EMD CPR

"The First First Responder"

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“The First, First Responder”

- Objectives
  - 1. Why does EMD matter?
  - 2. Review Role of EMD as Key Part
  - 3. Agonal Respirations
  - 4. Review Barriers to Bystander CPR

Why does EMD matter in CPR?

- How long can brain cells survive following cardiac arrest?
- How long before First Responders arrive?

"The First, First Responder"

- Time from collapse to CPR critical
- PAI CPR decreases this time interval
- Goal for CPR initiation is?
  - 1 minute
- US average response time 4 – 6 minutes
- Average response time for ALS in US?
  - 8 – 12 minutes

Emergency Medical Dispatch / EMD

EMS NEEDS THE DISPATCHER


Making Everything Easier!™
Novelty Edition
Button Pushing
FOR
DUMMIES
Learn to:
Mispronounce street names
Make the man who was shot 17 times a BLS Sickness
Send the unit from the other end of the City clear across town, just because you can
By 33HCFAS35 & 11BCFARS84
WHEN THE TOUGH GET GOIN
911
DISPATCHERS

TIME IS CRITICAL

Survival decreases by 10% for every minute treatment is delayed

Adult Chain of Survival

1. Immediate recognition of cardiac arrest and activation of the emergency response system
2. Early CPR with an emphasis on chest compressions
3. Rapid defibrillation
4. Effective advanced life support
5. Integrated post–cardiac arrest care

How many links with EMD?

1 2 3

1. Immediate recognition of cardiac arrest and activation of the emergency response system
2. Early CPR with an emphasis on chest compressions
3. Rapid defibrillation

Frequently Asked Questions

- Can I harm the patient?
- Should dispatcher's be trained in CPR?
- Caller doesn’t want to perform CPR?
- Caller knows CPR and is doing it?
- Dispatcher feels bad if person dies?
- Cannot get patient into position for CPR?
- Most die, why all the work?

"The First, First Responder"

- What are the two interventions which result in best chance of survival?
  - 1. High-Quality CPR
  - 2. Early Defibrillation

- Why is EMD so important in cardiac arrest?

“The First, First Responder”

- Amsterdam dispatch
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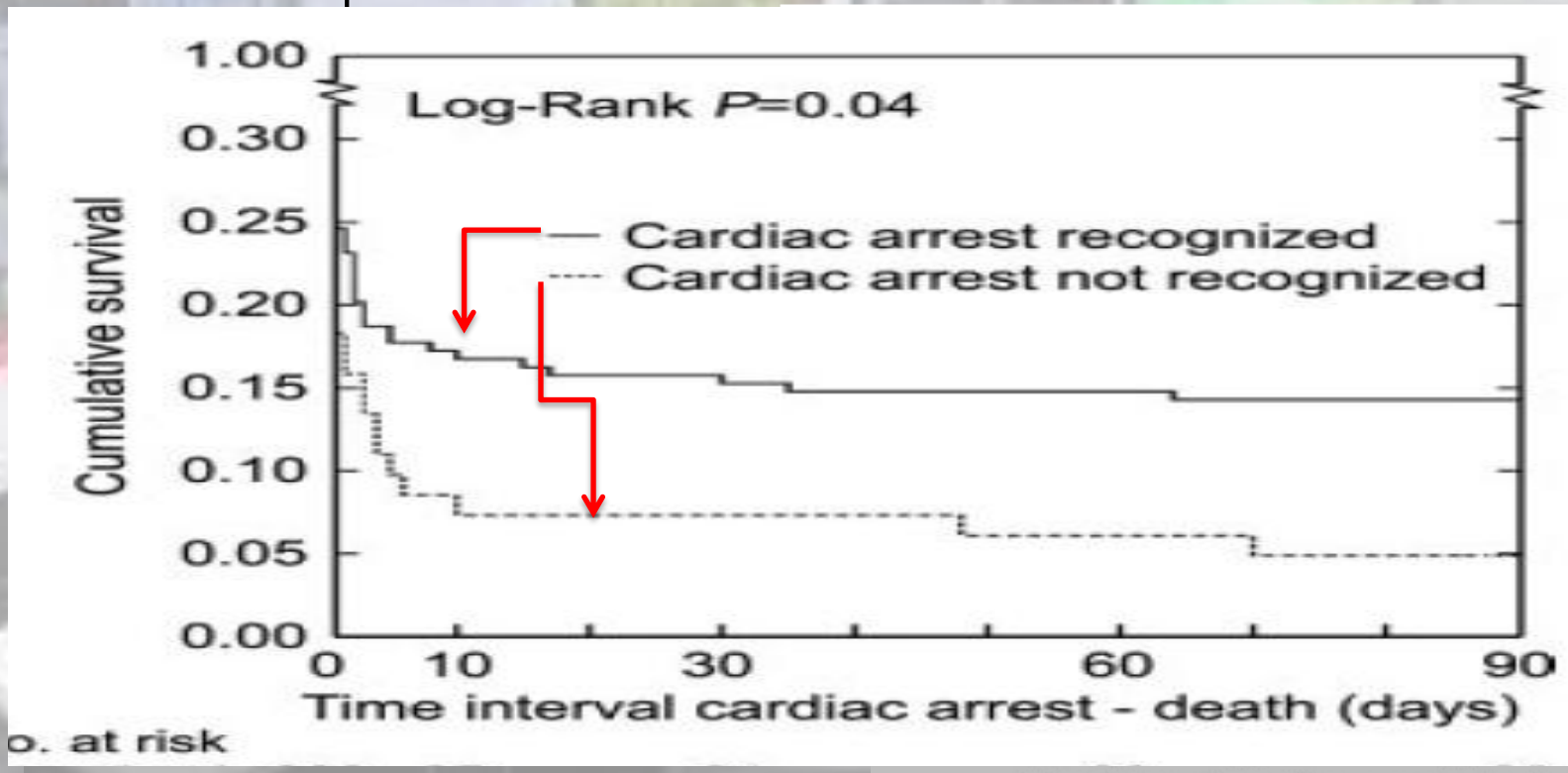


