

A Faster Ignition for Arrest Recognition: *Making Dispatch Modifications to Save More Lives*

Marc Eckstein, MD, MPH, FACEP

Medical Director

Los Angeles Fire Department

Professor of Emergency Medicine

Keck School of Medicine of the University of Southern California



**Los Angeles Fire
Department
Tiered Dispatch System**





Background

- New Tiered Dispatch System (TDS) Created by LAFD and implemented Dec 2014
- Focus on *time-critical* incidents
- Particular emphasis on recognition of cardiac arrest/agonal breathing and early provision of DA-CPR



How did we get here...

The roadmap to the LAFD TDS

- LAFD used a commercial OTS software for 25 years
- Analysis of “best practices” from around the nation
- Incorporated the best attributes of these systems and made our own dispatch system

History of LAFD Emergency Medical Dispatch

MPDS – 1988-2014

TDS – Launched December 1, 2014

Fire Dept. Begins Overhaul of Medical Emergency System

By JOHN KENDALL, Times Staff Writer

The Los Angeles Fire Department, facing stiff criticism that its responses to medical incidents have been "inadequate" in many cases and "seriously mishandled" in others, is revamping its emergency medical dispatching system according to the prescription of a Salt Lake City doctor.

The expert is Jeff J. Clawson, 41, creator of the "Clawson's protocols," a system of priority medical dispatching that enables fire dispatchers to determine the seriousness of emergency calls and to send the appropriate level of aid.

The program is expected to be in place in Los Angeles by January.

In the meantime, the Fire Department has modified its dispatch procedures and now sends engine companies on many low-level medical incidents. It also plans to equip fire engines with automatic defibrillators for thousands of heart attack calls received each year.

But adapting Clawson's system to Los Angeles conditions is viewed by city officials as a key step in efforts to improve poor response times by overhauling the city's emergency medical system.



Los Angeles Times

8.00 DESIGNATED AREA HIGHWAY 80 PAGES © 2012 FTB FRIDAY, MAY 18, 2012

latimes.com



TECHNICIAN Meicha Chen works the control panel for a news program at New Tang Dynasty Television in New York. The station, owned by a group based in China, has aggressively pursued Chinese political scandals.

Dispatch lag slows LAFD call response

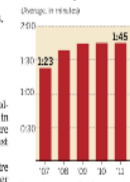
Operators on average take far longer than the national standard to send rescuers, a Times analysis shows.

By BEN WELSH, ROBERT J. LOPEZ AND KATE LINTHICUM

When Javier Ortiz collapsed in his backyard in Echo Park, rescuers were stationed in a firehouse just a half-mile away.

But the Los Angeles Fire Department's dispatcher who answered the 911 call from Ortiz's daughter took more than 2 1/2 minutes to send the firefighters —

Response time
From time Fire Department answers a medical 911 call to dispatch of units (average, in minutes)



Source: Los Angeles Fire Department. KENNETH WALLACE/LA TIMES

ers were dispatched to med-



What was the need for a new system?

- 25 years with the same system, with minimal improvements
- Inability to modify/customize system
- Inability to dispatch quickly on some critical patients
- Long call processing times
- Lack of identification of cardiac arrest and low percentage of bystander CPR
- Not aligned with local policies
- Poor Customer Service – Long interrogation which leads to increased anxiety and stress of caller and call taker

TDS goals

- ↓ Call Processing Times – Especially for Time- Critical Patients
- Improve Recognition of Cardiac Arrest
- ↓ Time to “Hands on the Chest” for CPR
- ↓ Over triage
- ↑ Survivability Rate from Witnessed Cardiac Arrest



LAFD TDS Philosophy

- ***NO-NO-GO!!!***
- ***IMMEDIATE DISPATCH*** on highest risk patients
 - Bad trauma (mechanism of injury)
 - Suspected arrests
 - Ineffective breathing/severe respiratory distress
 - Choking
 - Active seizures

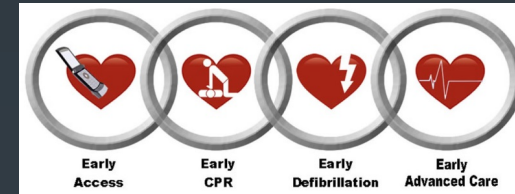
No-No-GO!



- ***Get hands on the chest!***
 - Look for an opportunity to do CPR on *every potential cardiac arrest*
 - It is ok to provide EIs for chest compressions for an unconscious patient who is in suspected arrest and turns out not to be in arrest but...
 - It is NOT ok to fail to provide or delay the provision of PAls in actual cardiac arrests
 - *No bystander CPR... game over!*



Why is this important?



- Chain of Survival
- Lack of bystander of CPR is predictive of death
- Recognition of Agonal Breathing is vital
- Agonal breathing is highly predictive of a shockable rhythm

How are we doing so far?



- ↓ Call Processing Times (16 sec overall, approx 30 sec for Immediate Dispatches)
- ↑↑ recognition of cardiac arrests
- ↑↑ rate of Dispatcher Assisted CPR



Comparison



2014 Q1

- 291 OOHCA 911 calls
- Avg age: 62.9
- Male: 61.4%
- Witnessed: 34.4%

2015 Q1

- 312 OOHCA 911 calls
- Avg age: 63.5
- Male: 63.1
- Witnessed: 32.4%

Preliminary results

2014 Q1

Bystander Witnessed

- N = 142
- CR to dispatch: 1:27
- CR-CA Recognition: 2:16
- BCPR = 81 (57%)
- ROSC = 62 (44%)
- **Survived = 7 (5%)**

Witnessed/Shockable

- N=33
- BCPR = 18 (55%)
- **Survived = 5 (15%)**

2015 Q1

- N = 144
- CR to dispatch: 1:04
- CR-CA Recognition: 1:34
- BCPR = 97 (67%)
- ROSC = 61(42%)
- **Survived = 15 (10%)**

- N = 48
- BCPR = 34 (71%)
- **Survived = 11 (23%)**



Summary

- Preliminary data suggests that a focus on rapid dispatch, cardiac arrest recognition by dispatchers, and getting hands on the chest saves lives!

Thank you

