National Emergency Management Summit

Providence Saint Joseph Medical Center

Strategies for Complying with Joint Commission’s 2008 Revised Emergency Management Standards

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Implementing Emergency Management Plans to Meet All Standards

• Objectives:
  – Demonstrate best practices related to required risk assessments and developing management plans
  – Overview of emergency preparedness plans, tools, and equipment
  – Provide networking opportunities among facilities on challenges and strategies for excellence in emergency preparedness
Implementing Emergency Management Plans to Meet All Standards

- Clarify and implement JCAHO compliance Standards
- Document in detail how this is accomplished
- Keep it simple
- Share the information
- Acknowledge what you are good at and be honest with your short falls
Providence Saint Joseph Medical Center

- Providence Health & Services began over 150 years ago and operates in Alaska, California, Washington, Oregon and Montana. It is sponsored by the Sisters of Providence.

- Founded in 1943, Providence Saint Joseph Medical Center is the San Fernando Valley’s largest hospital.
Our Community

• Burbank is located in Los Angeles County, California
• 17.14 sq. miles, Population: 102,400
• City Government,
• K-12 Unified School District
• Bob Hope Airport

• Motion Picture and Television Studios
  – Walt Disney Studios & International Headquarters
  – ABC West Coast Headquarters
  – NBC Universal Studios and Theme Park
  – Warner Brothers Studio
Why is Los Angeles County Involved

- Los Angeles County is a direct recipient of funding from the National Hospital Preparedness Program (NHPP)
- The EMS Agency serves as the Medical and Health Disaster Coordinator for the County
- This funding was provided to each state and 3 other municipalities – New York, Washington DC, and Chicago
The Challenge

• Developing the capabilities to respond to acts of terrorism
• Increasing Hospital Surge Capacity
  ▪ GOAL: Coordination and Collaboration between hospitals and other healthcare entities
  ▪ Over 100 acute care hospitals, 4,000 square miles, 10 million population
Layers of Participation

• Basic Level
  – Participating hospitals received PPE for 1st Receivers and training on decontamination procedures

• Expanded Level
  – Participating hospitals received funding for decontamination showers
    • “turn key”
    • 50 victims/hour
    • warm water
Disaster Resource Center Level

• Goal #1

Enhance hospital surge capacity by maintaining cashes of supplies, equipment and pharmaceuticals at each DRC hospital
  – Mobile Tent Hospitals
  – Ventilators
  – Chem Packs: A nationwide project for the “forward” placement of nerve agent antidotes.
Disaster Resource Center Level

• Goal #2
  Establish a forum for regional collaboration, planning and training.
  – The PSJMC DRC Umbrella includes:
    • 10 area hospitals
    • 4 EMS provider agencies
    • 4 Community Clinics
A Regional Plan

• Host regional DRC meetings to:
  – Share information, plans and training opportunities
  – Provide chain of command and contact information
  – Exercise our plans in table-top and during full function drills
Trauma Surge Level

• Goal #1
  – Plan, implement and coordinate activities to enhance surge capacity in trauma centers and the development of a trauma surge capacity plan in coordination with other LA County trauma centers

• Goal #2
  – Purchase, store and maintain equipment to ensure a constant state of readiness

• Goal #3
  – Implement security to decrease vulnerability to terrorist attacks
Community Relationships

- Burbank Disaster Council
  - Host quarterly meetings
  - Provide education and training opportunities
  - Provide expert speakers
  - Safety/Disaster Fairs

- MOU Agreements
  - Schools
  - Key businesses
  - Studios

- Vendor Contacts
  - Personal interaction

- Local government and business relationships
  - Know your leaders by name
JCAHO Revised EM Standards-2008

• Communication EC.4.13
• Resources and assets EC.4.14
• Safety and security EC.4.15
• Staff Responsibilities EC.4.16
• Utilities EC.4.17
• Patient Clinical and Support Activities EC.4.18
Communications

E.C. 4.13
Mass Emergency Notification

- Allows Mass Communication with staff in minutes on any device or email, including mass polling.
- All leadership enrolled, 10,000 staff when completed.
- Meets JCAHO staff recall requirements
- Internet based
- Secure infrastructure with redundancy at every level for uninterrupted availability
Radios

