

ECCU 2017 CONFERENCE & EXHIBITION • A CALL TO ACTION...AND ALL THAT JAZZ!

# Telephone-CPR: What We Know Works ... No-No-Go! ... And What Doesn't!

## Thomas Rea, MD, MPH Ben Bobrow, MD





# Rea Conflicts, Context, and Bias

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American Heart Association Laerdal Foundation Medtronic Philanthropy National Institutes of Health Philips Inc PhysioControl Inc

I am an EMS Medical Director. I also have worked in a limited capacity with APCO.

Professionally I am born and raised in King County, WA



# Bobrow Conflicts, Context, and Bias



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Board of Directors (volunteer): Citizen CPR Foundation, PulsePoint Foundation Volunteer: SOC Subcommittee AHA, CARES Advisory Council Volunteer: Co-author of IOM Report on Cardiac Arrest, Brain Trauma Foundation – Prehospital Guidelines





## A Clarification and then a Preamble





### Some may have confused this with my "Go-Go-No" Talk

"No-No-Go"

### Not conscious – Not Breathing Normally – Start CPR



## Clarification

LEARN 1960'S -G0 Dance WITH

Tom Rea Professional GO-GO Instructor







## Clarification

### Some may have confused this with my "Go-Go-No" Talk

### "Go-Go.....Oh No!" "Go-Go.....Just Say No!" Go-Go....OMG!











## A Preamble



# **Telephone CPR**



1. Implementing T-CPR is a process

2. Questions remain but we know much

3. No matter where you are in the spectrum, there are tangible steps you can take

4. Resources exist to help you do this





# Why TCPR?

## What type of effect size does TCPR have?



## Why Does This Matter?

"By far the most powerful criterion associated with survival from OHCA is ROSC in the field."

"Failure to restore a pulse on scene indicates that the patient will not likely survive to hospital discharge, irrespective of the subsequent sophistication of inhospital care."

Kellerman A. Annals Emerg Med 2010;56:358-61

### **Clinical Investigation and Reports**

### Dispatcher-Assisted Cardiopulmonary Resuscitation and Survival in Cardiac Arrest

Thomas D. Rea, MD, MPH; Mickey S. Eisenberg, MD, PhD; Linda L. Culley, BA; Linda Becker, MA

Characteristic	Survivors, n	Fatal Arrest, n	Unadjusted OR (95% Cl)	Multivariate OR (95% CI)*
No bystander CPR	361	2844	1	1
Dispatcher-assisted bystander CPR	283	1584	1.41 (1.19, 1.66)	1.45 (1.21, 1.73)
Bystander CPR without dispatcher assistance	470	1723	2.15 (1.85, 2.50)	1.69 (1.42, 2.01)

 TABLE 2.
 ORs of Survival in Out-of-Hospital Cardiac Arrest According to CPR Group

\*Adjusted for age, sex, witness status, location, and BLS response time.

### Adjusted OR (BCPR) = 1.69

### Adjusted OR TCPR = 1.45



Circulation

November 20, 2001

#### Original Investigation

### Implementation of a Regional Telephone Cardiopulmonary Resuscitation Program and Outcomes After Out-of-Hospital Cardiac Arrest

Bentley J. Bobrow, MD; Daniel W. Spaite, MD; Tyler F. Vadeboncoeur, MD; Chengcheng Hu, PhD; Terry Mullins, MBA; Wayne Tormala, MSW; Christian Dameff, MD; John Gallagher, MD; Gary Smith, MD; Micah Panczyk, MS

IMPORTANCE Bystander cardiopulmonary resuscitation (CPR) significantly improves survival from out-of-hospital cardiac arrest but is provided in less than half of events on average. Telephone CPR (TCPR) can significantly increase bystander CPR rates and improve clinical outcomes.

**OBJECTIVE** To investigate the effect of a TCPR bundle of care on TCPR process measures and outcomes.

DESIGN, SETTING, AND PARTICIPANTS A prospective, before-after, observational study of adult patients with out-of-hospital cardiac arrest not receiving bystander CPR before the 9-1-1 call between October 1, 2010, and September 30, 2013.

