



# Critical Topics – Cardiac Arrest **CARE** in EMS

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# Disclosure Statement

- I have no conflict of interest to report.
- I am not employed by an organization or company that will receive financial gain as a result of this material.

# Background

- Employee driven focus group to improve cardiac arrest care
- Efforts initiated July 2011
- Team CPR protocol initiated 1 April 2012
- Integration of all response stakeholders
- Cabarrus CARES

CEMS C.A.R.E.S

CARDIAC

ARREST

RESUSCITATION

ENHANCEMENT

STRATEGIES



# ***Cabarrus EMS C.A.R.E.S.***

- **Mission:**
  - To organize, streamline and enhance cardiac arrest and post resuscitation protocols and procedures using current research, evidence based medicine and advanced skills to improve survival rates and quality of life for patients whom suffer cardiac arrest in the field.
- **Goals:**
  - Achieve and maintain cardiac arrest ROSC and neurologically intact survival rates that are equal to or greater than that of the national average.
  - Provide a 360 degree feedback loop between EMS, first responder, and hospital staff about cardiac arrest outcomes and care.
  - Enhance data collection and analysis of all cardiac arrest treatment and outcomes in order to provide statistical data for quality assurance and comparison with other agencies.
  - Monitor research on pre-hospital treatment of cardiac arrest and consider new treatment plans or research projects.
  - Develop and implement ongoing training programs that encompass all agencies involved in pre-hospital cardiac arrest care.

# Impact

- 2011
  - 131 cardiac arrests
  - 35% ROSC
  - 9% Survival to discharge
  - Utstein ROSC 50%
  - Utstein Survival to discharge 21%

# Impact

- 2012
  - 146 cardiac arrests
  - 51% ROSC
  - 15% Survival to discharge
  - Utstein ROSC 80%
  - Utstein Survival to discharge 43%

# Demonstration





# Cardiac Arrest Management...A System Approach

- Community
- Dispatch
- First Responders
- Emergency Medical Services
- Hospital
- Partnerships

# Community

- Public Education
- Hands Only CPR
- Trained over 1100 in 2012
- Creation of Hearts & Heroes video

# Emergency Medical Dispatch

- Hands Only CPR instructions pre-arrival
- Increased awareness on the need for early CPR
- Coordinate dispatch of first responders, two EMS units, and supervisor
- Loop quality assurance

# First Responders

- Comprehensive training program for all first responder agencies
- Loop feedback
- Cardiac arrest report
- Role identification

# Emergency Medical Services

- Medic “buy-in” and system pride
- Retraining in team approach to CPR
- Role identity
- Therapeutic hypothermia on all arrests
- Increased utilization of IO and BIAD
- Implementation of Q-CPR program and equipment

# Emergency Medical Services

- 2<sup>nd</sup> ALS unit on all cardiac arrests
- Extended on-scene treatment
- Non-emergency transport when CPR in progress

# Hospital

- Increased communication with CMC-Northeast
- Greater Medical Director involvement and field discontinuation
- Serve on CMC-Northeast Resuscitation Committee
- Continuation of therapeutic hypothermia

# Partnerships

- EMS Agencies
  - Rowan EMS
  - Mecklenburg EMS
- RACE CARS
- CMC-Northeast
- American Heart Association
- Cabarrus Fire Association



# The Reward



- Creation of a “Save Award” for EMS crews
  - Citation bar and commendation letter for each survival to discharge.
- Award commendation letters to county first responders involved.
- Organization of reuniting event.

# Hearts and heroes

- Reunited patients with telecommunicators, first responders, EMS crews, and hospital staff.
- Promoted CPR awareness and shared stories with audience.





# Hearts & Heroes



**6:00pm-8:00pm**

**Wednesday February 27<sup>th</sup>, 2013**

**Hamrick Theater at Carolinas Medical Center-NE**

*Thank you for joining us for an evening celebrating the lives of those who have been resuscitated after an out-of-hospital cardiac arrest and the dispatchers, first responders, EMTs, paramedics, nurses and doctors who helped change their lives.*



**“Celebrating a second chance”**

Carolinas Medical Center  
NorthEast



# Future?

- Continued focus on quality review of all cardiac arrests
- Continued loop quality assurance feedback
- Moving forward with CPR education and AED mapping
- Continued modeling in best practices

# Special Thanks

- James Maneval, Cabarrus EMS CARES Coordinator
- EMS CARES Committee
- First Responder Agencies
- Dr. Craig Corey, EMS Medical Director
- CMC-Northeast
- Cabarrus County Communications

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