- 100 two-way radios (reserved)
  - Multi-unit and individual unit chargers
  - Spare batteries for each radio (NiMH, Li Ion)
- Ham Radio
  - 2M, 220, 440, and High Frequency (HF)
- Portable Handheld Ham Radios
Cellular Phone Cache

- 24 cell phones with direct connect feature
- Activated < an hour by dialing “800” number
- Numbers are preserved (not recycled)
- All phones pre-programmed with key numbers and HICS roles
- Spare batteries for each phone
- All hospital and umbrella hospitals and clinics have a phone for communicating with us
Incident Command Structure-based Software Tool

- HICS IV and NIMS Compliance
- Real time HICS role assignments and tracking
  - Automated through mass notification software
- Real-time resource tracking at the hospital and regional levels
- Custom dashboard views by role
- Records and tracks hospital performance for the post-incident audit process
Mobile Communications Trailer

- 36’ Mobile Command Center Custom Trailer
  - Satellite connections - 16 IP addressable internal connections for voice and data
  - Self contained – portable generator
  - Separate Communications Room
  - Storage for 8 carts
  - Collapsible tables, write on walls
Satellite Phone Equipment

- Talk to a single person or multiple individuals
- Cost effective alternative to land-based systems
- Supports multiple, separate talk groups
- Communicate via telephone or two-way radio
Mass Notification System – Real Time Notification!

- Alerts are received in seconds, not minutes.
  - Reducing the risk of employees taking incorrect action, or putting themselves in danger.
  - To all personnel in a building or the campus.
  - Verifiable and auditable for proof of communication.
- Alerts display text, voice, videos, photos and images.
  - Building diagrams, evacuation routes and mustering locations.
  - Persistent instructions for easy review.
Government Emergency Telecommunications Service (GETS) and Wireless Priority Service (WPS)

• **GETS:** Provides the means to get landline-based National Security/Emergency Preparedness (NS/EP) calls through.

• **WPS:** Provides the means to get your wireless (cell-based) NS/EP calls through.
  
  – The Department of Homeland Security National Communications Center must approve all applicants for the GETS and WPS services.
  
  – Each facility or organization must establish who their Point of Contact (POC) will be.
Additional Means of Communication

- ReddiNet and HEAR Radio
- Fax machines
- Pay phones
- Direct Inward/Outward Dial (DID/DOD) lines
  - Phone lines independent of the hospital phone switch
Dedicated HCC Communications Room

- Partner with local amateur radio services
- Separate/adjacent to HCC
Resources and Assets

E.C. 4.14
Resources and Assets

- Food = 7 days
- Water = 5 days
- Linen = 3 Changes + Disposable
- Diesel, Gasoline, and Propane Fuels = 4 days
- Medical Supplies Cache
- Sewer = Kitty Litter = 5 days
- Oxygen = NOK & 2 Six-Packs
- Pharmaceutical Cache
Department Disaster Barrels

- Clipboards
- Gloves
- Pry Bars
- 12 hour light sticks
- Whistles
- Hard hats
- Shovels
- Push brooms
- Masking and duct tape
- Stretchers
- Mylar Blankets

- Goggles
- 5 gallon water containers
- Aqua Blox water boxes
- Emergency Lanterns
- Hand held flashlights
- First Aid kit
- AM/FM radio
Automatic Disposable Resuscitators

- 50 Adult
- 20 Pediatric
- 10 resuscitators per/case
  - Includes manifold, regulators, and tubing
- Stored inside of a hardened weatherproof case
Equipment Transportation
Portable Hospital

- 10 Gurney-height or 10 cot-height beds
- 18’ x 24’ shelter with detachable 10’ x 10’ ante-room
- Both shelters set up in under 10 minutes with a blower
- Converts to negative pressure
- Propane-fed heating unit
  - Maintain propane cache
- 6500 watt generator
- Florescent overhead lights
Portable Hospital Beds

• Gurney-height beds
  - Regular bed height
  - O2 tank, chart, and IV pole holders
  - 300-450 lb capacity

• Cot-height Simpler Life Beds
  - 300-450 lb capacity
  - Sit 18” off ground
  - IV pole holder
Evacuation Chairs

