

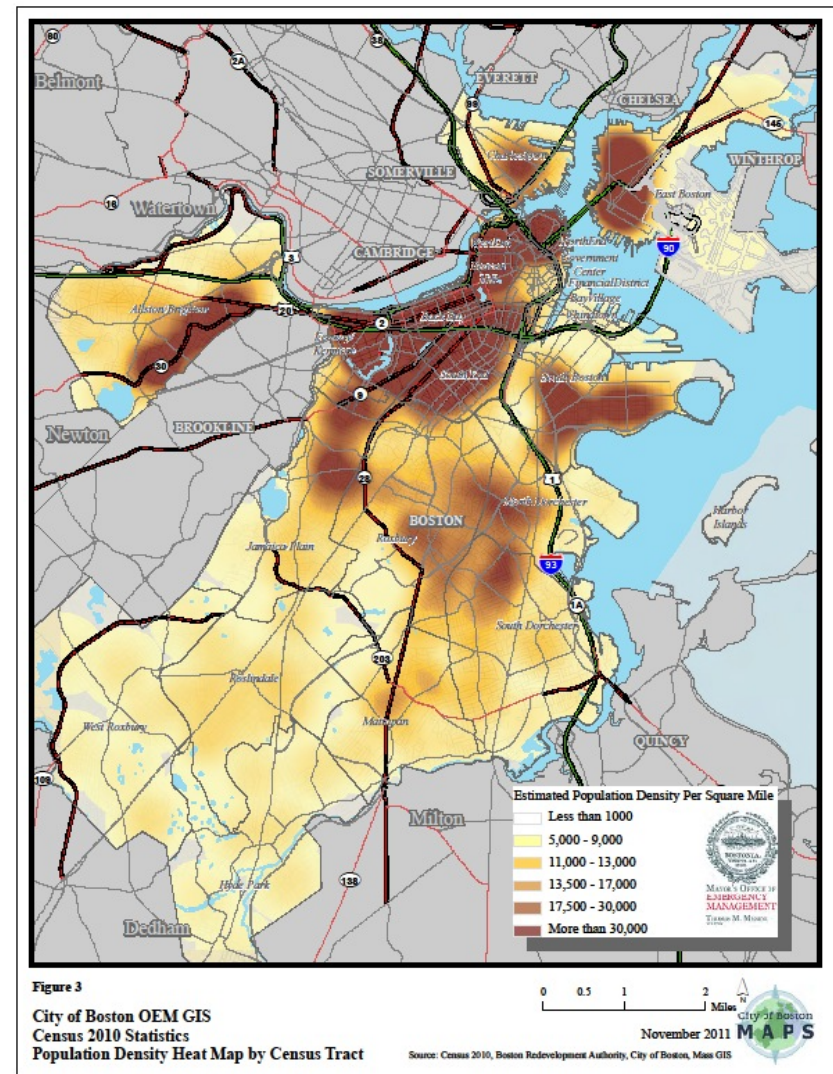
Overview of the Boston Bombing: April 2013

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Demographics

21 Neighborhoods
Resident Population: 617,594 (2010 Census)
4.8% increase from 2000
22nd in U.S.
Size: 48.4 sq/miles
3rd Highest Population Density (13,321/sq. mi)
Daytime Population:
Approx. 1.2 million (BRA)



Public Safety Agencies

- Boston EMS
 - 350+ Uniformed EMTs & Paramedics
 - 19 BLS Units / 5 ALS Units (Peak Times)
 - 111,000+ calls/year.
- Boston Fire
 - 1,467 Uniformed Personnel
 - 70 Fire Companies & Units
 - 72,000+ calls/year
- Boston Police
 - 2,000+ Uniformed Personnel
 - 800,000+ calls/year



Healthcare Systems within the city

- 10 Hospitals
 - 5 Adult Level 1 Trauma Centers
 - 3 Pediatric Level 1 Trauma centers
 - Shriner's Burn Inst.
 - Mass Eye and Ear
 - 2 VA Hospitals, one with an ED



