LBFD RAPID MEDIC DEPLOYMENT PILOT PROGRAM

September 1, 2015

Long Beach Fire Department

Outline

1. Background
2. Alternatives
3. Approval Process
4. RMD – Training & Implementation
5. Data Collection & Analysis
6. Where Are We Now?
7. Next Steps

How We Got Here

2011	• Eliminated Engine #101 • Eliminated Rescue #12 (ALS) • Reduced Staffing at Station 14 • Daily Engine Reduction
2012	• Eliminated Engine #18 • Eliminated Truck #14
2013	• Eliminated Engine #17 • Relocated Engine #8 to Station 14 • Adopted RMD in Budget
2014	• Implemented RMD Pilot Program ✓ Added Rescue #12 (Converted BLS to ALS) ✓ Added Rescue # 22 (Converted BLS to ALS) ✓ Added Rescue #3 (Converted BLS to ALS) ✓ Added two Ambulances (BLS)
2015	• Pilot Continues ✓Added 1Ambulance (BLS)

Deployment Alternatives

Where did it come from?

- RMD Not invented in Long Beach
  - 1999 City of Los Angeles Fire Department received approval
- Utilized throughout the Country & California
  - 29 of 33 California Emergency Medical Services Agencies currently allow 1 paramedic system

RMD Approval Process

Local Emergency Medical Services Agency Approval Process

- Initially introduced Sept 2011 to EMS Agency as pilot study
- Pilot program vetted through multiple committees & stakeholders
- May 2013, LBFD submitted pilot project proposal
- 2 years worth of retrospective data was provided to the EMS Agency for analysis prior to program approval
- June 2013, Pilot project endorsed by EMS Commission
- Policy Reference No. 407 had to be updated from LAFD 1999 approved program (2-year update)
- Data Safety Monitoring Board (DSMB) - created by EMS Commission

DSMB

Data Safety Monitoring Board

- DSMB comprised of 4 distinguished physicians & educators from LA County
- Created to review and monitor RMD program performance
- LBFD provided raw data monthly for review by the DSMB
- DSMB reviewed 32 data points per month
- DSMB provided periodic updates to EMS Commission on the RMD program

City Council Discussion

City Council

- August 14, 2012 - Budget Presentation
- December 11, 2012 - Status Update
- March 12, 2013 - Status Update
- September 3, 2013 - Budget Presentation
- November 5, 2013 - Agenda Item #25 (GEMT)
- June 10, 2014 - Status Report
- August 12, 2014 – Budget Presentation
- August 18, 2015 - Budget Presentation

Budget Oversight Committee

- August 15, 2012 - Budget Presentation
- August 20, 2013 - Budget Presentation

Public Safety Committee

- December 18, 2012 - Presentation

What RMD did for LB

Advantages

- Added ALS units
- Maintained 4-person staffing
- Response times improved
- Reduced reliance on automatic aid
- Patient outcome data improved
- Stabilized budget

Disadvantages

- Reduction in sworn staffing
- Union opposition
- Changes to Standard Operating Procedure
- Culture change

Training Process

- Creation of RMD manual
- Department-wide RMD training conducted
- Increased training for ambulance operators
- Increased driver training for ambulance operators
- Solicited feedback from rank and file
- Provided continuing education and ongoing review

RMD Implementation

- Program approved in May 2014
- Began 2-year pilot program July 10, 2014

Data Collection Methods

Process for collecting our data

- Daily medical reports
- Computer Aided Dispatch data
- EKG Monitors
- Raw data sent monthly
- LBFD management not provided raw data
- Data Safety Monitoring Board conducted all data analysis

Data Outcome (DSMB)

