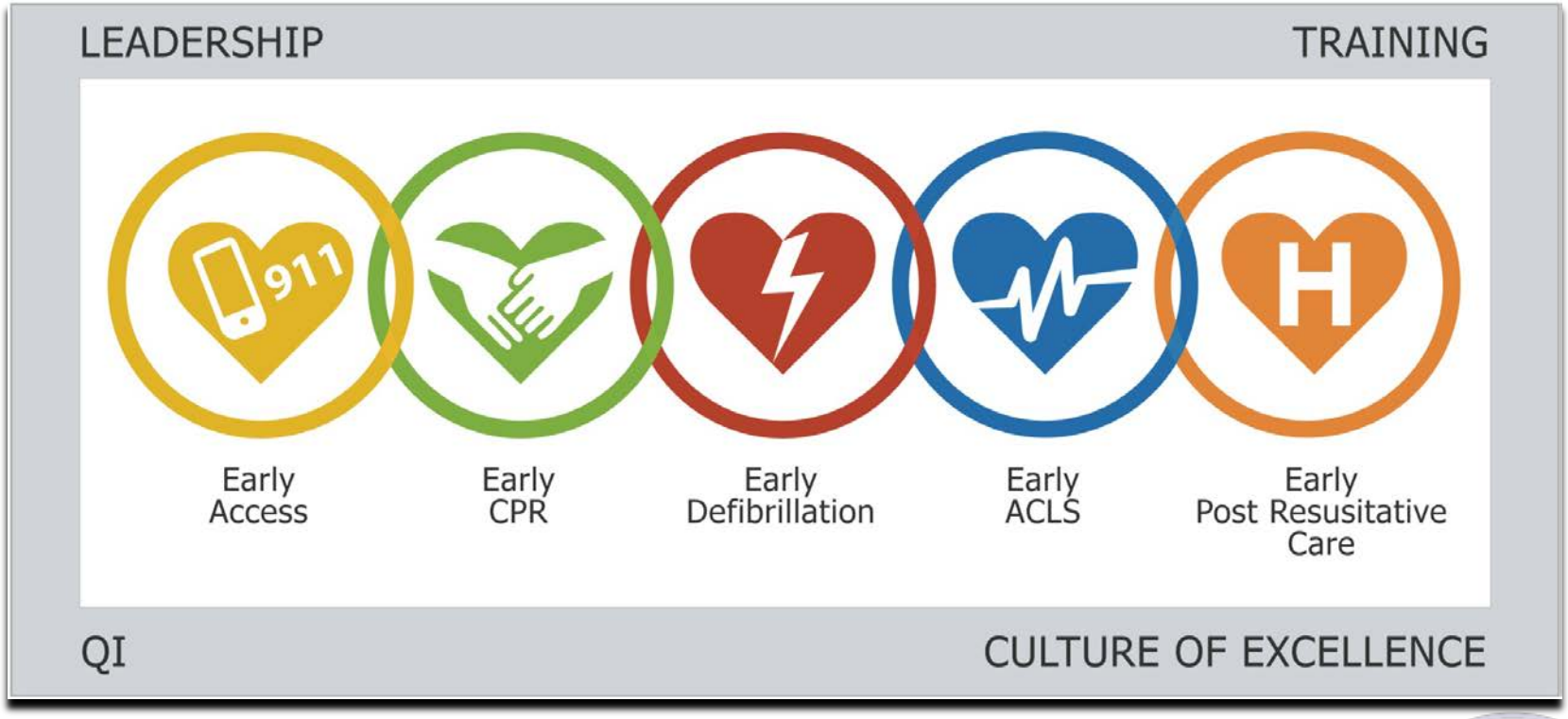

RESUSCITATION
ACADEMY


Improving Cardiac Arrest Survival
... in your community
Global
Resuscitation
Alliance
RESUSCITATION
ACADEMY

Ten Programs to Improve Cardiac Arrest Survival



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What programs?

Part 1 : Low Hanging Fruit

- Cardiac Arrest Registry
- Dispatcher Assisted CPR
- High Performance CPR
- Rapid Dispatch

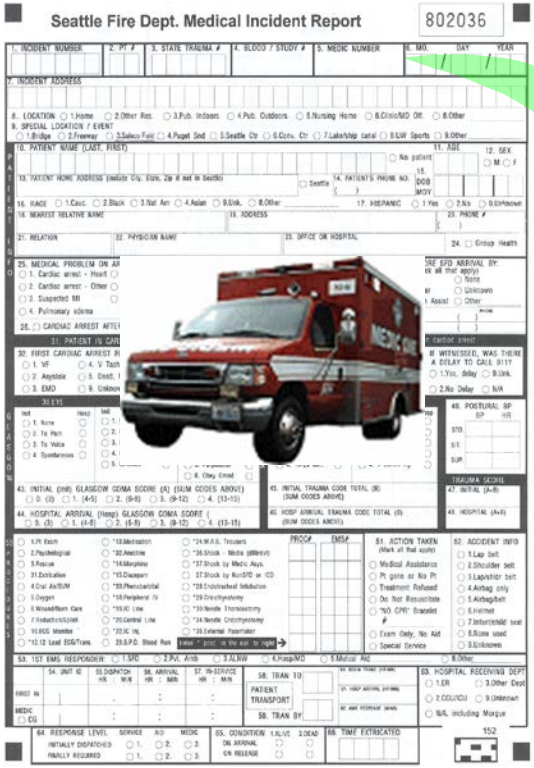
Why a Registry?

