Joan Mellor's innovative work literally brings people back from the dead.

The young athlete who drops on the field. The dad who suddenly falls mowing the yard. The coworker who collapses at work. More often than not, it's cardiac arrest. And sure death. But because of Joan's tireless work, more people are living.

Sudden Cardiac Arrest (SCA) is an ignored public health crisis, killing an estimated 350,000 Americans each year. Only eight percent of victims survive, a national rate that has not changed in 30 years. Many experts dismissed SCA as an untreatable condition. Not Joan. Joan has been challenging the SCA status quo for the last sixteen years. She uniquely understands and represents the voice of victims and survivors, the field work of first responders and the expertise of trained physicians and researchers.

Despite a track record of successful programs, she could not accept the terribly low survival rate. She knew something radical must be done and drew on her passion, vision and experience to drive change. She also knew she could not do it alone. Joan launched the HeartRescue Project in 2011, convincing some of the country's leading emergency and resuscitation experts to join her in this ambitious project.

Working together for the first time, these HeartRecue Partners represent three critical levels of response: bystanders, emergency medical services and hospitals. More than just a funder, Joan rolled up her sleeves with Partners to design a new kind of SCA program. They were charged with integrating best practices at all levels of response and to expand the reach of these efforts, measuring their success all along the way. Their goal? Improve survival rates by at least 50 percent in five years in select geographies.

Three years into the project, 80 percent of the population in pilot states are covered by the program's activities, with survival rates up 50 to 500 percent. In Chicago, the survival rate jumped to 12 percent, after languishing at two percent for decades.

Recognizing that traditional CPR training methods were sometimes a barrier to bystanders, Joan led the development of the "save-a-life simulator," a free online virtual experience that allows visitors to save a life, teaching CPR and AED usage in a simple, engaging, effective manner. More than 7 million visitors have gone through this" at www.heartrescuenow.com, which drew the attention of staff at the Institute of Medicine, who said the simulator could change the way we conduct public health education efforts.

The HeartRescue Project results have caught international attention, and Joan is currently leading efforts to adapt the program in China and Russia.

Joan's hands-on, bold approach to grant making is changing the way the United States treats SCA. Her humble, yet determined style, has allowed her to build partnerships among stakeholders not accustomed to working together. An angel, an academic, an entrepreneur, a lifesaver...these are just a few of the terms these Partners use to describe Joan, as demonstrated in the attached testimonials. We think "Creative Grantmaker" should be added to that list.

UW Medicine SCHOOL OF MEDICINE



April 30, 2014

I am pleased to nominate Joan Mellor of the Medtronic Foundation for the Scrivner Award. Ms. Mellor directs the HeartRescue Project, an initiative supported by the Medtronic Foundation. The goal of the HeartRescue Project is to improve out-of-hospital cardiac arrest resuscitation on a broad multi-state basis. I am part of the HeartRescue team for Washington State and so have had extensive opportunity to work Ms. Mellor over the past few years and feel qualified to comment on her qualifications for the Scrivner Award.

This HeartRescue project is a formidable challenge given the context of current practice. Unlike many public health conditions, there is not the expectation of routine surveillance that can provide comprehensive case capture and review of care and outcome for cardiac arrest. This lack of initiative and infrastructure is alarming given that cardiac arrest is a leading cause of death in the US and around the world. Until recently, the magnitude and challenges of this condition were informed by a modest number of self-selected communities. These sporadic efforts to assess cardiac arrest suggest that overall survival is very poor – on the order of 5% - but that a few communities do better.

Part of the challenge is that cardiac arrest resuscitation is a true "team sport" that requires time-sensitive involvement from a variety of persons and organizations that include the general public, 9-1-1 emergency dispatcher, the first responder group, the paramedic system, and the hospital. A sustained and coordinated strategy to achieve resuscitation has eluded for most communities.

Thus, the challenge for the HeartRescue initiative is to organize diverse stakeholders to systematically capture cardiac arrest events, to measure care and outcome, to use this information to identify opportunities for improvement, and to in turn implement effective programs to address shortcomings. This challenge is especially daunting when one appreciates that each community (or system) has a different set of resource strengths and limitations and of course different personalities and inter-organizational dynamics. Collectively many believe that these differences cannot be overcome, and so prevent translation of science into effective community practice.

