

# Evacuation and Shelter-in-Place of Medically Dependent Populations Residing in High-Occupancy Facilities



## Integrated Medical, Public Health, Preparedness and Response Training Summit

### Evacuation and Shelter-in-Place of Medically Dependent People Residing in High-Occupancy Facilities

May 13, 2010

# Yale New Haven Health System



## Largest, most integrated healthcare system in Connecticut

- 12,000 employees and 3,500 physicians
- 78,000 patient discharges and 1,300,000 outpatient visits
- 3 acute care hospitals, a children's hospital and a psychiatric hospital, a Level 1 Burn Center and two Level 1 Trauma Centers
- \$1.4 billion in revenues and \$1.9 billion in assets
- Primary teaching hospital of the Yale University School of Medicine (YSM)

## *Our Mission*

To reduce loss of life, injury and illness by developing and delivering services, that advance healthcare planning, preparedness, response and recovery from emergency events and disasters through **collaborative partnerships and coordinated programs**

## *Programs and Services*

- Assessments
- Preparedness planning
- Education and training
- Drills and exercises

# YNH-CEPDR Partner Healthcare Organizations and Providers

- Hospitals
- Emergency Medical Services
- Community Health Centers
- Community Medical Practices
- Home Health Agencies
- Nursing Homes
- Urgent Care Centers
- Ambulatory Surgery Centers
- State Public Health Organizations
- Local Public Health Organizations
- Area Health Education Centers
- Physicians
- Registered Nurses
- Physician Assistants
- Allied Health Professionals
- Pharmacists and Pharmacy Technicians
- Healthcare Administrators
- Dentists
- Paramedics and Emergency Medical Technicians
- Mental Health Professionals
- Support Services – Security, Environmental Services, Dietary, etc.



# Program Overview

## Training and Exercise Integration/Training Operations (TEI/TO) Competitive Training Grant Program (CTGP)

- **Three Year Grant to develop and deliver national training program**
  - Year 1 – Curriculum development
  - Years 2 and 3 – National training delivery
  - Year 3 – Plan assessments and regional table-top exercises

### Program Timeline



# Program Overview – Courses to be developed

## Evacuation and Shelter-in-Place of Medically Dependent Populations from High Occupancy Facilities

- Awareness Level Course – Online – 2 hours
- Performance Level Course – Online – 4 hours
- Planning and Management Level Course – Instructor Led – 8 hours



***\*All courses will reside in FEMA TEI/TO course catalogue***

# Opportunities for Collaboration

## Anticipated opportunities for collaboration include:

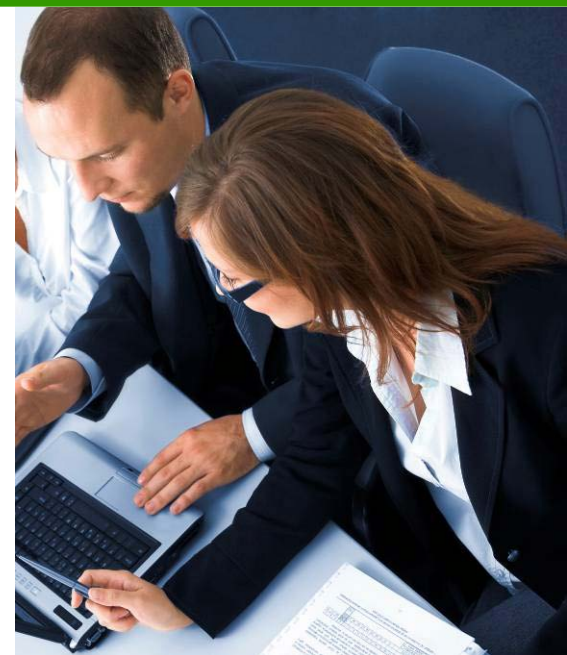
- Strategic guidance in course development and implementation strategies
- Subject matter expert review of draft materials
- Participation in train-the-trainer module
- Participation in plan assessments
- Participation in regional exercises



# Needs Assessment

## Needs analysis (performance gap analysis)

- Review of the literature
  - AARs
  - GAO reports
  - Peer reviewed articles
  - White papers
- Interviews with subject matter experts
  - YNH-CEPDR subject matter experts
  - Field responders
  - Centers for Public Health Preparedness
  - Federal coordinating agencies