- Requires work (data collection/retrieval)
- Describes EMS & hospital outcomes
- Foundation of “measure to improve”
  - Performance feedback
  - Can itself improve outcome

1. Cardiac Arrest Registry

CARDIAC ARREST TRACKING SYSTEM	
EVENT VARIABLES	OUTCOME VARIABLES
Demographic information	Died at scene
Age, sex	Admitted to hospital
Collapse before EMS arrival	Discharged alive
Witnessed collapse	Discharge location *(optional)*
Time of call to 911	CPC score on discharge *(optional)*
Resuscitation stopped because of DNR orders	
Rhythm on arrival *(or shockable rhythm on arrival)*	
PAD shock	
Dispatcher-assisted CPR	
Bystander CPR without dispatcher-assisted CPR	
Estimated time from call to 911 and bystander CPR *(half of interval from 911 call to scene arrival)*	
Time from call to 911 to time to dispatcher-assisted CPR *(first compression)*	
Time from call to 911 to time to EMS CPR	
Time from call to 911 to time to first shock	

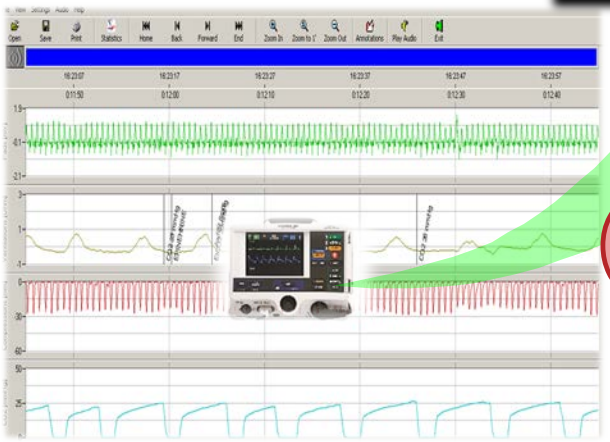
1. Cardiac Arrest Registry


Seattle Fire Dept. Medical Incident Report

802036

EMS

Data Gathering



Incident Report

Print Report

INCIDENT # F050000582
INCIDENT DATE: 1/2/2005 16:49:51 hrs

Agency: SFD
Jurisdiction: SFD

Incident Overview

Location:	12739 39th Av Ne	City	Seattle, WA 98125
Initial Problem Type:	MED7 - Medic 7 Person Rule	Final Problem Type:	MED7 - Medic Resp, 7 Mem. Rule
Initial Alarm Level:	1	Final Alarm Level:	1
Units Assigned:	E39 E40 M16	Response Area:	Battalion 6
Disposition:			a E

Location Infor

Location Name:

Map Reference:

NE 130TH ST

Call-Taking In

Taken By:

REF

EMD

0/0

Dispatcher Co

1. 56/M UNC UNR

16:50:20

Units Assigned (* Primary Unit)

Unit	Assigned	Enroute	Arrived	Transport	Trans. Complete	Complete	Cancel Reason	ETA
E39	16:50:28	16:51:29	16:55:02*			17:21:01		2:52
E40	16:50:28	16:51:39	16:55:03			17:19:50		6:54
M16*	16:50:28	16:51:41	17:00:06			17:33:32		10:40

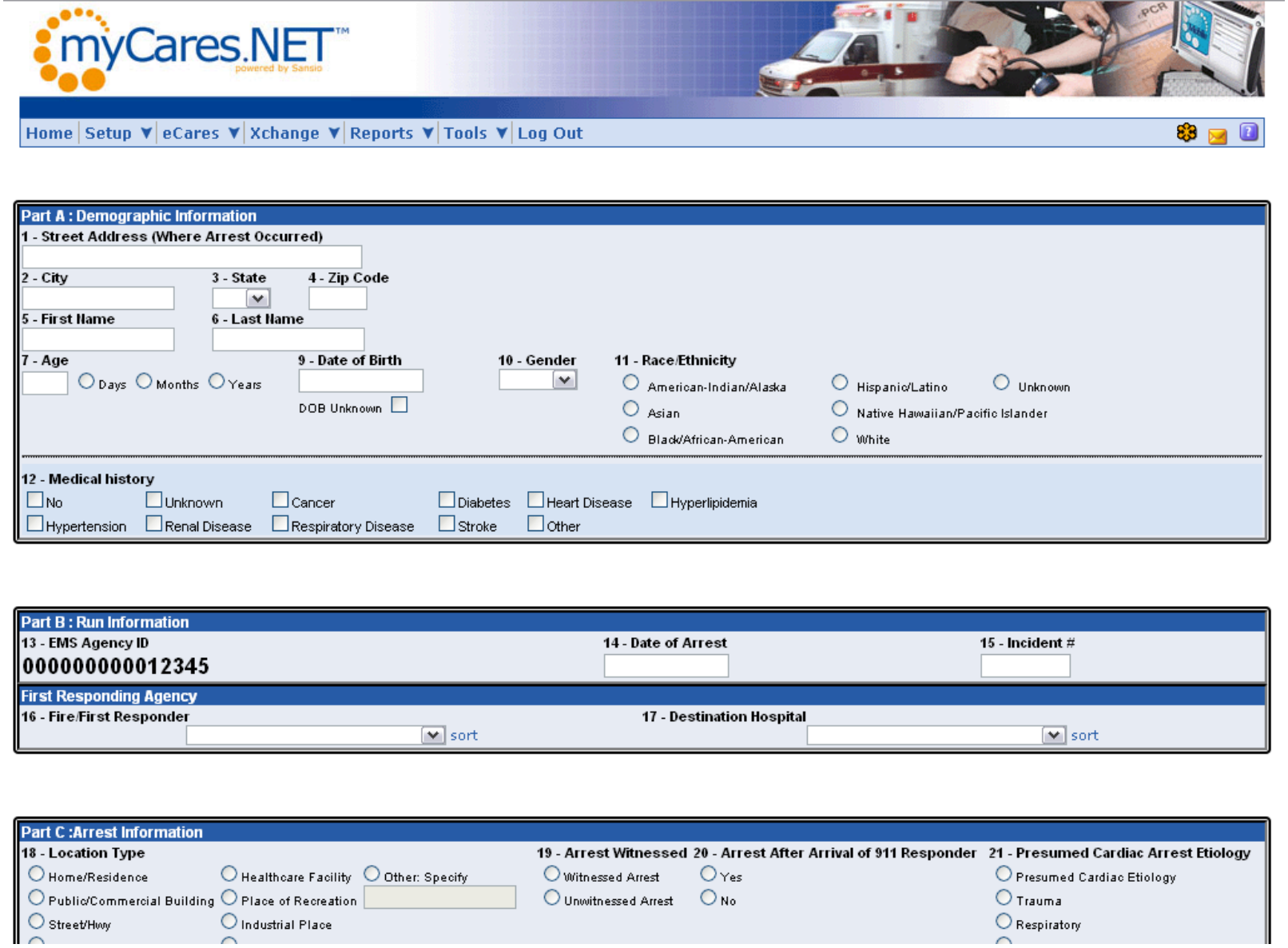
Disp. By: REF

Unit Line-Up Info

Unit	SFD ID	Name	Rank

Dispatch

Hospital(s)

