

CHALLENGING SUDDEN CARDIAC ARREST A COMMUNITY BASED APPROACH



IMPLEMENTATION GUIDE AND RESOURCES

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About this Guide

This guide is intended to provide an overview of a community-based approach to improving cardiac arrest outcomes.

The evidence-based recommendations, best practices and innovations described in this guide present interrelated, action-oriented steps that, when combined, should enable short- and long-term improvements for people who experience a cardiac arrest.

In this guide you will find specifics related to the HEARTSafe Community strategies and recommendations in the form of tactical elements. The tactical elements provide definition for key actions and tactics. You will also find links to a wide variety of resources from world recognized organizations and industry partners, including scientific statements, videos and other resources that may be useful to advocate champions.

It is our collective hope that our efforts will inspire and guide communities in implementing lifesaving strategies, thereby helping to save more lives by preventing sudden cardiac arrest from becoming sudden cardiac death.



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Sudden Cardiac Arrest: A Community Issue

Despite the prevalence of cardiac arrest, federal support for resuscitation research pales in contrast to other diseases and conditions that are just as common. Compelling new research holds promise for boosting survival without disability and for reshaping approaches to cardiac arrest treatments. Yet much is still unknown about some aspects of cardiac arrest, including the effectiveness of current treatments.

Approximately 80% of cardiac arrests occur in and around the homes of our



communities. They are mini disasters that not only claim the lives of the victims but devastate the families and the community at large. Because local circumstances deserve local solutions, efforts to improve survival must occur at the community level with a vision of ideally prepared communities.

There is increasing awareness of geographic disparity in sudden cardiac arrest (SCA) outcomes. This should inspire community stakeholders and advocates to make a positive difference through action in their own communities. These actions should be based on the links in the cardiac arrest chain of survival, be supported by local leadership, guided by science, influenced by best practices and implemented with innovation to address local needs. All plans require sensibility and that the actions be pragmatic.

Challenges in optimizing outcomes through effective community resuscitation are formidable and, by nature, iterative. The **key to success is mobilizing community support, finding partners and champions, assessing needs and resources, and organizing and conducting assessments, all while prioritizing implementation, evaluation and sustainability.**

The consequences of well-integrated and well-delivered community-based strategies can be measured directly in the number of lives saved and celebrated by the individuals who live in the community.

An Essential Read from the Resuscitation Academy

This guide was developed by the Resuscitation Academy and is intended for EMS directors, medical directors, fire department chiefs, EMS service officers, EMS training officers and dispatch center directors. **The Resuscitation Academy appreciates the importance of implementation and has developed this high-value asset to assist leaders in implementing community-based strategies.**

TEN STEPS FOR IMPROVING SURVIVAL FROM SUDDEN CARDIAC ARREST

A practical guide designed for EMS, 911 Centers and community leaders who want to improve cardiac arrest survival. It includes embedded links to short videos and audio of actual dispatch center cardiac arrest calls.

<https://www.resuscitationacademy.org/ebooks>



RESUSCITATION ACADEMY

A foundation committed to improving cardiac arrest survival rates



A Blueprint for Improving Cardiac Arrest Survival

The Cardiac Arrest Chain of Survival, including early recognition and activation of emergency medical services (EMS), early CPR, early defibrillation and early access to emergency medical care, has contributed to saving many lives. Regretfully, the full lifesaving potential of an optimized system of care remains elusive in most communities, which results in striking disparities in cardiac arrest survival. Some systems of care report more than a 5-fold difference in survival depending upon the development of their system. For the suddenly collapsed victim of sudden cardiac arrest to survive, witnesses and initial responders must be ready, willing and able to take quick action within a comprehensive patient-centered system of care. Such systems must be able to rapidly coordinate, mobilize and integrate each aspect of resuscitative care while focusing on optimizing patient survival with good neurological function and return to pre-arrest condition.

The Institute of Medicine (IOM) study and report, ***Strategies to Improve Cardiac Arrest Survival: A Time to Act***, was sponsored by the American Heart Association; the American Red Cross; the American College of Cardiology; the Centers for Disease Control and Prevention; the National Institutes of Health, and the U.S. Department of Veterans Affairs in 2015.

Strategies to Improve Cardiac Arrest Survival: A Time to Act

This report examines the complete system of response to cardiac arrest in the United States and identifies opportunities within existing and new treatments, strategies and research that promise to improve the survival and recovery of patients. The recommendations in *Strategies to Improve Cardiac Arrest Survival: A Time to Act* provide high-priority actions to advance the field. This report will help citizens, government agencies and private industry to improve health outcomes from sudden cardiac arrest across the United States.

This report is rich in information, guidance and resources and most importantly includes a spotlight on strategies and the importance of action.

<https://www.nap.edu/catalog/23695/exploring-strategies-to-improve-cardiac-arrest-survival-proceedings-of-a>

**2015 IOM Report
Strategies to Improve Cardiac Arrest Survival: A Time to Act
Recommendations**

1. Establish a national cardiac arrest registry
2. Foster a culture of action through public awareness and training
3. Enhance the capabilities and performance of EMS systems
4. Set national accreditation standards related to cardiac arrest
5. Adopt continuous quality improvement programs
6. Accelerate research and translation of science for cardiac arrest
7. Accelerate research on the evaluation and adoption of therapies
8. Create a national cardiac arrest collaborative

The above 8 IOM strategies are established at a national level.

But how can local strategies support the recommendations made by the IOM?

A coordinated, planned, structured, supported and sustainable implementation of existing and already proven strategies at the local level is needed.

Below are 6 community strategies that can be implemented in any community today with existing resources to improve outcomes locally and support a national effort.

SIX CORE COMMUNITY STRATEGIES TO SUPPORT IOM RECOMMENDATIONS

1. Strengthen local stakeholder collaboration
2. Encourage data collection, analysis and dissemination
3. Facilitate implementation of lifesaving strategies
4. Promote public education and training
5. Improve delivery of high-quality resuscitation and post-arrest care
6. Enhance the impact of cardiac arrest therapies

Translating the IOM Recommendations for Regional and Local Implementation

The Citizen CPR Foundation believes it is essential that sudden cardiac arrest is recognized as a communal issue and that local resources can and should be leveraged to improve preparation, recognition, response and immediate interventions for sudden cardiac arrest by the citizens as well as the local system of care. Time to treatment is the truest enemy and there is a need for multi-agency collaboration at the national, and, even more critically, at the local level.

We have the ability to improve systems to reduce the time between the onset of the arrest and the provision of lifesaving treatments. Shortening this time is one of the most effective ways to improve outcomes. Specific actions can be implemented immediately in every community to decrease time from detection to treatment of the suddenly collapsed victim.