Enter one Joan Mellor and the HeartRescue initiative. The HeartRescue initiative turned the whole challenge on its head. I think there are 3 key strategies that Ms. Mellor spearheaded as part of HeartRescue that have enabled for programmatic success and collectively represent an innovative transformation to the public health challenge of cardiac arrest. First, Ms. Mellor required geographically-comprehensive measurement so that HeartRescue was truly a State-wide, population-based strategy to measure and improve care for cardiac arrest. This inclusive strategy forced the handful of communities with expertise and experience to engage with the much larger number of "have-not" communities. This approach was a brilliant strategy that has underscored Ms. Mellor's conviction that resuscitation is not the purview of a select few but really can be achieved by many and potentially all communities/systems.

Second, Ms. Mellor treated the HeartRescue project as a public health initiative. As a consequence, she forced the leadership from the different State partners to step outside their scientifically-driven framework that typically attempts to attribute cause-and-effect in a discrete microcosm. Instead the State partners approached the challenge of comprehensive measurement and improvement from a more macro- perspective.

The strategy evolved to programmatically impact organizations and communities with the goal of addressing a public health challenge.

As a consequence of the second strategy, Ms. Mellor leveraged the diversity of stakeholders. Instead of identifying infrastructure differences across communities as potential obstacles to effective resuscitation, Ms. Mellor highlighted these as opportunities to learn, adapt, and improve. Ms. Mellor was true to the science of resuscitation but challenged convention in highlighting the potential for different community-specific strategies to effectively improve care locally. The strategy has empowered local communities to smartly apply the science in a manner that builds on their local programmatic strengths. The strategy spawned the Resuscitation Academy forum that is now gaining traction worldwide as a primary means to "change culture" through pragmatic education that provides real-world tools to improve resuscitation.

As a means of imparting strategy, Ms. Mellor engaged *all* the stakeholders. She values the input of scientific expert, but also the involvement and contributions of the local fire chief, the community education advocate, and the intensive care nurse to name a few. This broad and equitable engagement has energized "the team" that is required for successful resuscitation. Her tireless efforts have motivated many and provided true inspiration for resuscitation insiders such as myself.

HeartRescue is a success because of Ms. Mellor's operational strategy, her sincere and determined conviction, and her broad-based and engaging leadership. In Washington State for example, we now have 90% of communities participating in HeartRescue. In 2013, there were nearly 500 survivors from cardiac arrest. Survival is now approaching 20%, 4-fold greater than the traditional figure of cardiac arrest survival. The Washington State momentum has carried over to Oregon and Alaska; both States are now moving forward with Statewide efforts to measure and improve arrest care and outcome.

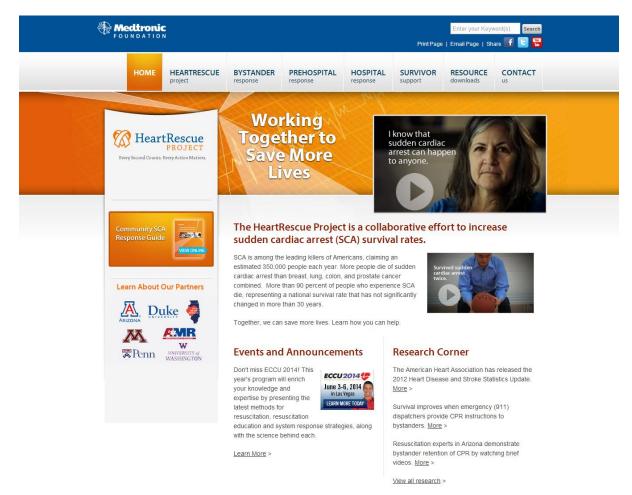
I believe HeartRescue represents the critical initiative that is transforming resuscitation care and cardiac arrest outcome. HeartRescue couples stakeholder accountability with can-do strategies that can improve health. And all because of Ms. Mellor's distinguishing efforts. I am honored to nominate Ms. Mellor for the Scrivner Award.

Sincerely,

Thomas Re.