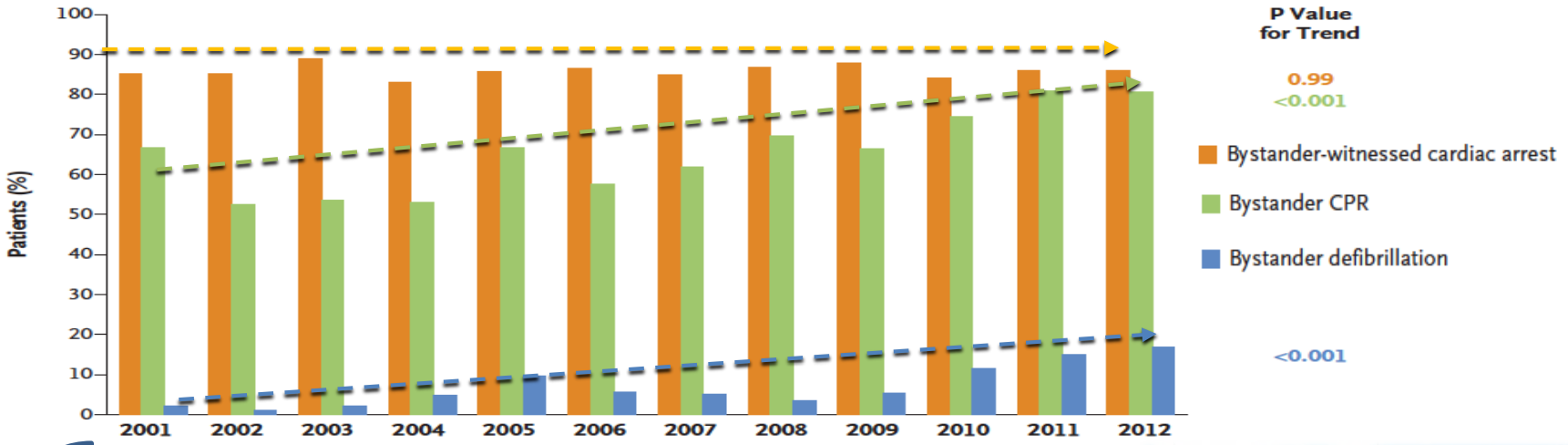


1. Cardiac Arrest Registry

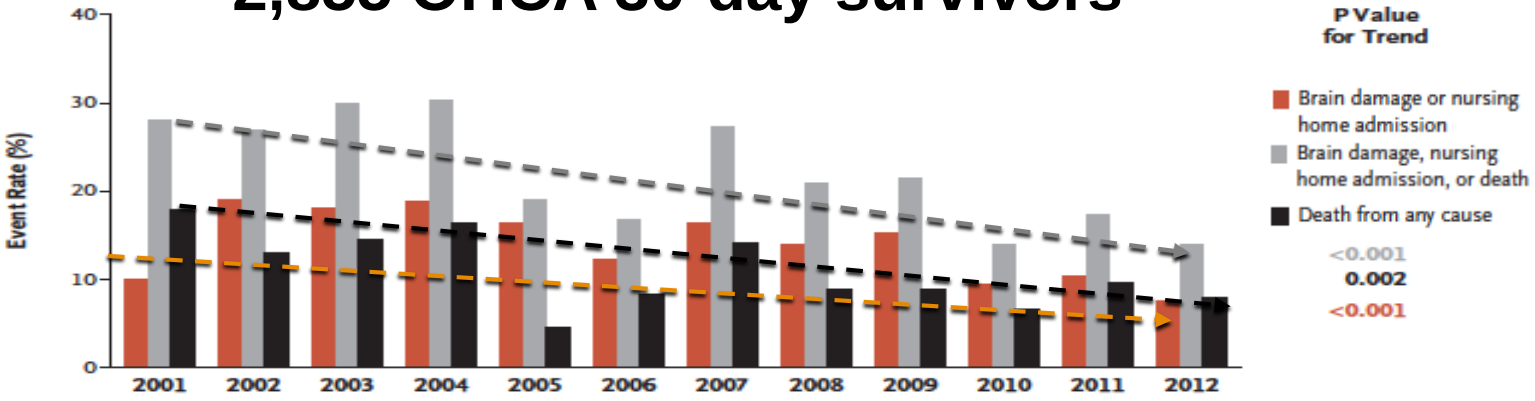
Bystander Efforts and 1-Year Outcomes in Out-of-Hospital Cardiac Arrest

Kristian Kragholm, M.D., Ph.D., Mads Wissenberg, M.D., Ph.D., et al ...

34,459 non-nursing home OHCA - Denmark



2,855 OHCA 30-day survivors



Kragholm K et al. N Engl J Med 2017;376:1737-47.

Measure . . .