on
ed
90
Time interval cardiac arrest - death (days)
o. at risk

Resuscitation Science

Importance of the First Link

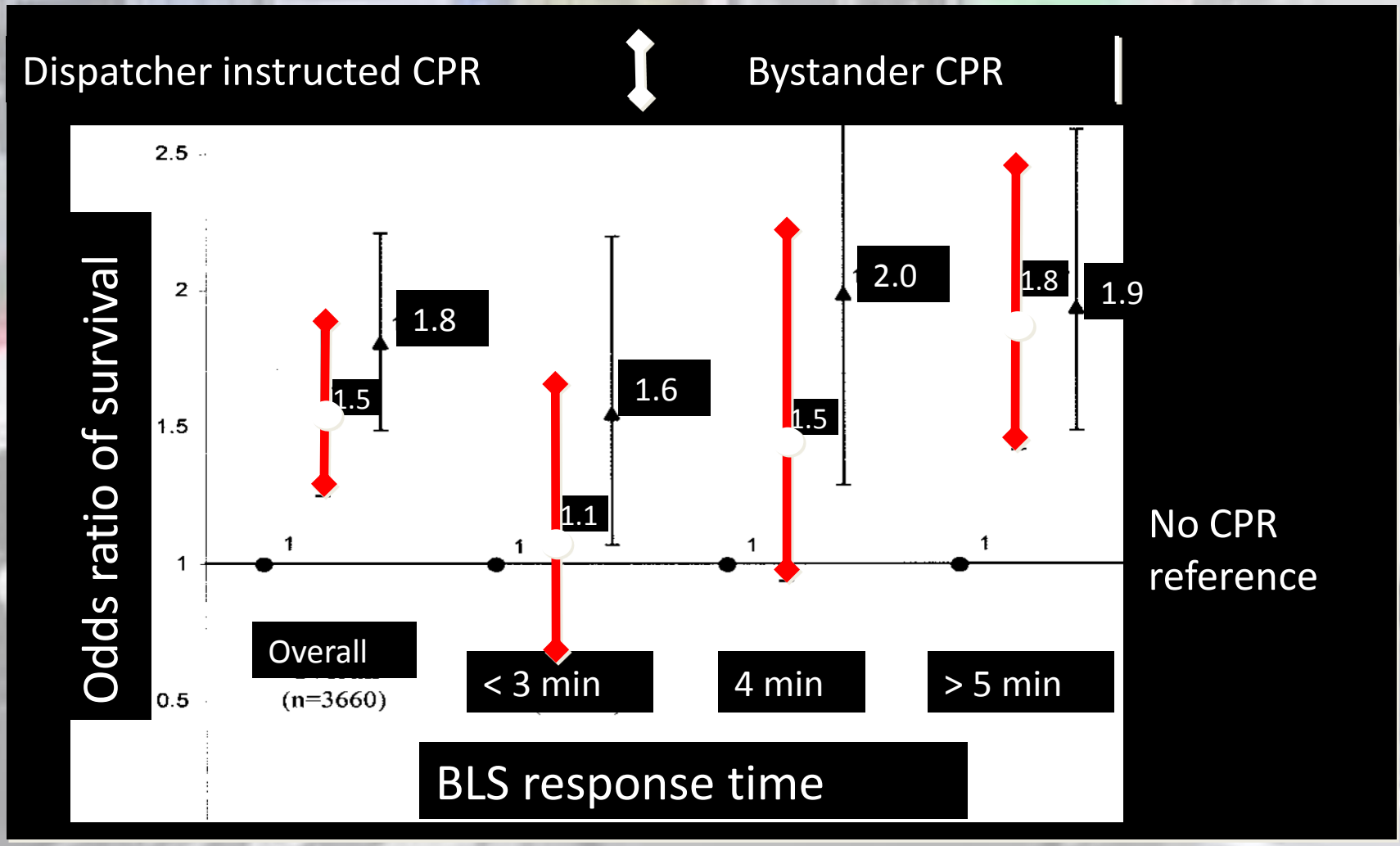
Description and Recognition of an Out-of-Hospital Cardiac Arrest in an Emergency Call