Thomas Rea MD MPH Professor of Medicine University of Washington

HeartRescue Project Website: <u>http://www.heartrescueproject.com/</u>



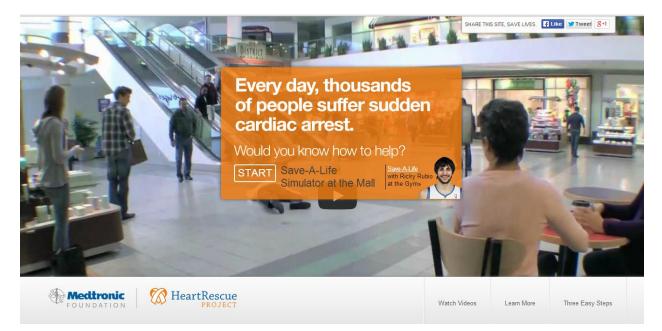
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HeartRescue Now Simulator - http://www.heartrescuenow.com/

The Save-A-Life Simulator is an immersive, online experience that engages visitors rather than passively presenting educational data the way previous training videos do. The lifelike video footage in the Save-A-Life Simulator depicts a man suddenly collapsing and then presents bystander with choices that will determine whether the victim survives. Each real-life response takes the bystander further into the scenario and illustrates the proper steps. The Save-A-Life Simulator was designed to be shareable so that more lives would be saved as more people are educated on how to respond.

The site has had more than seven million visitors.



"A Community Response Planning Guide for Sudden Cardiac Arrest" – screen shot of cover



Every Second Counts. Every Action Matters.



A Community Response Planning Guide for Sudden Cardiac Arrest

> HeartRescue PROJECT

http://www.medtronic.com/communi ty-response-guide-2012/guide/brimproving-bystander-cpr.html Excerpt from the American Heart Journal article, with peer review below.

http://www.ahjonline.com/article/S0002-8703(13)00371-2/abstract

Multistate implementation of guideline-based cardiac resuscitation systems of care: Description of the HeartRescue Project

Sean van Diepen, MD, MSc, ^{a,j} Benjamin S. Abella, MD, ^{b,j} Bentley J. Bobrow, MD, ^{c,j} Graham Nichol, MD, ^{d,j} James G. Jollis, MD, ^{c,j} Joan Mellor, BA, ^{f,j} Edward M. Racht, MD, ^{g,j} Demetris Yannopoulos, MD, ^{h,j} Christopher B. Granger, MD, ^{c,j} and Michael R. Sayre, MD ^{i,j} Alberta, Canada; Pbiladelphia, PA; Pboenix, AZ; Seattle, WA; Durbam, NC; Minneapolis, and Dulutb, MN; Greenwood Village, CO; and Columbus, OH

Background There is large and significant regional variation in out-of-hospital cardiac arrest (OHCA), and despite advances in treatment, survival remains low. The American Heart Association has called for the creation of integrated cardiac resuscitation systems of care capable of measuring and improving evidence-based care from bystanders through to hospital discharge.

Methods The HeartRescue Project was initiated in 2010 by the Medtronic Foundation in collaboration with 5 academic medical centers and American Medical Response. The HeartRescue Project aims to develop regional cardiac resuscitation systems of care that will implement guideline-based best practice bystander, prehospital, and hospital care with standardized data reporting linked to outcomes. The primary goal is to improve collective OHCA survival by 50% over 5 years.

Results The total population in the 5 participating states is 41.1 million. At baseline, the HeartRescue Project covers approximately 26.1 million people (63.6%) and has engaged 767 emergency medical services agencies and 269 hospitals. Data will be collected for quality improvement, to inform provider feedback, and serve to define effective strategies to improve cardiac arrest care.

Conclusion The HeartRescue Project is the largest public health initiative of its kind focused entirely on cardiac arrest outcomes. The project is designed to significantly improve OHCA survival by implementing and measuring model systems of care for cardiac resuscitation. (Am Heart J 2013;166:647-653.e2.)

Out-of-hospital cardiac arrest (OHCA) affects an estimated 380,000 people per year in the United States.¹ Unfortunately, a recent report has suggested that the overall rate of survival to hospital discharge has remained low despite advances in both prehospital and hospital cardiac arrest care.² Another report has suggested that survival is approximately 8%.³ Despite this poor prognosis overall, a 5-fold regional variation in OHCA survival has been reported in North America.³ This disparity presents an opportunity to identify best practices from high-performing communities and expand implementation and integration of community-, prehospital-, and hospital-based interventions to improve care and patient outcomes.

