Memorandum

Date: February 24, 2012

To: Members of the Public Safety Committee

Subject: Emergency Medical Services System

The Public Safety Committee will be briefed on Emergency Medical Services System on Monday, February 27, 2012.

A.C. Gonzalez
First Assistant City Manager

Attachment

c: Honorable Mayor and Members of the Dallas City Council
   Mary K. Suhm, City Manager
   Rosa Rios, Acting City Secretary
   Thomas P. Perkins, Jr., City Attorney
   Craig D. Kinton, City Auditor
   C. Victor Lander, Administrative Judge
   Jill A. Jordan, P.E., Assistant City Manager
   Ryan S. Evans, Assistant City Manager
   Forest E. Turner, Assistant City Manager
   Joey Zapata, Assistant City Manager
   Jeanne Chipperfield, Chief Financial Officer
   Frank Librio, Public Information Office
   Stephanie Cooper, Assistant to the City Manager

"Dallas, the City that works: Diverse, Vibrant and Progressive"
EMERGENCY MEDICAL SERVICES

Presentation for
Public Safety Committee
Louie Bright, III, Interim Fire Chief
Dallas Fire Rescue Department

February 27, 2012
PURPOSE

- To provide an overview of the Emergency Medical Service (EMS) system
- To present trends, legal constraints/regulations, challenges which have an impact on the system as well as opportunities
- To review future briefing topics
MISSION

- To provide exceptional emergency medical services and patient transportation through a system of coordinated emergency medical care and EMS surge response
OUTLINE

- Basic Response
- The EMS System
- Trends
- Future Briefings
DFRD RESPONSES

- EMS & Fire: 29,536
- EMS Only: 155,950
- Fire Only: 36,123
- Special Operations: 385

Incidents: 221,994

Emergency Medical Services (EMS): 83%

- Fire: 17%
- EMS Only: 13%
- Fire Only: 16%
- Special Operations: <1%

EMS Only: (155,950)
EMS Service

OUR BASIC RESPONSE
Calls generally fall into two categories: medical emergency or traumatic injury.

All EMS calls receive an Advanced Life Support (ALS) Rescue.

- However, an Engine is sent as an additional unit for:
  - unconscious person, chest pain, gun shot wound/stabbing, motor vehicle collision, or with a Rescue responding out of district.
On average, a Rescue is on the scene within 6:11

- However, an Engine often arrives first with ALS capabilities including defibrillator, oxygen and medications.

Most common services include:

- physical assessments, D–stick, ECG, oxygen, IV, bandaging and spinal restriction
SCENE CARE
Beyond Our Basic Response

There are certain incidents that require additional resources.

- Emergencies on highways
- Extrications and other technical rescues
- Dangerous or criminal scenes
- Multiple casualty incidents
- Mass gatherings

Those additional resources include:

- Trucks
- Special Operations (USAR, Haz-Mat, Swift Water)
- Air support
- Dallas Police Department
- Mass Casualty Vehicles and Equipment
- Mutual Aid
EMS Service

System Components
SYSTEM COMPONENTS

- Operations
- Medical Direction/Medical Control
- Education
- Hospitals
- Processes
- Regulation
KEY PLAYERS

- **Operations**
  - Dispatch
    - Ch. Tine
  - Emergency Response
    - Ch. Gillam
  - Equipment/Supplies
    - Ch. Salazar

- **Medical Direction**
  - Dr. Pepe

- **Online Medical Control**
  - BioTel

- **Education**
  - UT Southwestern Medical Center
    - Debra Cason
  - Medic CE
    - Dr. Ezzidine

- **Research/Initiatives**
  - Resuscitation Outcome Consortium (ROC)
    - Dr. Idris
  - AHA/W.W. Caruth STEMI Grant Initiative
    - Leilani Stuart
Operations - Dispatch
OPERATIONS - Field

- Emergency Response
- EMS
- Fire Suppression
- Special Operations
- USAR
- Haz-Mat
- Swift Water
- Urban Wildland
- ARFF
OPERATIONS SUPERVISION

Deputy Chief

Section Chief

Administrative Captain
EPCR Captain
QA/QI Captain
“A” Shift Captain
“B” Shift Captain
“C” Shift Captain
Special Events Lieutenant

