has wireless nodes in Dover.
 - (c) Point of contact is Mr. Judd.
 - (8) Issue: Facilities.
- (a) Discussion: Permanent autopsy facilities were adequate but cramped. Autopsy operations were expanded into the overflow area, and this area had poor environmental control, lighting, and pest control (flies). Office facilities were sub optimal, with excessive noise level and poor environmental control. Facility shortcomings will be addressed in the new port mortuary initiative.
 - (b) Recommendation: Full support for the new port mortuary initiative.
 - (9) Issue: Base Services, dining facilities, lodging support and transportation.
- (a) Discussion: Housing availability was initially poor due to the conflict with a local community event. Availability improved after the first week. On-base dining facilities were closed to officers. Food was occasionally made available in the mortuary facility, when it was supplied by the USO. The AF Services Squadron supplied box lunches when this was not available.
- (1) Initial billeting assignments off base were sub optimal. Some facilities Were far from the worksite, and several had noise levels and cleanliness problems, which precluded adequate rest. Inadequate rest during the initial operation definitely interfered with the mission through decreased performance of the professional staff.
- (2) The nearest commercial airports are in Philadelphia and Baltimore. Rental cars or military vans were necessary for transportation to Dover. This might have presented significant hindrance to the relief team arrival. Van support was coordinated through the WRAMC Transportation Motor Pool.
- (3) Many support personnel, specifically the Chaplains, were TDY without per diem. Government meals (at no cost) were not provided. In-flight box lunches were available for purchase but are unappetizing and inadequate. The USO should be applauded for stepping up and stocking the Port Mortuary with nutritious snacks, water, sodas, juice, and hot meals. Their volunteers worked long and hard for us and accepted only voluntary donations to the USO for their services.

- (b) Recommendation: Base Billeting, Transportation Motor Pool, and base dining facilities should give priority to personnel arriving on orders as part of the forensic mission. Develop emergency plans to access adequate civilian lodging facilities for all task force personnel.
 - (c) Point of contact is Lt Col



(10) Issue: Safety.

- (a) Discussion: Universal precautions were prescribed while in the processing area's. OAFME personnel followed all local safety requirements. Universal precautions compliance was fair. Potential for cross contamination exists due to colocation of break, eating, and administrative areas. Dressing, showering and sanitary areas are sub optimal.
- (b) Recommendation: Full support of new port mortuary initiative. Strictly enforce universal precautions for all personnel. Ensure that protective gear is removed prior to entering break, eating, and administrative areas.
 - (c) Point of contact is Col

(11) Issue: Reporting.

- (a) Discussion: Dual reporting was performed through the Air Force Service channels and through Army OTSG. Multiple requests for information became onerous and interfered with operations. All requests were funneled through the Director's executive assistant. As directed, the daily raw data spreadsheet was provided to OTSG.
- (1) The OAFME used tracking numbers supplied by the FBI at the incident site. The Dover mortuary used tracking numbers supplied by their internal computer system, which could not adapt to the FBI numbering system. This caused additional work in tracking both sets of numbers and in reconciling any discrepancies.
- (2) The barcode system at the mortuary was not used, and handwritten flow sheets were used in its place.
- (3) The use of an excel spreadsheet instead of a dedicated autopsy tracking and recording system required extraordinary oversight and data entry resources to ensure accuracy and accountability. Minor errors were made due to the awkwardness of the method and the lack of automated checks.

- (4) Lack of ad-hoc reporting tools made daily reporting extremely human-resource consuming. In the place of well-planned reports, raw data was transmitted up the Army Chain, resulting in errors from well-intentioned interpretation efforts at OTSG.
- (5) There was no network connectivity between OAFME and Dover port mortuary.