INTERVENTIONS A TCPR program, including guideline-based protocols, telecommunicator training, data collection, and feedback, in 2 regional dispatch centers servicing metropolitan Phoenix, Arizona. Audio recordings of out-of-hospital cardiac arrest calls were audited and linked with emergency medical services and hospital outcome data.

Invited Commentary and Editor's Note

 Supplemental content at jamacardiology.com

> TCPR Bundle of Care Significantly Improved Patient Outcomes





/ 2017



# TCPR is effective at saving lives, how does that work?







## Multiple Barriers to Performing Bystander CPR

Bystander Recognizes Event	Bystander Calls 911	Dispatcher Identifies OHCA and Provides CPR Instruction	Bystander Performs CPR
ack of knowledge of what a cardiac arrest s Infamiliar with person or setting Inwilling to get nvolved	<ul> <li>Unfamiliar with 911</li> <li>Distrust of police/authority</li> <li>Language barrier or disability</li> </ul>	<ul> <li>Poor description of event due to lack of knowledge</li> <li>Language barrier or disability</li> <li>No dispatcher protocols in place for CPR</li> <li>Bystander lack of knowledge of CPR</li> </ul>	<ul> <li>Fear of doing CPR incorrectly</li> <li>Fear of liability</li> <li>Unsafe setting</li> <li>Language barrier or disability</li> <li>Fear of endangering self</li> </ul>

Sasson - AHA Scientific Advisory Statement. Circulation 2013





### Table 1: Obstacles to Bystanders Starting CPR and Dispatcher Solutions

BARRIER	SUGGESTED DISPATCHER RESPONSE		
Bystander has trouble identifying cardiac arrest	Utilize simple, two-question algorithm		
Bystander fears CPR will injure	Assure bystander CPR will not cause injury		
Bystander fears mouth-to-mouth contact can transmit disease	Provide instructions for compression-only CPR		
Bystander lacks confidence bystander can perform CPR	Assure bystander he/she can do CPR and that dispatcher will help		
Bystander panic/fear prevents	Assure bystander he/she can do CPR and that dispatcher will assist		
Bystander fears legal ramifications	Assure bystander of Good Samaritan Laws that safeguard citizen action		

**Bobrow et al. Current Opinions Critical Care. 2012** 

## **The Critical First Link**



## The Math

### Train 10,000 bystanders ~ 1 cardiac arrest

Train 1 dispatcher = <u>many</u> cardiac arrests







# ✓ Tools/Training ✓ Best practices ✓ Quality monitoring ✓ Engaging Bystander ✓ Translation into practice





## What is the Current Status of TCPR?





#### ORIGINAL RESEARCH

### **Telephone CPR Instructions in Emergency Dispatch Systems: Qualitative Survey of 911 Call Centers**

John Sutter, BS\*1 Micah Panczyk, MS\* Daniel W. Spaite, MD† Jose Maria E. Ferrer, MD‡ Jason Roosa, MD, MS<sup>§</sup> Christian Dameff, MD\* Blake Langlais\* Ryan A. Murphy, MD1 Bentley J. Bobrow, MD\*†

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Section Editor: Michael Kurz, MD Submission history: Submitted March 19, 2015; Revision received June 5, 2015; Accepted June 28, 2015 Electronically published October 20, 2015 Full text available through open access at http://escholarship.org/uc/uciem\_westjem DOI: 10.5811/westjem.2015.6.26058





Figure 3. Proportion of public safety answering points providing telephone cardiopulmonary resuscitation (T-CPR) instructions and the type of CPR instructions provided to callers.



## What defines programmatic best practice?







Circulation 2012, 125:648-655:

### **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

Helping ofdees and communities save lives

V CPR

ATIO

## **Barriers to Implementation**

- Scope of practice issues for Call-Takers
- Fear of liability and regulation
- Data collection and sharing
- Time and effort Training/QI
- Public relations concerns
- Budgetary constraints
- Ignorance of the Guidelines
- Lack of Medical Direction
- Competing interests and overcoming inertia





## **Strategies to Overcome Barriers**

- Educate that this is a guideline intervention
- Convince dispatch centers this is a vital service/cost effective
- Involve public health agencies
- Streamline data collection process
- Use free and available training modules
- Share in the program's success



# **Programmatic Best Practices**

## Establish a Protocol Provide Training Engage Continuous Quality Improvement





# Let's circle back to the protocol - Please break down the components of TCPR actions?





## **3 Phases of TCPR**

Identification (No No Go!)

