

Improving Survival From Out of Hospital Cardiac Arrest In Phoenix

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Arizona Experience

Between Jan.1,2005 and April 1, 2006
only 37 (3.4%) of 1,076 OHCA patients
survived to hospital discharge using
standard AHA CPR.

PEC 2008 Ewy, Bobrow et al.

In Phoenix - 2005

Overall survival from OHCA was 3.6%.
Using standard AHA CPR

Survival from witnessed V. Fib was 7%.

The background of the slide is a solid dark blue color. Overlaid on this background are numerous thin, light blue diagonal lines that radiate from the top right corner towards the bottom left, creating a sense of motion or a sunburst effect.

Where to start?

Bystander CPR (Seattle)

Bystander CPR has increased from 28% to 40% in our system over 5 years.

Promote Compression Only CPR

- Lay persons say it is easier to do.
- More people are willing to do it.
- COCPR overall incidence—19% to 76%.

Standard CPR v. COCPR ?

Two recent randomized controlled trials using dispatchers to give CPR instructions reported in the NEJM. They found no significant differences in survival between the two methods.

Survival (n =1,941)

COCPR = 12.5% v. 11.0% AHA CPR

Patients with a cardiac cause of arrest were somewhat more likely to survive with compressions alone-15.5% v.12.3% p=.09

■ NEJM 2010;363:423-433 T. Rea et al. (Seattle/London)

In Sweden (n = 1,276)
30 day survival from OHCA
COCPR 8.7% v. AHA 7.0%
(no significant difference)

COCPR, which is easier to learn and perform,
should be the preferred method for CPR performed
by bystanders in patients in OHCA.

■ NEJM 2010;363:434-442 Svensson et al.

No benefit from ventilation.

- In the first few (?) minutes of resuscitation.

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

* 5 year observational cohort study
(n = 5,272)

Ewy, Spaite, Gallagher, Bobrow and others.
JAMA 2010;304:1447-1454

Survival to hospital discharge

No CPR	AHA CPR	COCPR
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5.2%		
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	7.8%	
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		13.3%
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■ 95% confidence intervals

5 Points
(to improve survival)

- 1. System wide media campaign to endorse compression only CPR by bystanders/with free training.
- 2. Dispatchers give COCPR instructions to bystanders if they do not know AHA CPR.
- 3. Phoenix Fire Dept. EMTs and Paramedics were trained to do 4 sets of COCPR for 2 min. each with oxygen mask on. Intubation was done late if needed. (passive oxygen insufflation*)
- 4. Cardiac Receiving Centers with specific criteria were identified (in 2008). Survival outcome has doubled.
- 5. Therapeutic Hypothermia was driven by Fire/EMS.

*Ann Emerg Med. 2009 54(5):656-662 Ewy et al.

In Phoenix 2009

- Overall survival increased to 10%.
- Survival for witnessed V. Fib. = 34%.

(Survival increased each year since 2005)

Thanks

- To the professional firefighter men and women of the Phoenix Fire Dept. whose hard work made this possible.
- 643 FF/Paramedics
- 1005 FF/EMTs
- Terry Valenzuela/Tucson Fire Dept. 2003
(never be afraid to use your phone!)

Questions?