Jocelyn Berdowski, MS, MSE; Freerk Beekhuis, RN; Aeilko H. Zwinderman, PhD; Jan G.P. Tijssen, PhD; Rudolph W. Koster, MD, PhD

Berdowski, *J. Circulation*. 2009;119:2096-2102

Odds ratio of survival by CPR status and BLS response time

Witnessed cardiac arrest, King County 1983 – 2000, n = 7265



Rea TD *et al. Circulation. 2001;104:* 2513-2516.

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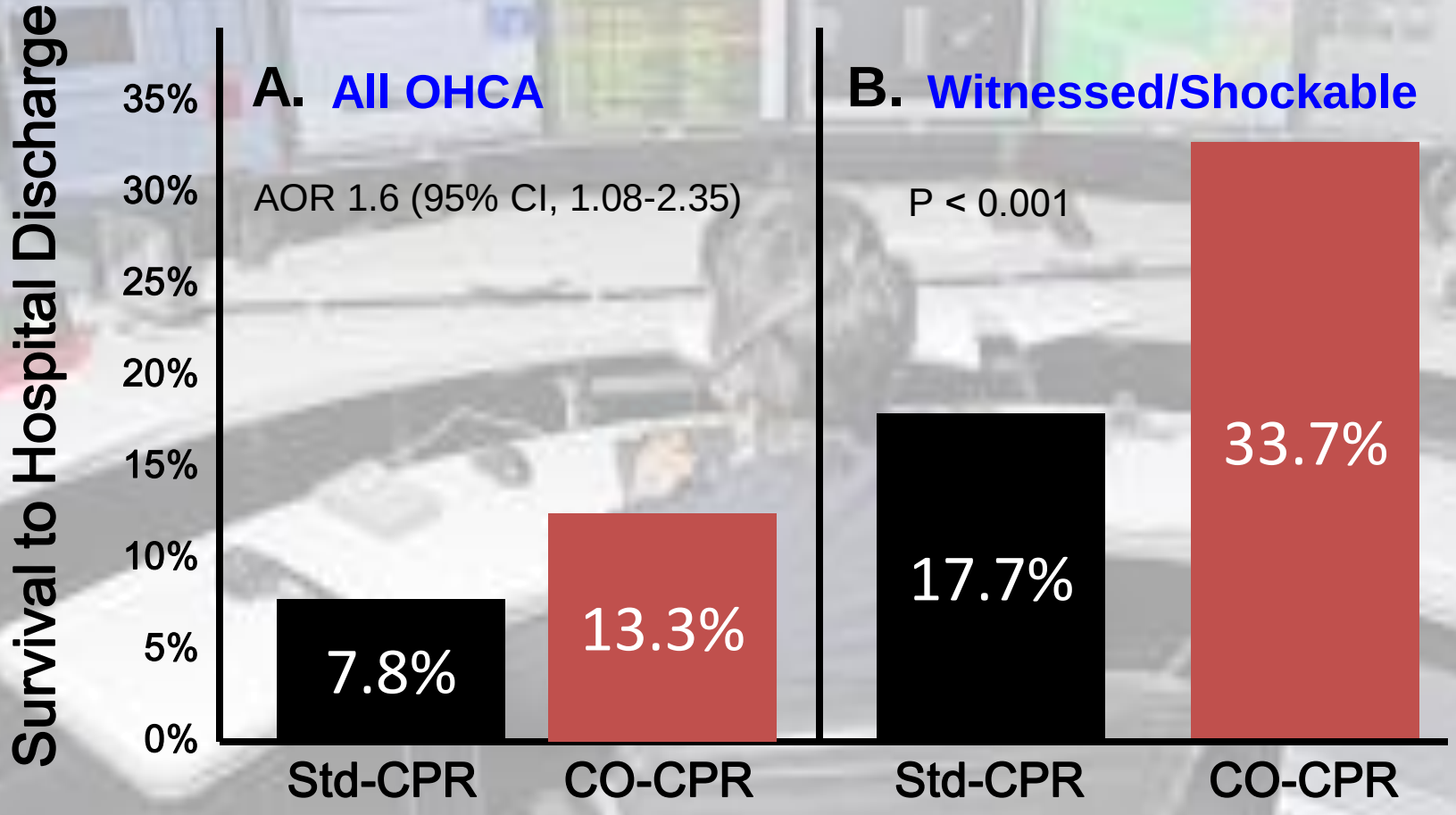
JAMA ORIGIONAL CONTRIBUTION