- Starting CPR Instructions
- Coaching the lay rescuer until EMS arrives



# NO NO Go!

## Initial Call Interview

### 2 Question Approach

- Is the patient conscious?
- Are they breathing normally?





# Recognition: What works? What doesn't?





## Each extra question had the potential to <u>delay</u> the identification of cardiac arrest and initiation of CPR





# NO NO Go! Rationale:

### **Resuscitation Science**

### Dispatcher-Assisted Cardiopulmonary Resuscitation Risks for Patients Not in Cardiac Arrest

Lindsay White, MPH; Joseph Rogers, MS; Megan Bloomingdale; Carol Fahrenbruch, MSPH; Linda Culley, BA; Cleo Subido, RPL; Mickey Eisenberg, MD, PhD; Thomas Rea, MD, MPH

*Conclusions*—In this prospective study, the frequency of serious injury related to dispatcher-assisted bystander CPR among nonarrest patients was low. When coupled with the established benefits of bystander CPR among those with arrest, these results support an assertive program of dispatcher-assisted CPR. (*Circulation*. 2010;121:91-97.)

Minor injury probably resulting from compressions: 2%
 No instances of vital organ damage



## AHA-Recommended Two-Question Model NO-NO Go!



Figure 1. Sample algorithm for identification of a patient with possible cardiac arrest. CPR indicates cardiopulmonary resuscitation.







## What are the pitfalls for identification?



# Agonal Breathing (Gasping)

- Abnormal breathing in unresponsive patients
- A brainstem response to lack of oxygen
- Occurs in ~ half of cardiac arrests
- Associated with improved survival
- Hurts but potentially can <u>help</u> recognition
   ECCU2017 (2017)






RESUSCITATION



Resuscitation 56 (2003) 25-34

#### Prospective review of 100 confirmed EMS CPR calls

Interaction between emergency medical dispatcher and caller in suspected out-of-hospital cardiac arrest calls with focus on agonal breathing. A review of 100 tape recordings of true cardiac arrest cases

Angela Bång<sup>a,\*</sup>, Johan Herlitz<sup>a</sup>, Sven Martinell<sup>b</sup>

<sup>a</sup> Department of Cardiology, Sahlgrenska University Hospital, SE-413 45 Göteborg, Sweden <sup>b</sup> The Emergency Medical Dispatch Centre, Göteborg, Sweden

Received 5 March 2002; received in revised form 8 April 2002; accepted 9 August 2002

#### Table 4

Reasons for not offering T-CPR (n = 82)

No. of cases n = 82 %

Breathing patient	16	20
Gasping/abnormal breathing	16	20
Witness not susceptible	11	13
Witness not at scene	11	13
Difficulties interpreting the case	10	12
Not asked whether breathing or not	10	12
No obvious reason	6	7
Suspected rigor mortis	2	2

\*, Figures in parentheses denote number of patients with missing information.



## **Agonal Breathing**

ORIGINAL RESEARCH



#### Description of Abnormal Breathing Is Associated With Improved Outcomes and Delayed Telephone Cardiopulmonary Resuscitation Instructions

Hidetada Fukushima, MD; Micah Panczyk, MS; Chengcheng Hu, PhD; Christian Dameff, MD; Vatsal Chikani, MPH; Tyler Vadeboncoeur, MD; Daniel W. Spaite, MD; Bentley J. Bobrow, MD

#### Table 3.Process Analysis: Proportion of Patients WithCertain Events

#### The rate of TCPR is significantly reduced when callers describe agonal breathing.

Group	Description YES (n=379)	Description NO (n=1462)	<i>P</i> Value <sup>†</sup>		
Telecommunicator	r knows CPR indicated	I			
No	75 (19.8)	84 (5.7)	<0.0001		
Yes	302 (79.7)	1359 (93)			
Unknown	2 (0.5)	19 (1.3)			
CPR instructions started					
No	131 (34.6)	401 (27.4)	0.0078		
Yes	248 (65.4)	1060 (72.5)			
Unknown	0 (0)	1 (0.1)			
CPR instructions started and compression started					
No	149 (39.3)	471 (32.2)	0.0123		
Yes	228 (60.2)	978 (66.9)			
Unknown	2 (0.5)	13 (0.9)			

Count (percentage) for categorical variables. CPR indicates cardiopulmonary resuscitation.