From the Resuscitation Academy mantra, *“It’s not complicated, but it’s not easy.”* The science behind the steps to improve survival are not difficult to understand and are fairly straight-forward, however, change must start at the local level. **It is the local medical employees, administrative team members, training leaders and operational personnel who are most accountable and can best decide how to bring about change.**

This guide will address and support a national effort and improvement of tactics for implementation in communities of any and all sizes using the 6 Core Community Strategies based on the IOM Recommendations.



Plan Nationally and Implement Locally

It is important to understand that the very nature of cardiac arrest requires bystanders to be ready, willing and able to act in combination with care provided by our EMS, fire and first responder agencies. The most successful care must occur within a system that coordinates and integrates each facet of care into a choreographed group effort, which focuses on neurologically intact survival.



The Citizen CPR Foundation believes organized community efforts that prepare the lay public to provide bystander-initiated CPR and rapid defibrillation offer the best opportunity for successful resuscitation in the initial minutes after cardiac arrest. The optimal strategy is one that is localized and actively engages a community at all levels.

There are numerous opportunities for improvement that are rooted in engaging and educating the public, the centralized collection and distribution of cardiac arrest related data, the use of that data in quality improvement on a local, regional and national level, the provision of high-quality care by emergency medical services and our healthcare systems, and improved stakeholder collaboration.

Collaboration is Key to Success

Collaboration can be defined as the action of working with someone or a group of individuals to produce or create something, in this case a local system designed to improve cardiac arrest outcomes.



A collaborative multi-agency partnership promotes and provides for the sharing of skills, knowledge, expertise and resources between all parties. Progress will not be possible in the absence of multi-agency collaboration, particularly at the local level.

Group efforts involving individuals, businesses, public officials and emergency responder agencies can establish a cardiac arrest response system to make the difference between life and death.

An Ideal Cardiac Arrest Prepared Community

What is an “ideal community”? Because the vast majority of sudden cardiac arrests occur in the community, the community itself represents the ultimate coronary care unit. We must develop a local system based on science and effective implementation, transforming bystanders into “trystanders”.



The HEARTSafe Community concept presents a blueprint for communities that supports the national recommendations made by the IOM. This community-based concept incorporates 6 strategies and 13 elements to provide structure, objectives and guidance for improving cardiac arrest survival in the community. It encourages communities to initiate strategies and sustain efforts aimed at improving survival. Through implementation, individual communities can develop and establish lifesaving networks that focus on coordinating and optimizing local resources to prevent sudden cardiac arrest from becoming sudden cardiac death.

[RECOMMENDED LINKS](#)

An Introduction to HEARTSafe Communities A Citizen CPR Foundation Podcast

David Hiltz, Director of the CCPRF HEARTSafe Community Initiative, walks you through the HEARTSafe Community strategy and best practices to achieve this designation and save more lives from Sudden Cardiac Arrest.

<https://youtu.be/s8bqd9leRA0>

Challenging Sudden Death: Resuscitation Leadership Panel Citizen CPR Foundation and Resuscitation Academy

Robbie MacCue with the EMS Leadership Summit leads a discussion with Tom Rea, MD and Ann Doll from the Resuscitation Academy, and Jim Suozzi, DO, and David Hiltz from the Citizen CPR Foundation around the importance of strong leadership in efforts to save more lives from cardiac arrest.

<https://youtu.be/RtIOZ8xA7Uo>

Ideal Community Characteristics Table

- Recognizes the significant threat and impact of sudden cardiac arrest, has made it a localized public health priority and takes aggressive measures to improve preparation, recognition, response and the quality of care rendered by first responders and the EMS system.
- Has committed in an official capacity to the formation and support of a task advisory group dedicated to the issue of cardiac arrest.
- Uses their EMS system to lead and coordinate efforts related to cardiac arrest outcome improvement.
- Collects and utilizes data to develop, measure and support localized strategies.
- Offers extensive public education in recognizing and responding to sudden cardiac arrest.
- Embraces the notion that performing immediate lifesaving measures is a civic duty and moral obligation.
- Values citizen or TRYSTANDER actions and provides recognition for those who render aid to others in their critical time of need.
- Develops and implements strategies for the strategic placement of automated external defibrillators and makes them accessible on a 24/7 basis whenever and wherever possible.
- Has instituted telephone guided TRYSTANDER CPR and has an AED registry that is integrated with the 911 system.
- Fosters the development of effective emergency action plans for households, businesses, schools and public venues.
- Conducts periodic multi-party/multi-agency cardiac arrest drills to validate the effectiveness of response and identifies areas needing improvement on a regular and ongoing basis.
- Equips, trains and supports first responder rapid defibrillation strategies including equipment, effective protocols, medical direction and post-event debriefing including arrest event reconstruction including review of all available data.
- Supports the development and practice of high-performance CPR in their EMS system as well as in their receiving hospitals.
- Shares publicly cardiac arrest progress reports that include bystander CPR and AED utilization rates as well as outcome data on a regular and ongoing basis.
- Has instituted primary and secondary prevention strategies aimed at improving the population's cardiovascular health.

How Does Your Community Measure Up?

Things that get measured improve. Measuring and reporting continuous improvement metrics demonstrates your work as essential and validates the campaign. In addition, when people know that you're measuring results and associating them with improvement, there is an increased sense of accountability that contributes to engagement and success. This is especially true when the metrics are visible.



When starting your campaign, you should measure your system's current capabilities. This will involve interaction and engagement of individuals and agencies. These engagements should not be limited to the collection of information but also an opportunity for collaboration and involvement with your community team.

The Resuscitation Academy offers a 5-step assessment to measure your system's performance, which will provide additional and valuable insight. It also provides a formal report that can be used in garnering further support for your efforts.

Resuscitation Academy Assessment

<https://assessment.resuscitationacademy.org/>

The Citizen CPR Foundation has developed a Self-Assessment and Project Progression Tracking and Scoresheet. Use of this Tracking and Scoresheet will be helpful in performing a baseline assessment as well as project tracking, measurement and quality improvement.

CCPRF Self-Assessment and Project Tracking Tool

<https://citizencpr.org/wp-content/uploads/2022/06/Self-Assessment-and-Project-Tracking.pdf>

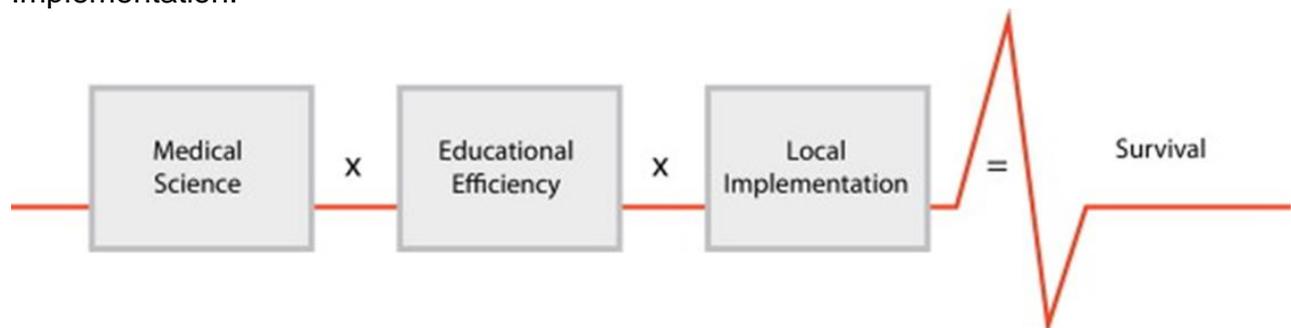
In Search of the Secret Sauce

Regretfully, there is no "secret sauce" or single intervention that will by itself magically improve survival rates in our communities.



