

General Sessions

Rhode Island *Station Nightclub* Fire: Lessons Learned Saturday, February 5, 2005 1:00pm ~ 2:00pm

Statewide Emergency Preparedness in Rhode Island:

Lessons Learned "The Station" Nightclub Fire

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Orlando, Florida
February 5, 2005

Rhode Island - *Setting the Stage:*



Rhode Island – *Key Characteristics:*

- Our Size
 - Just over 1,000,000 population
- 16 Hospitals
 - **10 acute care with acute care ED (1 ACS Level-1 Trauma center in Providence)**
 - 1 Women's and Infants specialty (limited ED capabilities)
 - 1 Rehabilitation
 - 1 Adult Psychiatric
 - 1 Pediatric Psychiatric
 - 1 Long-term Care Acute/Psych - state run/no ED
 - 1 Veteran's Affairs Medical Center

Rhode Island – *Key Characteristics:*

- 39 Cities and Towns
- Scene First Responders – Municipal Fire
- Very Limited County Government
- One State Department of Health
- State Emergency Management Agency on limited hours schedule
- Local EMA's (Civil Defense)

Rhode Island – *Strengths:*

- Relatively small, close-knit group with effective communication processes among key groups
- Strong, collaborative relationships with member hospitals and key hospital groups
- Effective, collaborative relationships with key stakeholders

"The Station" Nightclub Fire

February 20, 2003



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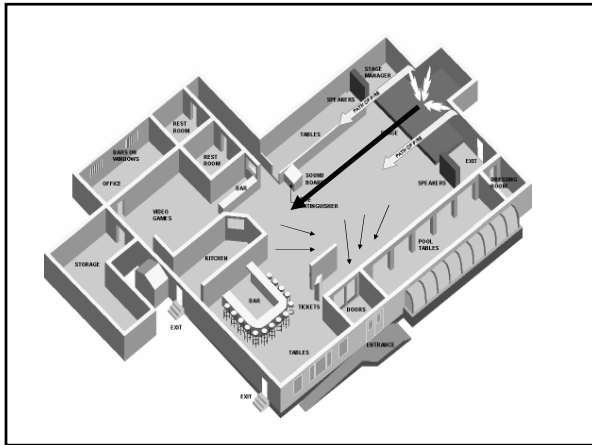
The "Station" Nightclub



Upon Arrival 11:19 p.m.

Arrived on scene four minutes after dispatch

Approximately ten minutes after initial alarm, task force arrives with flames through the roof.



Bad Decisions !!!



Delay in Escape !!



Inadequate Egress !!



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The Struggle to Survive

- Front doors became blocked within 1 minute.
- Front doors became impassable after 1:16 sec. (As recorded).
- N.F.P.A. Suggested 50 people exit every 200 seconds.
- This formula could not account for the illegal use of pyrotechnics, flammable wall coverings, low ceilings, no sprinklers and a rapidly moving fire.

Protecting the Entrance



People vs. Fire and Smoke



Smoke: The BIG Killer

Chemical compounds typically found in building fire smoke.

- Ammonia
- Sulfur Dioxide
- Chlorine
- Cyanide
- Phosgene
- Carbon Monoxide
- Formaldehyde
- Hydrogen Chloride and more

Problems in the building

- Overcrowding with inadequate exits.
- No fire suppression system
- No active municipal fire detection system
- Delay in acknowledging the "problem"
- Patrons limited knowledge of the building
- Blocked and hidden doorways
- Smoke obscured all visibility, "lights out !"
- Flame spread "beat patrons to the door"

"Triage" Established

- Triage was quickly established in the "Cowesett Inn" restaurant after West Warwick firefighters led victims away from the fire scene to the restaurant.
- Sheltering was critical (26-30 degrees)
- 80-100 victims in the street
- 30+ victims in the triage area
- 30-50 survivors still in the fire building
- 97 perished initially in the blaze

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Triage: Start to Finish

- Establishment of a triage area
- Security of triage area (State Police)
- Assignment of assistants (use all available)
- Logistics outside the building (staging, transport)
- Hospital notifications and updates (communication problems)
- Assignments of victims to EMS and Hospitals
- Constant evaluation of victims (minutes count)

Assessment of Victims

- Primary size up of triage area
- Visualize injuries and brief discussion
 - Calm each patient
 - Assess the degree of inhalation injury
 - Look for signs of smoke/heat injuries
 - Grade their injuries for transport
 - Treat obvious injuries first
 - Bypass mortal injuries

Typical Injuries



Third Degree Burns



Visual Triage



Injuries

- 40%+ third degree burns of face, hands and/or upper bodies.
- Most with inhalation burns and smoke.
- Many with lacerations to arms and legs.
- Some crushing injuries.
- Several hyperventilation victims, mostly with moderate to lesser injuries, important to control!
- 20-30 critical third degree victims saved from the fire by firefighters.

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Emergency Care for Burns 1 of 2

- Follow standard precautions.
- Move the patient away from the burning area into a protected environment.
- Stop the burning process.
- Cover with dry, sterile dressing.
- Administer oxygen (carefully).
- Monitor the airway closely.

Emergency Care for Burns 2 of 2

- Protect patients temperature.
- Check for traumatic injuries.
- Estimate the burn severity.
- Treat the patient for shock/hypothermia.
- Provide prompt transport to nearest receiving facility for treatment, stabilization and/or transfer.