and Improve

1. Cardiac Arrest Registry

2. Dispatch Assisted / Telecommunicator CPR

AHA Scientific Statement

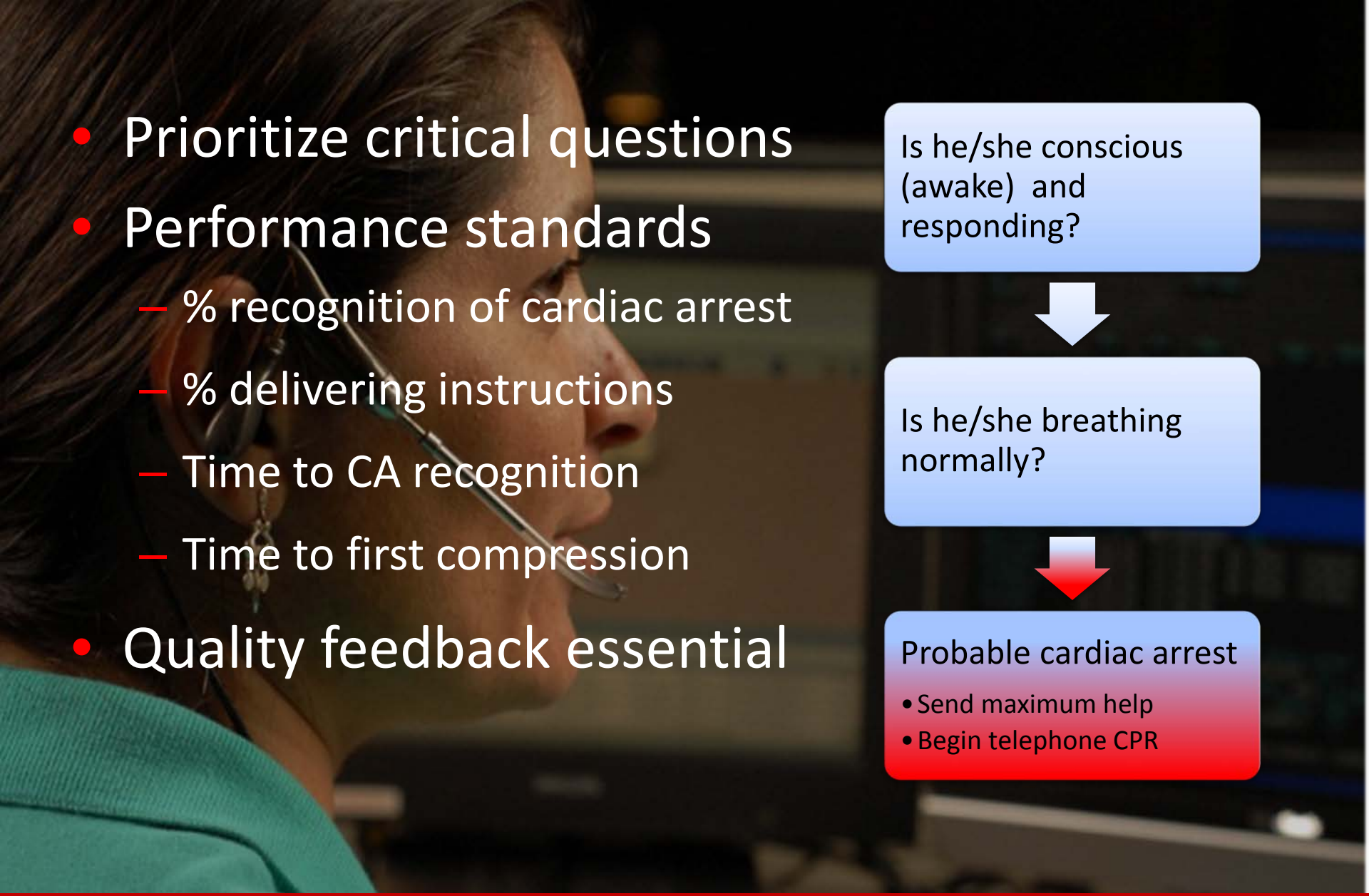
Emergency Medical Service Dispatch Cardiopulmonary Resuscitation Prearrival Instructions to Improve Survival From Out-of-Hospital Cardiac Arrest

A Scientific Statement From the American Heart Association

Endorsed by the Association of Public-Safety Communications Officials International, International Academies of Emergency Dispatch, National Academies of Emergency Dispatch, National Association of Emergency Medical Technicians, National Association of EMS Physicians, and National Association of State EMS Officials

E. Brooke Lerner, PhD, Chair; Thomas D. Rea, MD, MPH; Bentley J. Bobrow, MD; Joe E. Acker III, EMT-P, MPH; Robert A. Berg, MD, FAHA; Steven C. Brooks, MD, MHSc, FRCPC; David C. Cone, MD; Marc Gay, BA, EMT-P; Lana M. Gent, PhD; Greg Mears, MD, FACEP; Vinay M. Nadkarni, MD, FAHA; Robert E. O'Connor, MD, MPH, FAHA; Jerald Potts, PhD; Michael R. Sayre, MD, FAHA; Robert A. Swor, DO; Andrew H. Travers, MD, MSc, FRCPC; on behalf of the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation

2. Dispatch Assisted / Telecommunicator CPR



- Prioritize critical questions
- Performance standards
  - % recognition of cardiac arrest
  - % delivering instructions
  - Time to CA recognition
  - Time to first compression
- Quality feedback essential

Is he/she conscious (awake) and responding?

↓

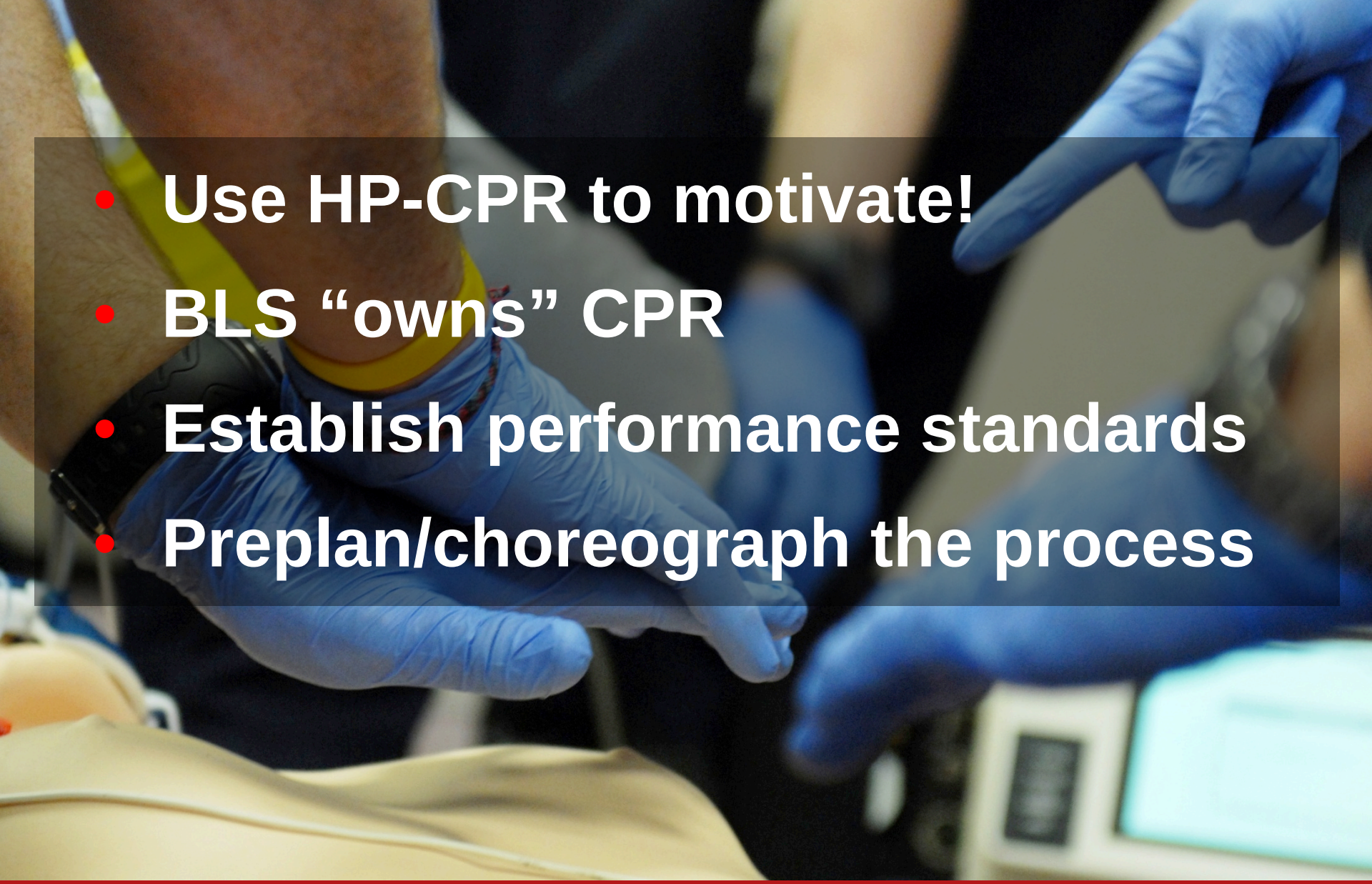
Is he/she breathing normally?