Boston Marathon

- Multi-Day Event
- ICS Implemented
- Zone Concept
- 9 BLS / 4 ALS
- 11 Bicycles
- Medical Stations / Proceed Out Teams
- Dispatch Operations
- Coordination Centers: UCC, MEMA, MIC



Boston Marathon by the numbers

- 27,000 + registered runners
- 5,000+/- “Bandit” (non-official) runners
- 550,000+/- spectators and family members
- 1,100 members of the media
- Approx. 100 Boston EMS members assigned to the event on bikes, gators, golf carts, and in ambulances and medical tents
- Largest single day sporting event after the Super Bowl and world’s oldest annual marathon.

Arrive at Copley Sq. - Briefing



The People Supporting the Race

- 8,000 Volunteers
 - Medical Reserve Corp: Patient Tracking
- 1,200 Medical Volunteers
 - Physical Therapist, Trainers, Physicians
- 1,500 Security Personnel
- 61 Race Officials
- 250 Ham Radio Operators
- ~500,000 Spectators Along the Course
- 1,600 Total Uniform Police Officers
- 220 State Police
- 480 Members of the National Guard
- 90 (initial) then 140 Members of Boston EMS
- EMS Personnel for other Cities & Towns Along the Route
- 325 American Red Cross Volunteers



Typical Casualty Rate

- Real time patient tracking along route
- Data regularly sent to field command staff, hospitals, and race physicians during event.

	Runners	Max. Temp	Incident Totals	Transport Totals	Hospital Totals	Incidence Rate	Transports (as % of Incidents)
2010	22,540	61	1,320	42	68	5.86%	3.18%
2011	21,554	61	1,324	55	87	6.14%	4.15%
2012	22,426	87	2,181	241	260	9.73%	11.05%

Hospital Preparedness

- Hospital EOC Staffed / Monitoring WebEOC
- Collection of Supplies (Ice, etc.)
- Enhanced ED Staffing
- Briefings with supervisors and admitting staff
- Patient Tracking



Medical Tents – Set-up



10:00a.m. – General start x 3 waves
Includes Elite male runners at front



11:05 a.m.: First pitch in the Rays-Red Sox Patriots Day game at Fenway Park.



11:59 a.m.: Rita Jeptoo of Kenya crosses the finish line first in the women's race, in 2:26:25.



12:10 p.m.: Lelisa Desisa of Ethiopia crosses the finish line to win the men's race, clocking in at 2 hours, 10 minutes, 22 seconds



2:00 p.m. – The race at this point

- 17,000 runners in, 5,700 remain in the field
- 597 patients seen at med stations
- 197 still actively being treated
 - 86 in Med Tent A
 - 58 in Med Tent B
- 17 transports



- 2012 Census: 2,181 patient encounters, 241 EMS transports
NOTE: Temp at Finish line 30° lower (54°F vs. 84°F)



2:49 p.m. – A powerful explosion occurs close to the finish line at Copley Square.



2:49 p.m. - A second blast goes off one block away about 13 seconds later.



