

When a Hurricane Strikes - How Do We Evacuate Patients?



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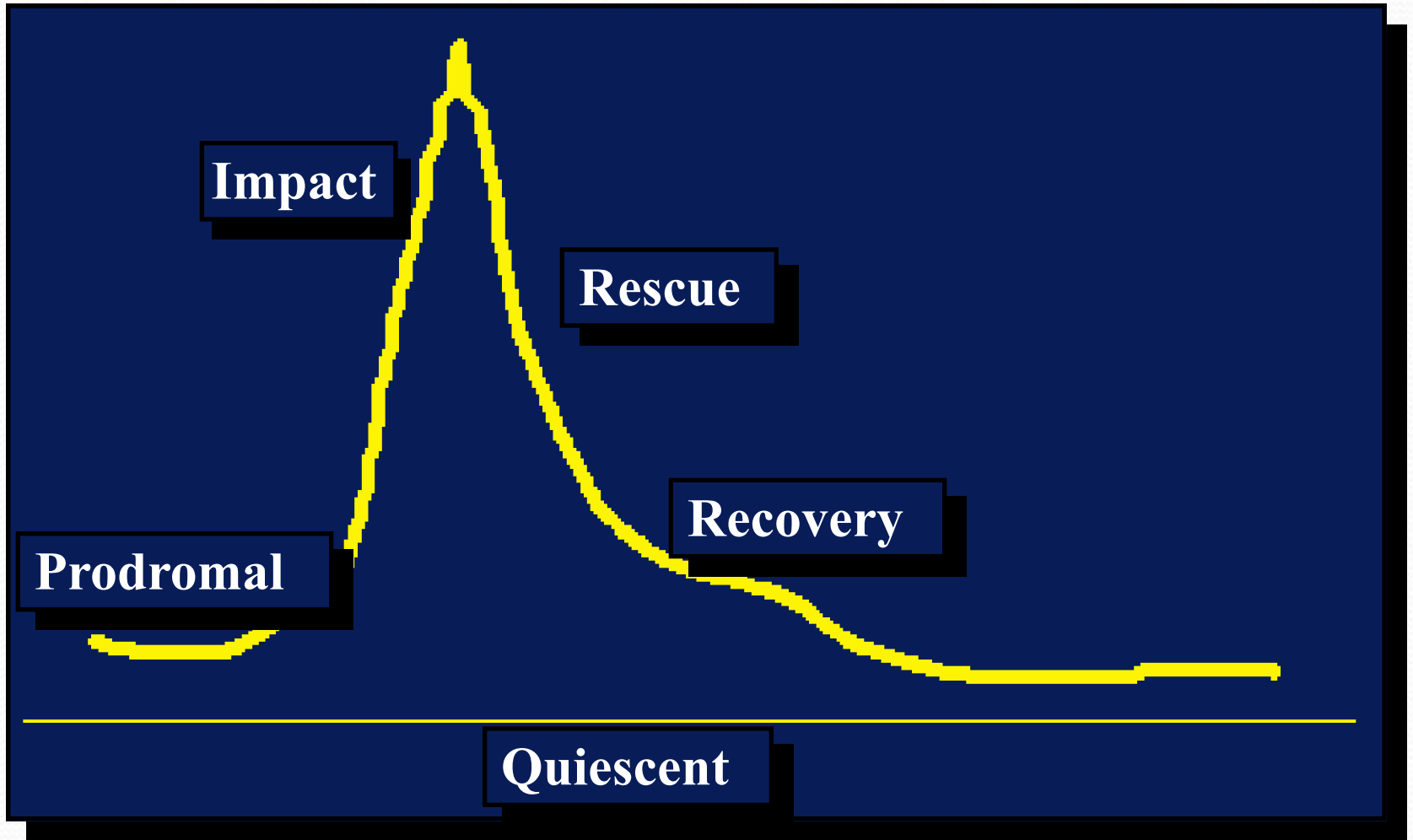
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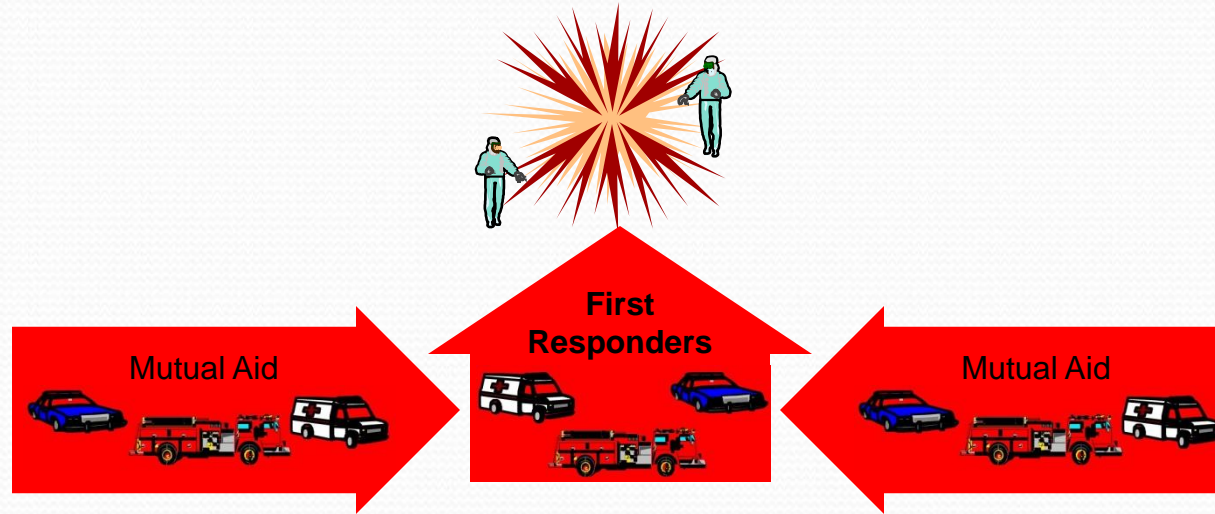
2017 Hurricane Season