(b) Recommendation:

- (1) Research and acquire a data system adequate for remains tracking, results tracking and reporting. The system should be compatible with OAFME portable computers in order to maximize utility and familiarity, and should be fully networked with Dover. The potential for such a system to be web-based should be investigated as a way to allow seamless operations after redeployment from Dover (see below). The system should include automated physical tracking (barcodes), as well as data checks.
 - (2) Standardize the numbering system to be used in all future missions.
- (3) Purchase portable data equipment (laptops, printer, and copiers) for OAFME to use during contingencies.
- (4) Release only completed, validated data. Raw or incomplete data constitutes working data and should not be released outside of OAFME.
 - (c) Point of contact is Col and MAJ
 - c. Support Activity: Dental Identification.
- (1) Issue: Value of Dental Identification. Since DNA comparison has been made the "gold standard" for identification in DoD, should dental identification still be performed?
- (a) Discussion: All methods of identification are complimentary and there is no single best method. In NOBLE EAGLE, and almost all other incidents with double-digit fatalities, one or more identifications are made exclusively by dental, fingerprint, or DNA means. During the operation, tissue from remains identified by dental or fingerprint methods were used to establish a "DNA reference" sample, which was then used to reassociate traumatically separated, and otherwise non-identifiable, body parts.
- (b) Recommendation: Continue the policy of employing all three legally accepted methods of identification, i.e., DNA, Dental, and Fingerprint.

- (c) Point of contact is Col
- (2) Issue: Personnel, AFIP and Dover AFB can provide initial staffing levels that are sufficient for processing up to 20 remains per day. If the mission requires processing more than 20 per day or up to 20 per day for more than 10 consecutive days, supplemental and replacement personnel will be required. Replacement teams will consist of 9 dentists, 11 dental technicians, 1 computer specialist, and 1 MSC (health care administrator) officer. This number is approximately half of the staff and will allow for 7-10 day overlap with the other half for continuity, familiarization and training as needed.
- (a) Discussion: During NOBLE EAGLE, Keesler Air Force Base personnel originally deployed as part of an AEF EMEDS unit were diverted to Dover AFB and provided relief teams. Additional replacements were identified through Army OTSG and were placed on stand-by but ultimately not required. These were unconventional methods for acquiring manning assistance. Establishment of a formal mechanism for manning requests is being sought through OTSG. (Original memo sent through AFIP Resources Management in Nov 01.). Air Force, Army, and Navy have identified, by name, qualified dental personnel but authority to issue orders for TDY travel has not been identified.
- (b) Recommendation: Need a clear administrative routing path for requesting and receiving replacement personnel to support dental identification.
 - (c) Point of contact is Col See enclosure (2).
- (3) Issue: Records. Without antemortem dental records, dental comparison cannot be performed. Reluctance on the part of the military's offices of casualty affairs to release lists of missing persons delayed requests for locating and retrieving antemortem dental records.
- (a) Discussion: The lists were eventually released about 1800 on 13 September and immediately faxed to the Central Panorex Storage Facility (CPSF) in Monterey, CA. This resulted in 58 "hits" by 2210 on 13 September and a 59th "hit" on 21 September from a subsequent list sent by the FBI requesting fingerprint records. Significant problems were encountered arranging delivery of the panoramic radiographs to Dover, as the usual 24 hour FEDEX turnaround option was eliminated by the grounding of all commercial flights. Efforts by AF and Army HQs to arrange dedicated military aircraft to fly from Travis AFB to Dover AFB resulted in arrival of the X-rays at the Dover flight line at 2030 hours on 14 September.

In this incident, there were difficulties determining the agency responsible for acquiring records for the civilian casualties and the FBI ultimately took responsibility. Records of passengers of AA Flight #77 continued to arrive for several weeks.

- (b) Recommendation: Absolute earliest possible release of lists of missing will expedite antemortem dental record retrieval.
 - (c) Point of contact is Col
- (4) Issue: Central Panorex Storage Facility (CPSF). Since 1996 no new films have been sent to the repository and the value of the database has been declining.
- (a) Discussion: The CPSF still proved to be valuable in limited numbers and, in this operation, resulted in two early identifications that would otherwise not have been made. The concept of a repository for dental imaging studies has been proven to be useful, however, the modality of storage should probably now be digital rather than film. Images could be stored digitally regardless of the original mode of imaging. Images taken in a conventional manner could be readily scanned.
 - (b) Recommendation: Establish a replacement dental X-ray "warehouse". This should be a digital dental image repository to reside in CHCSII and updated as a normal consequence of routine clinical practice.
 - (c) Point of contact is Col
 - (5) Issue: CHCSII An automated forensic module would integrate many functions of the forensic process and specifically, may accelerate the dental identification.
- (a) Discussion: Since the Pentagon attack caused upwards of 200 potential deaths and many were civilians whose dental records were going to be of varied and unknown quality, we chose to use an automated comparison tool. The one we used is called WinID, developed by a civilian dentist by the name of Jim McGiveney. It is a Microsoft Access based system that runs under Windows. It performs the basic functions of the original Army program, CAPMI, and has some additional features including the ability to link the antemortem and postmortem chartings to digitized images of the antemortem and postmortem X-rays. This latter feature is time and manpower intensive. For future missions that have 50 or more fatalities with few presumptive identities, and/or fatalities with a candidate pool of more than 50 possible identities, an automated tool will be desirable.