Video

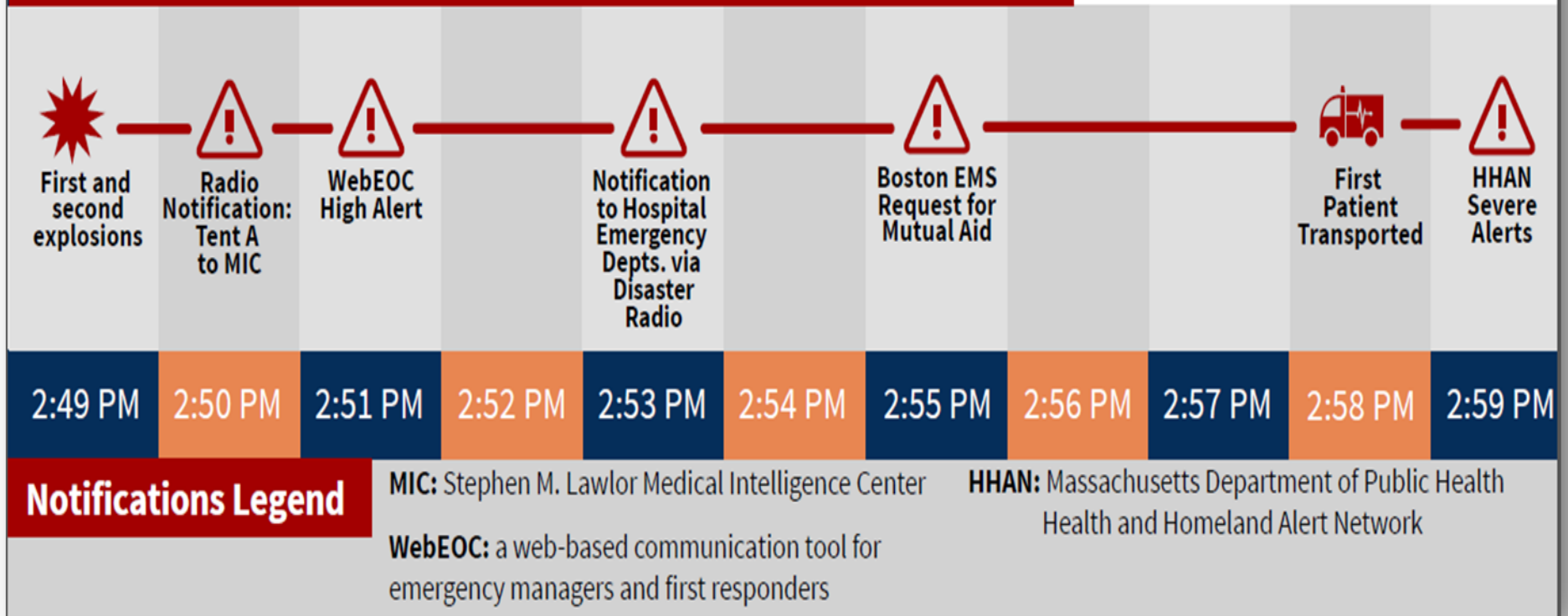
www.youtube.com/watch?v=7j7LkuPzT1c

Two Distinct Active Incident Areas

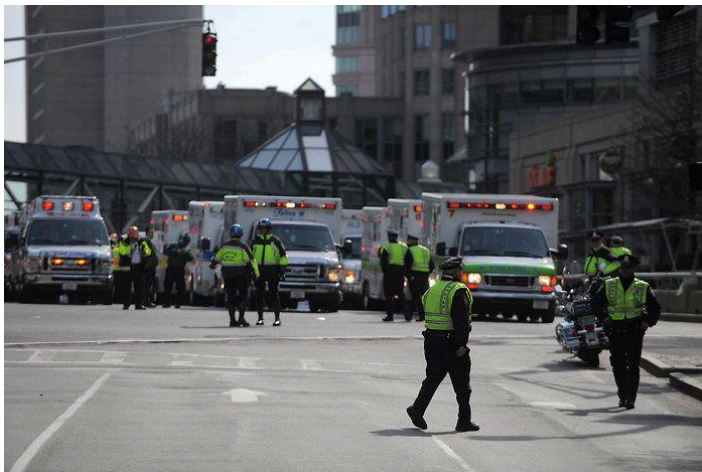


Initial Response

The First Ten Minutes: Notifications



Medical Tent A



- No longer a “medical treatment” site
- Casualty collection point
- X-A-B-C’s
- Rapid clearance of victims to next available ambulance
- Avoid multi-tasking and role confusion
 - Triage vs. Loading