- The 2017 Atlantic hurricane season featured 17 named storms.
- Ranking as the fifth-most active season since records began in 1851.
- Preliminary total of approximately \$281.14 billion (USD) in damages, which is about \$100 billion higher than the total of the 2005 season.

Disaster Phases



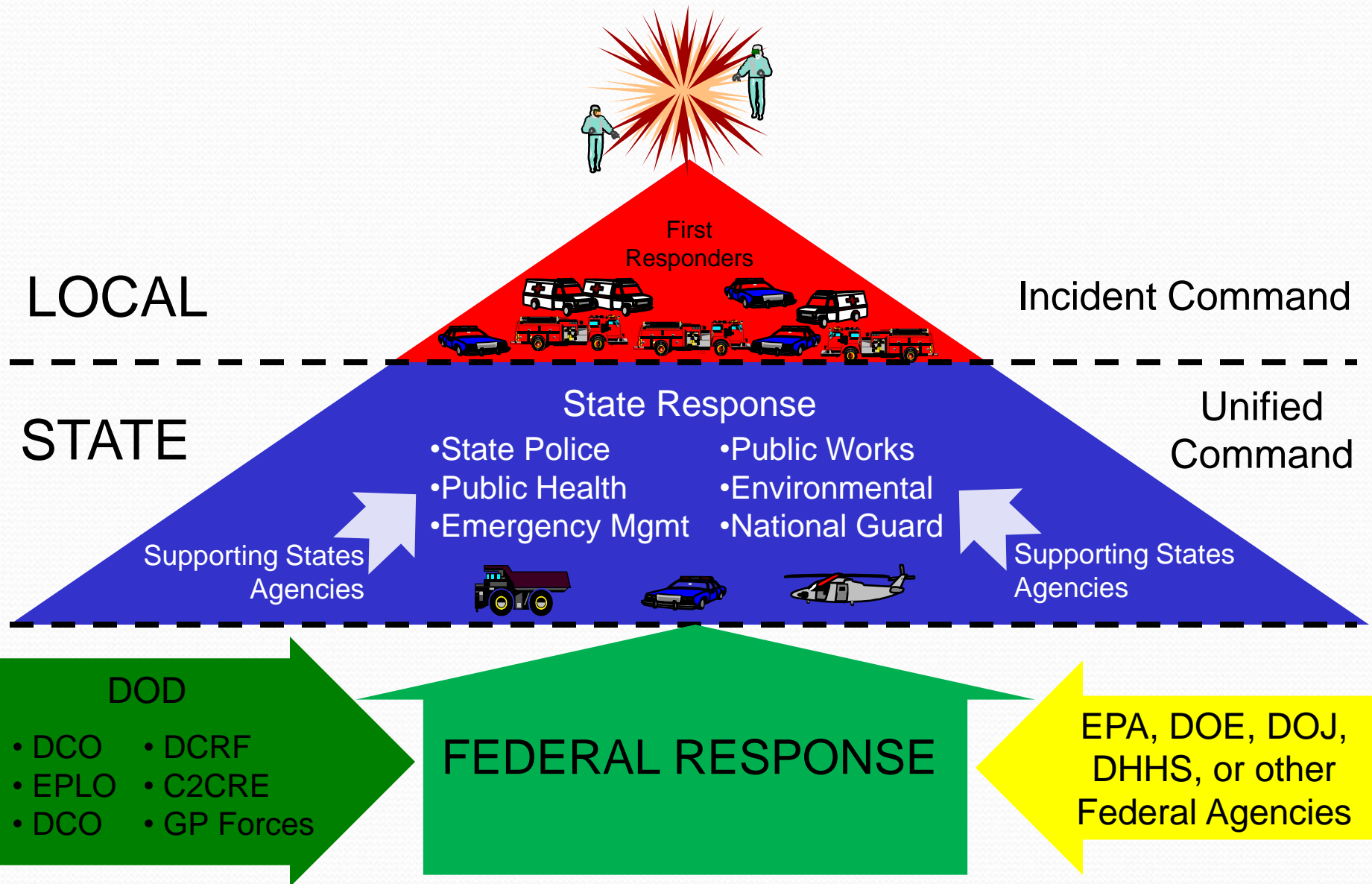
Emergency Response

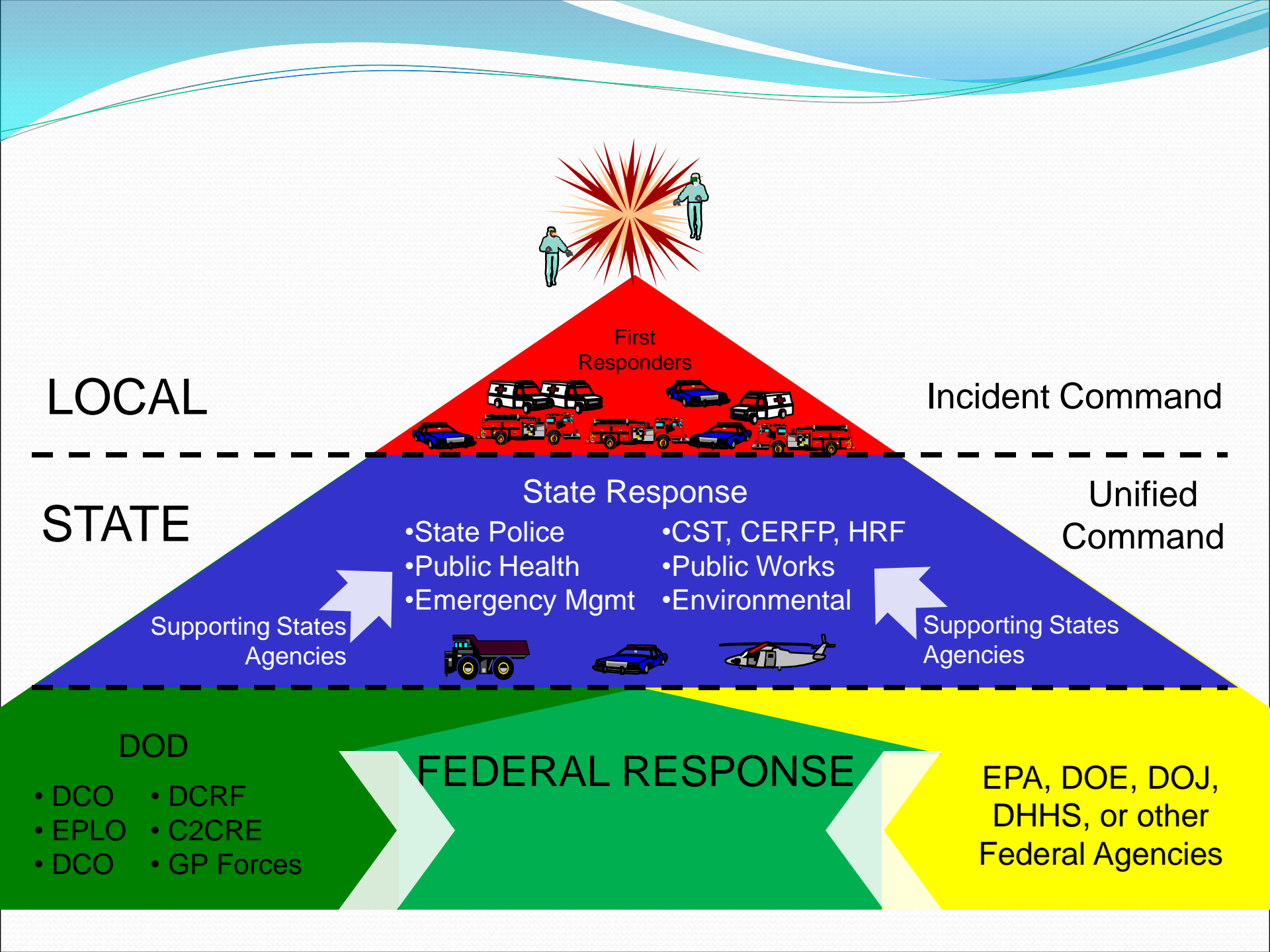


Emergency Response

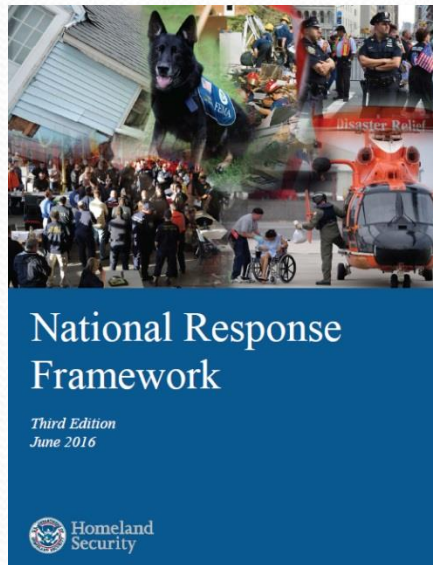


Emergency Response

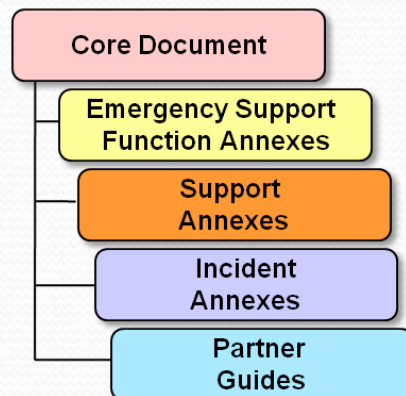




National Response Framework



- Establishes a comprehensive, national, all-hazards approach to domestic incident response
- Presents an overview of key response principles, roles, and structures that guide the national response
- Includes Core Document, Annexes, and Partner Guides



Emergency Support Functions

- The primary operational-level mechanism to provide assistance
- Organized around functional capabilities (e.g., emergency management, transportation, search and rescue, etc.)

Emergency Support Functions

- ESF #1 – Transportation
- ESF #2 – Communications
- ESF #3 – Public Works and Engineering
- ESF #4 – Firefighting
