An Introduction to ESF #8 Patient Movement

The “101” Course

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Outline

- HHS Responsibilities
- Evolution of Patient Movement
- National Disaster Medical System’s Patient Movement Components
- Scarce Resources
Acronyms

AE: Aeromedical Evacuation
APOE: Aerial Port of Embarkation
APOD: Aerial Port of Debarkation
CCATT: Critical Care Air Transport Team
DASF: Disaster Aeromedical Staging Facility
DMAT: Disaster Medical Assistance Team
EOC: Emergency Operations Center
EMS: Emergency Medical System
ESF: Emergency Support Function
FCC: Federal Coordinating Center
JPATS: Joint Patient Assessment and Tracking System
MAC ST: Mobile Acute Care Strike Team
NGB: National Guard Bureau
NDMS: National Disaster Medical System
NRF: National Response Framework
PHS: Public Health Service
PMI: Patient Movement Items
PRA: Patient Reception Area
REC: Regional Emergency Coordinator
SOC: Secretary’s Operation Center
TRAC2ES: Transportation Command Regulating and Command & Control Evacuation System

HHS Role under National Response Framework

- HHS is the primary Federal Agency for ESF #8 under NRF
- 17 Core Functional Areas of Responsibility
- 15 Supporting Agencies
- HHS support to other ESF’s
ESF#8
Core Functional Areas
(partial list)

- Assessment of public health/medical needs
- Health Surveillance
- Medical care personnel
- Health/medical/veterinary equipment and supplies
- Patient Evacuation
- Patient Care

Progression of Patient Movement

- Local
  - EMS – day-to-day operations
    - Accident to hospital
    - Hospital to hospital
    - Home to hospital
    - Home to appointments
      - Directed by local EMS Dispatch
      - Patient tracking by EMS Dispatch
  - Ground / Air Ambulance
  - Mutual Aid / Emergency Management Assistance Compacts (EMAC)
  - Police / Fire
Progression of Patient Movement

- State
  - Support local requests
  - Communicated through State EOC / Department of Health
  - Provide additional resources (e.g., ground and air ambulances)
    - National FEMA Ambulance Contract
      - 300 ground ambulances
      - Rotary and fixed wing aircraft
      - Paratransit
  - Centralized coordination at best
    - Visibility of patient transportation

Patient Movement ‘The Players’
The Nightmare!

What Happens If...

- A plane crashes into a high-rise at mid-day?
- A Cat-5 hurricane slams into New Orleans?
- The San-Andres fault or New Madrid fault shifts?
- Thousands of casualties need care

Where will they go? How will they get there?
The seeds of a movement…

**Hurricane Katrina, August 2005**

- 3 Disaster Medical Assistance Teams (DMAT) deployed to New Orleans Airport
- Became evacuee reception area…and then patient reception area
- Plan was to screen evacuees; those that could get on ambulance did, those more critical went by helo
- Mobile Aeromedical Staging Facility (MASF) arrived
- AF Field Hospital (EMEDS) arrived; integrated into DMAT footprint
- Began preparing patients for flight
- Approx 4,000 evacuees processed
- DoD airlifted >2,500 patients

**NDMS**
A Nationwide Medical Response System to:

- Supplement State and local medical resources during disasters or major emergencies
- Provide backup medical support to the military/VA medical care systems during an overseas conventional conflict

Components of NDMS

1. Medical Response
   Lead HHS
   - HHS
   - DMAT
   - NMRT
   - IMSuRT
   - DMORT
   - Specialty Teams

2. Patient Evacuation
   Lead DoD/HHS
   - DoD Aeromedical Evacuation
   - Primarily Fixed Wing

3. Definitive Care
   Lead DoD/VA
   - DoD/VA Federal Coordinating Centers
Patient Evacuation
Primary: DoD / HHS

- Provide Patient Movement from the disaster area
- Utilize all types of transportation
- Primarily relies on aeromedical
- Patient regulating, movement requests, staging, tracking, lift
  - Embarkation
  - Debarkation

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   Lead DoD
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3. Definitive Care
   Lead DoD/VA
   - DoD/VA Federal Coordinating Centers
3. Definitive Medical Care
Primary: VA / DOD

- Approximately 1,700 civilian hospitals in the NDMS network
  - Agree to make a number of inpatient beds available
    - Beds categorized in 5 bed categories (burn, critical care, med-surg, psych, and pediatric)
  - Heavy focus on trauma care
- Federal Coordinating Centers (FCCs)
  - Concentrated in major metropolitan areas
  - Air access
  - Available hospital support
  - Patient reception and distribution capabilities
3. Definitive Medical Care

- **Service Access Teams (SAT)**
  - Follow patients to the NDMS facilities; track in Joint Patient Assessment and Tracking System (JPATS)
  - Ensure transportation, human services (language translation, food, lodging, etc) and arrangements for discharged patients and attendants
  - Coordinate patient return

### AE Operations

- **Patients from area hospitals, nursing homes**
- **DASF / MAC ST At an Aerial Port of Embarkation (APOE)**
- **FCC At Aerial Port of Debarkation (APOD)**
- **Definitive Care**
Planning Factors

- Routine processing of 35 patients at a time
  - Approximately 20% (6-8) of these patients could be critical care patients
- 140 patients moved in a 24-hour period from one Aerial Port of Embarkation (APOE) (based on two mission per day with 35 pts per mission)
- Maximum 1-2 hour patient hold time
- Four APOEs

Source: Air Mobility Command, AE Homeland Support Planning Factors

Limitations to Federal Patient Movement

- System built on wartime model
  - Known military population: healthy, 18-45 year old males
  - Civilian population: can’t predict who, where, or how many
- DoD has limited AE crews, Critical Care Air Transport Teams (CCATTs)
- Limited burn, pediatrics/neonates and bariatric transport capability
  - No peds transport; only two (2) DoD burn transport teams
  - No formal NDMS capability to provide en-route care
Managing Scarce Resources

Patient Movement Planning Factors

Maximum Patient Movement Capability: 960 patients/day

4 APOEs

30 hrs of patient movement

H-72
H-48
H-24
H-18
H-12

Request to Move
Boots on the Ground
Evac Ops Cease
Redeploy Complete

Teams Deploy
Setup
Patient Movement Operations
Reconstitution

Planning Factors:
- Laydown: 3 C-130s; 4 APOEs
- C-130 schedule: 2 sorties per day
- Average acuity: 20% critical care
- 35 patients per C-130

Typical pre-storm start at H-48 = 700 patients evacuated

H-72
H-48
H-24
H-18
H-12

H-Hour - Point at which tropical force storm winds reach landfall

Total Patients

1200
1000
800
600
400
200

400
200
800

Patient Movement Planning Factors

30 hrs of patient movement

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H-48
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Other Patient Movement Operations

- Hurricanes Ike / Gustav 2008
- Haiti Earthquake 2010
- ??? 2012

What we are doing?

- Increase capacity to move patients
  - Develop NDMS augmentation capability for DoD
    - Support staging and en-route care capability
  - Explore alternate modes of transport
    - General Aviation
    - Department of Transportation
  - Work with Hospital Preparedness Program to build coalitions, build resiliency/self-sufficiency, decrease demand for federal support
- Always “think out of the box”
Summary

- Patient Movement starts local
- Federal Patient Movement is a safety valve, when local and state are overwhelmed
- Federal patient movement has limitations
- Need to maximize EVERY resource and capability

Questions?