 $^\dagger \text{Fisher}$  exact test or  $\chi^2$  test; the unknown category, if present, is excluded from the testing procedure.

# **Agonal Breathing**

#### Table 4. Process Analysis: Time to Events

Group	Description YES (n=379)	Description NO (n=1462)	P Value <sup>†</sup>
Time to telecommunicator's recognition of CPR (s)	118.5	73.5	<0.0001
Time to start of CPR instructions (s)	203.5	155.5	<0.0001
Time to first compression (s)	242	197.5	<0.0001

Estimated median in each group. CPR indicates cardiopulmonary resuscitation. <sup>†</sup>Asymptotic logrank 2-sample test (permutation form) based on Sun scores.

DOI: 10.1161/JAHA.116.005058

# **Agonal Breathing**



**Figure 2.** The variations and frequencies of emergency 9-1-1 callers' descriptions of abnormal breathing. Error bars indicate 95% confidence intervals. Because some callers described abnormal breathing with  $\geq 2$  terms, the total numbers of frequencies were 498. Others group was composed of minor descriptors: wheezing, gagging, grunting, death rattle, deep, shallow, faintly, little, sporadically, slowly, or barely breathing.

DOI: 10.1161/JAHA.116.005058

"Gasping," "Snorting" or "Snoring" and "Gurgling" accounted for ~ 2/3 of all terms callers used to describe abnormal breathing

Journal of the American Heart Association





## **Gasping: Audio Examples**







Agreed - Agonals are a prominent challenge What other barriers should we expect? Do barriers differ based on the location of the arrest?







### **Barriers to TCPR in Public & Residential Locations**

Category	Public (N = 223)	Residential (N = 1,627)	p-value
Caller not with patient	11.7%	2.5%	< 0.001
Couldn't calm caller	2.2%	8.2%	= 0.002
Couldn't get patient to floor	11.7%	23.8%	< 0.001
OHCA Recognition	83.3%	91.2%	< 0.001
TCPR Instructions Started	47.3%	65.6%	< 0.001
TCPR Started	32.4%	54.1%	< 0.001
Survival	23.8%	9.5%	< 0.001

**Resuscitation 2016** 



## **Question 8**

### How should we train TCPR?







#### Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation

Simulation and education

Targeted simulation and education to improve cardiac arrest recognition and telephone assisted CPR in an emergency medical communication centre\*

Camilla Hardeland<sup>a,b,\*</sup>, Christiane Skåre<sup>c</sup>, Jo Kramer-Johansen<sup>d</sup>, Tonje Birkenes<sup>e</sup>, Helge Myklebust<sup>e</sup>, Andreas E. Hansen<sup>f</sup>, Kjetil Sunde<sup>g,h</sup>, Theresa M. Olasveengen<sup>i</sup>

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- 1. Basic CPR Training
- 2. E-Learning
- 3. Simulation Training
- 4. Adapted Scenarios
- 5. Group Learning
- 6. CPR Coaching
- 7. Analytics

# **Basic CPR Training** – to learn the skills



# EVERY call is a cardiac arrest



# ...until proven otherwise

# **E-Learning** – to recognize and act





# **Simulation Training** - to practice events that occur infrequently





# Locally adapted scenarios



# **Group Learning** – to reflect and share



# **CPR Quality Coaching** – to optimize performance



## **Question 8**



A coach is someone who tells you what you don't want to hear, who has you see what you don't want to see, so you can be who you have always known you could be

- Tom Landry

AZOUDTES

# **How Should we Coach**



# **Future of Telephone CPR Delivery**



## **Question 9** Why & How Should we measure TCPR?





## **Telephone CPR Reporting**

SHARE - Cardiac Event Data and Reporting (CEDaR)
Used timestamp methodology
in auditing 5,987 Confirmed
Add Desp.R.cli Call To prevent data less, this lage must be saved (using button at bottom of form) within how 9 starting, remember you may save as "intropolete" and re- open the main the Chine SUSPECTED 9-1 -1 audito
Dispatch Location Dispatcher - Eight II m Dispatcher - Last Hame Cole of Call
Timestamp Start of Call *(Default 00:00) 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00  • : 00
QI knows CPR Indicated? Dispatcher knows CPR Indicated? CPR In Progress? CPR Instructions Started? Were Compressions Started?

- 1. % cases arrest recognized
- 2. % cases CPR instructions started
- 3. % cases compressions started
- 4. Time to recognition
- 5. Time to start of CPR instructions
- 6. Time to first bystander compression ECCU201

#### Dameff Resuscitation 2014



	WARNING SIGNS	Search	Q			DONATE
CPR & First Emergency Cardiovas	Aid scular Care					
FIND A COURSE -	TRAINING -	PROGRAMS	RESUSCITATION SCIENCE -	ABOUT CPR & FIRST AID▼	INTERNATIONAL -	

CPR > Resuscitation Science > Telephone CPR (T-CPR) > Recommendations & Performance Measures

CPR & ECC Guidelines	Telephone CPR (T-CPR) Program Recommendations and				
First Aid Guidelines	Performance Measures				
Guidelines Highlights	Audden earlier earlier and the sudden unsurable lass of head funding knowling and excellences and is commonly the				
ECC Scientific Statements Archive	result of an electrical disturbance in the heart. Each year an estimated 350,000 cardiac arrest events occur in the United States in an out-of-hospital environment. Almost all of these events result in a call for help to 911. Without quick intervention in the form of				
International Liaison Committee on  Resuscitation (ILCOR)	cardiopulmonary resuscitation (CPR) and defibrillation, death from SCA is certain.				
High-Quality CPR	Telecommunicators are the true, first responders and a critical link in the cardiac arrest chain of survival. It is the telecommunicator, in partnership with the caller, who has the opportunity to identify a patient in cardiac arrest, providing the initial level of care by delivering				
Telephone CPR (T-CPR)	telephone CPR (T-CPR) instructions to the caller, and quickly dispatching the appropriate level of help. It is through these actions that the telecommunicator can make the difference between life and death. It is important to emphasize that the telecommunicator and the caller				
Recommendations & >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	form a unique team in which the expertise of the telecommunicator and the willingness of the caller to provide T-CPR represents the best opportunity to improve survival form SCA.				
PSAP (Public-Safety Answering > Point) Recommendations	The information below outlines the minimal acceptable standards for timely and high-quality delivery of T-CPR instructions by emergency telecommunicators. Where possible, these processes should occur in parallel, rather than in series, to minimize the overall time interval				
Meet the Taskforce	from 911 call to T-CPR as much as possible.				
	Every emergency dispatch center in the nation should be aware of the following: • The provision of T-CPR instruction for virtually all cardiac arrests is a standard of care. • Meeting this standard requires training, ongoing training, and continuous quality improvement. • Meeting this standard saves lives. • Not meeting this standard results in deaths that are preventable.				

**AHA Task Force on TCPR: Recommendations** and Performance **Measures** 



### **Performance Measures: Median Times**







Home CARES Overview · Publications · Data · Education/Resources · Contact Us

#### **Dispatcher Assisted CPR Training**

Home → Education/Resources → Supplemental Modules → Dispatcher Assisted CPR Training

Dispatcher Assisted CPR Trainir	ng
Targeted Temperature Managen	nent
CPR Quality Metrics Module	

Please select from the following:

- Training Video
- Data Dictionary
- Data Entry Training Webinar
- > How to get started
- DACPR User Guide
- Resource Materials
- FAQs
- CARES Telephone CPR Webinar Available for Viewing

# **Anchorage TCPR Experience**

#### **CARES Dispatcher Assisted-CPR Report**

End of the Event: Dead in Field, Pronounced Dead in ED, Ongoing Resuscitation in ED I Resuscitation Attempted by 911 Responder: Yes I Presumed Cardiac Arrest Etiology: Presumed Cardiac Etiology, Respiratory, Drowning, Electrocution, Other I Service Date: From 01/01/2015 Through 07/01/2016

Characteristic	Anchorage Fire Department
Bystander CPR (Module-based)	N=134
Bystander CPR with dispatcher assistance	106 (79.1%)
Bystander CPR without dispatcher assistance	15 (11.2%)
Dispatcher CPR Instructions	
Dispatcher recognized need for CPR	119 (98.3%)
CPR instructions started	117 (95.9%)
CPR instructions refused	3 (4.8%)

#### Time Intervals



# **Anchorage TCPR Experience**

Time Intervals		
Call receipt to CPR recognition	98	
Mean	00:51	
Median	00:43	
Call receipt to CPR instruction	109	
Mean	01:21	
Median	01:14	
Call receipt to first compression	105	
Mean	01:54	
Median	01:42	
Barriers to CPR	N=63	
Hang up phone	0 (0.0%)	
Language barrier	4 (6.3%)	
Difficult patient access	2 (3.2%)	
Caller left phone	0 (0.0%)	
Overly distraught	8 (12.7%)	
Caller refused	3 (4.8%)	
Couldn't move patient	12 (19.0%)	
		(D) (D) CITIZEN





### **Increasing Awareness on TCPR**



<image><text><image><image>



# **Combining CPR Training and TCPR**



#### **Paths Towards Widespread Dissemination**

- Establish Performance Standards
- Advocacy
- Legislation
- Certification
- Accreditation
- Local Implementation
- Community Champions





## **NAS Recommendations**



### Strategies to Improve Cardiac Arrest Survival: A Time to Act

#### INSTITUTE OF MEDICINE

OF THE NATIONAL ACADEMIES

IOM (Institute of Medicine). 2015. *Strategies to improve cardiac arrest survival: A time to act.* Washington, DC: The National Academies Press.



#### Recommendation 3. <u>Enhance the Capabilities</u> and Performance of EMS Systems

As the informal agency for EMS, NHTSA should coordinate with other federal agencies and representatives from private industry, states, professional organizations, first responders, EMS systems, and non-profit organizations

- to develop standardized dispatcher-assisted CPR protocols and national educational standards for use by all public safety answering points.
- to establish a standardized definition and training curriculum for high-performance CPR to be used in basic emergency medical technician training and certification.



Advising the nation • Improving health

#### Recommendation 5. <u>Adopt Continuous</u> <u>Quality Improvement Programs</u>

EMS systems, health care systems, and hospitals should adopt formal, continuous quality improvement programs for cardiac arrest response that

- Assign responsibility, authority, and accountability within each organization or agency for specific cardiac arrest measures;
- Implement core technical and non-technical training, simulation, and debriefing protocols to ensure that EMS and hospital personnel can respond competently to both adult and pediatric cardiac arrests; and
- Actively collaborate and share data to facilitate national, state, and local benchmarking for quality improvement.



Advising the nation • Improving health



### Summary

- Telephone CPR can significantly improve outcomes
- Multiple real-world barriers to implementation exist
- Diverse communities are showing how to overcome these challenges
- We are past the 17 year mark and the *Time to Act* is now!



# List of TCPR Resources



- Materials, training video, protocols, audio calls: <u>http://azdhs.gov</u>
   <u>http://cprlinktolife.com/</u>
   <u>http://fiercecert.org</u>
- Training webinar for data entry: <u>https://azdhsems.ilinc.com/join/vwrzmss</u>
- <u>AHA</u> <u>http://cpr.heart.org/AHAECC/CPRAndECC/</u>
- <u>HeartRescue</u> <u>http://www.heartrescueproject.com/</u>
- <u>Resuscitation Academy</u>
   <u>http://www.resuscitationacademy.org/</u>
- CARES website (<u>https://mycares.net</u>)

# Thank You

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What to do

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## Remember.....

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Tom Rea Professional GO-GO Instructor