- ESF #5 – Emergency Management
- ESF #6 – Mass Care, Emergency Assistance, Housing,
and Human Services
- ESF #7 – Logistics Management and Resource Support
- **ESF #8 – Public Health and Medical Services**
- ESF #9 – Search and Rescue
- ESF #10 – Oil and Hazardous Materials Response
- ESF #11 – Agriculture and Natural Resources
- ESF #12 – Energy
- ESF #13 – Public Safety and Security
- ESF #14 – Long-Term Community Recovery
- ESF #15 – External Affairs

ESF #8



- HHS coordinates ESF #8 using resources primarily available from within the Department and other ESF #8 support agencies and organizations as outlined in the NRF, including the DoD, VA, and the DHS
- HHS may request DoD support to provide movement of seriously ill or injured inpatients

The National Disaster Medical System (NDMS)

- The statutory mission of the NDMS, as part of ESF #8, is to organize a coordinated effort by the NDMS Federal Partners (DHS, HHS, DoD, and the VA)
- Work in collaboration with the states and other appropriate public or private entities to provide health services to victims of a public health emergency

NDMS

Is composed of three components:

- Medical Response – Lead HHS
 - Specialty Teams
- Patient Movement – Lead DoD
 - DoD Aeromedical Evacuation
- Definitive Care – Lead DoD/VA
 - DoD/VA Federal Coordinating Centers



NDMS

National Disaster Medical System

Patient Movement

- When the NDMS is activated to move patients, the DoD coordinates this movement in collaboration with other ESF #8 partners
- USTRANSCOM's Global Patient Movement Integration Center (GPMIC) is the single manager for the movement of NDMS patients

Patient Movement

- Through the Air force Aeromedical Evacuation System
- Contract carriers
 - Ground and Air



Aeromedical Evacuation System

- Regulated movement of patients
- Opportune cargo aircraft
- Dedicated medical crews and equipment
- Air Force-run system for Joint casualties



Aeromedical Evacuation Crew

- Basic crew is two FN and three AETs
- All equipment is brought aboard

Critical Care Air Transport Teams

- The CCATT mission is to conduct seamless ICU level care of critically ill, injured, or burned patients while transporting them to a higher level of care.
- CCATTs are an integral part of the AE system.
- They do not function independently from AE crews.