# Select Needs Identified

Need/Issue Identified	Impact on Course Development
Integration with first responders	Primary audience for the course defined as first responders
Ambiguous/inconsistent definitions – special populations, shelter-in-place, etc	Clear definitions of key terms established at the beginning of the course
Local and regional differences in resources used (e.g. CERT integration with response, role of EMS, Fire, etc)	Use task/mission oriented approach to describing roles, allow the audience to match their responders to the roles
Very broad range of potential medical conditions. Not possible to teach management of each one in a 2-4 hour course	Focus on issue identification, resource activation and requesting to support medically depended within scope of practice
Various facilities and response agencies are at very different levels of planning	Utilize a regional delivery approach for planning/management level course

# Select Definitions Established

## **Medically Dependent –**

This course focuses on the medically dependent population, which is a subset of the broader “special needs” population. For the purposes of this course, medically dependent is defined as including individuals within the general population who are not self-sufficient or who do not have adequate support from caregivers, family, or friends.

This population has chronic, health-related dependencies requiring ongoing medical interventions. If the technology, support, and services received by the individual are interrupted or denied, their condition may deteriorate, requiring immediate medical intervention. Without medical intervention, these individuals may experience irreversible damage or death.

For the purpose of this course, the term medically dependent does not apply to victims of the actual event, but individuals with ongoing medical needs.

(Adapted from FEMA Preparedness Guide 301)



# Select Definitions Established

## High Occupancy Facility –

High-occupancy facilities include public housing, assisted living facilities, school dormitories, hospitals, and long-term care facilities. The term “facility” is often used to describe a structured environment, such as a hospital, but its use here is very broad. Facilities are often simply referred to as buildings. The size of a high-occupancy facility is relative to the community it is in. The evacuation of a small facility could overwhelm resources in some areas. These facilities include any building where multiple people are dwelling on a temporary or permanent basis.



# Select Definitions Established

## **Evacuation –**

Evacuation is the movement of people away from the threat or actual occurrence of a hazard. Examples range from the small scale evacuation of a building due to a bomb threat or fire to the large scale evacuation of an area or community because of a flood, bombardment, or approaching hurricane. This course focuses on full evacuation of a building or area. It does not include vertical or horizontal evacuations within a facility.

## **Shelter-in-Place –**

Shelter in Place, for the purposes of this course, is taking shelter in a location readily accessible and offers a safe refuge or protection to the affected individuals. A facility will consider sheltering-in-place instead of evacuating if sheltering-in-place is safer than evacuating.

# Role in Responding Around the Country

## Around the Country

The roles responding to an evacuation may include, but are not limited to:

- Governmental (State and Federal) decision makers
- Fire
- Police and facility security
- Emergency Medical Services (EMS)
- Community Emergency Response Teams (CERT)
- Medical Response Corp (MRC)
- Red Cross
- Salvation Army
- Faith-based organizations
- Facility staff
- Unaffiliated volunteers
- Trucking and fuel industry
- Federal Emergency Support Functions (ESFs)

Many different roles could respond to a large evacuation event. If you deploy to a different area, your role may have a different title and different responsibilities than what you are used to. You may work along side groups that you have never heard of before and people you have never met.



# Deciding to Evacuate

## Causes of an evacuation

- Events that create the need for an evacuation:  
Relating each to medically dependent
  - Internal vs. external
  - Fire, flood, chemical, etc
  - Time factors relating to causes listed
  - Impact of time factor on evacuation decisions
  - Influence of type of incident to decision to evacuate

Medically dependent patients pose a unique challenge during an evacuation due to their varying degrees of medical stability and types of medical devices needed. There are common issues you may face on scene with the medically dependent population that you need to be aware of.