• For vertical stairwell evacuation
• Collapsible
• Approximately 35 lbs
• 500 lb maximum load capacity
• Equipped with IV poles, O2 tank holder, head support, and protective storage cover
Evacuation Sled Devices

- For horizontal floor and vertical stairwell evacuation of patients
- Collapsible
- 500 – 800 (Bariatric) lb maximum load capacity
- Hold IV solutions, medical chart, O2 tanks, etc. inside with patient
Safety and Security

E.C. 4.15
CCTV System

- Can never have too many cameras
- Digital recorders with >30 day storage
- HDTV
- 4 Monitors
- Cover all critical infrastructure
- Purchased with Homeland Security funding
Easy-up Barricades

- Set-up by 1 person in 2 minutes or less
- Two flashing strobe lights per barricade
- Dimensions: 10.5’L x 5.5’H x 22”D
- 24 lbs
- Ballast with Sandbags
- Zip-tie multiple units together
- Stored in a compact carrying bag
Vehicular Barricades

- Vehicular and/or pedestrian access control purposes
- Water or sand-filled
- Weigh up to 1800 lbs when filled with sand or water (100 lbs dry weight)
- Reinforced with steel cross beams
- Easy set-up
- Supplement heavier barricades with smaller and lighter folding barricades.
Mass Decontamination Trailer

- Rapid set up
- 50 victims per/hour
- 3 ambulatory, 1 non-ambulatory lane
- Folding benches
- Soap-inducted lines
- Heated water- temperature controlled
- Air-heated bays
- Self-contained water supply
Mass Decontamination Trailer

- 1-1/2”, pressure regulated water supply line for indefinite water feed
- 2800 gallon water containment capacity
- 13 KW diesel generator
- Privacy shelters for both Hot & Cold sides
  - Maintained in a deployed state
Portable Deluge Shower / Barricades

- Four 11 gpm nozzles
  - Very low pressure
  - High volume
- Fed by a pressure-regulated 1-1/2” line
- On/off control valve
- Deluges 10’ x 12’ area
- Great for Mass Gross Decon purposes
Technical Decon Shower

- Unique quick-connects for fast assembly
- Three shower heads plus an independent hand-held sprayer for thorough decontamination
- Tough construction for frequent training and use.
- Vinyl bag for storage and transport
- Shower Specifications
  - Augmented with a portable soap & water sprayer
RRPAS Vest Kit

- RRPAS vest converts from a duffle bag to a vest-mounted PAPR:
  - 3 FR-57 Cartridges
  - Lithium battery
  - Hair net and inner gloves
  - Laminated instruction sheet
  - Clothing cutting device & Airflow monitoring tube.
  - Tyvek-F suit with outer gloves, over-boots, and roll of Chem-tape
  - Pre-tabbed Chem-tape strips
PPE/RRPAS Vest Kits

- 47-Rapid Response Powered Air-Respirator Systems (RRPAS)
- Vest-mounted PAPR with cinching strap
- Vest has 2 large cargo pockets
- Pocket w/Velcro securing strap for PAPR battery
- Can be decon’d
- Vest secures loose suit material, prevents snagging or tearing of suit
Decon Communication Equipment

- **Haz-Amp Voice Amplifier:**
  - A belt or chest mounted voice amplifier attached to a throat microphone.
  - Can be decon’d

- **Tri-Com Voice Amplifier with Two-Way Radio Interface:**
  - Haz-Amp with attached two-way radio interface and Push-to-talk (PTT) button, earpiece, and throat microphone
Decon Cooling Vests

- No ice water or refrigeration required to activate
- 21 Phase Change Material packs
  - converts from a solid crystal to a liquid as it absorbs body heat
  - Packs are inert, non-toxic, and non-carcinogenic
- Cool effect lasts for approx. 4 hrs
- Lay flat to recharge
Radiation Monitors - RadAlert 100’s and Mass Screening Portal

• Radalert 100’s
  – Personal dosimeters or area monitors w/digital readout
  – X-ray, gamma, beta, alpha (CPM, mR/hr)
  – Can be reset and reused
  – 9-volt battery operated
  – Only weighs 8 ounce

• Mass Screening Portal
  – Portable
  – Set-up between Warm and Cold zones for mass screening post-decon
Isolation Anteroom with Negative/Positive Pressure HEPA Filtration Units