Critical Care Air Transport Teams: “Provides ICU Care in the Air”

Deliver High-Tech Medicine
in Combat Conditions

- ICU level physician
- Critical Care Nurse
- Respiratory Therapist



CCATT Capabilities

Each CCATT team is
capable of caring for:

- 3 ventilator patients
- Up to 6 less acute patients



Current Airframes Being Utilized

C-130 Hercules



C-17 Globemaster III



KC-135 Tanker



Flexibility is the Key...

- The primary purpose of these aircraft is **NOT** Aeromedical Evacuation



**Where are patients
transported to?**

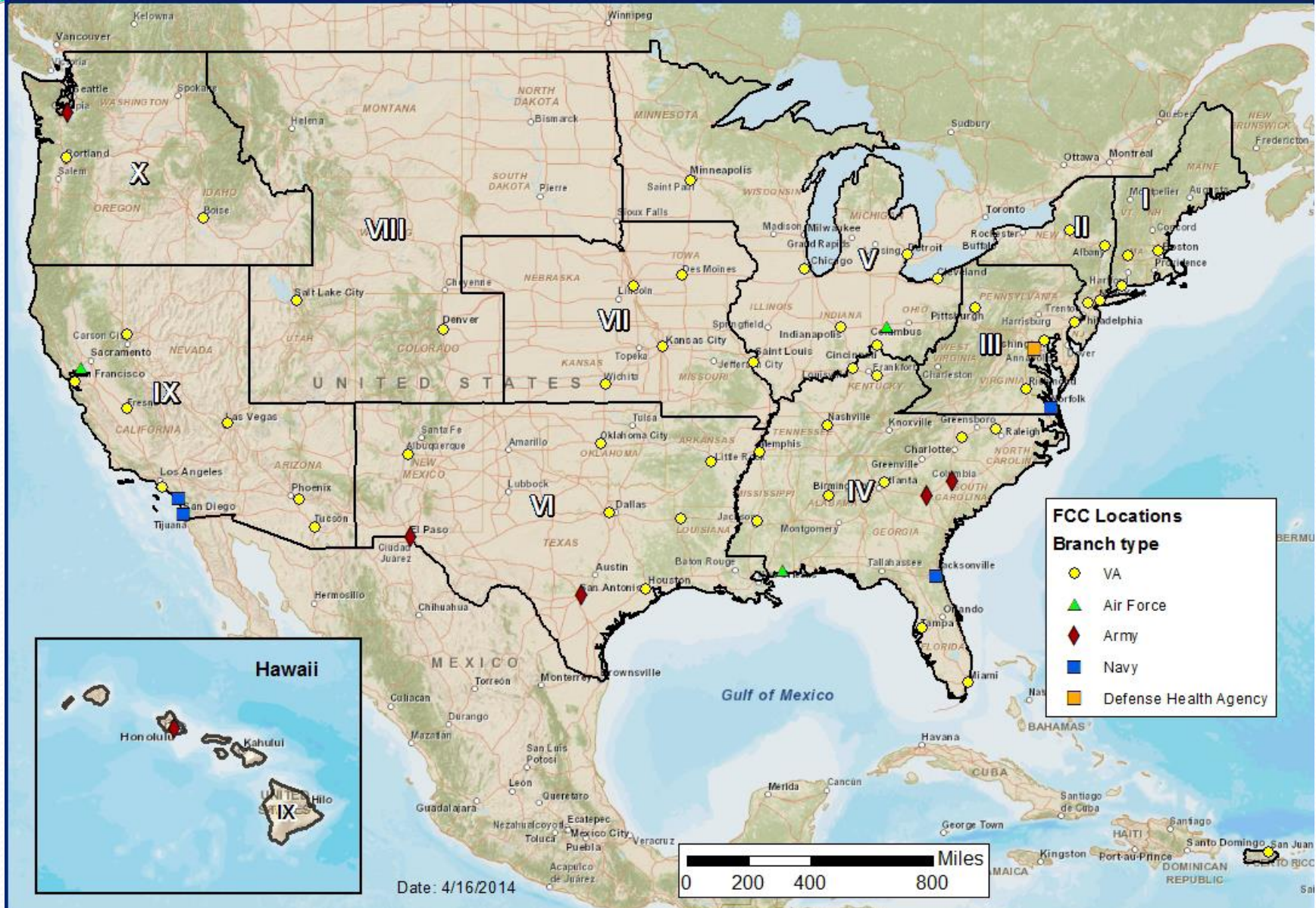
Federal Coordinating Centers

- They receive, triage, stage, track and transport inpatients, affected by a disaster or national emergency, to a participating National Disaster Medical System (NDMS) medical facility capable of providing the required definitive care.
- The FCCs are spread across the country and are led by the DOD or the VA.