One potential approach to addressing regional outcome disparities might involve the regionalization of postcardiac arrest care. The creation of regional care systems has led to important improvements in the care of other time-sensitive medical conditions, such as trauma and ST-elevation myocardial infarction (STEMI), through the timely and consistent application of evidence-based

From the "Divisions of Critical Care and Cardiology, University of Alberto, Edmonton, Alberto, Canada, ^bUniversity of Pennsylvania, Philadelphia, PA, "University of Arizona, Phoenix, AZ, "University of Washington, Seattle, WA, "Duke University, Durham, NC, ⁴Madronic

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Multistate implementation of guideline-based cardiac resuscitation systems of care: description of the HeartRescue project. van Diecen S ¹ , Abella BS, Bobrow BJ, Nichol G, Jollis JG, Mellor J, Racht EM, Yannopoulos D, Granger CB, Savre MR.	Save items 6
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CONCLUSION: The HeartRescue Project is the largest public health initiative of its kind focused entirely on cardiac arrest outcomes. The project is designed to significantly improve OHCA survival by implementing and measuring model systems of care for cardiac resuscitation. © 2013.

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Q&A with HeartRescue Project Manager Joan Mellor

National HeartRescue Project is sponsored by Medtronic Foundation



By Jenifer Goodwin | From the EMS State of the Science 2012 Issue

The Medtronic Foundation's Joan Mellor oversees the Foundation's HeartRescue Project, a collaborative initiative designed to improve how SCA is recognized, treated and measured in the U.S. Most importantly, it's an ambitious effort to change the way we collectively respond to sudden cardiac arrest (SCA). Partners involved in the project are working to improve SCA survival rates by 50% over five years by implementing measurable, evidencebased best practices among citizen bystanders; prehospital responders such as police, fire and EMS; and hospitals.

Despite years of working to reduce the high death rate from SCA, Mellor has high hopes that the rates can be significantly improved. "It's been such a tough disease to tackle, and nobody has been able to do it in a way that is really scalable," she says. "And yet several communities across the country, including places like Arizona and Seattle-King County in Washington, have proven that increasing survival rates is possible."



Joan Mellor

FEATURED IN PATIENT CARE

Testimonials:

"Joan, from the start (2003) of the Minnesota Sudden Cardiac Arrest Survivor Network (MNSCASN), initiated the idea that Medtronic could support us as a nonprofit organization. She walked us, step by step on becoming a viable up and running productive organization which thru the years helped thousands of people become aware of Sudden Cardiac Arrest and its deadly effect on a large portion of Americans along with AED knowledge and use. We definitely would not be the strong functioning group of SCA survivors that we are today without her guidance and expertise. She created us.....watched and nudged us along until we now can independently survive and thrive as a non-profit group of SCA survivors supporting one another and our families, accomplishing our mission and goals, by providing us with the necessary equipment to teach CPR and AED usage to hundreds...and thousands of people annually!

We are eternally indebted to Joan Mellor for many of our accomplishments to date. In a way we were like a child to her...guiding and protecting us until we could manage on our own..then with maturity...move on separated and independent to what we've become today. We love her!!" Gene Johnson, SCA survivor and chairperson of the Minnesota Sudden Cardiac Arrest Survivor Network

"I've know Joan Mellor since 2005, when I applied for one of the small Heart Rescue grants offered by the Medtronic Foundation, and I've watched Joan learn more about the problem of sudden cardiac arrest each year. She has grown into a visionary leader in the field of resuscitation and has been extremely successful in encouraging collaboration among resuscitation experts and in directing them toward a common goal. Her work over the past decade has been a primary force in improving sudden cardiac arrest survival across the US and across the world." Lynn White - National Director of Resuscitation and Accountable Care, American Medical Response

"Joan's dedication to the HeartRescue Project has saved thousands of lives across the US. She advocates for the 400,000 victims that die each year, advocates for the families who may have had a chance to spend more time with their loved one should local resources implement the best practices that is recommended by the American Heart Association. She has organized an elite group of experts in the field to lead the nation in adopting the best practices to save lives. She has encouraged and helped get our partners on national platforms to push the message of simple interventions in the links in the chain of survival. She inspires all of us by her diligence to assure that organizations who are committed to saving young lives has resources and local attention to continue their efforts. Many survivors from sudden cardiac arrest have no idea who Joan is, but it's been her work nationally that may have saved their lives. Joan should be commended for her efforts, very few people can say that the work that they do on a day to day basis saves lives." - Lisa Monk MSN, RN, CPHQ, Director, Regional Approach To CV Emergencies, Cardiac Arrest Resuscitation System