



An Objective Evaluation of Out-of-Hospital Chain of Survival

RQI RESUSCITATION
QUALITY
IMPROVEMENT™

An American Heart Association®
and Laerdal Program



PROVIDER STORY

Hilton Head Island Fire Rescue needed an objective evaluation of its out-of-hospital cardiac arrest Chain of Survival.

“It was an honor for Hilton Head Island Fire Rescue to be chosen as a pilot site for the Cardiac System Assessment by RQI Partners! We’re proud of the hard work that we’ve done and it was validating to receive feedback from some of the best in the business. It also provided specific recommendations for further improvement.”

— *Battalion Chief Tom Bouthillet*

About

- **Population:** 39,639
(peak summertime population can exceed 150,000)
- **Annual Call Volume:** 7,477
(5,593 medical)
- **Personnel:** 146 employees,
including 108 line personnel

Cardiac Arrest Performance

- **Annual Cardiac Arrests:** 46
- **Incidence of Bystander CPR:** 59%
- **Median Response Time:** 7:59 mins
- **EMD T-CPR Protocol:** Priority Dispatch MPDS
- **Overall Survival:** 19%
- **Utstein Survival:** 55%



CHALLENGE

Hilton Head Island Fire Rescue operates seven fire stations and responded to over 7,000 calls in 2018. Despite drastically improving their cardiac arrest survival rates over the past several years, they knew there was still more that could be done. The department’s leadership team believed there were further opportunities to improve their Chain of Survival, but it wasn’t clear on where to begin.

Hilton Head Island holds one of the nation’s highest survival rates for cardiac arrest. Over the past several years they have built a great sense of community around the mission of saving lives from cardiac arrest. They have also implemented High Performance CPR (HP-CPR) and made huge strides in training their community members in CPR and AED use. However, in their journey of continuous improvement, they needed to decide what the next steps were to continue to move the dial representing cardiac arrest survival.



SOLUTION

Hilton Head Island Fire Rescue’s leadership decided to participate in the Resuscitation Academy Cardiac Arrest System Assessment. The basis for the decision was a need to understand what the next logical step was to continue to strengthen Hilton Head Island’s out-of-hospital Chain of Survival.

The Cardiac Arrest System Assessment is a remote consultative model. The service is designed to assess several areas of concentration within the Chain of Survival.

Resuscitation Academy consultants, consisting of multi-disciplinary resuscitation experts, conducted structured interviews with Hilton

CONTINUED ON BACK



Cardiac Arrest System Assessment

Overview

- Survival from Out-of-Hospital Cardiac Arrest (OHCA) may be improved when best practices are implemented
- Knowing where, and how, to begin isn't always clear
- Our tools and services help communities prioritize Chain of Survival improvement efforts

Chain of Survival—Areas of Concentration

- Cardiac Arrest Registry
- Telephone CPR & Rapid Dispatch
- Community CPR & AED
- First Responder CPR & AED
- High Performance CPR

Maturity Model

Measures five dimensions for a community's capability to efficiently deliver the Chain of Survival

- Governance
- Collaboration
- Processes
- Performance
- Technology

SOLUTION CONTINUED

Head Island stakeholders including executive leadership, cardiac arrest registry, 911 PSAP, training, quality improvement and EMS providers.

When consultants lead an area of concentration assessment, they conduct interviews using a structured, evidence-based database of questions. Questions are organized into a maturity model consisting of five dimensions. The maturity model measures the client's capability to manage a process.

Following the interviews, consultants write a report highlighting steps that can be taken to improve survival. A senior consultant prepares a final report that weighs and prioritizes areas for improvement.

A senior consultant delivered the comprehensive recommendations and met with the department's leadership to explain the results of the report.



RESULTS

Hilton Head Island Fire Rescue prioritized recommendations from the assessment related to ongoing training and quality assurance around their T-CPR program. Specifically, recommendations focused on providing two to three hours of annual refresher training to dispatchers around cardiac arrest. Additionally, reviewing all cardiac arrest calls, including EMS-confirmed cardiac arrest cases. An emphasis was also placed on measuring the calls against the American Heart Association standards around time to call recognition, time to first compression, percentage of calls recognized by the telecommunicator, etc. Moving forward, they are in discussions about how to create a robust data review within their PSAP, with a focus on moving the needle with their T-CPR performance. The recommendations in the System Assessment report validated and reinforced where HHIFR needs to go to further increase their survival rates.

“We're devoted to our mission of protecting the people of Hilton Head Island and leading by example. We've worked hard over the past decade to bring our cardiac arrest survival rate to 50%. Although this is one of the highest survival rates in the nation, we won't stop there. We know even more people can be saved. The Resuscitation Academy Cardiac Arrest System Assessment helped us identify our next steps on this journey.”

— *Chief Tadlock*