↓

Probable cardiac arrest

- Send maximum help
- Begin telephone CPR

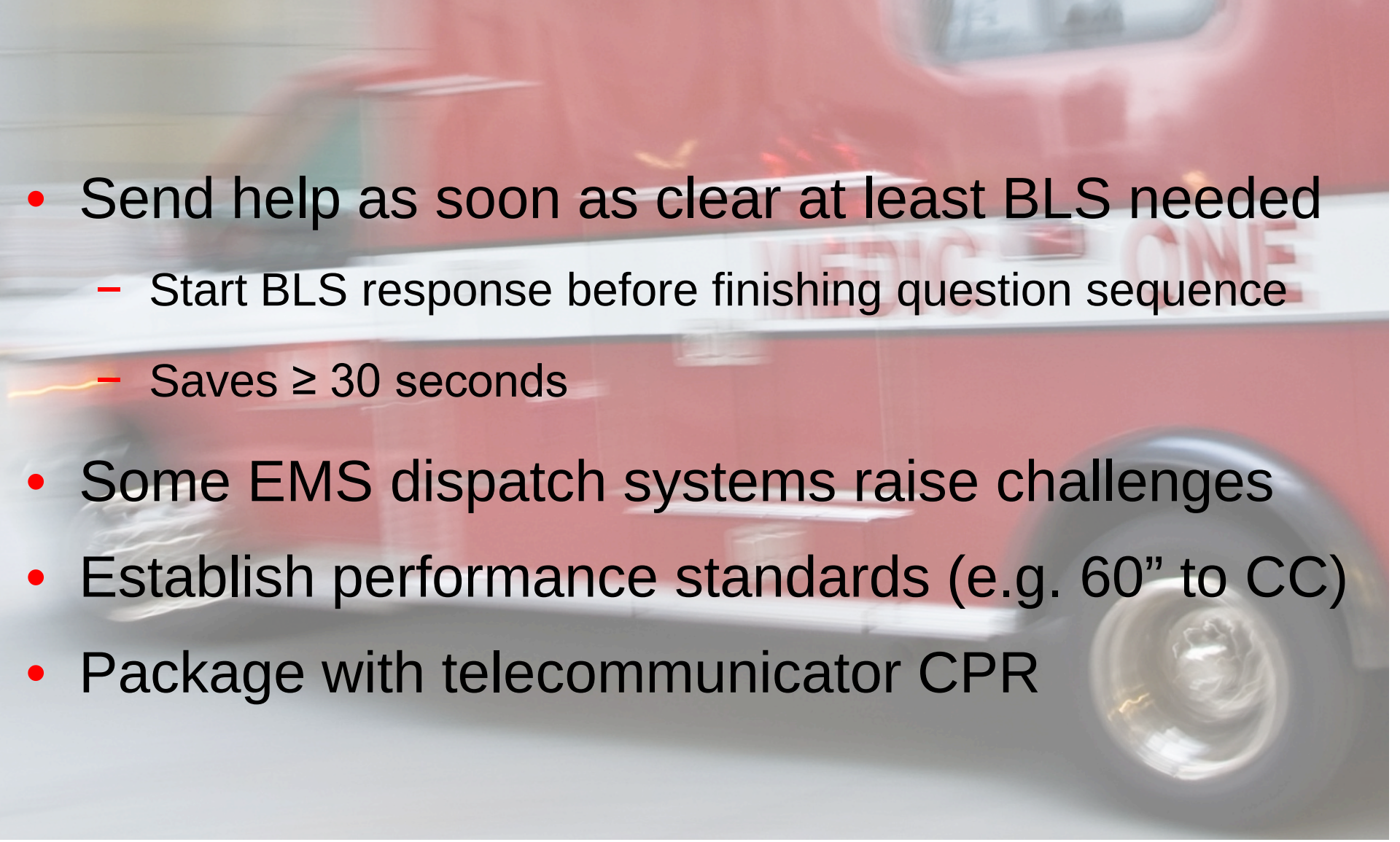
2. Dispatch Assisted / Telecommunicator CPR



- **Use HP-CPR to motivate!**
- **BLS “owns” CPR**
- **Establish performance standards**
- **Preplan/choreograph the process**

3. High Performance CPR

4. Rapid Dispatch



- Send help as soon as clear at least BLS needed
  - Start BLS response before finishing question sequence
  - Saves ≥ 30 seconds
- Some EMS dispatch systems raise challenges
- Establish performance standards (e.g. 60” to CC)
- Package with telecommunicator CPR

4. Rapid Dispatch

1. **Is help needed?**
   - Yes → **Dispatch BLS**
2. **Is he/she conscious?**
   - No → **Probable Cardiac Arrest**
3. **Is he/she breathing *normally*?**

