

1. Plans and Procedures

1a. Name/position of staff responsible for developing COOP plan:

Name: Larry Cameron
 Position/Title: Medical Examiner Director of Operations
 Contact number(s): 305-545-2487

This Continuity of Operations (COOP) Plan addresses the response of the Miami-Dade County Medical Examiner Department (ME) to incidents leading to a partial or total loss of its facility and/or a loss of personnel.

The Medical Examiner Department's response to other major disasters resulting in mass casualties is outlined in its Disaster Plan, which is incorporated as Appendix 3 in its Policy and Procedures Manual.

This COOP Plan will be updated annually by the Medical Examiner Director of Operations (305-545-2487) for re-submission to the Department of Emergency Management (DEM). The plan is reviewed frequently by the Director of Operations in response to ongoing training and testing.

Model

Homeland Security Presidential Directive – 5 (HSPD-5) has mandated that the National Incident Management System (NIMS) be used by all federal, state, local and tribal governments to provide a consistent nationwide approach for the handling of disasters. NIMS incorporates the concepts of the Incident Command System (ICS) for this purpose.

The management model followed by the Miami-Dade Medical Examiner Department is based on the principles of the ICS. The ICS model has been recognized nationally as the model for the command, control and coordination of resources and personnel in response to a disaster or an emergency. See Annex to this plan for the Department's NIMS/ICS model for disaster management.

The key concepts of the ICS include:

1. a centralized, unified command system;
2. adaptability to multi-jurisdictional and multi-agency involvement;
3. flexibility for use in any type of emergency or disaster situation; and
4. use of common terminology.

OBJECTIVE

The objective of the Medical Examiner Department's COOP Plan is to provide Miami-Dade County with a set of guidelines, instructions and resources to maintain mission essential functions in the event that the Department's facility and/or personnel are threatened or incapacitated.

ACTIVATION:

The Medical Examiner Department's COOP Plan will be activated in response to the following incidents:

- A. Loss of 50% or more of its Morgue and Photography facility or function, or
- B. Loss of 50% or more of its Toxicology Laboratory facility or function, or
- C. Loss of 50% or more of its Administrative offices facility or function, or
- D. Functional loss of 25% or more of its personnel within any Bureau of the Department as a result of death, injury or illness.

Determination of activation of the COOP Plan will be made by the Department Director or by his/her designated survivors/successors. See "Delegation of Authority/Order of Succession," pages 18 & 19.

The Department Director or successor will page the Department of Emergency Management (DEM) Duty Officer at 305-468-5800 and leave a call-back number.

COOP events can vary greatly in scope and nature. A fire that disables the Morgue building but injures no personnel, for example, would present a very different scenario than an air crash that destroys the entire facility during business hours. The activation information above and the instructions contained in this plan are intended to provide guidelines and directives that must be adapted to each unique situation.

2. Mission Essential Functions

The Department's Essential Function is to fulfill its statutory obligations as stated in Florida Statutes Chapter 406 (Medical Examiner Law) and Chapter 11G of the Florida Administrative Code (Department of Law Enforcement). Those documents may be accessed via: http://www.miamidade.gov/medexam/medexam_system.asp. The Medical Examiner Department operates 24/7, including holidays, to provide death investigative services to the residents of Miami-Dade County. The Department's COOP response identifies seven specific mission essential functions. These are:

Priority	Essential Functions	*Recovery Time Objective (RTO)
1	Recovery of deceased bodies and other evidence from police crime scenes	Within 4 hours of incident.
2	Storage of deceased bodies/Pathology services to determine cause of death	Storage facility within 8 hours of incident/Morgue-Pathology staff within 24-48 hours of incident.
3	IT support	Communications support (Phones/Radios) within 8 hours/computers within 12-24 hours.
4	Photographic documentation of scenes, bodies and related evidence	Within 8 hours of incident.
5	Forensic investigation of cases, including identification, next of kin contacts and documentation of medical & social history	Within 8 hours of incident.
6	Security of overall operation	Within 1-2 hours of incident.
7	Toxicology testing services	Within 1-week of incident.

*Recovery Time (RTO): depends on nature of the event, extent of damage and available resources at the time of the incident.

Since the ME assists law enforcement with the removal of deceased persons from locations across the entire county, it is understood that Miami-Dade County must have restored ME services quickly if a major COOP event were to impact the existing ME facility and personnel. Thus while the priority listing above attempts to designate the urgency of each mission essential function, it is understood that many of these items must occur almost simultaneously. Sections 5 (Devolution) and 7 (Alternate Facilities) of this plan provide information on where back-up personnel, equipment and facilities may be located.

2a. PRIORITY 1 – Evidence Recovery:

Evidence Recovery - These technicians are responsible for collecting, preserving and transporting evidence (e.g. bodies, medications) from all death scenes under the jurisdiction of the ME.

Minimum Personnel

- 1 – Evidence Recovery Supervisor
- 10 – Forensic Evidence Recovery Technicians

Equipment

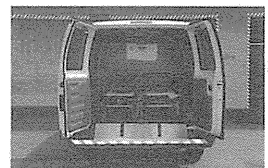
- 4 – Specially equipped cargo vans designed for body transport (see photos below)

Supplies

- Standard office supplies
- Body bags
- Standard PPE, such as latex gloves, masks, etc.
- Numbered ID bands for human remains
- Toe tags

RTO

Within 8 hours of incident



2b. PRIORITY 2 – Morgue/Pathology Bureau

Morgue/Pathology Bureau - These are the medical examiners and the forensic mortuary technicians who examine and perform autopsies on deceased human beings to determine cause of death.

Minimum Personnel

- 1 – Chief Medical Examiner
- 9 – Medical Examiners
- 1 – Forensic Odontologist
- 1 – Operations Director
- 1 – Morgue Supervisor
- 10 – Morgue Technicians

Equipment

- Emergency responders such as FEMORS and DMORT (see p. 23) will provide all morgue/autopsy equipment.
- Refrigerator and freezer storage space (for specifications, see *REEFER Truck specifications in the Annex to this plan.*) Florida Law stipulates that deceased human remains be stored at a temperature of 40 degrees F or cooler.

Supplies

- Emergency responders such as FEMORS and DMORT will provide most morgue/autopsy supplies. This should include all standard PPE, such as surgical masks, latex gloves, etc.
- Standard office supplies

RTO

- Refrigerator/Freezer storage space within 8 hours of incident
- Personnel within 24-48 hours of incident

2c. PRIORITY 3 – Computer Services Unit (CSU)

Computer Services Unit (CSU) – This staff provides and sustains all IT and communication functions for the Medical Examiner Department.

Minimum Personnel

- 1 – Computer Services Supervisor/Senior Systems Analyst/Programmer
- 1 – System Analyst/Programmer 1

Equipment

- 49 – Computers
- 1 – Server for CME Application Implementation
- 1 – 48 Port Network Switch
- 3 – Network Printers High Capacity
- 1 – Network Cabling Infrastructure

Supplies

General Office Supplies

Applications

- 15 – Cellular Phones
- 33 – Land Lines
- 5 – Fax Lines
- 9 – Copiers

} This is the basic amount of equipment necessary to sustain emergency operations of the Medical Examiner Department. Equipment will be assigned as noted on p. 30 of this plan

RTO

- Communications support (Phones/Radios) within 8 hours of incident
- Computers within 12-24 hours

2d. PRIORITY 4 – Forensic Imaging Bureau

Forensic Imaging Bureau - The Forensic Imaging Bureau provides all photographic services to the Medical Examiner Department, including morgue and scene photography.

Minimum Personnel

- 2 – Photographers

Equipment

- 2 – Nikon D300 Cameras
- 2 – 18 mm-70 mm Nikkor lenses
- 2 – 105 mm Micro Nikkor lenses
- 2 – SB 80 Flash Units
- 4 – Quantum Battery Packs
- 2 – SC-29 Flash cords
- 2 – MK22 Battery cords
- 2 – Flashlights

Supplies

- 80 512mb Compact Flash Cards
- 360 AA batteries

RTO

Within 8 hours of incident

2e. PRIORITY 5 – Forensic Investigations Bureau

Forensic Investigations Bureau - Members of this bureau coordinate death investigations among law enforcement, families and next-of-kin, medical examiners and funeral homes.