Chest Compression-Only CPR by Lay Rescuers and Survival From Out-of-Hospital Cardiac Arrest

Bobrow *et al.*

JAMA 2010;304:1447-1454

"The First, First Responder"



Bobrow, et al. JAMA 2010:304:1447-1454

Common Delays in Delivering CPR

- Research showed these common causes of delay to CPR:
  - Unnecessary questions asked
  - Bystander not near patient
  - Omission of “breathing normally”
  - Deviation from protocols

Unnecessary questions cause delays

- How old is the patient?
- Does the patient have a heart history?
- Duplication of questions.
- What is the patient experiencing?

If patient is not conscious and not breathing - normally do we really need to know medical history?

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…the

We need to offer CPR without delay and inform the caller that we will help them.

“The Agony of Agonal Respirations”

Agonal Breathing Facts

- Agonal breathing present 40 % of arrests
- Commonly mistaken for signs of life
- Very difficult to recognize over phone
- Prevents bystanders from CPR
- Caller may report as breathing to EMD
  - Delay in recognition of cardiac arrest
  - Prevent pre-arrival instructions for CPR

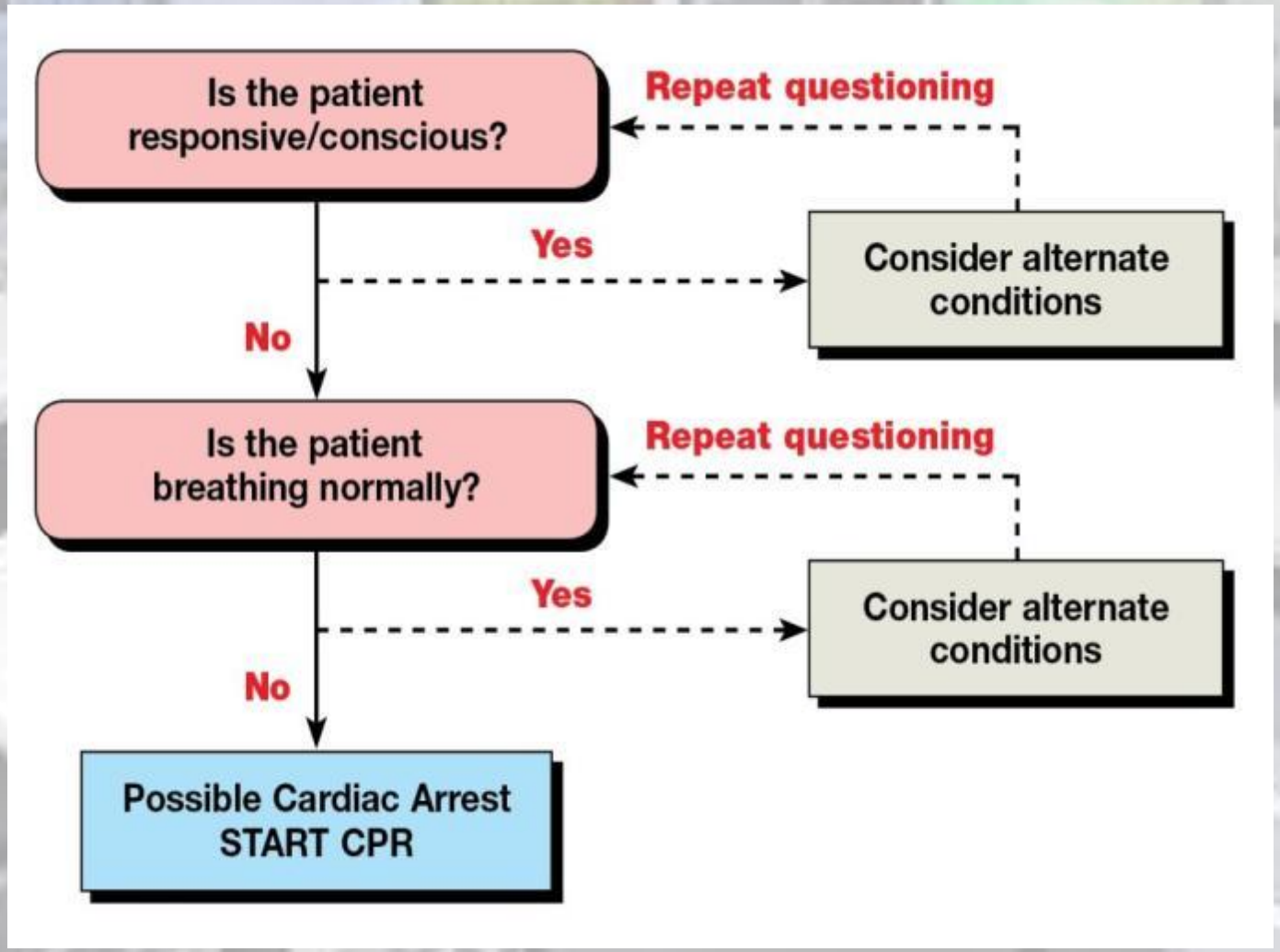
Agonal Breathing Facts

- Agonal breaths is the last respiratory pattern seen before apnea
- Duration may be 1 or 2 breaths
- Duration may be minutes to hours in some cases

Agonal Respirations

- Described by callers in a variety of ways:
  - barely breathing
  - heavy, labored breathing
  - gasping
  - snoring, snorting
  - gurgling
  - groaning, moaning
  - breathing every once in awhile

2-Question Approach



EMD Case

PREHOSPITAL / EMD