However, **there is a recipe for success that is based on available science, best practices and emerging innovations.**

The **Utstein Formula for Survival** is widely recognized as a way of predicting survival from sudden cardiac arrest. The model employs three elements in hypothesizing potential survival rates: Medical Science, Educational Efficiency and Local Implementation.



The Citizen CPR Foundation **HEARTSAFE concept focuses on** community-wide interventions to effectively increase survival and improve outcomes from sudden cardiac arrest by leveraging current science and treatment recommendations, education and **local implementation.**

Communities must be recognized as "ultimate coronary care units" in order to effectively increase survival and improve outcomes from sudden death. Community-wide interventions are critical aspects of any effort to reduce death and disability from cardiac arrest. **The optimal strategy is one that leverages the 3 Utstein elements and actively engages a community at all levels.**

Guiding, Empowering and Enabling Better Outcomes: Combining Strategy with Tactics and Logistics

"All men can see the tactics whereby I conquer, but what none can see is the strategy out of which victory is evolved."

The Art of War, Sun Tzu

Sun Tzu illustrates that while tactics are more concrete and easier to see, an overarching strategy is equally important. The approach should not be strategy vs. tactics, but strategy *and* tactics. Think of these two techniques as two different sides of the same coin—both are necessary to achieve your lifesaving goals.

If your project relies solely on strategy, success is unlikely since tactics are the concrete actions that need to occur. When a team only uses strategy, the only thing that they'll be doing is planning to achieve goals instead of doing the work that needs to be done to actually achieve them.

On the other hand, you can't achieve your program goals on tactics alone. Tactics without strategy quickly turn into aimless work. When this is the case, arbitrary actions are being taken without a strategic objective in place.

A good strategy incorporates data-informed direction and clearly defined goals.

Good tactics are short term steps that are clearly tied to strategy, are actionable and time bound.

As part of the Citizen CPR Foundation's efforts to improve survival, a group of subject matter experts convened to create a program to support improved outcomes. This resulted in the creation of 13 tactical elements to improve preparedness, recognition, response, care and outcomes.

Strategic and Tactical Elements

Element 1: Establishing a High-Performance Lead Agency and Community Team

Sudden cardiac arrest is a communal problem and local issues demand local solutions. As such, **a lead agency (e.g., police, fire, EMS provider, hospital or municipal office) is necessary for overseeing and coordinating localized HEARTSafe efforts. The lead agency takes ownership of the project and enlists help and representation from multiple agencies and individuals as well as the community at large.**

Most often, a public safety agency or healthcare institution will assume the role of a lead agency and have extensive representation from the community at large.



RECOMMENDED LINKS

Challenges in Implementation, Accountability and Leadership in Out of Hospital Cardiac Arrest

David Hiltz leads a discussion with Dr. Mickey Eisenberg and Ann Doll around the challenges many communities face in regard to saving more lives from Sudden Cardiac Arrest.

https://youtu.be/_dnk-FEfe9g

Challenging Sudden Death: Resuscitation Leadership Panel for the EMS Leadership Summit

Robbie MacCue with the EMS Leadership Summit leads a discussion with Tom Rea, MD and Ann Doll from the Resuscitation Academy, and Jim Suozzi, DO, and David Hiltz from the Citizen CPR Foundation around the importance of strong leadership in efforts to save more lives from cardiac arrest.

<https://youtu.be/RtIOZ8xA7Uo>

THE TOP FIVE STRATEGIES FOR EFFECTIVE COMMITTEES

This article by TripBuilder Media offers insights and tips for managing committees and groups of individuals as you work towards your goals. Committees are essential towards the work you will need to do to become HEARTSafe, but if they are poorly developed they can eat up time and resources without accomplishing goals.

<https://www.tripbuildermedia.com/2017/05/committees-top-five-principles-committee-effectiveness/>

Element 2: Using Data to Drive Regional Strategies and Localized Tactics

It is nearly impossible to improve something that isn't measured. **With this in mind, the Citizen CPR Foundation, with vast support from partner organizations, calls for the community to develop a plan for the collection and analysis of cardiac arrest data.** Enrollment and participation in the Cardiac Arrest Registry to Enhance Survival (CARES) is strongly and highly recommended.



CARES helps communities measure performance and identify how to improve cardiac arrest survival rates. In those cases where participation in CARES is prohibited for any reason, locally developed and compatible methods are acceptable.

RECOMMENDED LINKS

Cardiac Arrest Registry to Enhance Survival (CARES)

<https://mycares.net/>

Tom Rea, MD and the importance of measuring performance

Dr. Tom Rea discusses Joining a Cardiac Arrest Registry and Measuring Performance. This short video (2:20) highlights reasons to measure the care that is given to patients suffering from cardiac arrest.

https://www.youtube.com/watch?v=c_YDSxUyujg

Resuscitation Academy Access Data Template

Contact info@resuscitationacademy.org for a copy of the CATS database

**Scandinavian Journal of Trauma, Resuscitation and Emergency
Medicine - The importance of cardiac arrest registries.**

This article authored by Bryan McNally of CARES address the importance of cardiac arrest registries and the registries available.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4123185/>

The Value of Data Collection and Analysis

Guest Speakers: Bryan McNally, MD and Mike Levy, MD

David Hiltz leads a discussion with Bryan McNally, MD and Mike Levy, MD on the opportunities to measure outcomes and why communities should track and measure this information.

<https://www.youtube.com/watch?v=38DMNi13ec>

Element 3: Trained Citizen Rescuers

Building on local coordination, data collection and analysis, citizen CPR training plays a pivotal role in improving outcomes. Ideally, our entire citizenry is adept at recognizing cardiac arrest, has some form of hands-on experience and is willing to perform CPR when called upon. **Recognizing the importance of bystander action, this element calls for a minimum of 15% of the community population to receive some form of hands-on CPR training on an annual basis.** All forms of training are acceptable, including hands-only CPR and certification at any level from any nationally recognized organization.



Viewing approved ultra-brief CPR instructional videos produced by the American Heart Association and American Red Cross can also help contribute to your community's 15% goal but are not intended replace valuable hands-on experience.