Minimum Personnel

- 4 – Forensic Investigators
- 1 – Manager

Supplies

General Office Supplies

RTO

Within 8 hours of incident

2f. PRIORITY 6 – GSA Security

GSA Security - The Medical Examiner Department is a limited-access facility that requires protective services to restrict entrance only to employees and approved visitors.

Minimum Personnel

6 – Security Guards for 24/7 hour coverage

Equipment

- 4 - Radios
- 6 - Barricades (to restrict access)
- 4 - Caution signs
- 4 - Portable light for night activity
- Rope (300 yards to form cordon around parking)
- 1 - Golf Cart
- 3 - Portable Toilets
- 2 - Portable Coolers for Drinking Water

Supplies

General Office Supplies

RTO

Within 1-2 hours of incident

Revised: March 30, 2011

Page 16 of 60

2g. PRIORITY 7 – Toxicology Bureau

Toxicology Bureau – Evidence and Record – Storage, Security and Maintenance - This is the Laboratory Bureau staffed with toxicologists who assay fluid and tissue specimens removed during the autopsy process to determine what drugs or chemicals were present in a body at the time of death that may have contributed to the cause of death.

Minimum Personnel

3 - Toxicologists
1 - Secretary

Equipment

- Refrigerator and freezer storage space (for specifications, see *Refrigerated Truck Specifications for Morgue and Toxicology in Annex to this plan*)
- Small balances
- Ventilation hood
- Personal safety supplies
- Emergency wash stations
- Plastic tubes and plastic containers for sample collection and storage
- 100 sq ft. of secured file storage space
- 300 linear feet of file storage cabinet space
- 1 copier
- 2 networked laser printers
- 1 Bar code reader
- 1 Label printer
- 1 Dry ice generator or dry ice source for storage and shipment of specimens

RTO

Within 1 week of incident

Revised: March 30, 2011

Page 17 of 60

3. Delegations of Authority**Chief/Deputy Chief**

The Medical Examiner Department functions in accordance with its Table of Organization (See page 20). In the event that the Chief Medical Examiner is incapacitated as a result of death or debilitating injury or disease, authority to direct the Medical Examiner Department as vested in the position of Chief Medical Examiner is delegated as follows:

- Deputy Chief Medical Examiner (786-229-8929 cell)
- If the Deputy Chief Medical Examiner is unable to assume the Chief's functions, the County Manager has the authority to appoint another doctor as acting Chief Medical Examiner and to report that appointment to Florida's Medical Examiner Commission (850-410-8600). The acting Chief will operate under the authority of Florida Statute 406 (Medical Examiner Law).

The delegated authority will remain in effect until such time as the Chief Medical Examiner returns or until the County Manager determines that a new Chief Medical Examiner will be appointed.

Director of Operations

The Medical Examiner Department's Director of Operations oversees all operational and administrative functions of the department. In a COOP event that results in this person's death or inability to serve, the Chief Medical Examiner will need to appoint an acting Operations Director. This appointee would exercise the authority outlined in the job description and in accordance with the Table of Organization as found in this plan. The appointee would serve until the existing Operations Director is able to return to duty or until the Chief Medical Examiner makes this new appointment permanent.

Morgue Bureau Manager

The Morgue Bureau Manager position is a critical position in the operation of the Medical Examiner Department. If a COOP event results in this person's death or inability to serve, the supervising senior forensic technician with the greatest seniority should be appointed to serve in this capacity until the existing Manager is able to return to duty. The Operations Director or acting Operations Director should make this temporary appointment.

Investigations Bureau Manager

The Investigations Bureau Manager position is also a critical position in the operation of the Medical Examiner Department. If a COOP event results in this person's death or inability to serve, authority to direct the bureau should be delegated to the bureau's lead worker. If this person is unable or unwilling to serve, authority should be given to the surviving Investigator with the greatest seniority in the Department. The Operations Director or acting Operations Director should make this temporary appointment.

Revised: March 30, 2011

Page 18 of 60

Toxicology Laboratory Director

In the event that the Laboratory Director is incapacitated as a result of death, debilitating injury or disease, authority to direct the laboratory will be delegated according to the following line of succession:

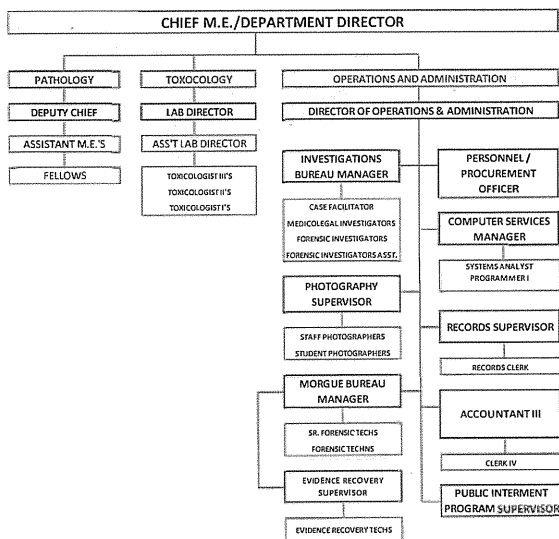
- Assistant Laboratory Director
- A senior Toxicologist III appointed with the approval of the Chief Medical Examiner

This person will serve as the acting Laboratory Director and will direct emergency laboratory operations according to the established Policy and Procedures. Authority will include managing the work flow, maintaining quality assurance procedures, and providing support to the medical examiners until normal laboratory operations resume.

Revised: March 30, 2011

Page 19 of 60

4. Orders of Succession



5. Devolution

In a worst case scenario, a COOP event that results in a destruction of the Medical Examiner Department's physical plant and much of its leadership and personnel, the following should be noted:

Administration/Leadership

This plan's Delegation of Authority provides information on replacing critical senior leadership of the department.

Other Specialized Personnel and Vehicles

The Medical Examiner Department employs many people with specialized skills. Loss of personnel can be temporarily alleviated as follows:

- The Medical Examiner Commission (850 – 410 – 8600) can be contacted if there is a need for medical examiners/forensic pathologists.
- Medical Examiner offices in nearby districts or local funeral homes can be contacted for forensic morgue technicians to assist the medical examiners in conducting examinations and autopsies of deceased bodies.

Neighboring ME Districts Include:	
Broward ME (District 17)	954-327-6500
Collier ME (District 20)	239-434-5020
Monroe ME (District 16)	305-743-9011
Palm Beach ME (District 15)	561-688-4575

- Forensic photographers can be obtained from local police crime scene units.
- Other Medical Examiner offices in nearby districts or local police departments can provide replacements for medico legal investigators.
- Local police departments can provide staff and vehicles to collect bodies and related evidence from deceased person scenes for transportation to the Medical Examiner Department. Privately owned body removal companies can also provide these personnel and vehicles.

Administrative Offices

This plan's Alternate Facilities section (page 26) provides a description of the Medical Examiner bureaus that require office space with estimations of square footage needs as well as the number of work stations. GSA Real Estate Management will identify an alternate work location for this portion of the Department.

Morgue

This plan's Alternate Facilities section (page 26) provides a description of the Medical Examiner Department's need in terms of its Morgue operation and recommendations as to alternate locations.