NDMS Federal Coordination Centers

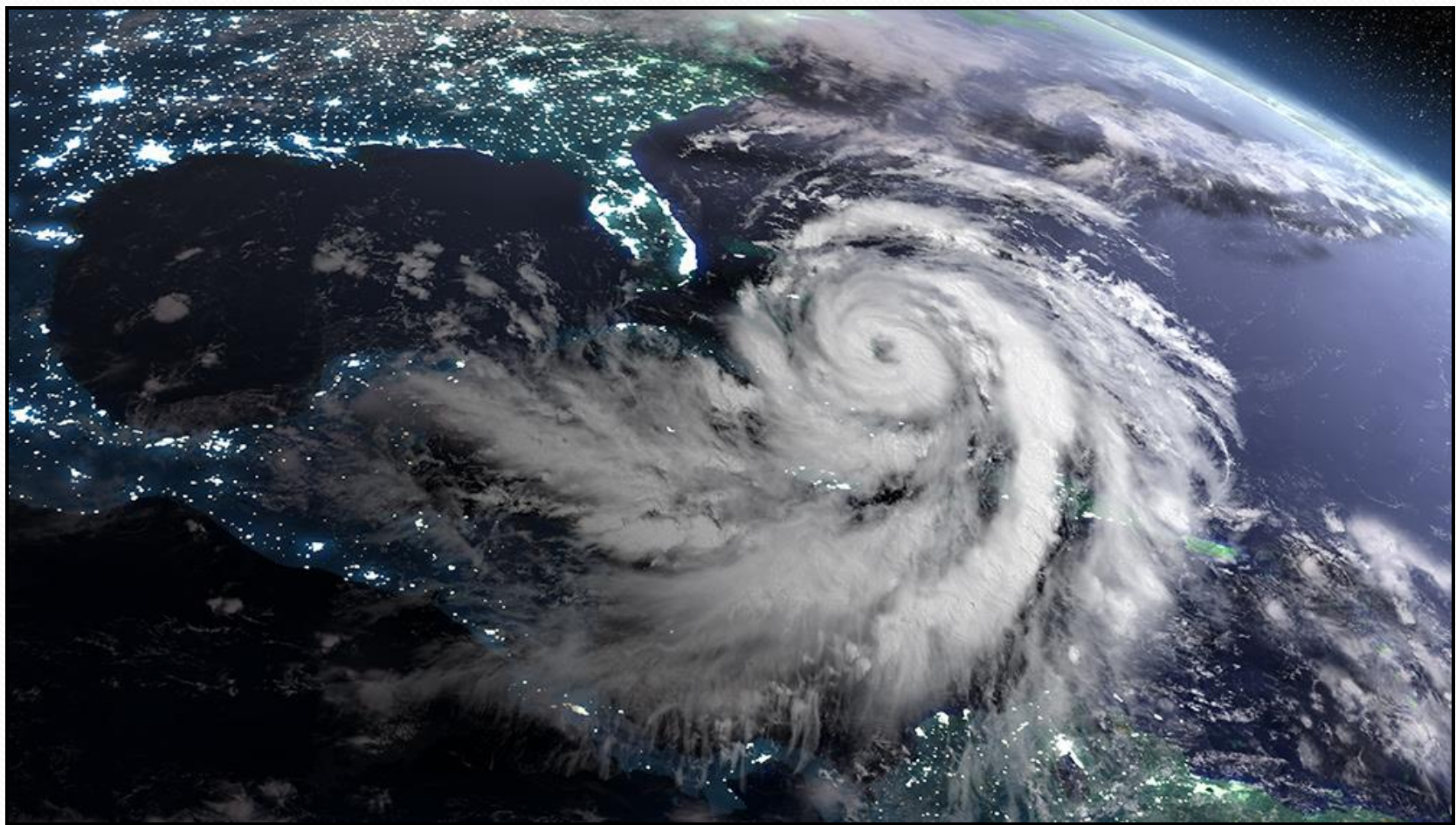
ASPR
ASSISTANT SECRETARY FOR
PREPAREDNESS AND RESPONSE



HHS Service Access Teams

HHS Service Access Teams deploy to all activated FCCs:

- Serve as “facilitators to ensure discharge planning is accomplished and human services support is provided to discharged patients and attendants evacuated through the NDMS.”
- “Coordinate all aspects of patient return to ensure a smooth transition from the host state to the home state or other appropriate location.”