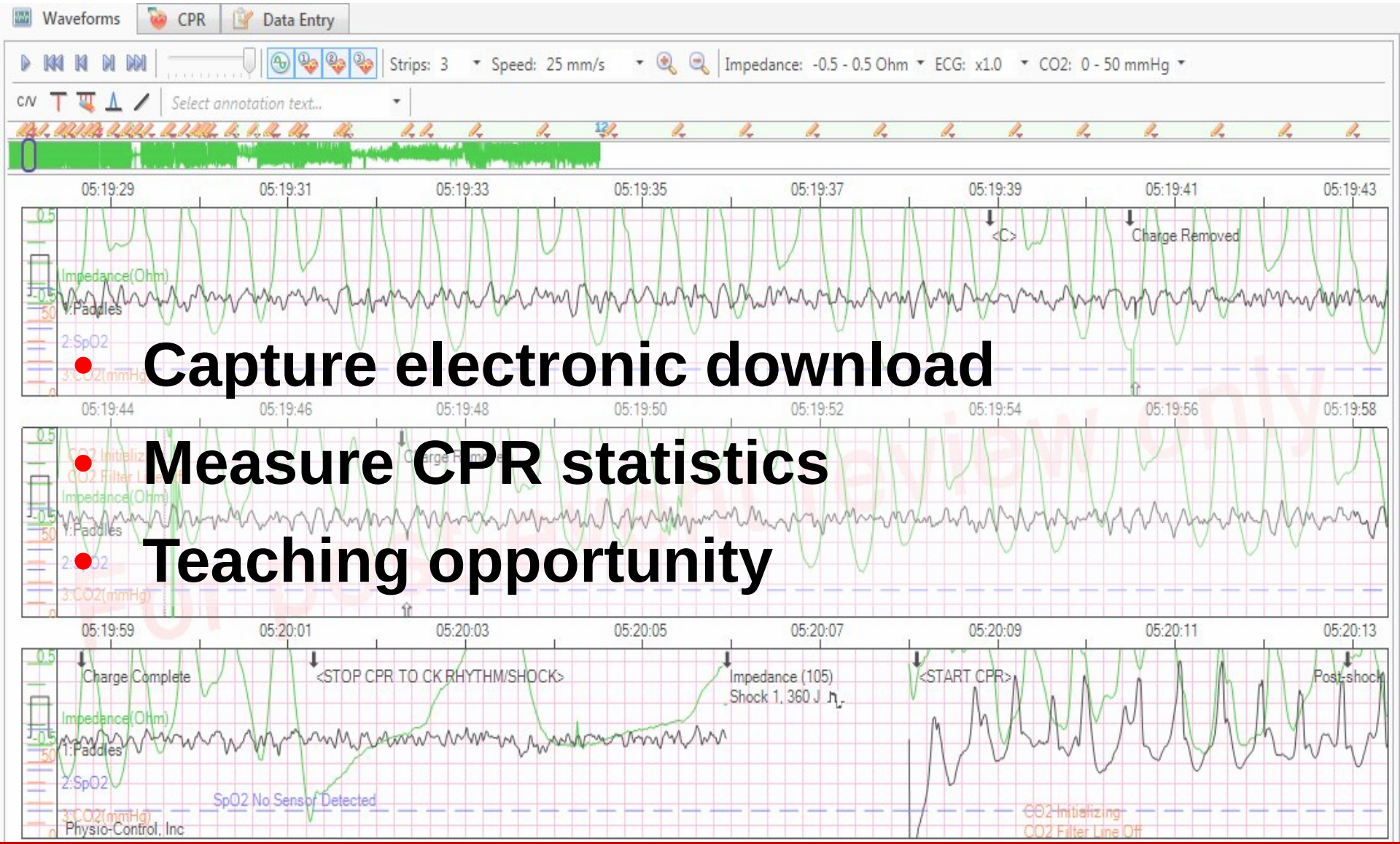
Send Maximum Help

Begin T-CPR

4. Rapid Dispatch

Part 2 : High(er) Hanging Fruit

- Review resuscitations
- Enlist police/1st responder CPR/AED
- Promote public access defibrillation
- Explore smart technologies
- Practice accountability
- Foster a culture of excellence



- **Capture electronic download**
- **Measure CPR statistics**
- **Teaching opportunity**