Back-up Mortuary Assistance Agencies

The Department Director or designee, in cooperation with the Office of the County Manager (305 – 375 – 5311) can utilize the following resources on an as-needed basis:

- FEMORS – Florida Emergency Operational Response System (www.femors.org or 352 – 265 – 0680) is the state-level team responding to mass fatality/disaster incidents. The Medical Examiner Department requests FEMORS assistance through the ESF – 8 desks at Emergency Management. FEMORS has a 16-station portable morgue that can arrive on site within 24 hours. See Alternate Facilities for more information on this.
- DMORT – Disaster Mortuary Operational Response Team (www.dmort.org or 202 – 267 – 2675 or 800 – 424 – 8802) is the federal-level team responding to mass casualty events. DMORT can provide medical support staff and full morgue equipment, including autopsy tables, computer systems, x-ray equipment, cameras, and fingerprinting supplies.
- International Mass Fatalities Center (www.massfatalities.com) or 888 – 717 – 2820 can respond to events that cause loss of life that cannot be handled through usual individual or local resources.
- Kenyon International (www.kenyoninternational.com) or 281 – 872 – 6074) also responds to mass fatality/major disaster events when additional support is needed.
- Florida Dental Society (850 – 681 – 3629) may be contacted for forensic odontology services if Dr. Richard Souvion (305 – 445 – 4956) is not available.
- The C.A. Pound Human Identification Laboratory at the University of Florida (Gainesville) may be contacted for forensic anthropology (human skeletal remains) services at 352 – 392 – 2253).

Toxicology Laboratory

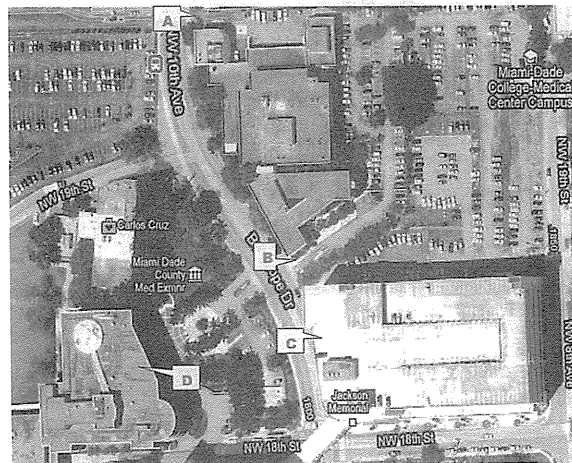
This plan's alternate facilities section (page 26) provides information on transferring specimens for storage and for sustaining toxicology services for the Medical Examiner Department.

6. Staging Area

Staging Areas A and B on the accompanying map indicate gathering points for employees and visitors in the event of a fire drill/building evacuation.

Staging Areas C and D on the accompanying map indicate protected gathering points for employees and visitors in the event of a hazard being posed by an actual fire, an explosion, or armed intruder(s). The building's overhead paging system would give specific directions for evacuation and employee safety.

See also Section 11 of this plan, Personnel Issues and Coordination.



Staging Area and Re-entry Status Form:

Date: _____ Time: _____

Staging Area Information

Roll call taken at staging area? Yes No

Everyone accounted for from your department? Yes No

How many employees or visitors missing: _____

Names if available: _____

Any injuries to personnel or visitors from your department? Yes No

First aid required to any personnel from your department? Yes No

How many injured or require First Aid: _____

Names if available: _____

Please ensure that all injured personnel are placed on the "Injury Log" when you return to your office.

Re-entry Information

Re-entry complete and all personnel accounted for? Yes No

Time of Re-entry: _____

Status of Department after Re-entry

Damage to Department? Yes No

Security problems? Yes No

Upon completion of this form at the staging area, please submit to Building Management personnel so action can be taken by the Police & Fire Departments, if needed.

In an actual building evacuation, designated staff members (see page 38) will carry this form on clipboards to the staging area and will take attendance of personnel. A current alphabetical roster of the names of all building staff will be printed on the back of the form.

7. Alternate Facilities

Existing Facility

An assessment will have to be made regarding the extent of damage to the facility (total or partial) and the portion(s) of the operation that will have to be relocated.

The existing Medical Examiner Department facility is operated by a Building Manager through General Services Administration. In the event that the Building manager is incapacitated as a result of death or debilitating disease or injury, authority to manage the Medical Examiner Department is directed as follows:

7a. Physical Plant Manager
 200 NW 1st Street
 Phone: 305-375-3907
 Fax: 305-375-3914

7b. Assistant Physical Plant Manager
 701 N.W. 1st Court, Suite 800
 Phone: 786-469-2040
 Fax: 305-469-2057

7c. GSA/FUMD Division Director,
 200 NW 1st Street
 Phone: 305-375-3466
 Fax: 305-375-3914

Administrative Offices

Assistance with relocating the Medical Examiner's administrative offices will be provided through GSA Real Estate Management (Phone: 305-375-5754; Fax: 305-375-1157). Approximately 12,000 to 15,000 square feet of office space will be needed as follows:

- a. Administration will need 1600 square feet for four private offices, two secretarial work stations and a small private conference area.
- b. Medical examiners will need 2500 square feet for twelve private offices.
- c. Computer services will need 1000 square feet in a secure room.
- d. Front desk reception will need 1000 square feet.
- e. The Investigations Bureau will need 3700 square feet with at least one private office, fifteen work stations, and two private family meeting rooms.
- f. The Business office will need 90 square feet with two private offices, three additional work stations and a secure area for file storage.
- g. The Records Bureau will need 1300 square feet with one private office, four work stations, and a secure area for file storage.

- h. The Evidence Collection Team will need 450 square feet with one private office and two work stations.
- i. One large conference room with 350 square feet is needed for staff meetings.
- j. A kitchen and a lounge/lunchroom area sufficient for 25-30 people are needed for employee lunches and breaks. The kitchen should include a sink, a refrigerator, a microwave oven, a coffee maker, and ice maker, some cabinets and counter space, and a couple of standard vending machines for snacks and drinks.
- k. Outside parking will be needed to accommodate 65-70 vehicles.

Toxicology Laboratory

Toxicology Laboratory Services will be relocated to the Broward County Medical Examiner Department. Additional outside reference laboratory services for specific testing procedures can be provided by the services listed below:

- Broward Medical Examiner Department Toxicology Laboratory (Dr. Harold Schueler at 954 – 327 – 6520)
- Palm Beach County Sheriff's Office Crime Laboratory Toxicology Laboratory (Tate Yeatman at 561 – 688 – 4203)
- University of Miami Forensic Toxicology Laboratory (Chip Walls at 305 – 232 – 7020)
- National Medical Services in Willow Grove, PA (215 – 366 – 1220)
- MedTox Laboratories in St. Paul, MN (800 – 832 – 3244)
- Forensic Toxicology Laboratory, 3175 Presidential Drive, Atlanta, GA 30340 (770-452-1590)
- Wuesthoff Laboratories, 6800 Spyglass Court, Melbourne, FL 32940 (877-599-7975 ext. 8020)
- Alabama Department of Forensic Science Laboratory, 2026 Valleydale Road, Hoover, AL 35244 (205-982-9292)
- University of Florida Center for Environmental and Human Toxicology, 471 Mowry Road, Gainesville, FL 32611 (352-265-0680 ext. 72002)

Morgue

If the Morgue has sustained significant damage, the state or federal mortuary assistance agencies identified on page 23 (FEMORS and D-MORT) will be able to provide the supporting morgue infrastructure, including equipment and supplies.

An alternate morgue facility will require proximity to major highways or traffic corridors, seclusion from residential populations, and security. There are three properties already owned by Miami-Dade County and controlled by the Medical Examiner Department that may be able to serve as alternate sites for a morgue operation:

Potential sites for Alternate Morgue Operations

- The employee parking lot on the east side of the Department's existing Morgue can accommodate a tented morgue operation. When the parking curb stones are moved, an area of 8,000 to 10,000 square feet can be established between the tree-and-grass islands immediately outside the exterior walk-in gate next to

the Morgue. This temporary operation would eliminate only a couple of dozen parking spaces.

- The Medical Examiner's Kendall Cemetery, located at SW 79th Street and 115th Avenue, has a flat, grassy area along the west-side fence that is larger than a soccer field and suitable for a temporary morgue operation. No bodies were ever interred in this section of ground. This area is directly behind the Kendall police substation. Water hydrants adjacent to the property can provide a water supply.
- The Medical Examiner's Galloway Cemetery, located at SW 59th Street and 87th Avenue, has a large, flat, grassy area in the southwest corner that could support a temporary Morgue operation. This area was never used for interment of human remains and is adjacent to the GSA radio shop.
- Both county cemeteries have utility poles and fire hydrants located along the property so that electrical and water hook-ups would be accessible. Portable generators can also be supplied through FEMORS.