This tactic requires collaboration between all individuals and agencies that provide resuscitation training in your community. Together they can coordinate the promotion and delivery of citizen CPR education as well as improve accessibility to training in all areas of the community.

RECOMMENDED LINKS

Citizen CPR Toolkit from the Resuscitation Academy and the Citizen CPR Foundation

This toolkit is free to EMS agencies interested in implementing a Community CPR Campaign. The materials have been developed to provide step-by-step instructions for implementing programs and serve as a resource to assist you in that process.

https://static1.squarespace.com/static/5f74bfd9d36c8e051d674096/t/6182d91703f65b7783ee24ea/1635965211656/RA_CommunityCPR9_21_toolkit_4.pdf

Novel Strategies for Citizen CPR and AED Training and Awareness-A Citizen CPR Foundation Vodcast

David Hiltz is joined by Josh Smith, Chair of the Citizen CPR Foundation's HEARTSafe Community Program Advisory Committee, and Jim Suozzi, DO, Vice-Chair of the Citizen CPR Foundation's HEARTSafe Community Program Advisory Committee, for a discussion on updates and new strategies for training and implementing programs in communities.

<https://youtu.be/5XW2GvH2vKw>

Hands-Only CPR information from the American Heart Association

<https://cpr.heart.org/en/cpr-courses-and-kits/hands-only-cpr>

American Red Cross Mass CPR Guide

This guide to hosting, managing and marketing a mass CPR training event in your community was adapted by the American Red Cross from the 2004 Laerdal Medical Corporation Document: CPR for Everyone – How to: Organize and Run a Mass CPR Training Event

<https://www.slideshare.net/Hiltz/arclaerdal-mass-cpr-guide>

Importance and Implementation of Training in Cardiopulmonary Resuscitation and Automated External Defibrillation in Schools, A Science Advisory from the American Heart Association

<https://www.ahajournals.org/doi/10.1161/CIR.0b013e31820b5328>

Ultra-brief American Red Cross video

In this brief video, 2:20, the American Red Cross walks viewers through instructions for hands-only CPR.

<https://www.youtube.com/watch?v=-Yqk5cHXsko>

Ultra-brief American Heart Association video

In this brief video, 1:34, the American Heart Association walks viewers through instructions for hands-only CPR.

https://youtu.be/ql_mnGulGmc

Played in Movie Theaters

This 30 second video was developed by the Regional Approach to Cardiovascular Emergencies Cardiac Arrest Resuscitation System and was shown in select movie theaters in the fall of 2013. Over 3.2 million impressions were generated from this ad.

<https://dcricri.org/new-race-cars-hands-cpr-video-will-coming-movie-theater-near/>

Build Your Own CPR Kiosk

The do-it-yourself building project from a Vt. AEMT is an interactive hands-only CPR learning activity

<https://www.ems1.com/ems-products/cpr-resuscitation/articles/2174038-AEMT-builds-a-hands-only-CPR-kiosk/>

Understanding the Importance of the Lay Responder Experience in Out-of-Hospital Cardiac Arrest: A Scientific Statement From the American Heart Association

<https://www.ahajournals.org/doi/epdf/10.1161/CIR.0000000000001054>

[4](#)

Element 4: Recognizing and Celebrating the Actions of Rescuers

Recognizing the actions of those who come to aid another person is essential and can help to promote your lifesaving efforts and reinforcing desirable behaviors.

This positive reinforcement can take on many forms such as lapel pins, plaques, survivor-rescuer events and more.

The key is to **formally recognize all those involved for their efforts wherever and whenever possible and appropriate.** A positive outcome is the goal; however, it is important to recognize bystander actions, even in cases of poor outcome. In addition to forms of recognition provided by local authorities, several organizations offer acknowledgment.



RECOMMENDED LINKS

Survivors, health-related knowledge, attitudes, behaviors, and changing public policy; A Citizen CPR Foundation Vodcast

Dr. Katie Dainty interviews Greg Page, a survivor of Sudden Cardiac Arrest and advocate for improvement in community responses to Sudden Cardiac Arrest, around how communities and individuals can address attitudes and behaviors to change public policy.

<https://youtu.be/oa9JnMLIGSI>

Heartsaver Hero (AHA)

The Heartsaver Hero award is the American Heart Association's way of saying thank you for performing the heroic act of CPR, a critical link in our chain of survival. Nominate a hero here:

<https://cpr.heart.org/en/training-programs/community-programs/heartsaver-hero>

Lifesaving Award (American Red Cross)

The Lifesaving Award is the American Red Cross's way of recognizing and telling the stories of those that save a life. This award is nationally recognized and heroes can be nominated here:

<https://www.redcross.org/take-a-class/lifesaving>

Lay Bystanders' Perspectives on What Facilitates Cardiopulmonary Resuscitation and Use of Automated External Defibrillators in Real Cardiac Arrests

<https://www.ahajournals.org/doi/pdf/10.1161/JAHA.116.004572>

Element 5: Educated and Responsive Citizens

Element 5 calls for the community to **develop and implement strategies to increase public awareness of sudden cardiac arrest, the encouragement of bystander intervention and public support** for your lifesaving campaign.



Examples include public demonstrations with hands-on practice, improving access to certification courses, utilization of social media and ultra-brief instructional videos, billboards, newspaper articles and other innovations.

Awareness campaigns are one of the most popular, effective, and flexible ways to improve interest, increase awareness and educate your public regarding sudden cardiac arrest.

Awareness campaigns can be organized to capitalize existing national awareness months such as National CPR and AED Awareness Week (June), Sudden Cardiac Arrest Awareness Month (October), World Restart a Heart Day (October) and Defibruary (February). Plan around these timeframes to capitalize on the exposure and increased general interest.

RECOMMENDED LINKS

Nonprofit Awareness Campaigns: The Complete Guide

This guide developed by onecause can help groups plan and host an awareness campaign that catches the attention of your audience and motivates them to get involved.

<https://www.onecause.com/blog/awareness-campaigns/>

CPR and AED Awareness Week-Red Cross

[https://www.redcross.org/about-us/news-and-events/news/2021/cpr-aed-awareness-week-every-second-counts.html#:~:text=June%201%2D7%20is%20National,automated%20external%20defibrillator%20\(AED\).](https://www.redcross.org/about-us/news-and-events/news/2021/cpr-aed-awareness-week-every-second-counts.html#:~:text=June%201%2D7%20is%20National,automated%20external%20defibrillator%20(AED).)