Convert standard patient rooms to negative pressure isolation
Staff Roles and Responsibilities

E.C. 4.16
Staff Roles and Responsibilities

• Use internet based program for management, implementation and tracking of HICS.
  – HICS roles
    • Assigned, Tracked and Timed
    • Staff trained 3 deep in critical HCC positions

• Training
  – Annual Safety and Skills Fairs
  – Orientations for new employees/ licensed independent contractors
  – Department posters:
    • Bioterrorism Response, National Threat Levels, Utility Shut Off, Basic Staff Response to Codes
16 CBT Modules

- Pre-donning Safety
- PPE Donning, Doffing & Technical Decontamination
- Decon Corridor Set-up: Hot & Cold Zones
- Decon Set-up: Support Zone
- Decon: Ambulatory
- Decon: Non-ambulatory & Special Needs
- Chemical Agent: ID, Decon, Casualty Mgmt
- Bacterial Agent: ID, Casualty Mgmt.
- Viruses & Toxins: ID, Casualty Mgmt
- Radiological & Nuclear: ID, Decon, Casualty Mgmt
- Explosives: ID, Casualty Mgmt
- Decon: Critical Thinking
- Chempack Deployment: Use of Mark 1 Auto-injectors
- Decon: Set-up, Utilization of Mass Decon Trailer
- Decon: Team Communication
- HEICS (HICS)
Weapons of Mass Destruction

Explosive Devices

- Improvised Explosive Devices
- Manufactured Explosive Devices
- Incendiary Devices (Fire-Bombs)

Decontamination – CBT Module 5
Objectives

• Identify and differentiate between the different types of explosives and explosive devices.

• Identify the 4 mechanisms of blast injuries, and the types of injuries associated with being exposed to each mechanism of the blast.

• Identify how to manage the treatment and care of victims exposed to blasts from explosive devices.
Improvised Explosive Devices (IED’s)

• Improvised Explosive Devices (IED’s) are bombs made in small quantities, or the use of a device outside of its intended purpose.

• May contain either HE or LE explosives.
  – Example of an IED: A commercial aircraft being converted into and utilized as a guided missile.
  – Categories of IED’s include:
    • Packaged IED’s
    • Vehicle-Borne IED’s
    • Suicide Bomb IED’s
Mechanisms of a Blast Injury

- **Primary Mechanism:**

- **Characteristics:**
  - Unique to High-Order (HE) Explosives.
  - Results from the impact of the over-pressurization wave with body surfaces.
Injuries Associated with a Blast

- **Primary Mechanism:**
  - Affects the gas filled structures of the body.
  - Examples: Lungs, GI Tract, Middle Ear.

- **Types of injuries include:**
  - “Blast lung”.
  - Rupture of the tympanic membrane and middle ear damage.
  - Rupture of the eye.
  - Concussion without physical signs of head trauma.
  - Abdominal hemorrhage or perforation.
Medical Management of Victims

- **Considerations:**
  - Expect an “upside-down” triage – The most severely injured will arrive after the less injured, who bypass EMS triage and transport themselves to the hospital.
  - Immediately consider all unusual explosions to be potentially terrorist-related.
    - Suspect the possibility that the explosive device contained biological, chemical, or radiological agents.
      - Wounds could be grossly contaminated with such agents and may require decontamination prior to treatment.
      - Consider the possibility that the victims were exposed to inhaled toxins and/or poisons from these agents.
  - Blast injuries should be considered for any victim exposed to an explosive force.
8. Victims of a bombing incident may present with which of the following types of injuries:

A. Amputations and Eye and Ear perforations or penetrations.
B. Concussion without physical signs of head trauma and Blast Lung.
C. Small to large bruising or hemorrhages, lacerations of organs, rupture of the testicles, and mesenteric injuries.
D. All of the above.
There is a Better Answer!

Please try again…
You are Correct!

