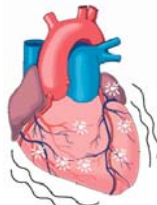


## Background

Cardiac arrest is characterized by sudden unexpected collapse caused by a loss of cardiac function. Often persons have no prior signs of heart problems.



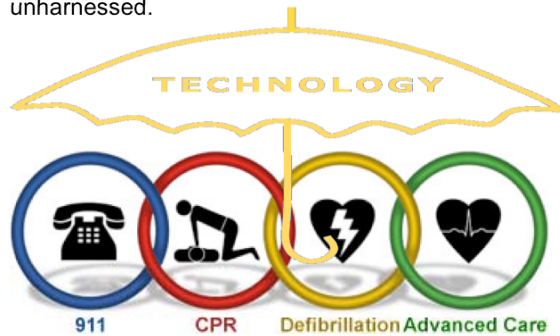
Most often the heart is experiencing an aberrant heart rhythm termed ventricular fibrillation which causes the heart to quiver (“fibrillate”) instead of pumping in an organized fashion.



Each year in the US hundreds of thousands of persons suffer cardiac arrest. Most die in the minutes after collapse. In alternate terms, the number of persons dying from cardiac arrest is equivalent to a fatal crash of a full 747 jet each day.

Resuscitation is feasible yet uncommonly achieved. Successful resuscitation requires a coordinated set of time-dependent actions that involve laypersons and emergency personnel.

These actions are termed “links in the chain of survival”. Technology envelops the “links”. Yet the potential for technology to innovatively interface with rescuers and aid resuscitation often goes unharnessed.



**The Program to integrate Technology and Cardiac Arrest Resuscitation** was borne from the appreciation that technology is inherent to resuscitation and yet frequently overlooked as a key to improvements.

The Program is directed by the Emergency Medical Services Division of Public Health – Seattle & King County, builds on a long history of rigorous evaluation of resuscitation, and actively collaborates with the University of Washington, Philips, and PhysioControl.



The Program combines programmatic infrastructure, clinical and intellectual resources, and support from Life Sciences to pursue a profile of technology-based projects that span the links.

### The primary aims of the Program are to:

1. Convene clinical, research, and industry stakeholders with resuscitation expertise to develop, evaluate, and refine technology aimed at improving resuscitation.
2. Disseminate and implement scientific advances produced by the Program to achieve better outcomes across Washington State, and provide marketplace advantages for Washington-based enterprises.

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## Focus on Statewide Translation

One of the main goals is to improve translation of clinical advances in resuscitation science throughout Washington State



### Resuscitation Academy (resuscitationacademy.org)



The goal of the Resuscitation Academy is to improve survival from cardiac arrest. The goal is achieved through participation by EMS managers and EMS medical directors in a 1-week intensive fellowship program conducted by King County EMS and Seattle Medic One.

The Resuscitation Academy is held twice yearly and reaches out to engage the EMS stakeholders throughout Washington State. The Academy establishes personal relationships and commitments across Washington



### Cardiac Arrest Registry to Enhance Survival



Improving resuscitation care requires systematic measurement. The Centers for Disease Control has developed a robust registry to measure cardiac arrest entitled “CARES”. We have partnered with the CDC and CARES to develop a Statewide registry. The registry entitled “Washington CARES” is one of a handful of pilot state-based internet registries aimed at improving care on a statewide level. The Resuscitation Academy provides all the tools and training for Washington State communities to enroll in Washington Cares.

### Heart Rescue Program



Systematic measurement using Washington CARES identifies opportunities for targeted efforts to improve care. The Program has leveraged the evolving approach to Statewide measurement to partner with the Medtronic Foundation. The Program - in conjunction with the University of Washington and Seattle Medic One - has been awarded support to develop innovative strategies aimed at improving care across Washington State.