CPR and AED Awareness Week-American Heart Association

<https://cpr.heart.org/en/training-programs/cpr-and-aed-awareness/cpr-and-aed-awareness-week>

Sudden Cardiac Arrest Awareness Month

<https://www.sca-aware.org/sca-news/october-officially-designated-national-sudden-cardiac-arrest-awareness-month>

World Restart a Heart Day

<https://www.erc.edu/about/restart>

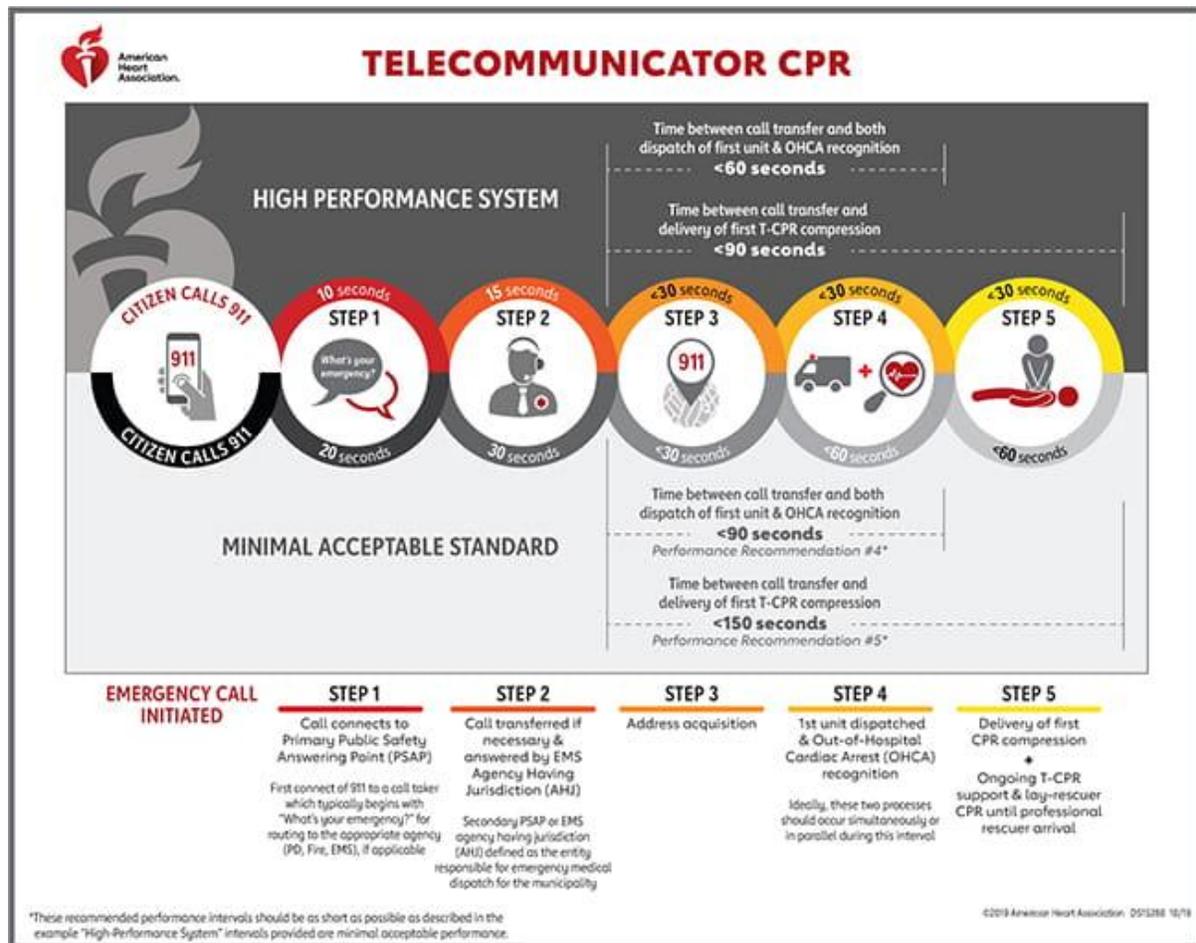
Defibruary

<https://www.sjacymru.org.uk/en/page/defibruary>

Element 6: Telephone Guided CPR and Utilization of AEDs

Telephone-guided CPR (T-CPR) can significantly improve bystander CPR rates. **The goal is for your emergency communications center or center(s) to commit to providing effective T-CPR in accordance with the American Heart Association Telephone CPR Program Recommendations and Performance Measures.**

In those cases where a community does not yet have T-CPR in place, the Citizen CPR



Foundation requires community leaders to engage with local and state authorities to enact enabling regulations to support T-CPR. The American Heart Association and American Red Cross are likely partners in any efforts to get T-CPR legislation on the priority list in your area.

Dispatch-Assisted AED Locating and Coaching, or T-AED, is an evolving strategy involving telephone guidance by emergency telecommunicators in the retrieval and use of nearby AEDs. At this time, there is limited research on this strategy. Although T-CPR has been associated with increased survival, most cases are not associated with AED retrieval.

RECOMMENDED LINKS

Insight and Best Practices for TCPR-Citizen CPR Webinar

David Hiltz hosts Julie Buckingham, Program Manager with the Resuscitation Academy and RQI Partners, for a discussion on how telephone CPR can be implemented in your community and best practices you can put into place with your communities telecommunicators.

<https://youtu.be/QoWGs48aQE>

Telephone CPR (T-CPR) Program Recommendations and Performance Measures (AHA)

The information from the American Heart Association outlines the minimal acceptable standards for timely and high-quality delivery of T-CPR instructions by emergency telecommunicators.

<https://cpr.heart.org/en/resuscitation-science/telecommunicator-cpr/telecommunicator-cpr-recommendations-and-performance-measures>

Be an advocate (AHA)

https://www.yourethecure.org/about_us

CPR LifeLinks

CPR LifeLinks is a national initiative to help EMS and 911 save more lives through the implementation of high performance and telecommunicator CPR programs. Numerous resources, including a how-to guide for agencies have been developed to improve cardiac arrest survival rates.

<https://www.ems.gov/projects/cpr-lifelinks.html>

Resuscitation Academy Toolkit

This guide provides a road map to establish and maintain a high performing TelephoneCPR (T-CPR) program in emergency communications centers. The guide supplements the AHA Telephone-CPR Program and Performance Standards. The guide was prepared by faculty of the Resuscitation Academy.

<https://static1.squarespace.com/static/5f74bfd9d36c8e051d674096/t/5f9872b65fe06402db0ddf5d/1603826360867/DACPRToolkit1010.pdf>

Resource links from the Citizen CPR Foundation

<https://citizencpr.org/lifesaving-strategies/dispatch-cpr/>

Element 7: Planned and Practiced Response to Sudden Cardiac Arrest

Schools, municipal buildings, businesses and public venues should have a **Medical Emergency Response Plan (Medical ERP)** that addresses the immediate need for medical assistance in the event of traumatic injury or illness including sudden cardiac arrest, just as they have prevention equipment and plans for fires and other disasters.