- (b) Recommendation: Fund the continued development and deployment of the CHCSII Forensic module to include full support of dental and medical imaging. The cost is estimated to be \$600,000 without imaging and \$2.6 million with imaging.
 - (c) Point of contact is Col
 - d. Support Activity: Emergency Operations Center (EOC).
 - (1) Issue: Temporary Communication Center.
- (a) Discussion: The EOC concept was developed out of the necessity to respond to the numerous and continuous requests for information and coordination. It was set up as a temporary structure until the forward operations EOC staff was set up. A duty roster was established for 24-hour operations. Daily shift change briefing were conducted. All necessary Information management equipment was set up within the first hour of operation. All AFIP staff was supportive. Duty driver's rosters were established.
- (1) The lines of communication with higher authority were not clear, multiple staff elements would request the same information. In some cases higher would have another staff element requesting the information directly. The EOC was used to coordinate the Medical Manpower pool for the institute and the initial security requirements.
- (2) OTSG request 100% personnel accountability. The EOC was used for the initial taskers. The daily SITREP was established and used until the reporting was established at Dover. Medical and dental records were delivered from the services through the EOC to Dover.
- (b) Recommendation: Use the EOC or central command post only as interim measure until forward operations are established. Request from Higher HQ activities should be channeled out thru a central point to avoid duplication.
 - (c) Point of contact is LTC
 - e. Support Activity: Public Affairs Office (PAO).
 - (1) Issue: Media Relations.
- (a) Discussion: The September 11 attack generated intensive media interest in AFIP's role in identifying the victims. Media interest was local, regional, national and international in nature, both print and electronic. The Public Affairs Office established lines of communication to OTSG public affairs, DoD public affairs, and Dover AFB

public affairs, immediately for coordination and approval. The PAO relied on pager and cell phones extensively to communicate with DoD and news media; which was available on a 24 hours a day basis, especially during first two weeks of the operation. Worked with the AFIP leadership and subject matter experts to arrange interviews and provided media with accurate/timely information. AFIP effectively communicated to the news media through a virtual DoD a Joint Information Center (JIC) ensuring that all media requests for interviews and comments made on the record were approved and appropriately staffed at the correct level.

- (1) Early during Operation Noble Eagle, public affairs learned that of flag officer interest in media stories pertaining to the Dover operation. This concern followed a news story that appeared in *The Washington Post*. We applied a temporary suspension on media activity while the media guidance was reconfirmed. Extensive follow-up with DoD public affairs confirmed that AFIP should continue to respond to media queries.
- (2) Requests for interviews with officer-in-charge at Dover (CAPT Wagner) were continuously denied by public affairs, and later a proposed news conference was denied by DoD public affairs, citing our first responsibility towards achieving the identification of victims and return to their families.
- (3) As interest turned towards DNA as primary identification method, producers were encouraged to interview the chief of AFIP's DNA laboratory (COL and to speak with former AFIP staffers (Dr. Charles Stahl and Dr. Richard Froede) for comments about how a mass fatality investigation would be conducted. Some concerns were expressed internally at AFIP about publicizing the location and role of the DNA laboratory; however, DoD approved and the resulting stories reflected positively on the Institute.
- (b) Recommendation: Continue to utilize DoD public affairs assets for approval and coordination.
 - (c) Point of is Contact Mr. Kelly, PAO.
 - f. Support Activity: Resources Management.
 - (1) Issue: TDY Orders Processing.
- (a) Discussion: The issuance of DD1610s (TDY Orders) for the initial deployment personnel was of minimal concern because most of the OAFME personnel maintain blanket orders covering the entire fiscal year. Blanket orders for FY02 were set up for those same personnel once it was identified that they may be crossing fiscal years. In total there were 26 sets of blanket DD1610s issued for FY01 and another 29 sets issued for FY02. In addition, another 37 sets of TDY orders were issued to AFIP