EMS Staging Area





PATIENT *Transports**

41% of critical transports
in 30 minutes

75% of critical transports in
45 minutes

100% of critical transports
in 60 minutes

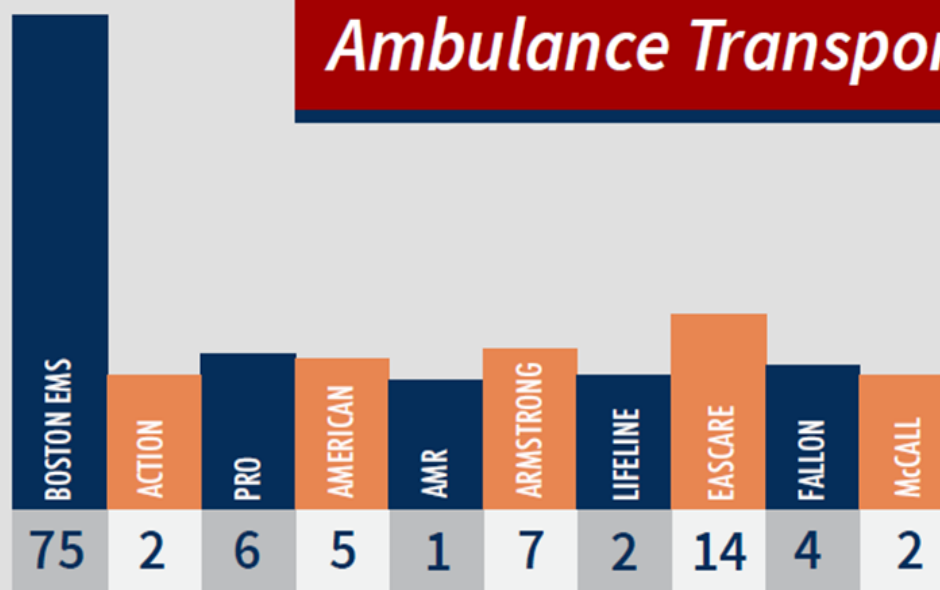
**16 non-critical patients were transported
after 60 minutes, with the final transport
occurring at 8:50pm.*

118
AMBULANCE
TRANSPORTS

75
Transports by
Boston EMS

43
Transports by
9 Mutual Aid Partners

Ambulance Transports



EMS Agency Legend

Action: Action Ambulance Service

American: American Ambulance Service

AMR: American Medical Response

Armstrong: Armstrong Ambulance

EasCare: EasCare Ambulance

Fallon: Fallon Ambulance Service

LifeLine: LifeLine Ambulance Service

McCall: McCall Ambulance Service

Pro: Professional Ambulance Service

Brewster Ambulance Service

also responded to the incident,
but did not transport patients.

Lesson #1: “Chance favours the prepared mind...” -Louis Pasteur

- Large events = opportunity
 - “*Pre-planned*” disasters
 - Implement ICS as part of any large event
- Frequent employment of ICS
- Standardized MCI Plan through the Metro-Boston UASI region
- Standardized triage tags
- Inter-agency coordination and planning
- You make your own good luck – don’t get trapped in a failure to imagine



Lesson Learned #2: Training Works



FEMA offers and funds an extensive array of courses (and exercises) our personnel and responders across the region have participated in.



Basic Trauma Life Support is hands-on training for EMS personnel, covering the skills necessary for rapid assessment, resuscitation, stabilization and transportation of the trauma patient. **'Load and Go'**



Boston EMS' DelValle Institute for Emergency Preparedness, funded through DHS and HHS funding, has offered regional training since its inception in 2003.



As a component of routine training, Boston EMS personnel receive instruction on responding to MCIs and high threat incidents through the Special Operations Division and the Boston Police Department.



Lesson Learned #3: Planning Works

- Regional MCI Plan
- Special Event Medical Consequence Plans
- Planning meetings
- A good plan is adaptable, including both known and unknown threats