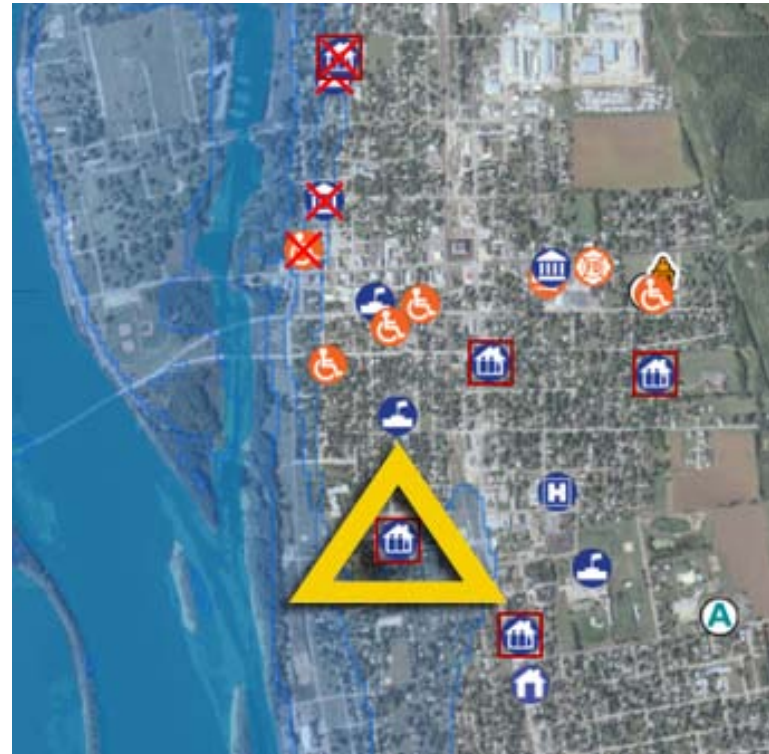
## Examples of Unique Challenges

- Intravenous Lines and Tubing
- Skeletal Medical Devices
- Medically Fragile
- Medication-Dependent Patients
- Behavioral Health Issues
- Special Precautions

# Deciding to Evacuate

## Additional considerations include:

- Staging the Medically Dependent Population
- Tracking the Medically Dependent
- Transporting the Medically Dependent
  - Equipment
  - Vehicles
- Evacuee safety
- Security
- Delivering Evacuees
- Returning the Medically Dependent Evacuees



# Deciding to Shelter-in-Place

## Causes of shelter-in-place

- CBRNE (includes local fire/smoke)
- Tornadoes
- Floods
- Hurricanes
- Civil disturbances
- Earthquakes
- Other Examples?



# Deciding to Shelter-in-Place

## General principles of Shelter-in-place:

- Safer to stay than to leave
  - Risk/Benefit – will the person’s medical condition deteriorate or put him/her in more danger if they evacuate? SiP decisions are often based on the principle that medically fragile people who evacuate often end up in worse shape than when they started
  - Works well when there are caretakers (incl. family)
  - Responding to medically dependent individuals that are sheltering-in-place may have the additional issues of:
    - Pressure sores
    - Heat/cold exposure
    - Glass injury
    - Deaths
    - Infections
- Unable to move critical patients
- Dealing with visitors in building
- Accountability (who is in the building)
- Staff
  - Shift change issues
  - Child care issues
  - Elder care issues
  - Notification
- Food and water supply
- Hygiene
- Utilities
- Fuel supply
- Affect on facility

# Discussion

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# Plan “B” Shelter in Place

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**(Certified in Homeland Security)**

President/CEO

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2010 Integrated Medical, Public Health Preparedness and  
Response Training Summit



# Post Disaster Findings

- Post Katrina Sensitivity
- Affected disproportionately
- 73% of the deaths from Katrina in New Orleans were 60 yrs old and over
- Most had comorbidities or functional and sensory disabilities



# Post Disaster Findings

- Special needs evacuation begins 3-5 days before scheduled landfall.
- Focus on special needs over the last five years made a major impact.