personnel for deployment to Dover AFB. The issuance of those orders proved to be less timely and of more concern as many of those orders were completed after the personnel already deployed to Dover AFB, causing issues with billeting. Also, 13 sets of orders were issued for personnel external to AFIP in the form of fund cite letters or Invitational Travel Orders (ITOs). Information including social security numbers, full names, and organizations was not present on the initial requests for many of those orders resulting in a delay of processing. of TDY orders were issued to AFIP personnel for deployment to Dover AFB. The issuance of those orders proved to be less timely and of more concern as many of those orders were completed after the personnel already deployed to Dover AFB, causing issues with billeting. Also, 13 sets of orders were issued for personnel external to AFIP in the form of fund cite letters or Invitational Travel Orders (ITOs). Information including social security numbers, full names, and organizations was not present on the initial requests for many of those orders resulting in a delay of processing.

- (b) Recommendation: All requests for personnel both internal and external to come to AFIP TDY, in support of the AFIP mission, need to be closely coordinated with DRM and coordinated to ensure all the appropriate information is provided so that the orders can be processed quicker and with more accuracy.
 - (c) Point of Contact is MAJ
 - (2) Issue: Funding.
- (a) Discussion: A total of \$811,101 was received in funding by AFIP to off-set the expenditures as a direct result of the mission at Dover AFB. The funding came at the very end of the fiscal year after repeated requests to both DCSPER and MEDCOM in to the availability of Operations and Maintenance, Army (OMA), and Defense Health Program (DHP) funding. Initially, AFIP covered the expenditures using their FY01 DHP funding. Overall expenditures for the operations for AFIP totaled \$896,383, with DHP funding at \$407,000 and OMA funding at \$404,101. The remaining \$85,282 was covered from AFIP mission dollars. The breakdown of the expenditures amounted to \$874,770 in supplies and \$21,613 in travel.
- (b) Recommendation: Due to the incident occurring at the end of the fiscal year, it was ever more evident the need for faster reaction as to increasing the appropriations for reactionary missions like that of the AFIP. FY01 mission funds had been pretty much exhausted and it is crucial to identify the funding sources along with the issuance of those funds faster.
 - (c) Point of Contact is MAJ
 - g. Support Activity: OAFME
 - (1) Issue: Operations at Rockville

AFIP-ZA

SUBJECT: After Action Report, Operation Noble Eagle

- (a) Discussion: During the last week of September, operations were moved to a secure office in the Rockville OAFME offices. Facilities and equipment were provided to support data collection, filing, and reporting. Identification information was processed in an identical manner as at Dover. Communication was by telephone, email, and fax. Intermittent on-site visits to Dover were required to complete death certificates and to resolve data conflicts that were identified. DNA specimens were taken from commingled remains without first separating and renumbering the remains. Resolution of this situation required physical separation after identification at Dover.
- (b) Recommendation: This is a training issue for DNA technicians and Medical Examiners. Physical separation of potentially commingled remains must always precede DNA sampling.
 - (c) Point of contact is Col
 - (2) Issue: Redeployment to Rockville
- (a) Discussion: Redeployment of personnel and equipment occurred during the weekend of September 29-30, 2001, so as to minimize mission and reporting effects. Movement was coordinated with all interested outside agencies.
 - (b) Recommendation: None.
 - (c) Point of contact is Col
- 2. Point of contact for this after action report is the undersigned or LTC

3 Encls

1. OAFME Mission Support Statistics

2. OAFME Staffing for Forensic Missions

3. NMHM Report

GLENN N. WAGNER

CAPT, MC, USN

The Director

CF:

OSD (HA), ATTN: LTC(P)

Air Force Surgeon General, ATTN: BG Murry Army Surgeon General, ATTN: BG Bester Navy Surgeon General, ATTN: RADM Arthur

OAFME MISSION SUPPORT STATISTICS, PENTAGON/AA-77

Overview

Incident Date: 11 September 2001

Operational dates: 11 September to 16 November 2001 Dover On-Site: 13 September to 29 September 2001

