



Fort Lauderdale Fire Rescue Strengthens Its Out-of-Hospital Chain of Survival

RQI RESUSCITATION
QUALITY
IMPROVEMENT™

An American Heart Association®
and Laerdal Program



Fort Lauderdale Fire Rescue

About

- Population: 182,595
- Annual Call Volume: 50,161
- Personnel: 412

Cardiac Arrest Performance

- Annual Cardiac Arrests: 200
- Incidence of Bystander CPR: 27.4%
- Median Response Time: 5:24 mins
- EMD T-CPR Protocol: Pro QA
- Overall Survival: 8.6%
- Utstein Survival: 36.4%

PROVIDER STORY

Fort Lauderdale Fire Rescue needed an objective evaluation of its out-of-hospital cardiac arrest Chain of Survival.

“We’re committed to providing the best possible service to our citizens and to those who visit our city. Improving cardiac arrest survival is complex. We recently invested in additional training and are implementing a cardiac arrest registry. The missing puzzle pieces became more clear to us after participating in the Resuscitation Academy Cardiac Arrest System Assessment.”

— Rhoda Mae Kerr, MPA, CFO, EFO
City of Fort Lauderdale Fire Chief



CHALLENGE

The Fire Rescue Department operates eleven fire stations and responded to nearly 53,000 incidents in 2018. Despite making several investments in training, protocols and equipment, survival for witnessed cardiac arrest wasn’t improving as much as they expected. The department’s leadership team believed additional improvements could be made but it wasn’t clear where to begin.

The Department’s EMS Bureau presents data monthly in its Continuous Quality Improvement (CQI) meetings. This data includes rates on airway management success, return of pulses during cardiac arrest and overall survival to hospital discharge. The results were disappointing.

It was clear that despite implementation of additional procedures and equipment for the treatment of cardiac arrest, the dial representing cardiac arrest survival wasn’t moving fast enough.

The Quality Improvement team noticed gaps in data—there were no measurements about the quality of EMS providers CPR skills such as compression fraction, compression rate and depth, and recoil. Same for ventilation effectiveness.

The Department was implementing a much-needed Cardiac Arrest Registry. This meant, going forward, data would be collected in a manner to provide deeper insights necessary to improve survival. Until the Registry was fully implemented, the department would lack the data to make decisions about performance improvement.

Key questions the department asked about cardiac arrest performance:

1. What is the quality of our providers resuscitation skills?
2. How can we support the maintenance of our EMS provider’s competence in resuscitation?
3. What metrics are appropriate for our PSAP in cases of cardiac arrest?
4. How can we increase intra-department awareness about our resuscitation performance?

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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

Fort Lauderdale 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 opportunities to strengthen Fort Lauderdale'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 Fort Lauderdale stakeholders including executive leadership, cardiac arrest registry, 911 PSAP, training, quality improvement and first responders.

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 report. The entire process took less than four weeks.



RESULTS

Fort Lauderdale Fire Rescue prioritized recommendations from the assessment related to measurement of performance and ongoing training.

Key Actions:

- Implement measurement of high-quality CPR metrics from the American Heart Association.
- Share data about cardiac arrest performance internally to create awareness and buy-in for continuous improvement.
- Develop processes for using the newly implemented cardiac arrest registry for quality improvement projects.

The department plans to repeat the assessment in a year to measure progress and to prioritize the next rounds of improvements.