Tents

If a temporary morgue operation is established at any of the above-mentioned outdoor sites, it will be necessary to erect a tent. Government mortuary agencies (FEMORS, D-MORT) can provide these tents. The current county vendor (A Navas Party Production, 12248 SW 133 Court, Phone: 305-232-7499) may be able to provide a tent more quickly. These tents are the circus-size, vinyl-structured tents with plain 16-foot panels.

Time-phased operation

Because of the varying nature of various COOP events, it is important to note that the Medical Examiner morgue operation can function in a tented facility for a limited period of time. It is not recommended that this operation be continued beyond a period of three or four months. A tented morgue operation can be used, for example, for a COOP event that requires decontamination of bodies or processing of bodies in a remote location. If a morgue operation is to be sustained for a longer period of time (e.g. resulting from severe fire damage to the existing morgue), the alternate morgue operation should be moved from the tented location to a more permanent indoor facility, such as a warehouse or an airport hangar facility.

Refrigerated (reefer) trucks

Refrigerated trucks would be used to store bodies of disaster victims as well as toxicology specimens. There are four electrical hook-ups on the west exterior wall of the Decomposed Morgue Building to power refrigerated trucks. Truck specifications are provided in the annex to this plan.

Contact information for local providers of reefer trucks is as follows:

Local Contacts for Reefer Trucks

Ryder Truck Rental Inc.
 3005 NW 87 Ave
 Miami, FL 33166
 Contact: Jill Verber
 305-500-8110
 800-793-3765 Ext. 7095

Tropical Trailer Leasing Corporation
 9475 NW 89 Avenue
 Medley, FL 33178
 Contact: Albert Vara
 305-885-6047

Penske Truck Leasing Company Inc.
 13000 NW 107 Court
 Miami, FL 33178
 Contact: Kenneth Fisher
 305-463-6000
 800-736-7531

Security

The Medical Examiner Department is a limited-access facility. GSA provides 24/7 security to the Department. The nature of the Department's work requires that this security be strictly maintained at alternate locations during any COOP event for several reasons: all cases are brought to the Department through a law enforcement agency and require confidentiality; all case files contain confidential medical and personal information; the work in the Morgue and Toxicology Laboratory areas present biohazards and necessitate restricted entrance.

GSA currently provides security card access to the Medical Examiner facility. Security cards or identification badges would have to be issued or reissued to staff whose security cards are lost and to new/temporary employees.

8. Interoperable Communications

8a. Scope of records/data backup:

The Medical Examiner Department will back-up and store data at the Miami Dade Police Department through Network Attached Storage (NAS) with our Fiber Optic installed. The ME began using a microwave connection in 2010 as its primary connection to metronet and for data backup. Forensic Imaging Bureau data will be delivered to MDPD headquarters in secured storages.

8b. Maintenance of Phones: Below is a table indicating how many phones should be allocated to our alternate facility with special considerations.

Section	Land Lines	Cellular Lines	Pager Lines	Fax Lines	Copiers
Administration	2	0	0	1	1
Business Office	2	0	0	1	1
Computer Services	1	1	0	0	0
Forensic Evidence	2	5	0	0	0
Forensic Imaging	1	4	0	0	1
GSA/Security	1	0	3	0	0
Investigations	5	1	0	1	2
Morgue	3	0	0	1	1
PIP	1	0	0	0	0
Records & Transcriptions	3	0	0	1	1
Staff Doctors	10	4	0	0	0
Toxicology	2	0	0	0	2
Total Number of Telephones	33	15	3	5	9

Special Requirements for Telephone System: Small Capacity Telephone PBX

8c. Computer System Scope:

The computer operations would require at least a limited number of computers, two servers and a wired and/or wireless network to re-establish the support for all areas of basic operations. See the table on the next page.

Computer Systems Needs:

Section	Computers Requested
Administration	2
Business Office	3
Computer Services	3
Forensic Evidence	2
Forensic Imaging	3
GSA/Security	1
Investigations	12
Morgue	2
PIP	1
Records & Transcriptions	3
Staff Doctors	12
Toxicology	5
Total Number of Computers	49

Special Requirements for network connections:	T1 or Micro-Wave connection to MetroNet Router
	Wired and/or Wireless Network Equipment: Access Point and USB Cards

II. Medical Examiner Software is provided by:

VertiQ Software
 18525 Sutter Boulevard
 Suite 280
 Morgan Hill, CA 95037
 Toll Free# 800-722-7947
 Telephone# 408-778-0608
 Fax# 408-782-0850
 Contact Person: Rolf Kessel
 E-mail: rolf@vertiq.com

BACK-UP COMMUNICATION SYSTEMS

A. **Emergency Phone Systems**

Medical Examiner Department employees will use their COOP contact card in all emergency and disaster situations.

Additionally:

1. **Hotline**

In certain disaster scenarios, the Chief Medical Examiner may instruct employees to use the Department's Hotline (305-679-7006) to receive additional or more specific information. The Hotline number is included on each person's COOP card.

2. **Disaster Phones**

There are 24 disaster phones located in a green storage cabinet in Room A105 next to the auditorium. These phones can be activated by being plugged into the covered jacks on the auditorium floor (see diagram next page). The phone numbers should be matched to the outlet/jack number.

3. **Red Bypass Phones**

Red bypass phones are to be utilized when the computerized telephone system in the building is not functioning. Locations and numbers for these phones are as follows:
 305-545-0440 (Morgue)
 305-545-0733 (Security)
 305-545-5338 (Reception)
 305-545-5428 (3rd floor alcove desk)
 305-545-5732 (Toxicology)
 305-545-6014 (Records)
 305-545-6123 (Chief's conference room)
 305-326-1854 (Next-of-kin desk in Investigations)

See diagram on next page

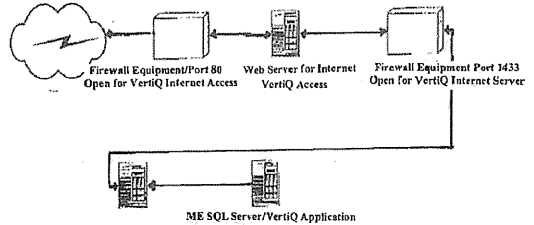
B. Radios – Policies & Procedures

M.E. Department key staff members (see p.21) have been issued 800-megahertz radios that include channels or systems that allow communication with all local law enforcement agencies

Emergency Operations

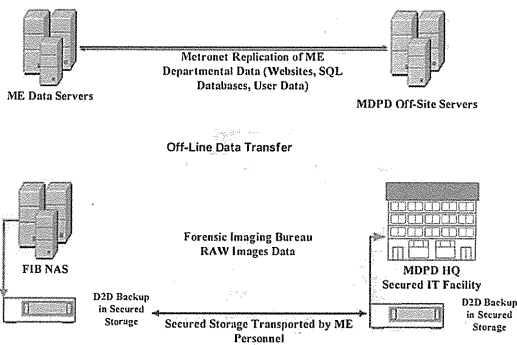
1. All M.E. personnel assigned a radio will be responsible to keep the radio charged and in a secure location and to have it available for use during periods of activation.
2. Radio communications may be activated whenever the Department is operating in a disaster mode, during a COOP event, or when regular telephonic communication systems have been disrupted.
3. M.E. personnel are to operate the radios only in accordance with ETSD – Radio Division instructions and protocol.
4. Unless directed otherwise, M.E. personnel are to use only System 11 (the assigned M.E. channel) for radio communications.
5. If there is a need during emergency operations to contact police, we are to use System 21 (Headquarters Channel).
6. Department personnel will not use police codes in their radio communications. Communications should be made in simple English and should be kept brief.