Administrative Lieutenant

5 Field Supervisors Lieutenants
5 Field Supervisors Lieutenants
5 Field Supervisors Lieutenants
OPERATIONS RESOURCES

34 Front Line Rescues
11 Peak Demand Rescues
2 ATV Polaris Vehicles
2 Medical Carts
13 Bicycles for Bike Medic Program
1 Mass Casualty Response Vehicle
OPERATIONS – EMS Personnel

820 PARAMEDICS

Licensed or Certified by Texas Department of State Health Services
OPERATIONS – EMS Personnel

All stations with Rescues have 5-6 paramedics per shift

Paramedics rotate between Fire Suppression and Rescue positions
OPERATIONS – Mass Gatherings

- Special Events
- American Airlines Center
- Fair Park (As Requested)
- Dallas Convention Center (As Requested)
MEDICAL DIRECTION

- Medical Director – Dr. Paul Pepe
- 10 EMS physicians
  - Uniform medical protocols
  - Assist online medical control 24/7 with over 40 emergency medicine faculty available
  - Field response
  - Routine audits and case feedback
  - Oversight of initial and continuing education
MEDICAL CONTROL - BioTel

- Online Medical Control
- 14 Fire Based EMS Systems
- Coordinates ground and air transport
- Based out of Parkland Health & Hospital System
- Close communication with area hospitals
EDUCATION
University Of Texas Southwestern Medical Center

- Initial EMT and Paramedic Certification
- Continuing Education
- Student Riders
EDUCATION – Medic CE

- Online Continuing Education
HOSPITALS

- North Central Texas Trauma Regional Advisory Council (Zone 8)
- Receiving Hospital Liaison Council
- Individual EMS Liaisons

Thank you for allowing us to join you in providing care for STEMI survivors. As you know, “Time is muscle.” Improving outcomes for STEMI survivors is truly a team effort. This care begins with the EMS team. Please let me know if there is anything I can do to improve our process or provide information that may help your job in the field. We appreciate all you do!

Incident: # 202019340
Date: 1-31-12  Time: 1033

STEMI WORKUP
Chief Complaint: Chest Pain
EKG Transmitted: X Yes  No
Cath Lab activated from the Field: X Yes  No
D2B: 22 minutes  E2B 53 minutes
EMS Observation: X Yes  No
Occlusion: 100% RCA
Outcome: Home on the Feb 4th with scheduled rehab

Paula Spencer, RN, CEN
Chesn Pain Coordinator / Director, EMS Regional Outreach
Texas Health Presbyterian Hospital Dallas
214-345-7159

C. Sean Black, MD
Asst, Medical Director, Texas Health Presbyterian Hospital Dallas
Emergency Department
Chest Pain Center, Medical Director
RescueMedic

- Created by EmergiData IT programmers in collaboration with Dallas Fire Rescue paramedics
  - Built around DFR operational processes
  - Complete, rapid customization
  - Integrated technology
  - Improves QA/QI
PROCESSES
Billing - DigiTech

• Billing Company
  • February 1, 2012

• All records electronically received from EmergiData daily through EPCR software
PROCESSES
Research and Initiatives

- Resuscitation Outcome Consortium
  - CCC vs 30:2
  - ALPS
  - Estrogen

- American Heart Association / W. W. Caruth STEMI Grant Initiative
Texas EMS is regulated under Chapter 773 of the Health and Safety Code and rules adopted by the Texas Board of Health through Texas Department of State Health Services. Regulatory activities include:

- Licensure of EMS firms
- Registration for first responder organizations
- Certification/licensure of EMS individuals
- Approval of EMS education programs
- Investigation of complaints
- Enforcement activities
REGULATION - Governor’s EMS And Trauma Advisory Council (GETAC)

GETAC was legislatively established to provide recommendations on EMS and trauma regulations to the Texas Board of Health and expert input on EMS/Trauma System to DSHS Staff.

Dallas Fire Rescue has an officer that has been appointed to the GETAC EMS Committee.
REGULATION - Regional Advisory Council (RAC)

North Central Texas Trauma RAC (NCTTRAC)

Lead role in:

- developing regional trauma system plans
- integrating the many system components and
- coordinating them to promote cost-effective services for injury prevention and patient care.