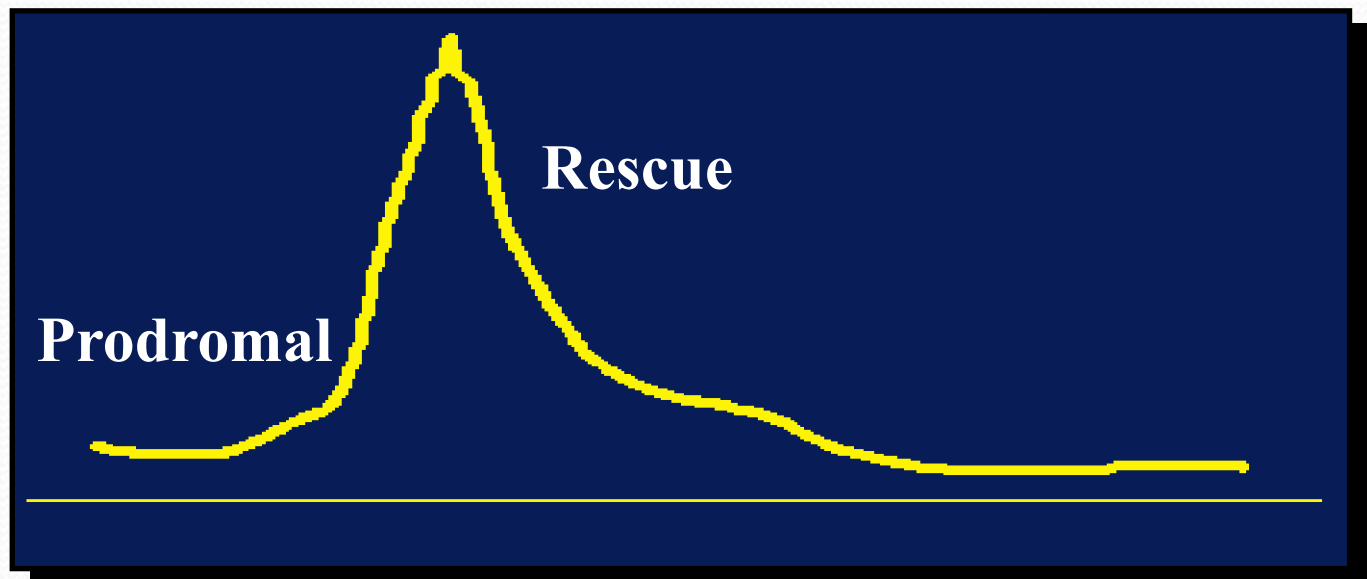


Hurricane Evacuation

- As major hurricanes approach:
 - Must have a plan in place on how to evacuate patients.
 - The successful evacuation of patients during a hurricane takes coordinated efforts by local, state and national resources.

Hurricane Evacuation

- Before the hurricane arrives.
- After the hurricane has impacted the local area.



Considerations During Evacuations

- Hospitals
- Nursing Homes
- Ambulatory patients that can not receive the care they require due to the effects of the hurricane (i.e. dialysis)

State Plan

- Local Response

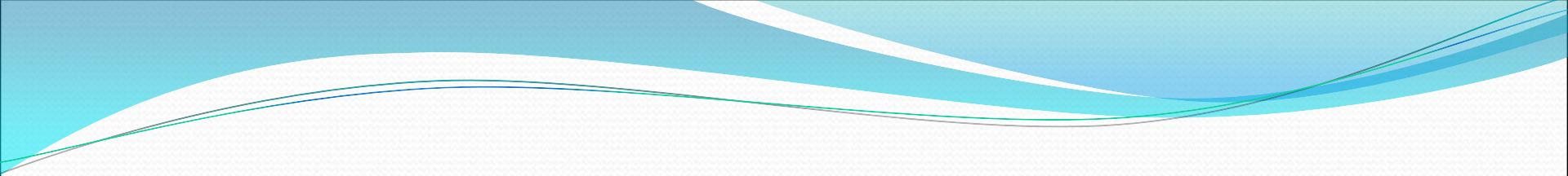
- Every facility has a plan in place to evacuate patients