9. Vital Records, Databases and Equipment



Miami-Dade County Medical Examiner Department IT Off-Site Backup Strategy

Live On Line Connection via METRONET



10. Administration and Logistics

The extent to which the Medical Examiner Department can self-sustain its emergency operations will directly depend on the size and nature of the COOP event.

If the COOP event impacts the physical plant, this plan's Alternate Facilities section gives directions for sustaining operations in other locations of the county.

If the COOP event affects personnel, temporary replacements can be obtained from two sources:

- a. Florida's Medical Examiner Commission (580-410-8600) provides for mutual aid between districts;
- b. The County's Department of Emergency Management through its ESF – 8 desks can request assistance from FEMORS or from DMORT.

As noted in Alternate Facilities (page 26), the M.E. Department's administrative Offices can be relocated to any standard office-space facility. IT support would come from Jorge Mederos (ETSD/305-596-8862) for network assistance, George Fleites (ETSD/596-8441) for SQL Database support, and Gabe Palmer (MDPD/305-471-1856) for off-site back-up system support.

GSA currently provides 24/7 security for the Medical Examiner Department and would need to provide similar security at alternate locations during emergency operations.

11. Personnel Issues and Coordination

- 11a. Employee Alert & Notification
The department's "Contact Tree – Notification Procedures" is located in Annex C of this plan. All ME employees are designated "department essential".
- 11b. Evacuation, Assembly and Accountability
Building evacuations will occur in one of three forms – by fire alarm signal, by overhead page or by direct personal communication.
- The fire alarm signal will prompt an immediate building evacuation through front and rear entrances/exits. All employees and visitors in the front (administration) building should exit through the front lobby doors and assemble in Staging Area B (front sidewalk by the driveway entrance). All employees and visitors in the rear (morgue/laboratory) building should exit through the rear doors by the security control room and assemble in Staging Area A (sidewalk/driveway at the service entrance).
- In the event of an actual building evacuation (not a drill), employees may be directed to move further from the facility for added or covered protection and to allow fire/rescue vehicles open access to the driveways. Employees would be directed to Staging Area C (Jackson Highland Professional Building). If chemical or noxious fumes are being directed toward the south of the ME facility, employees would be directed to take shelter in Staging Area D (lobby to the Ryder Trauma Center).
- The overhead page system may be used to prompt a lockdown or a building evacuation through specified entrances/exits when there is an intruder on the premises posing a threat to employees:
- A "Code Blue" call will indicate to all employees that they should remain at their work stations, that there is a threatening situation developing in a part of the building, and that no one should circulate from their work station until an "All Clear" is given.
 - A "Code Red" call will indicate to all employees that there is a threatening situation developing in a part of the facility and they should move to a designated exit. Thus the CODE RED call will also designate safe exits, as in the announcement: "This is a Code Red. Employees are directed to use exits on the north and west sides of the building at this time."
- The Director of Operations, the Morgue Bureau Manager, the Toxicology Laboratory Supervisor and the Building Manager will all carry clipboards with the "Staging Area and Re-entry Status Form" and a departmental staff roster to the staging areas to take attendance.

- 11c. Health, Safety, and Preparedness of Employees
Because all ME employees are designated "department essential," they understand that they can be called to duty at any time, especially when a multiple fatality disaster occurs within the county. Just as all county residents are encouraged to prepare themselves at the start of each Atlantic hurricane season, ME employees are reminded periodically that they must be in a state of constant readiness. This includes having family communication plans in place and in having homes and property protected in the event that all ME employees are called to duty.
- The ME Director of Operations reviews the department's COOP with supervisors and new employees each year and also advises all departmental employees to prepare their families and properties at the start of each hurricane season.
- In an actual COOP event or any other disaster that would necessitate all ME employees being called to duty, supervisors and administrators would monitor factors such as employee fatigue or stress and would request county assistance through the department's personnel representative.
- 11d. Pay Status, Leave Time and Employment Issues
Should a COOP event occur, or should a multiple fatality disaster prompt full department activation, the ME administrators and supervisors would approve administrative leave time as needed in accordance with directives from the County Manager's Office. All ME employees receive electronic deposits of their paychecks, and that process would continue in an emergency situation. Employees would be advised to plan for their cash needs as in any emergency, such as an approaching hurricane.
- 11e. Special Situations – Activation of Alternate Work Locations
Potential alternate work locations are all centrally located in Miami-Dade County and sit near or along major highways.

12. Reconstitution

The Chief Medical Examiner or his designee/replacement (see "Delegation of Authority") will make a determination for the appropriate time for the resumption of normal operations. Operations may be transitioned from the alternate location to the permanent facility when that facility has been repaired or restored.

Notification of return to the primary facility will be given to the Miami-Dade County Department of Emergency Management and Homeland Security, the Mayor's office and the County Manager's Office.

13. Testing, Training, and Exercising (TT&E)

- 13a. Departmental Training:
- The ME COOP Planning Committee meets annually to review the Department's COOP plan.
 - The ME Director of Operations conducts an annual review of the COOP plan with all ME supervisors and with all new ME employees.
 - The Department's COOP emergency contact cards are updated annually.
- 13b. NIMS Training:
- Four members of the Medical Examiner Department have completed IS-700, IS-100, IS-200, IS-300 and IS-800.
 - Three medical examiners, six forensic investigators and four forensic photographers have completed IS-700, IS-100, IS-200 and IS-800.
 - Ten forensic evidence recovery technicians have completed IS-700, IS-100 and IS-200.
- 13c. NTSB Training:
- Four members of the ME Department completed a four-day workshop on Mass Fatality Incidents for Medicolegal Professionals at the National Transportation Safety Board (NTSB) Academy in May 2005.
 - Three members of the ME Department completed a three-day NTSB workshop on Transportation Disaster Response – Family Assistance in July 2006.
- 13d. Joint Agency Exercising:
The ME Department participates on a regular basis with County-sponsored training and exercising opportunities, including:
- COOP table-top exercise at MIA in August 2005.
 - Phoenix I (TTX) with DEM in February 2008.
 - Operation Papa at MIA in February 2008.
 - MMRS exercise with DEM in March 2009.
 - Pro Bowl and Super Bowl preparations with DEM in 2009 & 2010.
 - Operation Quebec at MIA in February 2011.
- 13e. Departmental Testing:
- The ME Department conducts two building evacuations annually in conjunction with GSA and the City of Miami Fire Department.
 - GSA conducts a monthly generator load test at the ME Department. The 600-kilowatt generator is fueled from a 5,000 gallon underground storage tank that is on GSA's priority fueling schedule (305-375-1818).

Contact:

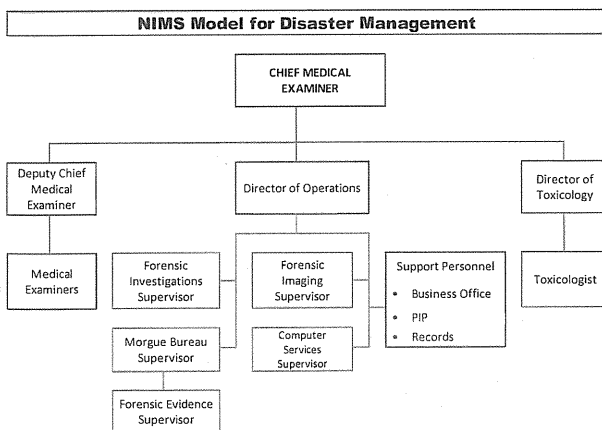
Department COOP Coordinators must contact Miky Gonzalez at the Department of Emergency Management once selected by their department director. Any questions or concerns regarding the COOP process should be directed to:

Mirtha (Miky) Gonzalez
 COOP Program Manager
 Miami-Dade Department of Emergency Management
 Phone: 305-468-5414
 Fax: 305-468-5401
 Email: Mirtha.Gonzalez@miamidadegov

ANNEX A: ACRONYMS

COOP	Continuity of Operations Plan
CMO	County Manager's Office
DEM	Department of Emergency Management
DHS	Department of Homeland Security
DMORT	Disaster Mortuary Operational Response Team
EOC	Emergency Operations Center
ETSD	Enterprise Technology Services Department
ERG	Emergency Response Group
FCD	Federal Continuity Directive
FEMORS	Florida Emergency Operational Response System
FPC	Federal Preparedness Circular
FS	Florida Statutes
GSA	General Services Administration
HSPD	Homeland Security Presidential Directive
ICS	Incident Command System
IT	Information Technology
ME	Medical Examiner
MEC	Medical Examiners Commission
MEF	Mission Essential Functions
MOU	Memorandum of Understanding
NIMS	National Incident Management System
NTSB	National Transportation Safety Board
PIP	Public Interment Program
RA & VA	Risk Assessment & Vulnerability Analysis
RTO	Recovery Time Objective
SOP	Standard Operating Procedures
TT&E	Test, Training, and Exercise

ANNEX E: NIMS MODEL FOR DISASTER MANAGEMENT



Medical examiners and all employees in operations bureaus will have active and front-line responsibilities in any COOP event or disaster and will be called to duty by their supervisor or division director.