Pentagon On-site: 11-12 September 2001

FBI numbered remains processed: 2397
Victims 183
Victims identified 178
Terrorists identified 5

Operations team:	OAFME	AFIP	Other Augmentees
Pathologists	5	4	9
Epidemiologist	1 ,	0	0
Pathology Assistants	0	8	16
Anthropologists	1	0	7
Photographers	4	2	8
DNA Staff	100		

Preliminary Cause of Death

Blunt force injury	78
Thermal injury	35
Blunt force and thermal injury	42
Conflagration	12
Multiple Injuries	5
Positional Asphyxia	1

OAFME Staffing for Forensic Missions Conducted at Dover Port Mortuary

Medical Examination:

Assumptions: 100 bodies/day

20% autopsies, 80% inspections

2 - 12-hour shifts per day

10 productive hours/12-hour shift

5 workdays per individual

Each medical examiner supervises one pathologist at an adjacent table

10 tables working 24/7

		REQ	ME	MES	DELTA
MORGUE TEAM	Pathologist	14	0	0	14
	Nurse/autopsy tech	28	0	0	28
	Photographer	17	3	0	14
	Medical Examiner	14	2	10	2
	Anthropologist	12	1	0	11
	Total	85	6	10	69
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Investigators	Total	6	1	0	5
ADMINISTRATORS	MSC	1	0	0	1
1 DIMINISTRATORS	Enlisted	$\overset{1}{2}$	1	0	1 1
	Total	3	1	0	2
	Total	<u> </u>	<u>_</u>	U	<u></u>
DATA	Transcription	10	1	0	9
	Data entry	5	0	0	5
	Epidemiologist	2	2	0	0
	Systems	1	0	0	1
	Total	18	3	0	15_
SUPPLY	Total	2	1	0	1
TEAM LEADER	Total	11	1	0_	0_
GRAND TOTAL		115	13	10	92

Column headers: REQ=required; ME=available at OAFME; MES=available within the regional Medical Examiner system (mixture of AD and reserves); DELTA=requirement for tasking outside OAFME.

Dental Examination:

Assumptions: 20 casualties/8-hour shift or 60/day

100% full dental examination 3 – 8-hour shifts per day

3 postmortem dental X-ray/examination stations available

This table defines staffing needs for 1 eight-hour shift (20 bodies). Multiples will be needed for 2 or 3 shifts per 24-hour period. For 2nd and 3rd shifts, all staffing will have to be from other than OAFME and Dover AFB.

		REQ	ME	MES	DELTA
POSTMORTEM EXAM	Dentists	6	2	2	2
	Dental Technicians	6	0	0	6
	Section Chief (Oral	1	1	0	0
	Pathologist)				
	Total	13	3	2	8
	ų				
ANTEMORTEM EXAM	Dentists	7	3	2	2
AND COMPARISON	Dental Technicians	4	0	0	4
	Section Chief (Oral	1	1	0	0
	Pathologist)				
	Total	12	4	2	6
TEAM CHIEF	Oral Pathologist	1	1	0	0
	Total :	1	1	0	0
GRAND TOTAL		26	8	4	14

Radiologic Examination:

24/7 Operations with 2 - 12-hour shifts

		REQ	\mathbf{ME}	MES	DELTA
Postmortem Exam	Radiologists	3	0	3	0
	Technicians	6	0	0	6
	Total	9	0	3	6

Column headers: REQ=required; ME=available at OAFME; MES=available within the regional Medical Examiner system (mixture of AD and reserves); DELTA=requirement for tasking outside OAFME.