In addition to having well thought out and written plans, **periodic drills should occur in order to validate the plan's effectiveness and identify areas needing improvement.**

A comprehensive emergency action plan (EAP) or emergency response plan (ERP) is



critical to facilitate a rapid and effective response to a cardiac emergency. Cardiac arrest should be suspected in any person that collapses suddenly and is unresponsive. All potential responders to a collapsed person should be trained in the recognition of sudden cardiac arrest (SCA), cardiopulmonary resuscitation and use of an automated external defibrillator (AED). AEDs should be accessible on-site to the victim location and with a response time to first compression and shock of less than three (3) minutes. The plan should be written, and a coordinator should be designated to foster compliance with training, practice and rehearsal of the plan at least once annually. Different locations may require special considerations.

RECOMMENDED LINKS

Cardiac Emergency Response Plan (Sudden Cardiac Arrest Foundation)

<https://www.sca-aware.org/campus/cardiac-emergency-response-plan-for-schools>

Cardiac Emergency Response Planning in Schools-Policy Statement

This article reviews the critical components of a Cardiac Emergency Response Planning (CERP) and a CERP team, the factors that should be taken into account when implementing the CERP, and recommendations for policy makers to support CERPs in schools.

https://www.heart.org/-/media/Files/About-Us/Policy-Research/Prevention-Nutrition/cerp-policy-statement-UCM_490670.pdf

Implementing a Heart Safe School-Project Adam

Project ADAM affiliate sites strive to assist schools and communities in establishing a practiced plan to respond to a sudden cardiac arrest. We provide the foundation for a school to develop and sustain their program, including planning templates, a reference manual and one-on-one consultation.

<https://www.projectadam.com/Heartsafeschools>

Project ADAM – CPR/AED Drill

Directions for school-based AED practice drills and checklists.

<https://migrc.org/resource/project-adam-cpr-aed-drill/>

AEDs in the Workplace-OSHA Resources

To assist in addressing AED issues, information is provided below regarding occupational risk factors and the use of AEDs in the workplace.

<https://www.osha.gov/aed/workplace>

Element 8: Strategically Placed and 24/7 Accessible AEDs

Element number 8 addresses the permanent placement of AEDs in public or private congregate areas where there is a statistical likelihood of sudden cardiac arrest such as shopping malls, supermarkets, theaters, health clubs, parks, recreational centers, transportation centers and other venues.

Additionally, the Citizen CPR Foundation recommends that AEDs are accessible at all times, particularly those placed at athletic fields, parks, beaches and public gathering spots. There now exists a variety of purpose-built enclosures that enable AEDs to be kept in outdoor environments, making them more accessible to greater numbers of people.



RECOMMENDED LINKS

ILCOR SCIENTIFIC STATEMENT

Optimizing Outcomes After Out-of-Hospital Cardiac Arrest with Innovative Approaches to Public-Access Defibrillation: A Scientific Statement from the International Liaison Committee on Resuscitation

This statement summarizes specific policy suggestions and identifies the knowledge gaps for future research. Continued evolution of the approach to public-access defibrillation with increased early CPR, rhythm detection and defibrillation will improve cardiac safety in our communities and ultimately increase survival after OHCA.

<https://www.ahajournals.org/doi/epdf/10.1161/CIR.000000000000101>

Effect of Optimized Versus Guidelines-Based AED Placement on Out-of-Hospital Cardiac Arrest Coverage: An In Silico Trial; A CCPRF Webinar

David Hiltz hosts a discussion on AED placement optimization with Timothy Chan, PhD and Christopher Sun, PhD.

<https://youtu.be/3gvEyAvy5tY>

Effect of Optimized Versus Guidelines-Based Automated External Defibrillator Placement on Out-of-Hospital Cardiac Arrest Coverage: An In Silico Trial

<https://www.ahajournals.org/doi/epub/10.1161/JAHA.120.016701>

Element 9: 911 Integrated AED Registry

Automated external defibrillators are proven lifesavers. **In an effort to enable AED utilization, element 9 involves the establishment and participation in an AED registry where AED locations are mapped and integrated with the 911 system and/or local Public Safety Answering Point (PSAP).**

AED registries serve as the backbone of many novel solutions developed to facilitate rapid identification of the nearest resuscitation-ready AED in an emergency. AED registries, holding information on location and accessibility, may facilitate AED retrieval by enabling rapid identification of the nearest device. Integration of this data with the 911 system is essential. By doing so, bystanders can be directed to nearby and accessible AEDs by emergency telecommunicators, reducing time to first compressions and shock.



Mobile device applications (apps) such as GoodSAM (United Kingdom) and PulsePoint AED (United States) can crowdsource the development and maintenance of AED registries. Both apps allow users to photograph AEDs and upload their locations so that they can be verified and added to the local AED registry by emergency communication centers and systems.

RECOMMENDED LINKS

911 Integrated AED Registries A Citizen CPR Foundation Vodcast

David Hiltz hosts a conversation with Richard Price, founder of PulsePoint, around the role 911 AED Registries play and the impact they can have on survival rates.

<https://www.youtube.com/watch?v=oGBqFdxGtHY>

Citizen Engagement in Denmark A message from Dr. Fredrik Folke

<https://den-praehospitale-virkksomhed.23video.com/secret/72531384/be300d1d11a0c08908149c5b83e914a7>

GoodSAM

<https://www.goodsamapp.org/aed>

PulsePoint

<https://www.pulsepoint.org/pulsepoint-respond>

Element 10: First Responder Defibrillation

In many communities, equipping and enabling First Responders such as police officers and firefighters can significantly reduce time to first compressions and first shock. Accordingly, **element 10 calls for first responder agencies to be defibrillation capable, undergo appropriate training, have device maintenance plans, and be able to distribute policies, event debriefing and medical direction.**



Firefighters and Law Enforcement Officers are often able to deliver defibrillation in significantly shorter times than Emergency Medical Services. EMS systems should review their response times and consider instituting first-responder defibrillation as one means of reducing defibrillation intervals.

[RECOMMENDED LINKS](#)

Law Enforcement Defibrillation A Citizen CPR Foundation Vodcast

Dr. Roger White joins David Hiltz for a conversation around the impact defibrillation training for law enforcement on successful resuscitation rates.

https://www.youtube.com/watch?v=hD_z21GW3EI

Improved out-of-hospital cardiac arrest survival through the inexpensive optimization of an existing defibrillation program: OPALS study phase II. Ontario Prehospital Advanced Life Support

<https://pubmed.ncbi.nlm.nih.gov/10199426/>

Death from Sudden Cardiac Arrest is a Preventable Crime! What is the Role of Law Enforcement in Saving Lives?

Law Enforcement is in a strategic position to help reduce the number of victims from cardiac arrest. In this article best practices are outlined, including 10 recommendations mutually agreed upon by IACP and the IAFC.