Members of the Toxicology Bureau, the PIP Bureau, and the Administrative Services Division may not have first-response duties but may be called upon to assist with support functions, such as handling phones or meeting bereaved families. The Director or his/her designee will make these determinations at the time of the event.

ANNEX F: MEMORANDUM OF UNDERSTANDING

TEMPORARY STORAGE OF MASS FATALITY HUMAN REMAINS

Appendix XI to Miami-Dade County Medical Examiner Department Disaster Plan: Temporary Storage of Mass Fatality Human Remains

MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING BETWEEN THE MIAMI-DADE COUNTY MEDICAL EXAMINER DEPARTMENT (ME) AND THE DEPARTMENT OF ENVIRONMENTAL RESOURCE MANAGEMENT (DERM), THE DEPARTMENT OF PARK AND RECREATION (DPR), MIAMI-DADE POLICE DEPARTMENT (MDPD), DEPARTMENT OF PUBLIC WORKS (PW), AND THE DEPARTMENT OF SOLID WASTE MANAGEMENT (SWM).

INTRODUCTION

The Miami-Dade County Medical Examiner Department is responsible for certifying the cause and manner of death in all cases that fall under its jurisdiction as defined by Florida Statute 406. Jurisdictional obligations include identifying remains and certifying deaths as a consequence of both natural and man-made disasters. As part of its disaster planning, the Medical Examiner Department needs to secure locations within the county for the temporary storage of mass numbers of human remains.

PURPOSE

Threats posed by our modern world have the potential of producing thousands of human casualties in a brief period of time. Terrorist attacks, weapons of mass destruction and avian flu are a few of these threats that have become a common part of our contemporary vocabulary. Any one of these threats could result in thousands of human casualties.

Normally human remains are stored in refrigerated facilities until they can be identified, examined and/or autopsied, and released to funeral homes for disposition. The Medical Examiner Department has refrigerated capacity for 450 bodies. Funeral homes in the county may provide refrigerated space for another 300 bodies. Availability of refrigerated ("reefer") trucks would vary upon other existing circumstances. The county must be prepared to handle thousands of bodies resulting from catastrophic threats.

PLAN

When refrigerated storage is inadequate or unavailable, human remains may be temporarily interred to provide storage at a temperature lower than surface temperature and protection from the elements. The plan would involve placing each body inside a sealed, heat-resistant, leak-proof body bag and affixing an aluminum tag with a unique identification number to the bag. These bags would be placed side-by-side on the ground and covered with several feet of beach sand. Numbered wooden markers

would be placed above ground to expedite retrieval of remains. Adult-sized body bags measure 7' by 4'. Placed side-by-side, 900 to 1,000 bodies could be placed in one acre of ground. This calculation allows for 19' pathways to provide space for workers and vehicles.

For appropriate disaster-readiness, the Medical Examiner Department needs to identify locations in the county where as many as 10,000 to 15,000 bodies can be temporarily stored. These locations need to be remote from residential areas, secure, and accessible by main roads and highways. Two areas within the county that meet these requirements have been identified.

- (1.) **Two Sections of the Landfill in Doral by GSA Shop 3**
 - a. Area One is the Top of Zone 1 on the eastern mound.
 - b. Area Two is North of Area D West.
- (2.) **One Section of the Landfill in South Dade**
Old South Dade Landfill – Zone 3, Northern Half

In the event of a major catastrophe, Medical Examiner Department personnel may be assisted by state (FEMORS), federal (D-MORT) or international (Kenyon) disaster relief agencies. Assistance would include fully-equipped portable morgue facilities as well as trained personnel.

Timetables for handling various disaster scenarios can vary greatly. An avian flu outbreak could produce thousands of deaths, but these would be intact bodies not needing autopsies and could be processed more easily. Terrorist attacks, on the other hand, could produce thousands of fragmented or burned remains, necessitating a more prolonged identification and documenting process and involving investigation by the FBI and local law enforcement. Depending on the number of trained forensic workers, the number of casualties and the type of disaster, processing a disaster scene could require as little as three or four months or as much as twelve to eighteen months. An exact timetable is difficult to calculate.

It should be noted that the funeral homes in Miami-Dade County collectively have thirteen retorts (the instruments used to cremate human remains). These retorts have a maximum capacity of cremating 60 to 70 bodies per 24 hours. Allowing for this equipment to have necessary cooling time and allowing for the ongoing cremation of non-disaster-related decedents would mean that local crematories would realistically be able to process 40 to 45 bodies per day. Thus there is a limited capacity locally to provide for ultimate disposal of human remains following a major disaster.

UNDERSTANDINGS

1. The County Manager's Office (CMO) will authorize the activation of this memorandum.
2. This plan will be activated only when it is determined that the number of fatalities following a disaster overwhelms available refrigerated storage capacity.
3. The sites identified in this memorandum would be retained in perpetuity by Miami-Dade County for use by the Medical Examiner Department (ME) for the

temporary storage of human remains following a mass-fatality disaster. This agreement would be reviewed every three years to allow for adjustments in land use.

4. The Department of Solid Waste Management (SWM) would identify the specific areas or locations at these sites that would be used by the ME, since available or suitable areas may change over time.
5. These sites would be used by the ME for temporary storage only when the number of disaster fatalities overwhelms existing refrigerated storage capacity.
6. The Department of Parks and Recreation (DPR) will provide the beach sand that will be used as a temporary ground cover for the bodies.
7. Personnel from Miami-Dade Police Department (MDPD) will assist with collecting bodies at scene(s) and unloading bodies at temporary storage location(s).
8. Public Works (PW) will provide trucks and other heavy equipment as available to transport and transfer sand.
9. When this memorandum is activated, the ME will operate under the policies and procedures outlined in its Disaster Plan.
10. The ME Disaster Plan stipulates that all human remains removed from a mass fatality scene will be placed in a sealed body bag. These bags are leak proof. The ME will coordinate its work with the Department of Environmental Resource Management (DERM) to ensure that no adverse environmental effect results from the temporary storage of remains as outlined in this plan.
11. With the assistance provided by other disaster relief agencies, the ME will work to expedite the processing of the remains of disaster fatalities and thus to utilize the temporary storage for as brief a period of time as possible.
12. Upon demobilization, all materials and supplies contaminated with bodily fluids or waste will be removed from the site in appropriate containers for biohazard waste disposal.
13. All waste water from the autopsies will be collected, stored and removed from the site in spill-proof containers and will be disposed of as biohazard waste. None of this water will penetrate the ground at the site.
14. Upon the termination of the Disaster Plan activation, all vehicles, equipment and reusable supplies will be removed from the temporary storage site by the ME and its cooperating agencies. A joint decision can be made to remove the sand or to spread and leave the sand at the site.