Rescues Arrive



Transporting the injured



Hospital Location:

- The closest hospital is about 3 miles from the scene (KCMH - ~60K ED visits/year)
- The level I Trauma Center is located about 12 miles away (RIH ~120K ED visits/year)
- 7 of the acute care hospitals are located within a 15 mile radius of Providence
- West Warwick is located approximately on the outskirts of this radius

Area Hospitals

- Rhode Island Hospital (ACS Level 1 Trauma)
- Kent County Memorial Hospital
- Roger Williams Medical Center
- Westerly Hospital
- South County Hospital
- Newport Hospital
- Fatima Hospital
- Landmark Medical Center
- Miriam Hospital
- Memorial Hospital

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Rhode Island Hospital



- 719 bed facility
- Acute care hospital
- Academic medical center w/ Brown Univ. Med. School
- Southeastern New England's level 1 trauma center, 110,000+ ER visits

Kent County Memorial Hosp.



- Closest hospital to incident
- 359 Bed Facility
- Acute Care Hospital
- 58,000 Emergency Room Visits
- Rhode Islands second largest hospital

Reassess and Reroute



All area Life Flights from Massachusetts and Connecticut responded

Emergency Preparedness

- Reform communications
 - Nextel between hospitals and EMS/IC
 - Statewide radio system, multi-channel
 - Discipline !!!!!
- Cross border resources
- Rapid response teams (DMAT and Hospital Response Team)
- Secondary triage team (reevaluation)
- Unified trauma system (treat and transfer)

Grim work, One reward!



Swift and Unforgiving!!



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In the End

- 160 Firefighters from 15 Communities responded to West Warwick
- 65 Rescues/Ambulances from R.I. and Southeastern Massachusetts responded.
- All injured transported in 1 hour 45 min.
- 273 patients treated in area R.I. Hospitals, Mass. General, Univ. Mass. Medical Center and Shriners Burn Hospital.
- Hundreds of Support workers responded as planned.

R.I. Legislature Responds

- "Grand fathering" clause removed by legislative act in Rhode Island.
- Adoption of NFPA 101 Life Safety Code.
- Sprinklers in "high risk" assemblies by 2006.
- Increased number of inspectors.
- Application of Active Alarm Code.
- Occupancy rates adjusted until compliant.
- On duty Firefighter in building during events.
- Night time inspections/stronger enforcement.

The Fire Service Responds!

- Aggressive pre-planning
- Fire line inspections (visible presence)
- Review of all public occupancies
- More mass casualty training, planning
- Hospital to EMS communications
- Additional mass casualty equipment
- Improved communications

The Fire Service Heals !!

Critical Incident Stress Management

The Nation Heals



More Need to Heed!

While the nation and the world have mourned the losses of this tragedy, have they really learned or are they just sympathetic?

Rhode Island remains the only state in the country to have made sweeping changes to the fire safety codes. Some have made prospective changes but none address the existing structures that possess the highest risks.

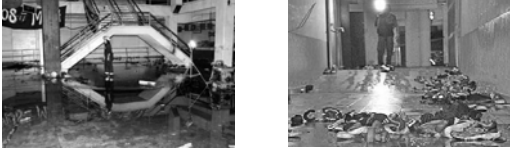
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BUENOS AIRES, 188 DEAD

Cromagnon Club, Legal Occupancy 1500, Actual 4,000

- Overcrowding
- Pyrotechnics ignites ceiling foam
- Doors locked to avoid freeloaders



Sharing Lessons Learned

Lessons Learned....

Opportunities exist to:

- Improve SCENE to HOSPITAL communications
 - Need to know approximately how many victims and the extent of injuries is critical to a hospital's response to "How many can you take"

Lessons Learned....

Opportunities exist to:

- Improve HOSPITAL to HOSPITAL communications
 - Issues with Nextel System operations
 - Training
 - Host Hospital
 - Redundant Systems

Lessons Learned....

Opportunities exist to:

- Improve PATIENT TRACKING
 - Many victims were not identifiable
 - Need tracking system sooner
 - Immediate media attention made issue much more significant

Lessons Learned....

Opportunities exist to:

- Improve AIR TRANSPORT coordination
 - One hospital had four air transport units in use
 - No mechanism to redirect to other facilities

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Lessons Learned....

Staffing and Surge Capacity

- All hospitals were ready
 - We did not exceed capacity
 - Reassured that our capacity to response was better than what our planning efforts were assuming....BUT...
 - Timing was on our side
 - New surge capacity plans in effect

Lessons Learned....

Media Management

- Can "make or break"!
 - Hospital Public Relations
 - worked with the media
 - encouraged communications
 - established history with media

Next Steps

Next Steps:

Action Plan:

- Developed and monitored by HPPC
- Involves hospitals and others
- Addresses key opportunities identified through review activities
- Status updates at monthly HPPC meetings

Statewide Review:

- In progress – Titan Systems Corp.
- Findings will be incorporated into HPPC Action Plan

Summary:

- Our emergency preparedness efforts have paid off but we still have work to do
- No drill could have adequately prepared us for what happened
- Our commitment to emergency preparedness efforts has been renewed

Questions:

