



# Performance Standards, Measures & Training

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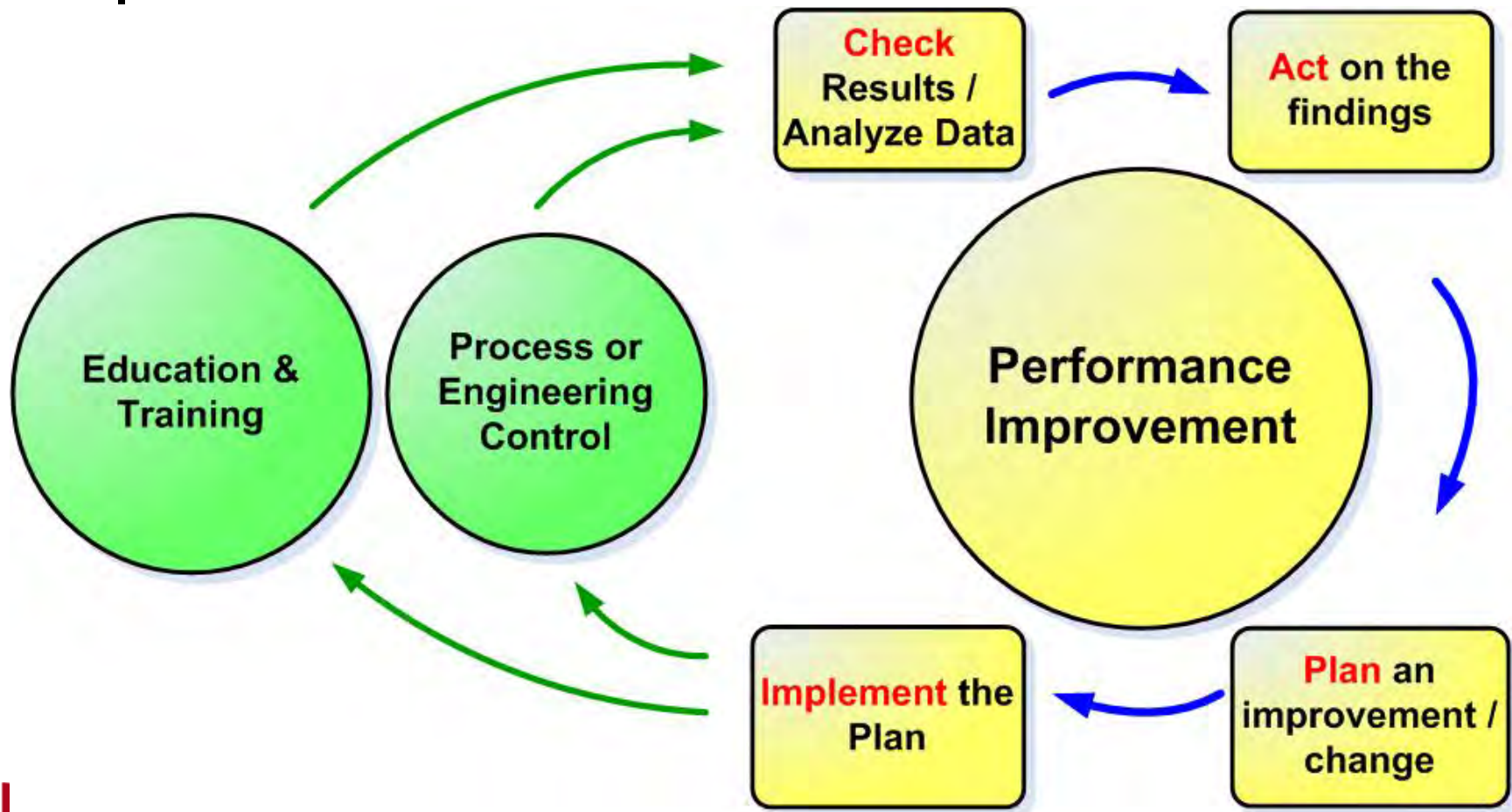
City of Austin / Travis County EMS System



# Discussion Points

1. **Performance / Process Improvement**
  - Standards & Measures
  - Examples
  - Value & Unintended Consequences
2. **Relationship to Training**
3. **Challenges**
  - Standards/Measures
  - Training
4. **Potential Improvements**

# EMS System Performance Improvement Process





# Standards & Measures

- ❑ **Process**
- ❑ **Structure**
- ❑ **Access**
- ❑ **Outcome**

**Process directs the behavior.  
Measures drive the behavior.  
Education modifies the behavior as needed.**



# CLINICAL PERFORMANCE MEASURE EXAMPLES

## Process

# EMS Call to 1<sup>st</sup> Compression

**Avg = 4:01**

**1:40**

**0:26**

**1:26**

**0:29**

Ring to Case  
Entry

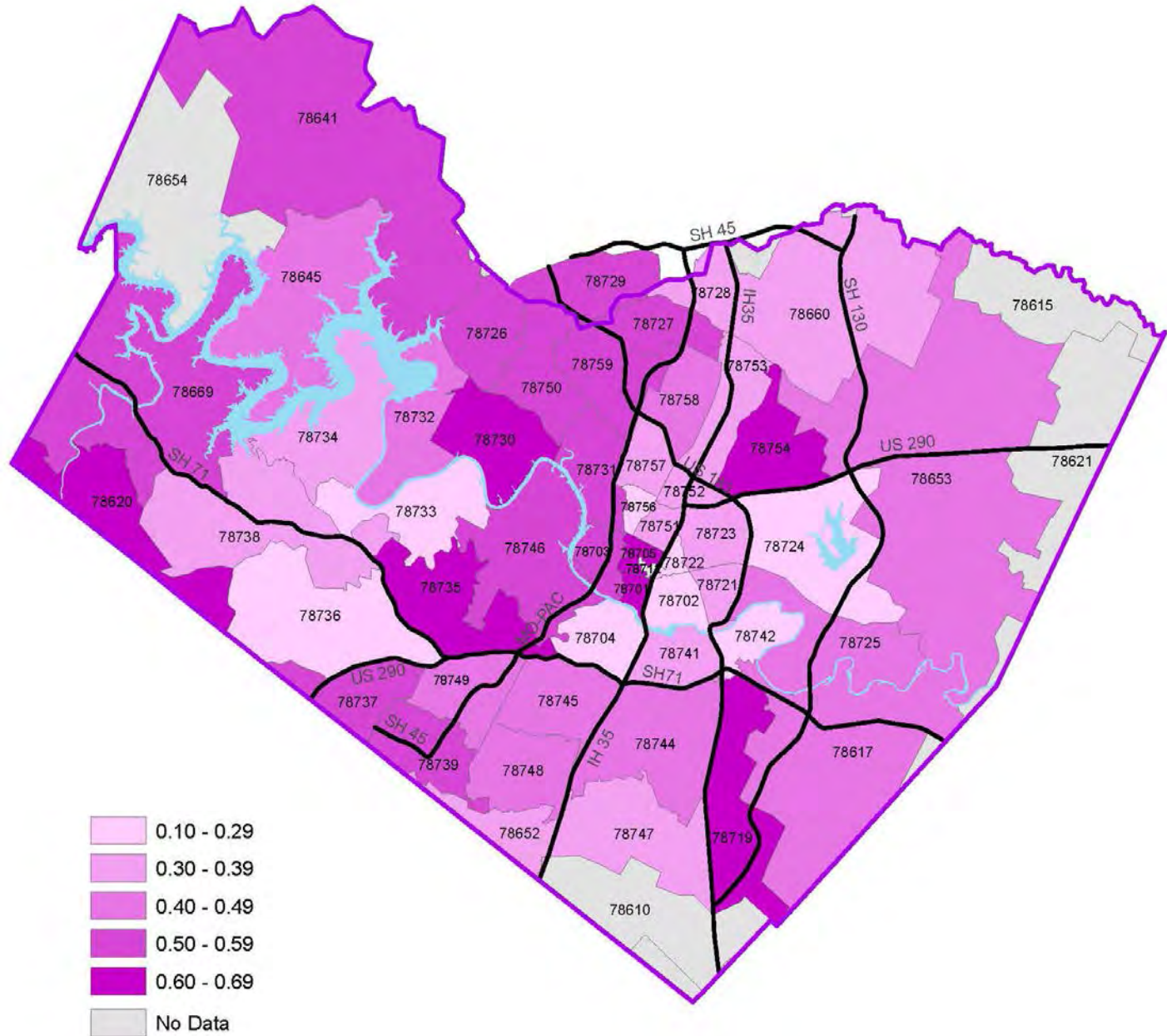
Case Entry to  
PAI Entered

PAI entry to  
Patient Positioned

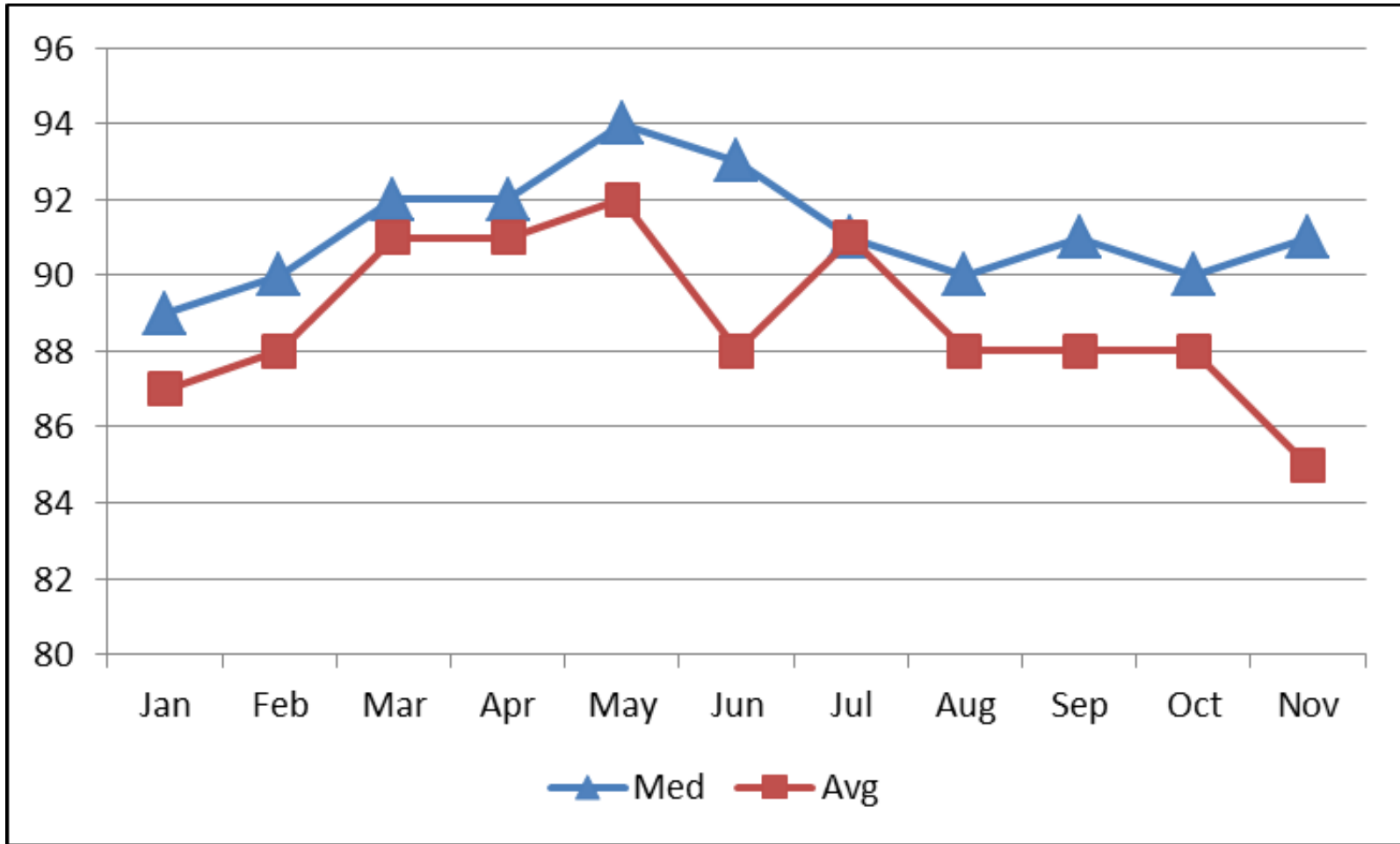
Compression  
instructions  
read to 1<sup>st</sup>  
Compression

N = 166 (Oct 2013 – May 2014)

# Bystander CPR



# Compression Fraction







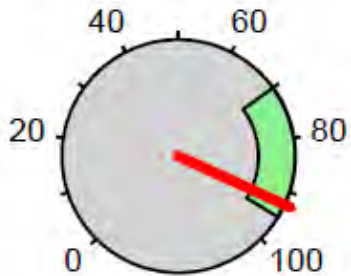
# Provider Feedback (“Qualitative” Measure)

- ● ●
- Self-Reflection
  - Goals provided but no score
  - No disciplinary action
- Uses competitiveness & internal desire to perform
- Simple visuals
- Drives desired behaviors



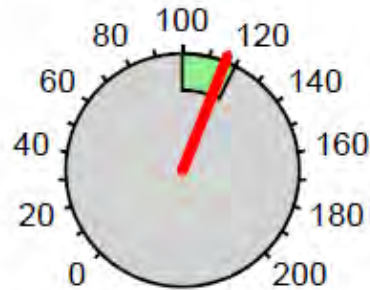
# Provider Feedback

Compressions Ratio  
(/total time)



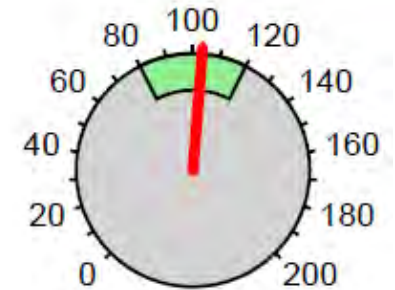
26:23 / 28:32 = 92 %

Compression Rate



116/minute

Compressions/minute



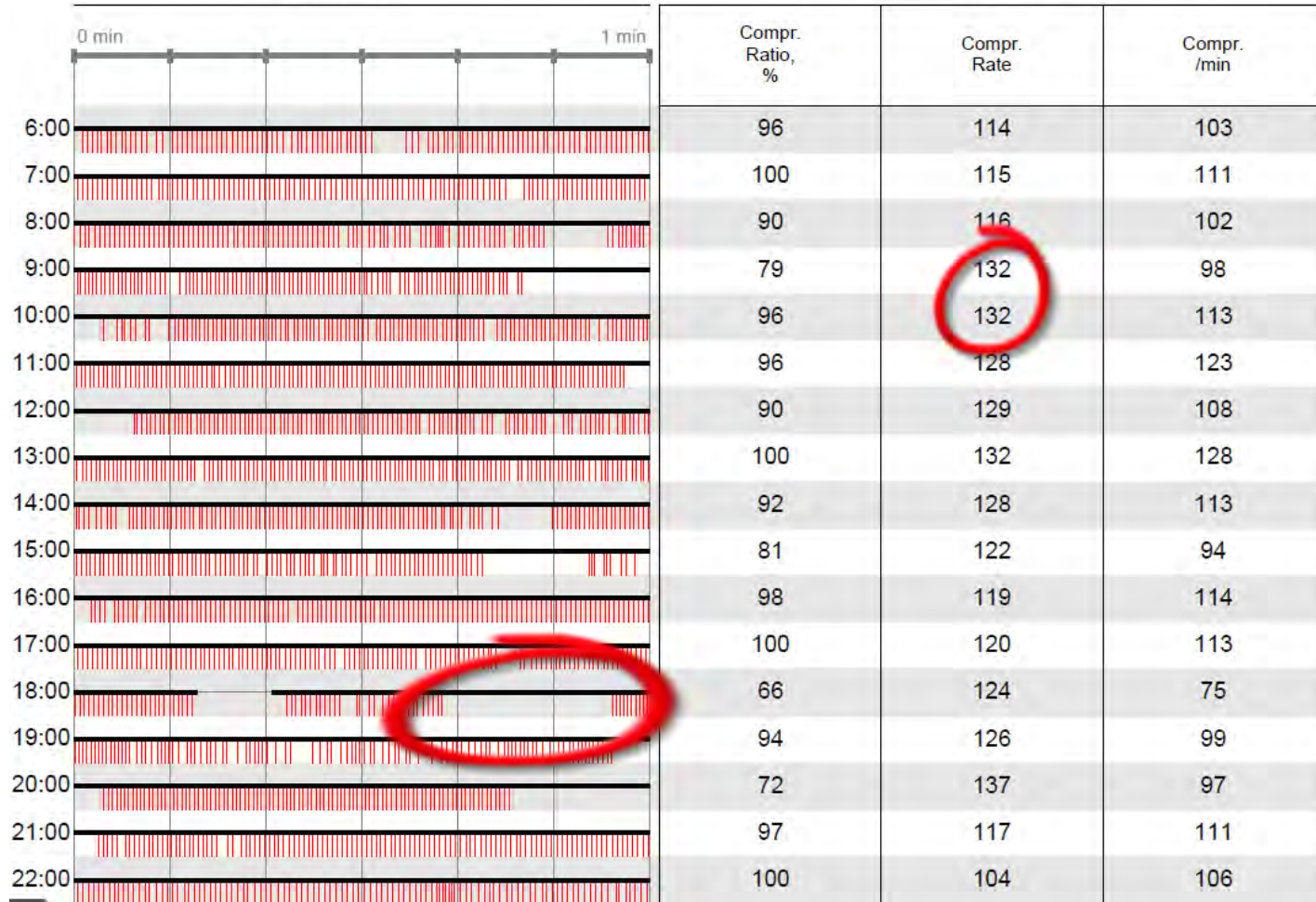
103/minute

# Provider Feedback



CPR QUIK-VIEW

Interval Statistics



Identify improvement opportunities



# RELATIONSHIP TO TRAINING

*Training is a performance & process  
improvement tool*



# Training Impact Points

- Initial Paramedic/EMT training
  - Resuscitation Vision, Culture and Concepts
  - Why focus on cardiac arrest?
  - Understanding Science
  
- Continuing Education
  - Practice for process improvement
  - Systems Approach
  - EMS Agency dependent



# Challenges



# Challenges

- Performance measures
  - Often manual
  - Time intensive
  - Dependent on data quality
  - Conflict – managing patient vs. data
  - Process measures not well defined



# Challenges

- Performance standards
  - Variation in cardiac arrest victims, communities, and EMS Systems
  - Shift focus from improvement to target
  - Variation in measures & application
  - Shifts culture to being #1





# Challenges

- Organizational Culture
  - Education/Training – “few if any survive”
  - Historical vs. evidence supported
  - No value to a cardiac arrest focus



# Potential Improvements



# Potential Improvements

- Improving cardiac arrest outcomes
  - Process improvement measures & tools
  - Effective & efficient bystander CPR programs
  - A change in resuscitation culture
  - Effectively promote a culture of resuscitation improvement



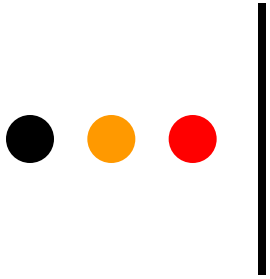
# Questions?

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# ADDITIONAL INFORMATION



# Standards & Measures

## *Quality*

“the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”



# Discussion #1

- o What are the essential differences in the EMS system in various regions that affects survival outcomes?



# Discussion #1

- Minimal to no integration of rapid first response
- A focus on historical resuscitation methods
- Minimal to no emphasis on bystander CPR
- A lack of effective performance measures





# Discussion #2

- Should EMS performance standards be required, and if so, how do we measure core competencies?



# Discussion #2

- EMS standards should NOT be required
- Define meaningful performance measures
- Adopt a continuous improvement culture



# Discussion #3

- o From a provider perspective, what are the current challenges in care delivery?



## Discussion #3

- Advocating for interventions with no proven outcomes benefit
- “Unlearning” historical practices
- Inadequate resources dispatched
- Delays in telephone CPR instructions
- Limited options for problem solving
- Lack of growth for providers



# Discussion #4

- What are the barriers to implementing known best practices (e.g., telephone CPR, AED/CPR training in schools, etc.)?



# Discussion #4

- Bystander CPR in lower SES populations
- Resource limits for community CPR and telephone CPR
- “Unlearning” historical practices
- Non-prioritized science and implementation changes
- Commercialization of the Science



# Discussion #5

- o What are the barriers to creating more effective systems and teams?



# Discussion #5

- Lack of clinical & operational leadership
- Lack of focus on continuous improvement
- Inability to effectively measure
- Failing to recognize differences within the community
- Lack of connection between EMS & hospital environments
- Failure to completely identify the problem





# Discussion #6

- o Which practices are most controversial and why?



# Discussion #6

- Historical Interventions without proven benefit
- Transport prior to ROSC
- Therapeutic hypothermia implementation specifics
- Belief that more is better



# Discussion #7

- What do you perceive to be the top 3 challenges or knowledge gaps in this area?



# Discussion #7

- Poorly defined process measures & tools
- Implementation research funding outside academic centers
- Poorly defined culture of resuscitation improvement



# Discussion #8

- What are your top three recommendations for improving health outcomes from cardiac arrest?



# Discussion #8

- Define processes leading to improved outcomes along with measures & tools
- Define and disseminate elements of a community culture of resuscitation
- Promote resuscitation improvement methods for clinical & implementation science