Please continue…
Additional Training

• Support CME training
• Practical hands-on training
• Department specific training and competencies
  – Automatic, disposable resuscitators
  – Mark 1-Autoinjectors (Nerve agent antidotes)
• Department specific disaster training
  – Evacuation equipment
  – Surge Training (portable hospitals, ChemPacks, etc.)
Personnel Identification

- Identifying staff and personnel during an event
  - HICS vests
  - ID badges
Disaster Fair
Utilities Management

E.C. 4.17
Utilities Management EC.4.17

• Lighting:
  – Portable battery-operated flashlights, lanterns, and light sticks from departmental disaster barrels
  – Portable light sets with generators
  – Prism lights (inflatable lights w/generators)
  – Light sets from local movie and/or television studios
  – Light sets from local rental companies
Portable Lighting Cache

- Various-sized floodlights
  - 250w
  - 500w
  - 1000w
Lights-Inflatable Lights

- Stands 15’ high
  - 2000w Generator or 110v powered
    - Additional power supply
  - 3 minutes to full illumination
  - Illuminates approximately 2.5 acres
  - 1 person set-up
  - Withstands 25 mph winds
    - Weatherproof
Medical Gases Cache

- Medical gasses:
  - Vendors for re-supply
  - Reallocate from in-house resources
  - Triage those currently on medical gasses
  - Utilize supplies from medical center’s emergency cache of O₂.
    - NOK kit (81 “E” Cylinders w/ tubing, masks, regulators)
    - 12 “H” Tanks
Alternate Water Supplies

- 30,000 gallon tank of potable water
- Aqua-blocks and/or 5-gallon containers of water in all departments
  - Cache of water specific to size of department
- 3 months supply of bottled water
  - Rotated through Dietary services
Alternate Electricity and Fuel Supplies

• Flexibility / Versatility
  – Various sized generators
  – Portable
  – Fuel caches to match generator types!
    • 30,000 gallons diesel
  – Self-priming siphon pumps
    • Vehicles on property (alternate fuel supply)
Clinical and Support Activities

E.C. 4.18
Clinical and Support Activities
EC.4.18

- Plan for critical activities during an emergency
- Plan for clinical services for vulnerable patients
- Plan for patient hygiene, sanitation, and mental health needs
- Plan for mortuary needs
- Plan or tracking of patients clinical information
Critical Activities

- HICS
- Define use of space, i.e. mass casualty triage, immediate, delayed, minor, expectant
- Identify decontamination areas, i.e. hot, warm, cold, and support zones
- Identify internal and external alternate care sites (Surge Plan)
Vulnerable Patients

- Plan for clinical services for vulnerable patients:
  - Working with local community, county, and state agencies on development of alternate care sites
  - Working with Home Health Care services
    - Maintain a list of the most frail/dependent patients
    - Help patients develop a neighborhood support system
    - Educate patients on emergency preparedness at home
  - Work with community dialysis centers
Patient Hygiene and Sanitation

- Portable hand washing stations
- Portable “porta-potties”
- Caches of hand sanitizing gel and soap
- Cache of kitty-litter
Patient Mental Health Needs

• Staff training:
  – “Preparing for the Psychological Consequences of a Terrorist Incident or Other Public Health Emergency”
• Privacy kits
• Privacy screens
• Spiritual Care and Clinical Social Work support
Mortuary Needs

• Mass fatality planning:
  – Cache of body bags
  – Overflow morgue space
  – Work with local Coroner’s Office
  – Plan for John, Jane, and Baby Doe
  – Plan for security and chain of evidence
Tracking of Patients Clinical Information

• Begin in triage
  – Triage tag
  – Patient Id number
• Track patients through treatment to discharge
• Maintain patient privacy - adhere to HIPAA laws
• Sharing information with other healthcare and law enforcement agencies, per HIPPA
Personnel Surge Packs

• Customizable/stackable
• Each kits contains 20
  – Cots
  – Blankets & pillows
  – Personal kits
    • Toothpaste/toothbrush
    • Personal hygiene wipes
    • Disposable scrubs
Additional Personnel Supplies

- Disposable towels and linens
- Disposable stethoscopes
- Privacy screens
Other Support Activities

- Two large barbeques for preparing food
  - Propane cache for BBQ’s
  - Maintain 7 days food
- Signed MOU’s for onsite placement of two 6-unit “Honeywagons.”
Future

• Virtual HCC and response
  – Mass notification and automated role assignment
  – Blackberry response and tracking
  – Internal notification done with instructions
    • Patients
    • Visitors
    • Staff
    • Physicians

• Portable response

• 7 days
Questions

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