厚生労働科学研究補助金 厚生労働科学特別研究事業
激甚災害時における死体検案体制の整備および運用に関する研究
平成 23 年度 総括・分担研究報告書 I

発行日 平成 24 年 5 月
発行人 研究代表者 青木康博
発行所 名古屋市立大学大学院医学研究科法医学分野
〒467-8601 名古屋市瑞穂区瑞穂町字川澄 1
Phone: 052-853-8181 Fax: 052-842-7701



201105005A (2/2)

厚生労働科学研究補助金
厚生労働科学特別研究事業

激甚災害時における死体検案体制の 整備および運用に関する研究

平成 23 年度 総括・分担研究報告書 II

研究代表者 青木康博

平成 24 (2012) 年 4 月

厚生労働科学研究補助金
厚生労働科学特別研究事業

激甚災害時における死体検案体制の
整備および運用に関する研究

平成 23 年度 総括・分担研究報告書 II

研究代表者 青木康博

平成 24 (2012) 年 4 月

目 次

II. 分担研究報告書

- 宮城県内の検案医体制に関する調査 1
舟山 真人
- 東日本大震災における日本法医学会災害時死体検案支援事業による
派遣医師に対するアンケート調査報告 39
青木 康博, 岩瀬博太郎, 久保 真一, 呂 彩子
 (資料 II-1) 災害時死体検案支援活動に関するアンケート結果 II 50

宮城県内の検案医体制に関する調査

研究分担者 舟山真人 東北大学大学院医学系研究科法医学分野 教授

研究要旨

当分担研究者が行った調査は東日本大震災における宮城県の検案医体制の調査である。ここでの調査は3つの柱からなる。第1に約半年にわたる宮城県下の検案医体制の推移、第2に宮城県医師会ならびに仙台市医師会としての検案業務支援、そして最後に宮城県警察医会を含め、実際に参加された検案医師による生の意見の集約、である。宮城県は沿岸部のほぼ全域が被害にあったことから、検案場所も多数箇所には設ける必要がある、検案医師の手当でもある一定数は確保せねばならないという点があげられる。加えて震災まもなくは交通路の遮断や渋滞、ガソリンの不足などから、特に仙台から離れた地域では数少ない医師で多数の遺体検案を行う必要があった。医師会の支援体制に関しては、県医師会の回答において震災直後は会員への連絡手段の制限と本部建物自体の被災が大きな問題として述べられている。その後は地元医師会員の他、他県からの検案支援が5月上旬まで行われていた。なお、災害時の通信手段としてMCA無線が有効であったことが述べられている。一方、市医師会では、所属会員による検案業務の他、14都市と診療行為を中心とした災害時の相互支援体制協定を結んでいたが、これを弾力的に解釈し、検案医師の手薄であった3月23日まで支援医師を含めた検案業務が行われていた。実際に検案された医師によるコメントはいろいろ多岐にわたるが、ポイントは移動手段の確保とともに、正確な情報とその伝達の確保があげられよう。震災直後は両者とも難しいところではあるが、特に後者に関しては、上述のMCA無線など、災害に強い連絡システムを法医学会を含め検案に携わる機関は常備しておく必要があると思われた。

A. 研究目的

今回の東日本大震災で宮城県における各地区の被害状況と検案医の活動実績とを比較検討し、宮城県医師会、仙台市医師会における検案体制の構築、更に同医師会員ならびに宮城県警察医会会員からのアンケートを通じ、実際に体験した中での問題点と解決過程、更に今後の要望を集約し、将来起こりうるであろう大地震災害時の際の検案体制構築のための資料を提供する。なお、日本法医学会ならびにその会員からも多大な検案支援を頂いたが、これに関しては学会としてまとめを行うため、この調査報告では除外している。

B. 研究方法

3月12日から9月末までの検案体制について

は、宮城県警察本部がとりまとめた資料をもとに検討した。宮城県医師会ならびに仙台市医師会の対応については、それぞれの事務局に対し、項目を定め聞き取り調査を行った。実際に検案業務を行った医師に対しては、宮城県医師会、仙台市医師会、宮城県警察医会に対し、事務局を通じてアンケート調査を行った。

(倫理面への配慮)

アンケート調査は任意・無記名であり、文書にて目的を説明し、厚生労働科学特別研究事業の一環として結果が公表されることを示し実施した。

C. 結果および考察

I. 3月12日から9月末までの検案体制

震災翌日の3月12日から9月までの宮城県

地域別の震災検案数と派遣医師数の月次推移を表1および図1-1にまとめた。この間の検案総数は9,433件、うち3月が7,008件(74.3%)、4月が1,784件(18.9%)で合わせて93.2%がこの2カ月の間に行われている。一方、派遣医師数は1,016名で3月が452名(44.5%)、4月が278名(27.4%)、合わせて71.9%にとどまる。これは後述するように、今回の震災が宮城県を広域に面としての広がりをもつことから、検案数が減少しても、それに合わせた検案医師数減少が難しいという側面を持つ。なお表では検案数のみ表示され、医師数が0のところも散見される(たとえば6月のグランディ21は検案数が6だが、医師数は0)。これはその場所に遺体が安置されてはいるものの、実際の検案は警察署などで行われたようなケースが多いが、一部では記録から抜け落ちているとしか思えないものもあり、参加した検案医師数は実際にはこれよりやや多い可能性が考えられる。

特に震災間もない3月12日から4月末までの日次推移をグラフ化したのが図1-2である。検案数は3月16日(655件)および19日(673件)をピークに3月14日から22日まで400件以上を記録、23日378件、24日258件、25日250件となり、その後は1週間の間に急激に減少、そして4月4日以降は100件以下のまま、漸減していった。一方、検案医師数は3月17日の36名をピークに3月15~23日まで21名以上の体制、4月7日までは11~20名、それ以降4月末までは6~10名体制であった。

検案医師の平均検案数につき、県全体の平均をとると、一人の検案医に対する検案数は3月では15.5件、4月では6.4件、5月及び6月は2.2件、7月は1.9件、8月は2.0件、9月は5.9件である。もっとも、このような表面的なデータはあまり意味がなく、特に震災1-2週間以内の、しかも多数の亡くなられた遺体を検案する地域においては、検案業務に限界が生じることは十分考えられる。そこでこの報告では宮城県を4つの地域にわけ、検案数と検案医師数との

比較を行なった。以下に市町の名前を列記する。

- 1) 仙台市ならびにその周辺市町ならびに県南地区：仙台市、塩釜市、多賀城市、七ヶ浜町、名取市、岩沼市、亶理町、山元町。なお、グランディ21は利府町、旧角田女子高校は角田市にある。
- 2) 石巻・東松島・女川地区：石巻市、東松島市、松島町、女川町。
- 3) 気仙沼・本吉地区：気仙沼市。なお旧豊里小学校は登米市にある。
- 4) 南三陸地区：南三陸町。

参考までにこれら地区の検案場所を図2に示す。ちなみに図2の各検案場所に書かれた日時は公式発表としての開設期間である。ただこれら施設の中には実際には震災後まもなく検案作業が行われなくなったり、逆にその後も遺体の安置や検案として使用されているところもある。少なくとも全ての施設がこの期間中、毎日検案が行われていたわけではない。図3は4地域での9月までの検案数と検案医師数を表したグラフである。まず仙台市ならびに塩釜、県南地区(図3-1)をみると、検案総数が3,086件、医師延べ数が331人となっている。3月において延べ205名の検案医師により2,536件の検案が6箇所の検案場所で行われた。石巻・東松島・女川地区(図3-2)では検案総数が4,763件、医師延べ数が429人となっている。3月において延べ167名の検案医師により3,470件の検案が9箇所の検案場所で行われた(但し、飯野地区体育研修センターと小野地区体育館では検案数はカウントされておらず、また別の3箇所の施設は耐震構造の問題などで早期に閉鎖され、別の検案場所に移設されている)。なお、早期に閉鎖された東松島高校では3月12日からの3日間に118件の検案が行われたが、ここでの医師数は記録されていない。同様に3月13日石巻市総合体育館で行われた50件の検案、3月15日石巻西高校で行われた26件の検案いずれにも医師数の記録はなかった。気仙沼・本吉地区