SUBJECT: Staffing of Forensic Operations at Dover Port Mortuary

- 1. When conducting forensic operations at the Dover Port Mortuary, the Office of the Armed Forces Medical Examiner (OAFME) has primary responsibility for three components of the overall process leading to release of remains to the next of kin. These are medical examination, dental examination, and radiographic examination.
- 2. The staffing required to conduct these operations is dependent on the number of fatalities and the period of time over which the remains are received at the mortuary. For example, preparing for 10 casualties per month over 10 months is very different than 100 casualties at one time.
- 3. We are able to process small numbers of remains with personnel immediately available to us to include those assigned to the AFIP and Dover AFB. For larger operations, we need to be able to request manning assistance through a prearranged mechanism. During Operation NOBLE EAGLE, we had limited success arranging for TDY orders to augment or relieve the first responders from the AFME office.
- 4. We have developed staffing requirements that will allow us to process up to 100 bodies per day. (Atch) The details for manning these efforts, including the number and specialty area of the personnel, are specific to each situation and will have to be determined by the Armed Forces Medical Examiner (or on-site representative) based on the number of fatalities.
- 5. A mechanism needs to be established for requesting the appropriate number and specialty mix of replacement personnel so that operations can continue uninterrupted until conclusion of a mission. Long range planning may include establishing a UTC or UIC that contains the proper number and knowledge level of people. Single or multiple units could be requested as needs dictate.
- 6. In the short term, identification of the proper routing for TDY requests will allow us to get requests processed as soon as the needs are identified.

7. We are seeking	guidance that will help us establish a request procedure through
OTSG, JFCOM, or	other appropriate agency(ies). My action officer for this request is
	Deputy Director, Air Force. He may be reached at: Work
, Pager	, or email

GNW

Support Activity: Two staff members of the NMHM/AFIP supported the identification efforts of United 93 victims in Somerset, Pennsylvania. Paul Sledzik and Lenore Barbian responded through the Disaster Mortuary Operational Response Team (DMORT), a division of the US Department of Health and Human Services, National Disaster Medical System (NDMS). Sledzik served as team commander for the Region III DMORT (a role he has had since 1997) and Barbian served as a forensic anthropologist. They were on site in Somerset, PA from 13 SEP 01 to 25 SEP 01.

The fact that staff members of the National Museum of Health and Medicine, AFIP, participated in this event points out the unique role of the museum in public service and scientific support. Museums are visibly more than the sum of the collected materials they present. Museum collections are the foundation supporting research, exhibition, education, and public service initiatives. In the case of United 93, the information gleaned from years of studying museum skeletal and soft tissue specimens was critical in the identification of remains of the victims. As part of a focus on forensic medical topics, museum staff also conducts research in forensic identification, provide an annual course in forensic anthropology, and consult with local jurisdictions on forensic matters.

Issue: Overall role of DMORT and AFIP in the United 93 crash response posed some potential future opportunities for the AFIP. As DMORT and AFIP have worked together, and will work together in the future, mutual support is beneficial to both parties. Mutual support would be in the pre-response phase (sharing of information, protocols, training), during response (coordinated response effort), and post-response (debrief and future planning).

Discussion: Region III DMORT was requested on 13 SEP 01 to deploy to Somerset, PA, to assist local authorities with the identification of victims from United 93. DMORT was activated under a MOU with the FBI to solely provide victim identification services. The FBI was the lead agency for the federal response, and they directed the work of the DMORT team and provided fingerprint identification services. The FBI had primary jurisdiction over the crash site, and handled all press interactions, meetings with state personnel and airline representatives. The DMORT team consisted of roughly 50 individuals comprised of civilian and federal personnel mainly from the Mid-Atlantic states. The team did not have access to the DMORT Portable Morgue Unit because it was deployed to New York City. As a result, the NDMS contracted with Kenyon International Services to provide their portable morgue, along with a support team to resupply the morgue.

DMORT organized a fairly traditional disaster morgue operation at the Pennsylvania National Guard Armory just outside of Somerset, PA. Modifications to the flow were made to accommodate triage of remains, DNA processing, and the additional documentation required for the medicolegal aspects of the response. The DMORT response was augmented by David Boyer of AFRSSIR, who served as primary DNA manager. Other AFDIL staff assisted in the Somerset

Response: Suzanne Barritt, Richard Coughlin, Jacqueline Raskin, and James Ross. In the spring of 2001, AFDIL staff trained the DMORT DNA team. At this time, AFDIL and the DMORT DNA team agreed that future responses would involve both DMORT and AFDIL staff; the United 93 crash was a successful first test of this agreement.. In addition, Sledzik and Boyer were able to work out several issues related to the AFDIL support of the FBI for this incident while in Somerset.

Given the potential legal aspects of this case, the FBI requested that AFIP examine suspected forensic pathology specimens. An arrangement was made to send specimens, via FBI plane, to Dover Air Force Base for review by AFIP pathologists.

