Burn Resource Center: Enhancing Los Angeles County’s Burn Surge Capacity

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Purpose

• Share the details of planning and implementation of the burn resource center program for Los Angeles County, California, USA.
What is a Burn Disaster?

• Any event in which the number of patients with burns exceeds the capability of local resources
Federal Requirements:

- Hospital Preparedness Program (HPP)
  - FY 2005 Guidance: Los Angeles must be able to provide burn care to at least 150 patients with burn injuries.

Public Health Service Act: Strengthening public health emergency medical management and treatment capabilities.
Regional Burn Care Capacities

- LA County – total 59 burn beds
  - LAC+USC - 21 beds
  - Torrance Memorial Burn Center - 8 beds
  - Grossman Burn Center - 30 beds

- Greater Los Angeles Area
  - UC Irvine Burn Center - 16 beds
  - Grossman Burn Center/Santa Ana - 5 beds
  - Inland Valley Burn Center (Arrowhead) – 14 beds
State of California

- California - total 202 burn beds
  - UC Davis - 14 beds
  - Shriners, Sacramento - 30 beds
  - St. Francis (San Francisco) – Bothin Burn Center – 10 beds
  - San Francisco General - 12 beds
  - Fresno - 14 beds
  - Santa Clara Valley - 8 beds
  - UC San Diego Regional Burn Center – 20 beds
U.S. Burn Care Capacities

- 125 designated burn centers
- 1,825 designated burn beds
Burn Center Surge Capacity

- American Burn Association Disaster plan:
  - Accommodate 50% over the normal number of patients
    - ABA Burn Disaster Plan JBCR, March/April 2005
- Applied to Los Angeles County
  - 30 additional beds
  - Total of just 89 beds
- Since existing patients are not discharged during disasters...
  - Surge capacity varies by
    - Season
    - Week to week
    - Day to day
    - Hour to hour
What is the Plan for Los Angeles County?
Evaluation and Planning

- Burn resources in the county were evaluated.
- Most viable method of surge was using the established trauma system.
  - LAC has 13 Level I/Level II trauma centers.
  - “Burn Resource Center” designation
- Burn Task Force
Creating a team

• EMS Director/Burn Center Director

• Designated a burn consultant to be a liaison between the two entities.
  – This person is dedicated to management of the project

• Draft burn care plan created

• Literature search conducted
Literature Search

  – ABA Action items
  – Triage Decision Table

Burn Task Force

• Burn Task Force formed
  – EMS Agency Program Manager
  – LAC + USC Burn Center Medical Director
  – Medical Directors from LA’s other 2 burn centers
  – Representatives from surrounding burn centers
  – An administrative nurse manager from each burn center
  – Members of Trauma Hospital Advisory Committee (THAC) and Trauma Surge Committee.
Burn Task Force Actions

- Quarterly meetings from Fall 06 to Spring 07 and as needed 08
- Reviewed draft Burn Care Plan
- Wrote Policies and Procedures, Clinical and Administrative Appendices
- Collaborative, developed consensus
- Obtained commitment from all Trauma Centers to participate
- Delivered final burn care plan and recommendations for education and equipment/supplies
Burn Task Force Deliverables

• Policies and procedures for multi-casualty burn disaster event
• Recommendations for Equipment/Supplies
• Recommendations for Education
Policies and Procedures

• Burn Care Plan
  – Burn Resource Centers
  – Activation
  – Field Triage
  – Emergency Department Assessment/Treatment
  – Burn Resource Center Treatment Guidelines

• Transfer Agreements
Burn Care Plan - Burn Resource Centers

• LA County “Burn Resource Centers”
  – 13 designated “Burn Resource Centers”
  – All LA County Trauma Centers

• Each “Burn Resource Center” will adapt to temporarily care for 12 critical burn patients

• Upgrades and adaptations through:
  – Enhance burn care training to staff
  – Maintain supplies to provide burn care

13 hosp x 12 surge burn patients = 156 disaster burn beds
Burn Care Plan - Activation

• Activate LAC multi casualty disaster Burn Plan
• Med Alert Center (MAC) will direct patients and transfers to:
  – Burn Resource Centers to each care for up to 12 major burn victims
  – 911 Receiving Hospitals to care for minor ambulatory burn victims
  – Activate regional & state health care resources
  – Explore use of Federal resources - National Disaster Medical System (NDMS)
Burn Care Plan-Burn Lead Specialist

• Call on a “Burn Lead Specialist”
• An MD from an LA County burn center
  – Assist MAC & the EMS system in managing available burn resources
  – Consultant for: triage, treatments, transfers
• Transfer & treatment priority will be based on ethical standards:
  – American Burn Association Decision Table for Mass Casualty Incidents (J. Burn Care and Rehab. Mar/Apr 2005)
    ▪ Very young or very old with large BSA burns receive palliative care
  – Other factors
    ▪ Inhalation injury?
    ▪ Additional trauma?
Burn Care Plan - Transfer Agreements

• Transfer Plan:
  – Burn patients will be transferred to a burn center as soon as space becomes available
  – Prioritization:
    ▪ Critical burn patient at a non-BRC
    ▪ Critical burn patient at a BRC
    ▪ Minor burn patients
Education Recommendations

• Needs assessment
• EMS Update
• Hospital Management Course
  – Six sessions over a 6 month period
• Wound care DVD
• Resource Manuals for all ED’s
Education Recommendations

- Burn Resource Center Plan: (Trauma Centers)
  - Establish ‘burn resource team’
    - Emergency MDs & RNs and ICU staff and surgeons
  - Members will demonstrate – “Competency in burn care”
Equipment and Supplies

Burn surge materials will be maintained at:

- County cache
- At burn resource hospitals

- Fluid - Blanket Warmers
- Body warming equipment
- Bronchoscopy setup
- Burn Wound care products
Other Resources: Manual for all ED’s

- History* has shown us that:
  - Mass casualty incidents are uncommon, becoming smaller and less common as time evolves
  - Produce fewer patients than expected that require IP care
  - “Walking wounded” will eventually find their way to burn centers and clinics

Burn Resource Manual

- Burn Resource Manual for each ED in Los Angeles county.
  - Burn Resource Contact list
  - Burn Care: Hospital Management DVD
  - Wound Care DVD
  - Transfer Information
Summary

• Defined Burn Disaster
• Discussed plans for 150 burn patient surge
  – Burn Resource Centers
  – MAC
    ▪ Burn Lead Specialist
    ▪ Transfer agreements
  – Education recommendations and plans
  – Equipment and supplies
  – Resource Manuals
Summary

• Collaboration between EMS and Burn Centers
• Consensus among stakeholders
• Commitment from trauma centers
• Ongoing dialogue and planning