- County Response

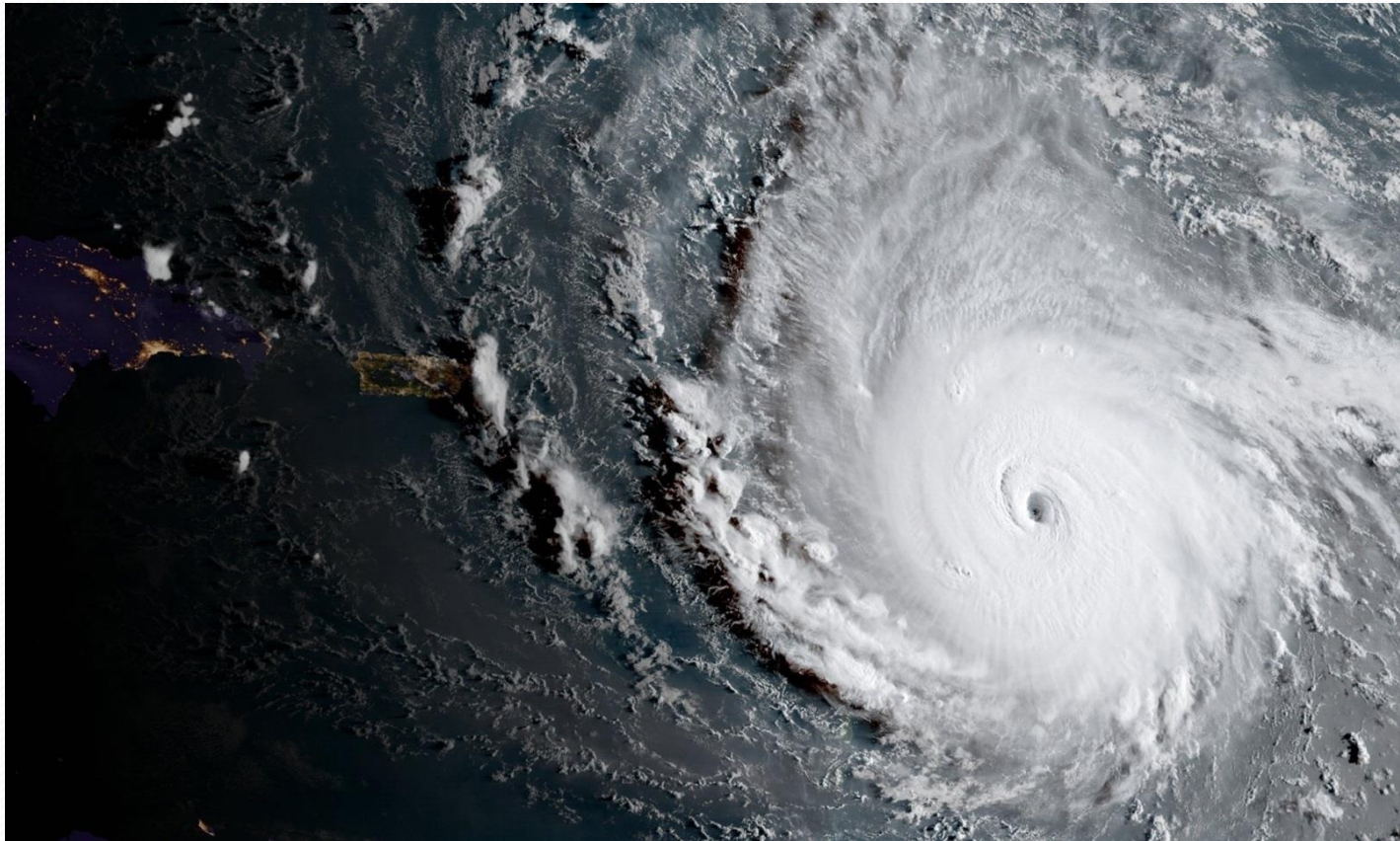
- The Hospital will contact county EMA when unable to execute evacuation requesting assistance from County EMA

- State Response

- County EMA unable to execute evacuation due to limitations will contact SOC with formal request to the State

- 
- Federal Response
 - When the state is unable to meet the requirement of patient movement. Formal request from the state through the Governors office

Hurricane Irma



Hurricane IRMA Response

- Projected that hurricane IRMA would make landfall in Savannah region.
- Request from local Hospital/NH → County EMA → State (SOC) with number of patients and any special requirements.
 - Sending facility finds destination. If unable GA Public Health will assist in finding a bed.



Hurricane IRMA Response

- Once destination was established transportation was identified to meet the requirements of the patient move
- Asset is located from the State EMS resources to meet the requirement



Hurricane IRMA Response

- Sending facility sends any needed medications as well as medical records with the patient
- When non-medical evacuee – Coach Buses can be employed

Hurricane Maria

- Federal response activated
- Among FCCs activated – Atlanta



Diagnosis Included

- DKA
- Sepsis
- Respiratory failure on vent
- Pneumonia on vent
- CVA on vent
- Pancreatitis
- ARI
- ESRD – volume overloaded
- High risk pregnancy



Diagnosis Included

- STEMI
- Extremity fractures
- ICH
- SAH
- Ruptured globe
- Thoracic dissection
- COPD
- 3rd degree AVB
- HTN Emergency on nipride



QUESTIONS