Because dispatcher CPR instructions substantially increase the likelihood of bystander CPR performance and improve survival from cardiac arrest, ALL dispatchers should be appropriately trained to provide telephone CPR instructions (Class I, LOE B).

2010 AHA Guidelines for CPR & ECC

“*The Agony of Agonal Respirations*”

LAFD dispatchers waste time getting 911 callers to start CPR

September 2012

- Article in LA Times
- "Speed is everything," says the report, which was obtained under the California Public Records Act. "Withholding or delaying [CPR] may result in a potentially preventable death!!"

"*The Agony of Agonal Respirations*"

- Percentage of CC started?
  - 31 %
- Average time to begin CC?
  - 4 minutes and 12 seconds
  - Longest 7 minutes and 30 seconds

AHA January 2012 EMD

- **Dispatchers should help 9-1-1 callers identify cardiac arrest victims and coach callers to provide immediate CPR.**
  - *If more dispatchers followed these processes, thousands of lives could be saved every year.*

AHA January 2012 EMD

- **Communities should regularly evaluate 9-1-1 emergency dispatchers' performance and the overall emergency response system,**
  - American Heart Association statement.

AHA January 2012 EMD

- **Dispatchers should confidently give Hands-Only CPR instructions for adults who have had a cardiac arrest *not* caused by asphyxia (as in drowning).**

AHA January 2012 EMD

- Communities should measure performance of dispatchers and local EMS agencies, including how long it takes until CPR is begun.

- Performance measurements should be part of a quality assurance program involving the entire emergency response system including EMS and hospitals.

Dispatcher as First, First-Responder

- Measure what you are doing now
- Look for ways to improve your process
- Empower your dispatcher to get hands on chest quickly
- Measure what you changes you make and outcomes