Strategies to Improve Local and National Cardiac Arrest Data Registries

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CARES Funding Partners

- American Red Cross
- American Heart Association
- Emory University
- Medtronic Philanthropy
- Zoll Corporation
- CDC (2004-2012)
“What is missing is a standard set of measures that can be used to assess the performance of the emergency and trauma care system within each community, as well as the ability to benchmark that performance against statewide and national performance metrics.”
You can’t manage what you can’t measure!

The first step to improving survival rates is to begin collecting data in order to better understand performance.
Quality Improvement Elements of a Resuscitation System

Developing a culture of high quality resuscitation.

What can we attribute the variation in survival to?

*Links in the “Chain of Survival”*

Disparate outcomes are almost certainly due to timeliness and quality of treatment.
OHCA Registries

- Danish Registry
- OHCAR – Ireland
- VACAR - Melbourne
- Swedish Registry
- Japanese Registry
- EuReCa- Europe
- PAROS – Pan Asia
- CARES - US
- ROC-North America
Improving Emergency Cardiac Care Saves Lives

CARES
Cardiac Arrest Registry to Enhance Survival

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention
CARES Mission Statement

To help communities determine standardized outcome measures for out-of-hospital cardiac arrest allowing for quality improvement efforts and benchmarking capability to improve care and increase survival.
To become the standard out-of-hospital cardiac arrest registry for the United States allowing for uniform data collection and quality improvement in each state and nationally.
CARES COVERAGE

The registry covers a population of over 80 million. This represents more than 25% of the US population.
In 2013 ~ 37,000 records entered with >130,000 cumulative records in the registry.
CARES 2014 Focus States
How do we get there?

- OHCA as a community core measure
- Expansion of statewide OHCA registries
- Sustainable funding model
- Separate ICD-10 Codes for OHCA & IHCA
State Based Registry

- States regulate health
- As part of national registry
- OHCA outcomes – AED registry
- Promotes quality improvement & benchmarking
State Based Registry

- Publically report annual summary data
- Endorsement by state health/EMS
- Academic medical center involvement
- Consideration of pilot funding for states to participate.
Community Core Measure

- Measures used to judge the effectiveness of a system should include:
  - Patient-oriented outcomes
  - Patient-centered processes of care
  - Community-centered outcomes
- Episode of care approach

Episode of Care Approach

Multi-stakeholder Review:
Criteria for Evaluating a Measure

MULTI-STAKEHOLDER COMMITTEES OVERSEE ENDORSEMENT
These committees evaluate measures by clinical condition against agreed upon criteria. Measures reviewed are endorsed and receive the NQF seal of approval. In order to receive NQF endorsement, measures must meet all five endorsement criteria.

1. IMPORTANCE TO MEASURE AND REPORT
Evaluate whether the measure has potential to drive improvements in care, is aligned with the National Quality Strategy, and is based on strong clinical evidence.

2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
Determine if the measure will allow for valid conclusions about quality based on performance scores. If measures are not reliable (consistent) and valid (correct), results may misclassify providers.

3. FEASIBILITY
Assess the burden involved with collecting measure information.

4. USABILITY AND USE
Evaluate if the measure can be appropriately used in accountability and improvement efforts.

5. ASSESS RELATED AND COMPETING MEASURES
Determine whether the measure is duplicative of other measures. If other criteria are met, harmonize or select the best measure among duplicative measures.

ACTION

NOT ENDORSED
ENDORSE
Community Core Measure

- Pay for reporting model for hospitals
- Future pay for reporting model for EMS
NEED FOR AED REGISTRY

- Minimal data available on use and efficiency of public access AEDs
  - $500 million invested in new devices each yr
- Data Use:
  - Product maintenance
  - Strategic placement of devices
  - Link to outcomes
  - Real-time identification of AED location by 911 dispatcher
NEED FOR AED REGISTRY

- **Community & public health value**
  - Saved lives
  - Maximize return on investment
  - Measurement for education and process improvement

- **Industry value**
  - FDA regulation for Level III devices
  - Need for industry to be compliant with process
    - Safety advisories and repair
NEED FOR AED REGISTRY

AEDs are covered by the same rules that apply to defibrillators implanted in the body.

But the two kinds of devices are subject to very different record-keeping protocols.

For instance, surgically-implanted defibrillators must be documented in a central national registry run by the American College of Cardiology.
NEED FOR AED REGISTRY

- State based AED Registry
- Data is provided back to manufacturers for a fee per device
- Emerging technology will provide GPS location of the device
- Can provide a sustainable funding model for a national registry through an alignment of interests
ICD-10
I-46

- Need for separate OHCA & IHCA ICD codes
- Presently I-46 used for both OHCA & IHCA
- Required for core measure tracking
- Determine the burden of disease
- Better understanding of annual costs
CARES 2019
2019

- OHCA is a community core measure
- National participation in CARES
- Sustainable funding model - alignment of interests
- Separate ICD-10 Codes for OHCA & IHCA