A total of 1087 bags of remains were processed during the DMORT response, totaling 501 pounds. Twelve identifications were made on site, using dental and fingerprint methods. The remaining identifications will be made by DNA and are being conducted by AFDIL. As of 05 DEC 01, 39 of the 44 passengers have been identified. Given that four of these passengers were terrorists and obtaining antemortem reference material on them is unlikely, 39 of 40 passengers have been identified. The remaining identification should be finalized shortly.

In all, the operation of the morgue at Somerset was efficient, effective, and professional. Security at the morgue was an important issue, and the Pennsylvania State Police provided excellent support in this area. The Somerset County coroner, Wallace Miller, was easy to deal with, and left the work of the FBI, DMORT, and AFDIL to those agencies. Interactions between the FBI, DMORT, and AFDIL were supportive and mutually beneficial. Because the goal for all agencies involved in the morgue operation was essentially the same, the team worked effectively.

Recommendations: The AFIP is a recognized name in mass disaster victim identification. In recent years, DMORT has achieved name recognition in this area as well. Through the work of Sledzik, Barbian, Boyer, and others at Somerset, AFIP can claim that it responded to and managed two morgue operations following the September 11 events: the Pentagon crash and the United 93 crash.

Sledzik (NMHM/AFIP) managed the DMORT response, bringing in AFIP when possible and promoting AFIP to the various federal and state agencies. Barbian (NMHM/AFIP) provided forensic anthropological support. Boyer (AFDIL/AFRSSIR) and other AFDIL staff guided the DNA specimen collection efforts and assured chain of custody. Forensic pathology services were provided through AFIP pathologists at Dover AFB. AFDIL took on the task of identifying the United 93 victims. The seamless nature of the response and the excellent working relationship of DMORT, AFDIL, AFIP, and FBI staff at Somerset resulted in the highest level of forensic response for the victims of United 93. AFIP should use every opportunity to promote its work at Somerset, as it has done for the Pentagon crash.

As federal agencies, AFIP and DMORT would benefit from continued and augmented mutual support and response at mass fatality incidents. A level of this mutual support currently exists. For example, AFDIL supports the NTSB victim identification responsibilities under the Aviation Disaster Family Assistance Act. Given that DMORT and AFDIL will undoubtedly work together in the future, and given the roles of DMORT and AFIP play in the forensic community, I suggest that AFIP take on a larger role in DMORT. Several opportunities exist here: education, consultation, and management.

Training DMORT personnel in various aspects of victim ID is critical for an effective response. Given OAFME and AFDIL experience, staff members from these departments should provide training to DMORT teams on a regular basis. HHS funds are available for development of training materials and travel to training sites. Additionally, AFIP should offer a separate CME course in mass fatality incident management and victim identification.

Providing consultation to DMORT during response and non-response times is another role. The fact that civilian pathologists in the DMORT system are difficult to activate during a response (because of their full-time jobs), leaves an opportunity for AFIP pathologists and staff if they are not otherwise responding to the incident. In addition, during non-activation times, NDMS questions about forensic activities could be well served by AFIP involvement. AFIP staff could also serve on the DMORT Forensic Oversight Group to examine forensic procedures and response.

In terms of DMORT management, two possibilities exist. Placing more AFIP staff on the DMORT team would allow AFIP staff to respond to mass fatality incidents, as well as educate AFIP about the DMORT system. As a volunteer federal team, placing federal employees and military personnel on the team is fairly simple.

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When activated, the NDMS pays for the travel expenses and overtime of team members. The other opportunity is to have AFIP manage the Region III DMORT team, or establish a "federal" DMORT team. This model exists in the NDMS, with at least one Disaster Medical Assistance Teams being managed by the PHS. Managing the team comes with some funding, and, with the events of September 11, the potential for more funding. This would also insert AFIP into a variety of disaster mortuary and medical issues that NDMS deals with daily. These include meeting with and advising federal and state health and forensic agencies and securing funding for research and education in mass disaster health and forensic issues. In addition, because DMORT is a volunteer organization, they cannot provide forensic continuity to a local jurisdiction after they have departed. Through AFDIL, AFIP effectively plays this role now, but this role could be expanded through contract mechanisms. The opportunity exists for the AFIP to increase its visibility and secure additional funding for a mission in which it is well known and respected.

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