<https://www.slideshare.net/Hiltz/death-from-sudden-cardiac-arrest-is-a-preventable-crime-what-is-the-role-of-law-enforcement-in-saving-lives>

Critical and underutilized: Fire and police responders associated with higher cardiac arrest survival rates

Police and fire first responders are often first on the scene during an out-of-hospital cardiac arrest, and a new study finds that their intervention correlates with significantly higher chances of patient survival and hospital discharge with good neurological outcomes. Researchers say non-medical first responders are likely underutilized as lifesaving resources in these cases

<https://www.sciencedaily.com/releases/2022/03/220329090738.htm>

Element 11: High-Performance Resuscitation

Among the essential components of a system of care for cardiac arrest victims is “high performance CPR” (HP-CPR).

High-performance resuscitation and improved outcomes are highly dependent on a foundation of high-performance CPR by prehospital care providers. Advanced cardiac life support must be positioned in a way that does not get in the way of, but instead enables high-quality CPR. The approach requires a teamwork approach by EMS systems, agencies and providers alike.

Element 11 calls for Emergency Medical Services (EMS) providers to practice “high-performance” CPR and possess supportive protocols, technology and equipment for resuscitation and effective post-resuscitation care.



High-performance CPR can boost survival outcomes significantly by ensuring that victims receive enough blood to their heart and brain. High-performance or high-quality CPR is an expectation for all those who are responsible for the delivery of professional resuscitation.

Performing high quality CPR with minimal delays and interruptions is a core strategy in improving outcomes. Quality improvement strategies should aim to encourage, enable and direct the ongoing practice and pursuit of high-performance CPR.

RECOMMENDED LINKS

High Performance CPR Toolkits from the Resuscitation Academy

The Resuscitation Academy's goal is to make it easy to replicate our popular HP-CPR "Train the Trainer" Workshop for instructors and agencies everywhere. From an instructional PowerPoint presentation with embedded videos to audio clips, check sheets, individual videos and more, below is the complete library of downloadable resources.

<https://www.resuscitationacademy.org/toolkits>

Element 12: Quality Improvement and Public Reporting

Similar to element 2 - data collection and analysis - element 12 focuses on EMS provider agency Quality Improvement (QI) processes for cardiac arrest that includes data review, facilitated debriefing, access to patient outcome data and active medical direction.



Continuous efforts to improve resuscitation outcomes are imperative and are impossible without data. The collection of resuscitation process measures the underpinning of your system's quality improvement efforts. The ILCOR Consensus Statement, "Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports: Update of the Utstein Resuscitation Registry Templates for Out-of-Hospital Cardiac Arrest" includes recommendations for cardiac arrest data collection based on updated and simplified Utstein templates.

Additionally, this element calls for public reporting performance and survival data by the lead agency. The goal here is to measure and improve, as well as transparency to increase support by the community.

RECOMMENDED LINKS

Excellence in Public Reporting On Resuscitation: The Ambulance Victoria Experience A Citizen CPR Foundation Vodcast

Tony Walker joins David Hiltz for a discussion on the changes he lead Ambulance Victoria through to improve their public reporting on resuscitation
<https://www.youtube.com/watch?v=U-Il30yJBD4>

Victorian Ambulance Cardiac Arrest Annual Report

<https://www.ambulance.vic.gov.au/record-survival-rates-for-cardiac-arrest-in-victoria/>

Cardiopulmonary Resuscitation Quality: Improving Cardiac Resuscitation Outcomes Both Inside and Outside the Hospital

<https://www.ahajournals.org/doi/full/10.1161/CIR.0b013e31829d8654>

Annual Cardiac Arrest Report for all of New Zealand

<https://www.stjohn.org.nz/news--info/our-performance/cardiac-arrest-annual-report/>

Element 13: Meaningful Primary and Secondary Health Promotion and Prevention

Cardiovascular diseases result in millions of deaths around the globe annually, most of which are avoidable if identified early. Preventive healthcare has a major role in the fight against cardiovascular diseases.

The adage “an ounce of prevention is worth a pound of cure” is reflected in element 13. This element addresses the need for the community to establish primary and secondary public health measures that support cardiovascular wellness, such as education, prevention, and systems of care for stroke and myocardial infarction.

Primary prevention refers to the steps taken by an individual to prevent the onset of the disease. This is achieved by maintaining a healthy lifestyle choice, to include diet and exercise. Secondary prevention focuses on reducing the impact of the disease with early diagnosis prior to any critical and permanent damage. This facilitates avoiding life threatening situations and long-term impairments from a disease.



RECOMMENDED LINKS

Primary and Secondary Prevention, Disparities in Cardiovascular Health and a Vision for the Future A Citizen CPR Foundation Vodcast

Stacey Rosen, MD and Pavitra Kotini-Shah, MD, join David Hiltz for a discussion around the disparities in prevention of cardiovascular health and what changes communities can make.

<https://www.youtube.com/watch?v=CrqANoRulKE>

Early Heart Attack Care Education American College of Cardiology

The primary goal of Early Heart Attack Care is to promote public awareness that heart attacks have "beginnings" that can occur weeks before the actual attack. EHAC focuses on intervention during these beginnings to help prevent acute myocardial infarction (heart attack) and cardiac arrest.

<https://deputyheartattack.acc.org/>

CDC's REACH Program

Since 1999, REACH has demonstrated that locally-based and culturally-tailored solutions can be effective in reversing the seemingly intractable gaps in health that diverse communities in urban, rural, and tribal areas experience across the United States.

https://www.cdc.gov/nccdphp/dnpao/state-local-programs/reach/program_impact/index.htm

Multisector Collaborative

<https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2018.0443>; https://www.cdc.gov/pcd/issues/2019/18_0596.htm

Implementing the Lifesaving Plan in your Community

To start, we can't overstate **the value of teamwork**. In that spirit, we recommend collecting a core team early in your campaign. **Individual advocates will find that progress will be difficult in the absence of the support of a team and will likely be unsustainable.**



When assembling your team, it makes sense to build a diverse group of dedicated individuals who accurately reflect the make-up of your community. Don't limit yourselves to a team comprised of only healthcare providers. Ultimately, your success will require talents from a variety of leaders and influencers in your community.

Once you have your core team assembled, the next step is to perform an inventory or assessment of your community. Evaluate your community based on the 13 elements. What are you doing well? What areas need improvement? Where is there an absence of supporting data?

Your assessment will provide you with the information you will need in the next steps. In addition, this assessment often yields opportunities for dialog between important stakeholders in your community.