# Post Disaster Findings

- Broadcasters and emergency management agencies failed to comply with legal obligations to provide accessible information
- People with hearing disabilities could not access information
- Transportation was not handicapped accessible

# Post Disaster

- People with special needs segregated in shelters or prohibited from entering general shelters
- PWD were separated from families
- General shelters have a legal obligation to provide reasonable accommodations
- 13 million individuals age 50 or over will need evacuation assistance



## Adopting A Function Based Framework

*The functional based approach operationalizes “special needs” and provides guidance in planning and resource allocation.*

## People with Disabilities

*However:*

**in emergency preparedness and disaster management activities it is important to think about disability broadly.**

# New Framework

The Functional Based Framework

**Maintaining Independence**

**Communication**

**Transportation**

**Supervision**

**Medical Care**

# New Framework

- Elderly
- Children
- People with various disabilities
- Diverse cultures
- Institutionalized/aggregate housed
- Non-English speaking/limited reading and writing
- Transportation challenged

# People with Disabilities

## *Traditional Definition of Disability:*

**One who has a physical or mental impairment that substantially limits one or more of the individual's major life activities; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.**

*(Americans with Disabilities Act)*

# People with Disabilities

Disability applies to a broad range of people:

- individuals who use wheelchairs or have other mobility disabilities;
- individuals who are blind or have low vision;
- individuals who are deaf, deaf-blind, or hard of hearing

# People with Disabilities

- individuals with cognitive disabilities, psychiatric px
- respiratory conditions, or other physical or mental impairments that substantially limit a major life activity

# The Elderly

**Elderly:** People who are 65 years of age or older may be although there is no general agreement on the age at which a person becomes “old”. The following may apply to those considered to be elderly: (*World Health Organization*)

- chronic health problems may be present, i.e. diabetes, the need for oxygen, etc.

# Maintaining Independence

- Replacing
  - Essential medications
  - Lost/damaged equipment (wheelchairs, walkers, scooters, and essential supplies catheters, ostomy supplies, etc.)
  - Need caregiver for activities of daily living
  - Neurological, cognitive, intellectual limitations

# Communication

- Large population who may not be able to:
  - hear verbal announcements
  - see directional signage to assistance services,
  - understand how to get food, water and other assistance because of limitations in:
    - Hearing, vision
    - understanding (cognitive, intellectual, and language)
    - have limited or no ability to speak, read or understand English

# Supervision

- **Do not have or lost adequate support from caregivers, family, or friends**
- **Decompensate because of transfer trauma and stressors that exceed their ability to cope and function in a new environment**
- **Have conditions such as dementia, Alzheimer's and psychiatric conditions (schizophrenia, intense anxiety)**
- **Unaccompanied children**
- **Prisoners**
- **Youth homes, aggregate housing**

# Medical Care

- Those who do not have or have lost adequate support from caregivers, family, or friends and need assistance with:
  - managing unstable, terminal or contagious conditions that require observation and ongoing treatment

## Medical Care

- managing intravenous (IV) therapy, tube feeding, and vital signs
- managing wounds
- dialysis, oxygen, and suction administration
- operating power-dependent equipment to sustain life

# Transportation

People who cannot drive due to

- disability
- age
- poverty
- addictions and/or legal restrictions
- Zero vehicle households
- Geographically isolated

# Shelter Planning

- Assessment and registries
- Emergency communication/public information
- Sheltering and mass care
- Evacuation
- transportation

# In Home Sheltering

## Personal plan

- Encouraging them to establish a network or support system
- Have a preparedness kit/go kit
- Life sustaining equipment
- Use of community services
- stockpiling

# Communication

- Develop some information now, pre event, mid-event and post event
- Cultural sensitivity
- Faith based groups
- Braille, large print, pictorials



# Shelter Planning

- volunteer special needs registry
- Educate volunteers, preparedness team on special needs
- Utilize 2-1-1, and reverse 9-1-1
- Special needs assessments at various locations, shelters

# Shelter Planning

- Companion animals









# Shelter Planning

- Caregivers
- Bathrooms/ beds
- Any shelter that receives federal money must reasonably accommodate special needs- ADA requirement
- Supplemental equipment, signage



# Planning

- Identify multi-cultures in region- communication plan
- Utilize entire health care. Home care and hospice
- Home Care- coordination of services, hi tech
- Hospice- death, dying and grieving

# Planning

- Identify transportation for evacuation
- Coordinate with other transportation companies such as schools for special vehicles to accommodate wheelchairs etc

# Building A Planning Team

- Special needs committee or advisor
- Coordination among planners **NO SILOIZATION**
- Ethics committee
- Mental health teams

# Shelter Planning

- Short term and long term needs
- No-notice event
- Long term placement
- tracking

*“Chance favors the prepared mind”*

- Louis Pasteur

1822-1895

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