Treatment and Unit Response	Pre- RMD	Post-RMD
Dispatch Time to EKG	12 minutes	11 minutes
Cardiac Arrest -Time to Defibrillation	9.5 minutes	9 minutes
Return of Spontaneous Circulation (ROSC)	21.8%	40.9%
Scene time for Critical Trauma	14.2 minutes	13.1 minutes
Response time for 1st PM on Scene Trauma	7.9 minutes	6.2 minutes
Response time for Chest Pain (any Unit)	5 minutes	5 minutes
Response time for Cardiac Arrest (any Unit)	5 minutes	6 minutes
Cardiac Arrest, Chest Pain and Trauma		
1st Paramedic Assesment Unit (PAU) on Scene	20.7%	44.4%
Non-PAU on Scene first (Basic Life Support)	38.7%	0%
Simultaneous Arrival (Rescue & Engine)	32.4%	42.6%
Rescue Arrive First	8.2%	13%

Data Outcomes

- Response Times (1st PM Arrival)

Chest Pain	Cardiac Arrest	Trauma
Pre-RMD: 9:23	Pre-RMD: 6:16	Pre-RMD: 7:52
Post-RMD: 6:05	Post-RMD: 4:45	Post-RMD: 6:10

- Call volumes per Rescue
  - Pre-RMD: 13.1 calls per day
  - Post-RMD: 11.7 calls per day
- Reliance on Automatic Aid (Medical Only)

LA County:

- Pre-RMD: 292 calls for service
- Post-RMD: 10 calls for service

Orange County:

- Pre-RMD: 450 calls for service
- Post-RMD: 218 calls for service

Agency Communication

- Attended EMS Commission meetings to provide feedback & receive updates
- Maintained constant contact with agency on RMD program
- Provided updates on system changes
- Quickly responded to any issues brought forth by EMS Agency
- Received formal communication from DSMB on May 27th, 2015 (on next slide)
- New Medical Director started July 1, 2015

DSMB Letter – May 27, 2015

- "There is no evidence of any patient harm associated with the RMD staffing model"
  - "For patients in cardiac arrest requiring defibrillation, we note a non-statistically significant trend towards more rapid defibrillation…"
  - "For patients with chest pain, we note a statistically significant decrease of approximately 1 minute in the time from dispatch to initial EKG…"
  - "For patients with traumatic injuries, we note a statistically significant decrease in the time to the first paramedic on scene, by approximately 1.7 minutes…"
- "The DSMB notes the consistency of the data over time which the DSMB finds reassuring evidence that the effects of the RMD Pilot Project are stable"
- "Based on this review and these observations, the DSMB recommends:"
  - "The RMD Pilot Project be terminated at this time" [made permanent]; "and"
  - "The LBFD make further staffing and deployment decisions based on the conclusion that the data reviewed demonstrate no evidence of harm associated with the RMD Project and evidence of patient benefit in specific metrics…."

Termination Letter

- New Medical Director conducts 4-hour ride-along on August 5, 2015
- Medical Director Requests follow-up meeting August 13, 2015
- Received letter terminating the RMD pilot August 26, 2015
- Concerns leading to termination:
  - Ambulances staffed w/new employees (EMTs & Paramedics)
  - Lack of mentorship for new EMTs
  - Paramedics concerned with compromising accreditation & license
  - 2nd paramedic arrival delaying transport of patients
  - No effective mechanism to identify high-risk cases
  - Data collection & reporting weren't adequate for analysis
- Data collecting & reporting is not robust enough to conduct comprehensive & timely analysis of system performance
- Tier 1 fall-outs were identified by LBFD & examined by EMS agency

Next Steps

- We plan to meet with the EMS Commission at its September 16, 2015 meeting to review the letter and discuss transitioning to the previous model
- We will develop solutions to meet Fire Department budget goals
- We will work closely with the City Manager and Financial Management to identify viable solutions
- We will comply with the direction provided by the EMS Agency
- We will revert to pre-RMD staffing

FY 16 Budget Impact

- Termination of RMD will have an estimated $1.4 million budget impact to Fire
- FY 16 Budget will be managed through reducing costs, First Responder Fee revenue, and FY 15 year-end savings:
  - Fire will make adjustments to minimize the FY 16 Budget impact
  - Budget Office will track First Responder Fee revenue received in FY 16 and use it to cover the additional costs
  - FM recommends reserving $1.4 million of any FY 15 year-end savings, in case First Responder Fee revenue and other reductions are not sufficient
  - Any permanent solution will be addressed in the FY 17 Budget process

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