Program to Integrate Technology and Cardiac Arrest Resuscitation

Washington Life Sciences Discovery Fund

Thomas Rea
September 14, 2010
Outline

1. The Public Health Challenge of Cardiac Arrest
2. Rationale and Structure of the Program
3. Feature Focus – Statewide Translation
4. Discussion
Challenge of cardiac arrest resuscitation

Normal Heart Rhythm

Disorganized Heart Rhythm
Challenge of cardiac arrest resuscitation

Normal Heart Rhythm

Disorganized Heart Rhythm

Most common cause of heart disease death and accounts for ~10% of all deaths
Resuscitation: Links in the Chain of Survival

- Prompt activation of emergency care (9-1-1)
- Early CPR
- Early Defibrillation
- Timely advanced care
- Training, Education, and Evaluation
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Technology to Improve Resuscitation Care

- Clinical
- Technical
- Administrative
- Research
Program interfaces

- Technical
- Clinical
- Research
- Administrative
Program Participants

Public Health
Seattle & King County

Universit of Washington

PHILIPS

PHYSICIO CONTROL
Program Structure

King County EMS Division of Public Health

Center for Evaluation of EMS

Philips Medical

Physio-Control

Program to Integrate Technology and Cardiac Resuscitation

Advance Resuscitation Science

Economic advantage and advancement

Improve the Public Health of Washington State and beyond

Leverage to sustain the Program

University of Washington

External Consultants
Program Objectives

Convene resuscitation stakeholders to develop and refine technology aimed at improving outcomes.

Pursue a strategic roadmap of investigation involving resuscitation technology.

Disseminate and implement the Program’s scientific findings to improve health across Washington State.

Provide marketplace advantages for Washington-based enterprises.

Leverage the Program’s accomplishments toward future Program success.
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Program Plan for Statewide Translation

**Partnership with Statewide stakeholder organizations**

- Washington State Dispatch (APCO)
- Washington State Medical Directors
- Washington State Department of Health

**Web-based resources**

- EMS Online
- RESUSCITATE!

**Resuscitation Academy**

- NEJM
- JAMA
- Circulation
- Annals EM
- JEMS
- PEC

**Traditional Scientific Dissemination**

- AHA Scientific Leadership

**Industry Partnership**

- PHILIPS
- PHYSIO CONTROL

“How your community can improve survival from cardiac arrest”
Reality is that survival varies from 0 to 50% for cardiac arrest presenting with a shockable rhythm.

How does your community perform? How can you improve?

The goal of the Resuscitation Academy is to improve survival from cardiac arrest.

Attendees develop a concrete plan of action to improve survival in their community.
Convene regional experts who provide a 1-week intensive fellowship program about how to improve community care for cardiac arrests.

Directed toward EMS Medical Directors and high-level EMS Administrators.

“Improving cardiac arrest survival rates, one community at a time”
# Resuscitation Academy Agenda

## DRAFT AGENDA: October 12-15, 2010

### October 12

**Tuesday**

**Foundation**

- 8:30 - 8:15 Welcome & Introductions - Hickey Eisenberg, MD
- 8:15 - 9:15 Overview & QA - Hickey Eisenberg, MD
- 9:15 - 10:00 Seattle/King County System Overview - Jonathan Larsen
- Break
- 10:15 - 11:15 Resuscitation from Out-of-Hospital Cardiac Arrest: Lessons Learned - Leonard Gold, MD
- 11:15 - 12:15 Medical Control - Michael Copass, MD
- Break
- 12:30 - 2:00 Lunch lecture: Chiropractic - Jonathan Larsen & Norm Redell
- 2:00 - 3:00 The Thurston County Experience - Cindy Hambly, Thurston Co. Medic One
- Break
- 3:15 - 4:45 The Science of CPR and Resuscitation - Peter Kodner, MD

### October 13

**Wednesday**

**Early Morning – Group 1**

- Seattle Medics One Office, Northwest corner of 9th Ave. and Jefferson St.
- 7:00 Run Review with Dr. Copass

**Morning – all participants**

- Emergency Operations Center, Media Briefing Room
- 105 5th Avenue South
- 8:30 – 9:00 Article discussion and case review
- 9:00 - 10:00 Data and Cardiac Arrest Registries - Tom Rea, MD
- Break
- 10:15 – 11:15 King County Cardiac Arrest Case Review – Steve Perry
- 11:15 – 12:15 Seattle Cardiac Arrest Case Review – Michelle Olsufka
- Break
- 12:30 – 1:30 Lunch lecture: Dispatcher Assisted CPR – Linda Callery (or Megan)?
- 1:30 – 2:00 EMS Online as a QA tool – Tracey White

### October 14

**Thursday**

**Early Morning – Group 2**

- Seattle Medics One Office, Northwest corner of 9th Ave. and Jefferson St.
- 7:00 Run Review with Dr. Copass

**Morning – all participants**

- Emergency Operations Center, Media Briefing Room
- 105 5th Avenue South
- 8:30 – 9:00 Article discussion and case review
- 9:00 - 10:00 Hypothermia and Post Resuscitative Care – Graham Nihill, MD
- Break
- 10:15 – 11:45 Developing an Action Agenda for Improving CA Survival – Tom Rea, MD
- 11:45 – 12:45 Lunch lecture: Community Programs - Linda Callery
- Break
- 1:00 – 1:45 Police AED – Ann Doll

### October 15

**Friday**

**Early Morning – Group 3**

- Seattle Medics One Office, Northwest corner of 9th Ave. and Jefferson St.
- 7:00 Run Review with Dr. Copass

**Morning – all participants**

- Emergency Operations Center, Media Briefing Room
- 105 5th Avenue South
- 8:30 – 9:00 Article discussion and case review
- 9:00 – 10:00 Putting It All Together & Project Selection – Hickey Eisenberg, MD
- 10:00 – 1:00 Project show and tell (Lunch served ~12:00)
- Break
- 1:15 – 1:30 Evaluation
- 1:30 – 2:00 Closing remarks – Michael Copass, MD

2:00 Resuscitation Academy ends

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Resuscitation Academy

Increased from annual to bi-annual to tri-annual
Here’s what Academy Fellows had to say:

“This is the best EMS course I ever attended.”

“The information was extremely useful and practical.”

“Thanks to the faculty, I am energized to improve cardiac arrest survival in my community.”

..................BUT
“I need an easy way to record and organize my community performance that will let me compare.”


...............Okay then
Cardiac Arrest Registry to Enhance Survival

Web-based Registry Centers for Disease Control.

Partner with the CDC and CARES to develop a Statewide registry.

“Washington CARES” is one of a handful of pilot state-based internet registries.

Resuscitation Academy provides the tools for communities to enroll in Washington Cares.

Use measurement to identify areas for improvement
Heart Rescue Initiative

Goal of improving resuscitation rates by 50% on a Statewide basis.

Develop and implement strategies aimed at improving care within communities across Washington State.

Sample Toolkits
- Bystander CPR Training
- Dispatcher CPR
- Public access defibrillation
- Police Defibrillation
- EMS CPR
- EMS airway management
Resuscitation Academy
Program to Integrate Technology and Cardiac Arrest Resuscitation

The Program is a multidisciplinary and multifaceted approach that works to innovatively advance care for cardiac arrest through scientific advancement and effective community translation.

The Program provided strategic positioning and infrastructure to importantly increase efforts aimed at Statewide translation through participation of CARES and the Medtronic Foundation.
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