RAC’s also work with local EMS to help coordinate disaster response resources.
• Policy of the city is to provide for the protection of the public interest as it relates to the transportation of the sick, injured, and deceased within the city.
• The article provides for the regulation of emergency ambulance service and private ambulance service to be administered in a manner that protects the public health and safety and promotes the public convenience and necessity.
REGULATION - Health Insurance Portability And Accountability (HIPAA)

Protects the privacy of individually identifiable health information; sets national standards for the security of electronic protected health information; and protects identifiable information used to analyze patient safety events and improve patient safety.
TRENDS

- Demand
- Response Times
- Types of calls
- Cardiac Arrests
- Paramedic Experience
- EMS Industry
DEMAND FOR EMS SERVICE

FY 06/07
- 4,679 Runs Per Unit

FY 07/08
- 4,338 Runs Per Unit

FY 08/09
- 3,878 Runs Per Unit

FY 09/10
- 3,917 Runs Per Unit

FY 10/11
- 4,041 Runs Per Unit
EMS RESPONSE TIMES*

*Does not consider the arrival of an ALS Engine prior to the Rescue
EMS RESPONSE TIMES

NFPA (National Fire Protection Agency) 1710
EMS Response Time Standard
Achieve EMS response time of 9 minutes or less for 90% of calls.

FY 10/11
Dallas Fire Rescue achieved EMS response time of 9 minutes or less 91.59% of time.
### EMS RESPONSE TYPES

**Top 5 Calls for Service** *

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>07/08</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Responses</strong></td>
<td>157,910</td>
<td>149,610</td>
<td>151,211</td>
<td>155,950</td>
</tr>
<tr>
<td><strong>Motor Vehicle Accident</strong></td>
<td>9,547</td>
<td>12,247</td>
<td>12,679</td>
<td>12,128</td>
</tr>
<tr>
<td><strong>Breathing Difficulty</strong></td>
<td>8,581</td>
<td>9,023</td>
<td>9,005</td>
<td>9,528</td>
</tr>
<tr>
<td><strong>Chest Pain (Cardiac)</strong></td>
<td>6,776</td>
<td>6,676</td>
<td>7,039</td>
<td>7,614</td>
</tr>
<tr>
<td><strong>Fall Victim</strong></td>
<td>5,404</td>
<td>6,236</td>
<td>6,487</td>
<td>7,433</td>
</tr>
<tr>
<td><strong>Abdominal (Medical)</strong></td>
<td>5,166</td>
<td>5,521</td>
<td>5,856</td>
<td>6,214</td>
</tr>
</tbody>
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* The remaining Calls for Service include about 80 other categories.
CARDIAC ARRESTS (BY AGE) 2011

- 0–17 yrs: 24%
- 18–29: 10%
- 30–39: 6%
- 40–49: 5%
- 50–69: 7%
- 70–89: 6%
- 90 up: 4%
- Unk Age: 6%
MOST CARDIAC ARRESTS 2011

RESCUE 49  48
RESCUE 33  43
RESCUE 57  41
RESCUE 28  40
RESCUE 46  40
RESCUE 25  38
RESCUE 32  38
RESCUE 38  38
RESCUE 08  36
RESCUE 53  35
<table>
<thead>
<tr>
<th>Experience</th>
<th>Number of Medics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 Years</td>
<td>124</td>
</tr>
<tr>
<td>3-5 Years</td>
<td>210</td>
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<tr>
<td>5-10 Years</td>
<td>197</td>
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<tr>
<td>10-15 Years</td>
<td>152</td>
</tr>
<tr>
<td>15-20 Years</td>
<td>97</td>
</tr>
<tr>
<td>20-25 Years</td>
<td>21</td>
</tr>
<tr>
<td>Over 25 Years</td>
<td>19</td>
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EMS INDUSTRY TRENDS

• Hospital Specializations – Field Activations
  • Trauma Center
  • Stroke Center
  • PCI Capable (Percutaneous Coronary Intervention)
• Electronic Patient Care Reports
• 12 Lead Transmission from Field
• Prehospital Research
• Community Health Programs
FUTURE PRESENTATIONS

• STEMI Patient Care (AHA/Caruth)

• Cardiac Arrest Performance (ROC)

• New Technologies in System

• EMS Surge Capacity (Mass Gathering) and Disaster Capabilities
FUTURE PRESENTATIONS

- Benchmarks and Metrics
- Medical Direction for City of Dallas Medical Services
- Community Health Program
- Tiered Response
QUESTIONS?