2013 Boston Marathon
Medical Manual

Lesson Learned #4: Responding to an unsecured scene

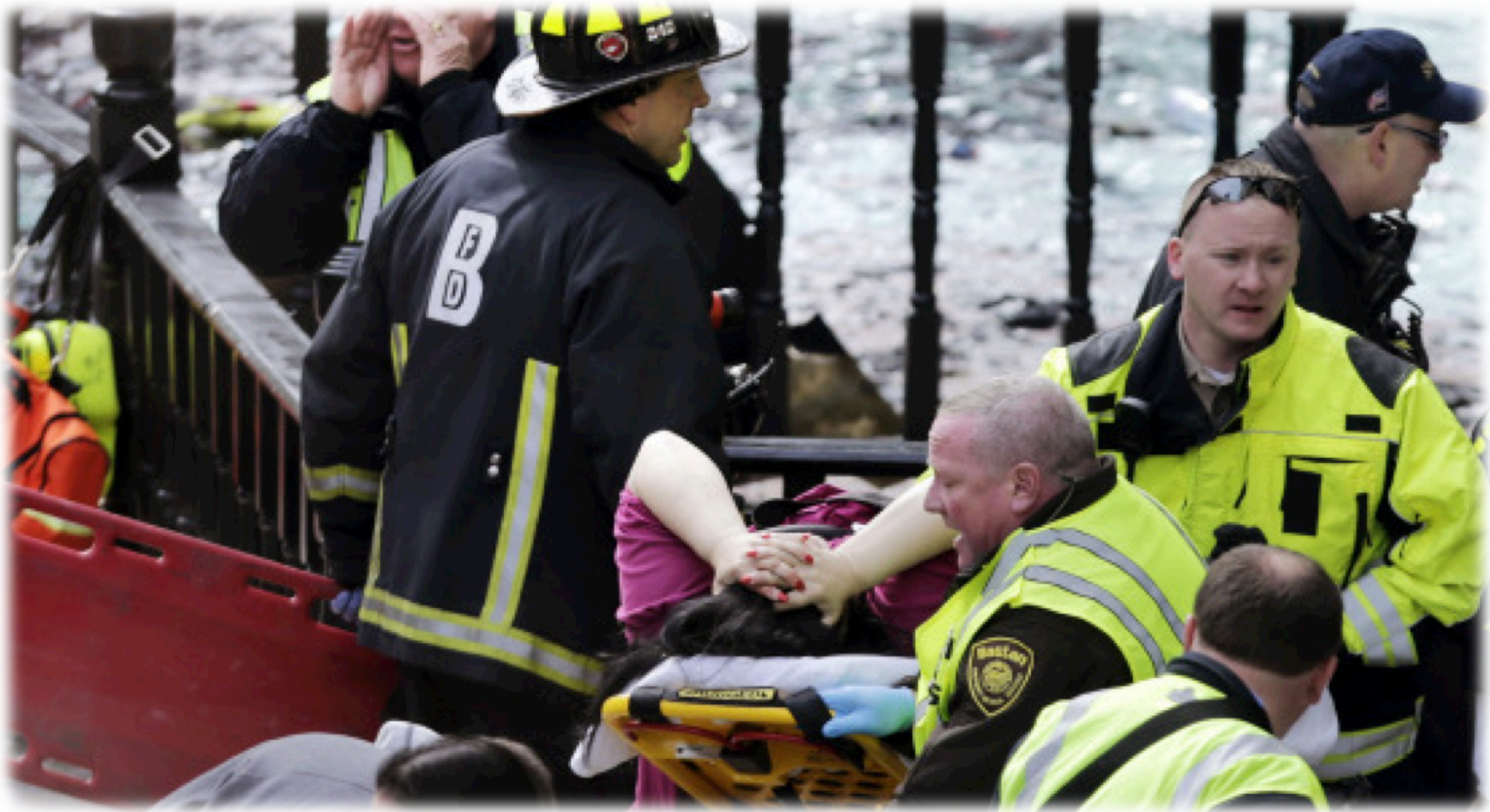


- How safe is safe enough?
- What is our threshold for risk and how do we best mitigate it?
- Personal Protective Equipment

Lesson #5: Expect and plan for others to respond too



Lesson #6: Interoperability is More Than Communications



Lesson #7: Ambulance Surge Capacity



Boston EMS would like to thank our mutual aid partners that sent support to the Boston Marathon bombing incident. The level of support we received was immediate, coordinated and responsible for saving a number of lives.



Thank you for answering the call





"When I was a boy,
and I would see
scary things in the
news, my mother
would say to me,
"Look for the helpers.
You will always find
people who are helping."

-Fred Rogers