5. Resuscitation Review

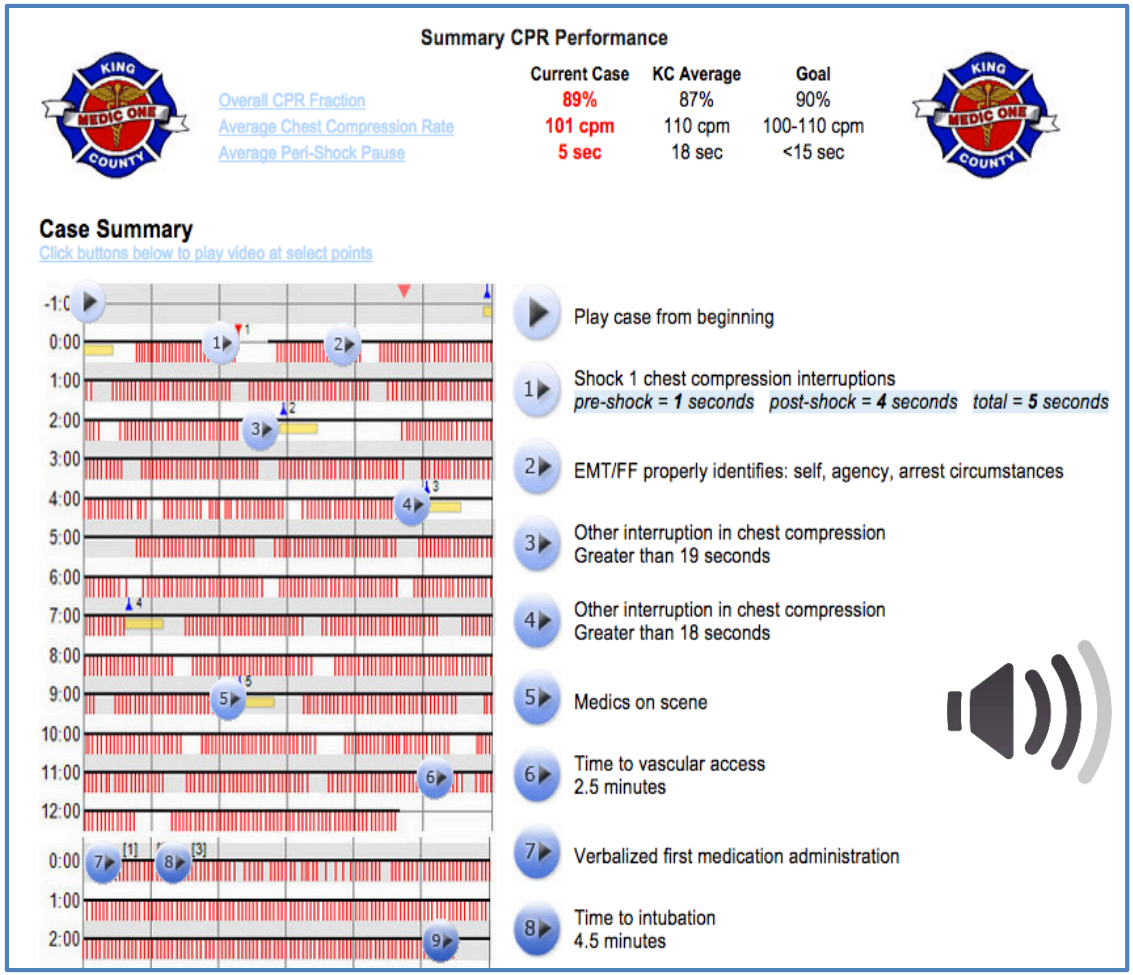
Voice

…the next best thing to
being there.

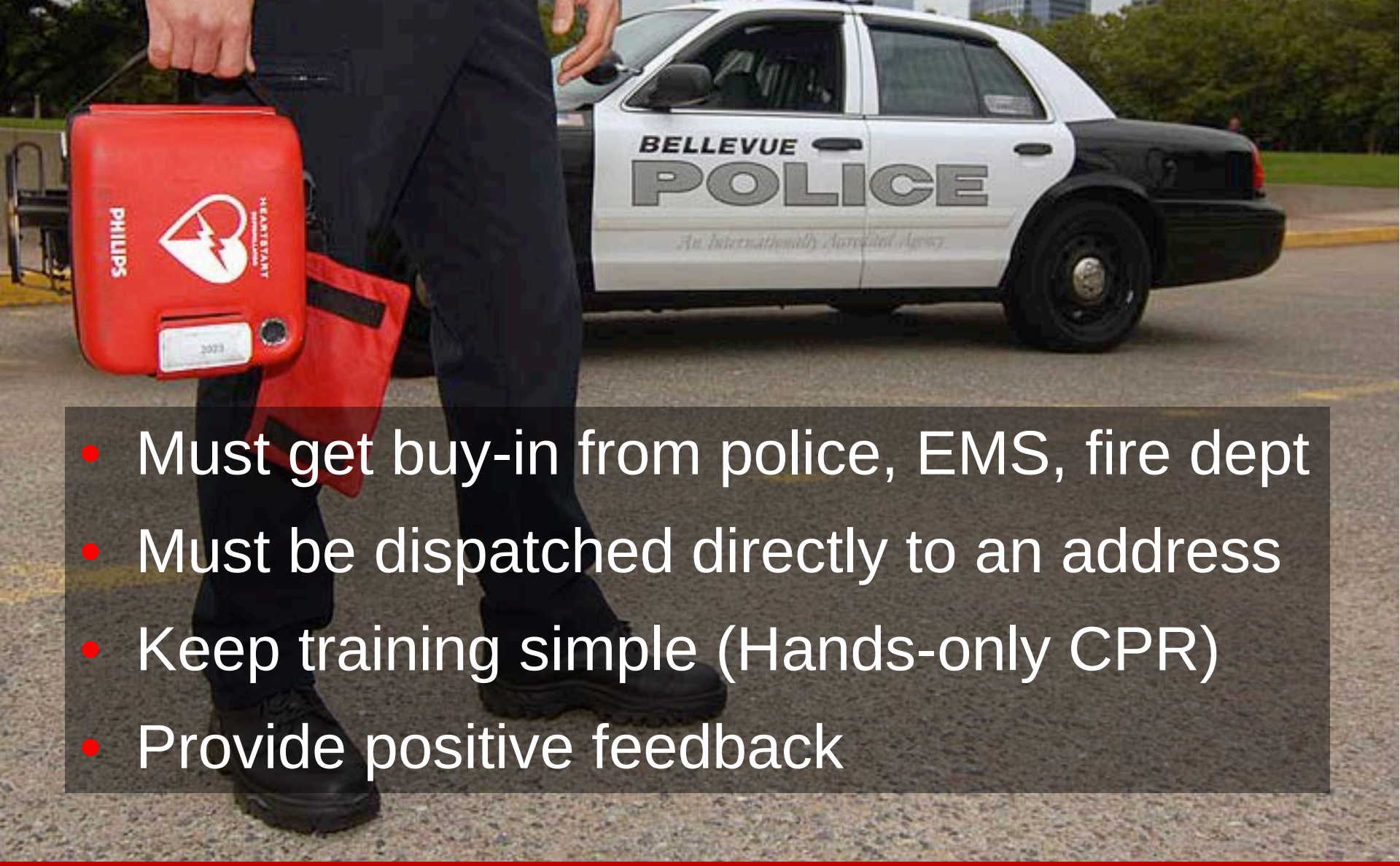
5. Resuscitation Review

5. Resuscitation Review

Defib Review: Feedback



5. Resuscitation Review



- Must get buy-in from police, EMS, fire dept
- Must be dispatched directly to an address
- Keep training simple (Hands-only CPR)
- Provide positive feedback

6. Police – 1st Responder CPR/AED Programs

Treatment of Cardiac Arrest with Rapid Defibrillation by Police in King County, Washington

Linda Becker, MA, Sofia Husain, MPH, Peter Kudenchuk, MD, Ann Doll, BA, Tom Rea, MD, MPH, Mickey Eisenberg, MD, PhD

Total cardiac arrest cases
3/1/10-3/31/12
231

↓

PD initially dispatched or already on scene

124/231 (54%)

↓

PD on scene prior to EMS

37/231 (16%)

↓

PD provided CPR

29/37 (78%)

↓

PD applied AED

21/37 (57%)

↓

PD found shockable rhythm on first analysis

6/21 (29%)