Once your core team has completed the preliminary assessment of your community, you will have identified areas where you have gaps or unanswered questions. These **gaps and unanswered questions are best used to form the basis of your strategies and plans**. Your strategies, tactics and goals should be well defined and achievable. You can also use the 13 elements to facilitate the conversation around creating your strategies, tactics and goals

With your strategies, tactics and goals now defined, put them into motion. **ACTION CHANGES THINGS!** Be steadfast in your desire for progress and change, but realistic in setting timelines for achievement of goals. Depending on your assessment and plans, some goals may be short term while others may take longer to achieve. **Take small incremental steps wherever and whenever appropriate.**

Quick Start Guide to Implementation

- 1. Become familiar with the HEARTSafe concept, strategies and tactics by watching the orientation video and review of the 13 elements (action tactics) outlined in the SELF-ASSESSMENT AND PROJECT PROGRESSION TRACKING AND SCORESHEET.**
- 2. Identify a lead agency and begin forming the membership for your task force. Start with core team members and recruit others on an as needed and ongoing basis.**
- 3. Establish the need, and achieve buy-in, for a culture of action related to sudden cardiac arrest through education aimed at community and other leaders.**
- 4. Conduct a baseline assessment in your community and document your findings.**
- 5. Establish measurable priority actions and tactics, based on data collected during your baseline assessment.**
- 6. Assign work to responsible teams with specific goals and suggested timelines for implementation.**
- 7. Meet regularly to assess measured progress and potential revision of actions and tactics.**

Next steps in your iterative process will be to assess the effect of your intervention or interventions. Reassess your current state regarding the 13 elements. Where were you able to observe success? What areas need additional improvement? Do any of your strategies and tactics require re-tooling?

Additional work is likely needed. Furthermore, you may have identified new supporters, opportunities and strengths in your community and system. This assessment, plan, intervene and re-assess cycle may need to be repeated to get you and your community to defined goals.

Use the Tracking and Scoresheet to perform a baseline assessment as well as serve as your essential tool in the iterative process of implementation and ongoing evaluation.

Those communities that achieve a 5.0 score in all 13 elements can [apply](#) for the designation as a HEARTSafe Community by the Citizen CPR Foundation.

Become HEARTSafe Designated by the Citizen CPR Foundation

The application process begins with an [online submission](#) on the Citizen CPR Foundation website. Applicants will need to complete the application and upload supporting documentation such as rosters and related files.

Once an application has been completed and submitted, the Citizen CPR Foundation is automatically notified. After a brief review of the application, it is forwarded to 3 Program Advisory Committee members for an objective review. The reviewers will use the CCPRF Self-Assessment and Project Tracking Tool to assess your work and accomplishments.

Following the review by the Program Advisory Committee members, your community will be identified as “ready for designation” or “not yet ready for designation.”

Those receiving approval will be notified by email and provided with a certificate suitable for framing, a press kit and information relating to obtaining traffic-grade HEARTSafe signs to be posted at key entry points to the community.

If an application review results in a “not yet ready for designation,” the applicant will be notified by email and provided with specific areas requiring additional work and/or documentation. The CCPRF offers consultation and peer-to-peer coaching for any community that is invested in improving outcomes.

When submitting your application, it is your opportunity to brag about your achievements. Be sure to provide as much supporting documentation as possible. By doing so, the review process can be as efficient as possible. Additionally, in the event that more work is needed, the Foundation will be in a position to provide meaningful guidance to you and your community.

Ready for designation?

Frequently Asked Questions

What is HEARTSafe?

HEARTSafe is a concept that incorporates science and treatment recommendations, as well as innovative best practices in implementation that are intended to help more people survive after sudden out-of-hospital cardiac arrest. When someone's heart suddenly stops, they will generally not survive unless a number of interventions take place immediately, including CPR and defibrillation. In order to facilitate this process, a strong system must be established to ensure the rapid execution of each step.

The HEARTSafe Community concept works by creating tactics that support the “cardiac chain of survival” and encouraging communities to work toward them.

What service, business, or organization runs HEARTSafe?

The HEARTSafe Community initiative is led by the Citizen CPR Foundation with support from numerous partners and similarly aligned organizations.

Is the HEARTSafe concept evidence-based?

No studies have specifically attempted to demonstrate improved survival after instituting an explicit HEARTSafe program in a community. The general model of community-level efforts to strengthen the chain of survival has been successful and is supported by existing evidence and treatment recommendations.

HSC Specific Research

Minnesota Heart Safe Communities: Are community-based initiatives increasing pre-ambulance CPR and AED use?

<https://www.sciencedirect.com/science/article/abs/pii/S0300957217303131>

Sudden cardiac arrest survival in (CT) HEARTSafe communities

[https://www.resuscitationjournal.com/article/S0300-9572\(19\)30679-3/pdf](https://www.resuscitationjournal.com/article/S0300-9572(19)30679-3/pdf)

Sudden cardiac arrest survival in HEARTSafe communities: A response

[https://www.resuscitationjournal.com/article/S0300-9572\(20\)30075-7/pdf](https://www.resuscitationjournal.com/article/S0300-9572(20)30075-7/pdf)

Help Improve Your System of Care with a Citizen CPR Academy

The Citizen CPR Foundation has recently developed a **CITIZEN CPR ACADEMY**.



The **CITIZEN CPR ACADEMY** is a day-long program that will introduce a diverse audience of cardiac arrest champions to a community-based approach and a blueprint for improving cardiac arrest survival. This approach and blueprint are based on recommendations made by the *Institute of Medicine Strategies to Improve Survival from Cardiac Arrest: A Time to Act*, current science and treatment recommendations, best practices and innovations in implementation.

Faculty will include members of the Citizen CPR Foundation Program Advisory Committee and invited subject experts.

Enable and Empower Resuscitation Leaders with a Community Resuscitation Officer Academy

The **COMMUNITY RESUSCITATION OFFICER ACADEMY** is designed specifically for public safety and public health professionals and focuses on leadership and other skills associated with the successful initiation of lifesaving strategies at the local level.

Community Resuscitation Officers work with community members and other stakeholders to identify necessary programs and coordinate lifesaving services and strategies. They oversee administrative functions and other aspects of programs to meet the objectives and improve community preparation, system response, system performance and outcomes related to sudden cardiac arrest.

Faculty will include members of the Citizen CPR Foundation Program Advisory Committee and invited subject experts.



Interested in learning about our academies?

Email us: info@citizencpr.org

Additional and Highly Recommended Programs for Advocate-Champions

Learn with the Resuscitation Academy!



From free instructional events and do-it-yourself resources to hands-on consultative initiatives, the Resuscitation Academy offers training workshops for EMS professionals and leaders to improve cardiac arrest patient outcomes.

Resuscitation Academy faculty and consulting partners are hand-picked for their demonstrated experience in handling complex improvements across multiple departments within their communities.

Interested in learning more?

Visit:

<https://www.resuscitationacademy.org/workshops-programs>

Attend the Cardiac Arrest Survival Summit

There's no better place to learn the latest in resuscitation science and implementation than at the Cardiac Arrest Survival Summit.

With attendees representing every link in the Chain of Survival, it's the only place to meet the widest array of resuscitation professionals in the world.

The Cardiac Arrest Survival Summit occurs every two years – our next convening will be in 2023!

Discover more about this in-person conference!

Visit: <https://citizencpr.org/summit2021/>



Share your Ideas



This guide is in a perpetual state of development and updates. Do you have an idea, a resource or a best practice that we have overlooked?

Please send your big **ideas** and **suggestions** to us!
info@citizencpr.org