(図 3-3) では検案総数が 1,022 件、検案医師数が 129 人となっている。3 月において延べ 41 名の検案医師により 621 件の検案が 8 箇所の検案場所で行われた。ただし、3 箇所の検案場所が震災後 1 週間以内で閉鎖されているが、公表上の開設期間は 5 月上旬までとなっている。南三陸地区(図 3-4) では検案総数が 562 件、検案医師数が 127 人、3 月において延べ 39 名の検案医師により 381 件の検案が 5 箇所の検案場所で行われた。但し、ここも 2 箇所の施設は震災後 1 週間以内で閉鎖されており、これは図 2 の期間とほぼ一致する。

図 3-1・2 は縦軸の単位は同じである。この比較において特に 3 月は仙台市近隣にくらべ、石巻・東松島・女川地区で検案対数に比較し、医師数が少ないことがわかる。後者の地区は平日に車で 1.5~2 時間の距離であるが、震災によるガソリンの不足と限られた道路での渋滞などの影響で十分な検案医師の派遣は難しかったことがうかがえる。

一方、図 3-3・4 は縦軸の単位は同じである。両地区に派遣された医師数はほぼ同じであるが、検案数は 2 カ月までは気仙沼・本吉地区がかなり多い。単純に考えれば、南三陸地区がバイサイドアリーナ 1 カ所で多くの検案が行われたのに対し、気仙沼・本吉地区では複数の検案場所が開設されており、同地区により多くの検案医師の派遣が望ましいと思われた。ただ、表 1 を参照すると、3 月の派遣医師数が気仙沼・本吉地区で 41 名、南三陸地区で 39 名、4 月ではそれぞれ 30 名と 34 名であり、要は震災直後は複数名であったものの、その後は派遣医師数にも限りがあり、おおむね 1 日 1 名の医師がそれぞれの地区を担当したということであろう。

このことは広域の津波震災において多数の災害死者が生じた場合、より広い遺体検案場所を確保できれば、それだけ効率的な検案医師の派遣で対応出来るということである。しかし当然のことながら、体育館など多くの公共施設は被災者の方々の避難所として使用されることから、

結局はそれぞれの被災地域の施設の現状に合わせた対応をせざるを得ないと考える。

図 4 は 3 月 12 日から 4 月末までにおける、上記 4 地域の中での代表的な検案場所 6 箇所での検案数と医師数の日次推移である。仙台市内ではグランディ 21 という総合体育施設を用い、主に同市ならびに周辺地域で亡くなられた遺体を中心とした検案を行い、市・県医師会ならびに宮城県警察医会の先生方を中心とした支援をいただいた。ここでは 3 月 14~16 日に 100 名を超えた遺体の検案が行われた。ちなみに震災翌日 12 日から 22 日までの一人の検案医に対する検案数は 12 日 8.7 件、13 日 8.4 件、14 日 6 件、15 日 9.2 件、16 日 12.9 件、17 日 3.3 件、18 日 58 件、19 日 36 件、20 日 8.5 件、21 日 16 件、22 日 8.5 件であった。17 日には 13 名の医師が参加していたものの、18 日の金曜日は、検案医師は 1 名のみである。また県南の増田体育館でも 17・18 日に 1 名の医師が 57 ならびに 62 件の検案が行われている。18 日に旧石巻青果市場では検案 104 件に対し、8 名もの医師が派遣されている。その他の 3 検案所においては特に極端な偏りは生じていないと思われた。

なお、注意したいのは、この警察統計による検案医師数はあくまでも検案書を作成した医師の数である。検案作業の効率化のため、複数の医師が参加した場合、ある医師は血液採取などの作業に専念し、別な医師が検案書作成を行うなど、チームを組んでの作業も多く見られたという。従って、参加医師数自体はもっと多い可能性があるということを指摘したい。

それはともかく、ガソリンの供給不足と日常医療の継続の中で、臨床医としての検案医師の適正な派遣数の調整はなかなか困難であると言わざるをえない。もっとも、その後は検案数自体の減少から、1~2 名体制でも各検案場所については、人手が足りないという事態は生じていないものと思われる。

公式記録ではないが、本分担研究者である舟山は平成 5 年 7 月 12 日夜に発生した北海道南

西沖地震の検案支援を経験した。この時、奥尻島に7月17日から23日まで検案医師として北海道警察本部の要請で派遣されたが、16日までには自衛隊の医師5名が検案業務を行った。震災翌日から17日まで10件以上、最大で26件の検案が行われたが、6日後からは2~4件にとどまった。今回の震災はその規模の大きさからほぼ2週間までは200件以上の検案が行われ、特に1週間から10日あたりがピークを迎えることから、最初の2週間でどう検案医師の手当てを行うかが、被災地域の広い、巨大津波被害における課題であろうと考える。更に述べれば、宮城県は被災場所が広範囲に及んでおり、単純に検案数を医師数で割った値が小さいから「適正数」である、とは必ずしも言えないことも自明であろう。

ここで強調したいが、災害後数週間の時期は交通事情を含め何もかも通常ではないという意識である。積極的な参加はありがたいが、現場は大いに混乱している。注射針といった検案器具だけではなく、現地への交通手段、宿泊所といったものまで地元の手配は難しい（奥尻島では全て警察検視係と食事・宿泊・移動を共にした）。少なくとも個人で突然参加されても現場では十分な対応はできない。あくまでも医師会や警察医会、学会を通じた正規の派遣が必要と考える。更にこの場を借りて言わしていただければ、残念ながら、法医学会員の中に、理想を求めたものがあると聞かすが、それを現場で100%解決するのは当然ながら無理であり、そればかりか現場への迷惑、周りの士気減退に繋がることさえある。それはともかく、わが国は大きな地震は100年単位で、明日どこでも起こる、という前提の中で、関連団体は定期的に初期対応マニュアルの再確認をしておくべきであろう。

II. 宮城県医師会ならびに仙台市医師会の対応

表2-1が宮城県医師会事務局への聞き取り調査項目とその回答、表2-2が仙台市医師会事務局への聞き取り調査項目とその回答である。

まず、大規模災害時の検案支援マニュアルで

あるが、宮城県医師会ではマニュアルを昭和61年11月に宮城県警察ならびに宮城県歯科医師会と連携して作成しており、今回の震災では特に問題が生じなかったという。

震災直後から検案業務開始までの経緯は、それぞれ医師会回答で克明に記載されている。特に大震災では、1) 連絡手段が制限・途絶を受け、関係機関同士ならびに会員医師間の連絡、情報伝達がうまく機能しないこと、2) 県医師会の回答にもあるように、建物自体の機能もそれなりの損害を受け、場合によっては入館禁止となることもありえること、の2点が挙げられよう。ちなみに東北大学法医学教室も高層階（10階）にあることから、戸棚類はほぼ全て倒れ、冊子・事務用品は全て散乱、検査機器類は損壊あるいは要修理の事態に陥った。ただ1階の解剖室の損壊は軽微で水の復旧も早かったことから（地下水を利用）、3月14日の時点で司法解剖が再開された（同日4件）。県医師会では会館への入館可能日が13日だったこともあり、県警本部からの検案要請は14日、正式な派遣開始は15日となったが、宮城県医師会の要請とは別に、既に沿岸部会員が地元署の要請で検案業務を行っていたことが書かれている。また他県からの医師派遣は宮城県医師会としては16日の埼玉県からの支援が最初であった。その後も他県からの精力的な検案支援の状況が5月4日の長期にわたり行われたことが記載されている。なお、震災当初の通信手段としてMCA無線が挙げられている。MCAはマルチチャンネルアクセスの略で昔の携帯電話のようなシステムであるという。その利点の一つに災害時にも通話が可能ということで、今回もそれが証明されたようである。

一方、仙台市医師会では連絡手段が機能しており、震災当日夜に県警本部からの連絡要請を受けている。市医師会の特徴は、回答にも書かれているように14都市と災害時、相互支援体制の協定を結んでいることである。これは被災地域への医療支援であり、あくまでも診療行為を中心としたものである。ただ支援内容の中に