↓

PD provided shock

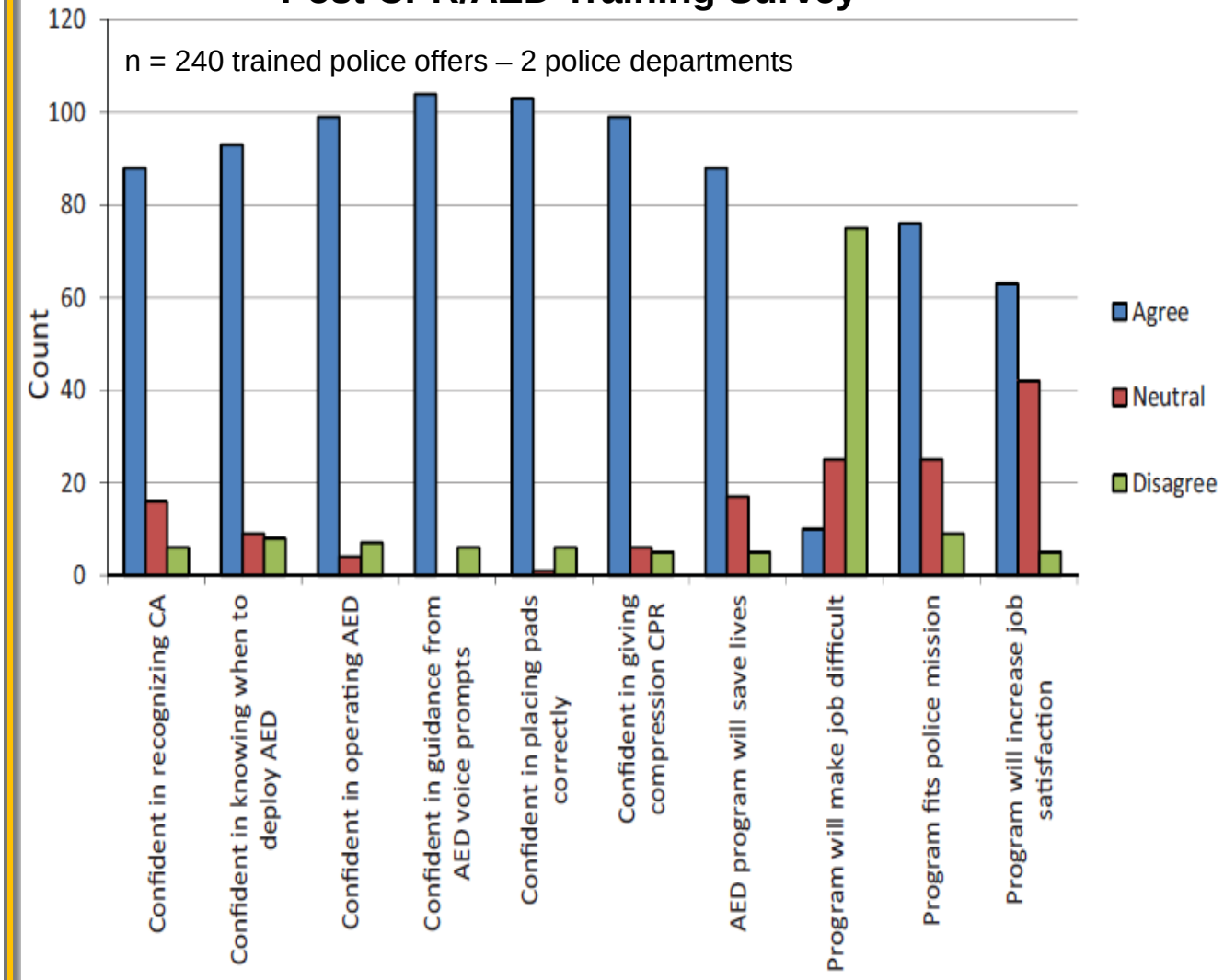
6/6 (100%)

↓

Patients survived to hospital discharge

4/6 (76%)

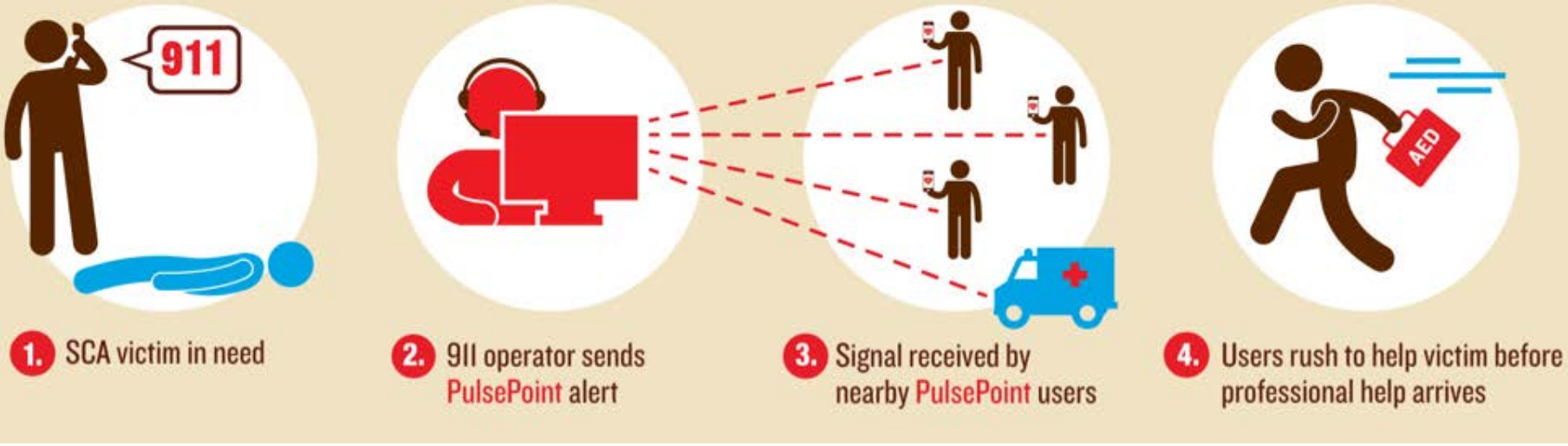
Post CPR/AED Training Survey



Becker L. Prehosp Emerg Care 2014;18:22-7

- High-risk places
- Visible locations
- Premise information in CAD system

7. Public Access Defibrillation Program



8. Smart Technologies

Public Health - Seattle & King County

Division of Emergency Medical Services

Public Health - Seattle & King County

Division of Emergency Medical Services

2017 Annual Report

to the King County Council

September 2017

Public Health
Seattle & King County

Public Health
Seattle & King County

9. Accountability

10. Culture of Excellence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