



Part of The University of Alabama at Birmingham Health System, **UAB Hospital** is a major center for clinical research and the home of some of the top medical programs in America.

As one of *U.S. News & World Report's* Best Hospitals, the hospital is a national leader in patient care, research and training. Situated among major research centers and clinics, UAB Hospital is the third-largest public hospital in the nation, providing patients with a complete range of primary and specialty care services, as well as the most up-to-date treatments and innovations in health care.

## PROVIDER STORY

UAB Hospital employees are seeing CPR differently, due largely to the RQI® training carts placed directly in their Emergency Department — an intangible statement of the importance of high-quality CPR. Staff members took that statement to heart, resulting in a cultural shift — and improved resuscitation.

*“We are providing better CPR in our department than we were a year ago.”*

*— Michael Kurz, MD, MS, FACEP, FAHA  
Associate Professor of Emergency Medicine, UAB Hospital*



### CHALLENGE

When **UAB Hospital** set out to review its emergency team's CPR performance, it was less than 100 percent — including long pre- and post-shock pauses and periods where no CPR was being performed.

The team, led by Dr. Kurz, board-certified in both Emergency Medicine and Emergency Medical Services (EMS), sought a method to improve its resuscitation competency. The American Heart Association's (AHA) Resuscitation Quality Improvement (RQI) program was chosen as the optimal solution.



### SOLUTION

The **RQI** program addresses a long-standing issue — that CPR is not a part of many health care providers' regular practices. In fact, some rarely perform CPR other than during their bi-annual training. As a result, CPR compression and ventilation skills degrade and overall CPR effectiveness is reduced — potentially affecting patient outcomes.

RQI's groundbreaking premise says that brief and regular practice — **“low-dose/ high-frequency”** training — leads to higher-quality CPR skills. Kurz can attest to RQI's effectiveness. “All of our nursing staff and emergency department (ED) staff train with RQI, and it only took three months for us to start seeing drastic improvements in our resuscitation efficiency,” he said.



### IMPLEMENTATION

From the time his organization began exploring RQI, Kurz said the AHA was right where it was needed. “I had the AHA's support at every level — from discussing the budget implications with hospital administration to demonstrating to my clinical and administrative staff how RQI would make their lives easier,” he said. The AHA assisted with implementation and ensuring that RQI “talked” with UAB Hospital's existing learning management system.



RQI Cart

### AHA's subscription-based RQI program:

- Is a cloud-based turnkey resuscitation quality improvement service from the AHA, with learning technology from Laerdal Medical Corporation.
- Delivers on-going resuscitation education and skills improvement, online and via simulation stations at the point-of-care.
- Includes an adult and infant manikin and a laptop at each station, providing real-time, high-fidelity audio and visual feedback on skills performance.
- Delivers cognitive learning modules which include educational videos, eSimulation patient cases and exam questions. As cognitive modules are successfully completed over the course of a two year period, students participate in self-directed, quarterly skills practice averaging 10 minutes each to sustain skills competency.
- Renews AHA course completion cards, allowing staff to obtain a perpetual card and continuously meet their credentialing requirements.
- Analytics for RQI track and measure CPR performance.

## IMPLEMENTATION (continued)

Like many changes, RQI met with some initial staff resistance. Kurz quickly found a program champion in Mike Lovelace, RN, CCEMT-P, EMS Program Coordinator. “He’s our program manager who works alongside folks to help ease their transition,” said Kurz. “Finding a core group of staff champions as quickly as possible has really worked for us.”



## RESULTS

Prior to RQI implementation, UAB could demonstrate up to a 26-second post-shock pause. Four months later, its data is “textbook,” said Kurz. The first shock occurs and within four to six seconds of CPR pause, everyone is directly back on the chest resuscitating. “That’s exactly what you want to see when you talk about high-quality CPR in the setting of a high-functioning, pit-crew resuscitation,” said Kurz.

### As part of its shift in culture, UAB Hospital implemented several new ideas and processes around RQI:

- **Nurse empowerment** — Nurses serve as UAB’s CPR experts and have shifted from a “Should I perform CPR?” mentality to one of “I’m doing CPR unless someone tells me not to.”
- **CPR line** — Nurses form a line and take turns performing CPR. When the number two nurse in line notices the first nurse’s CPR efficiency dropping, he/she taps the performer out and takes their place. Nurses wanting to take another turn move to the back of the line.
- **Hot/cold debriefs** — Following a resuscitation, those involved examine the data that’s immediately available to discuss events and what could have been done differently in a hot debrief. Approximately one week later, the same people hold a cold debrief when additional data becomes available. “It’s less about perceptions and more about examining the data,” said Kurz. “These meetings really engage the staff so that they’re truly invested, and that pays back intangible dividends. I can’t teach or mandate that kind of motivation — it has to come from staff members themselves.”

While UAB doesn’t yet have more precise data, Kurz estimates a four-fold return on investment. “The beauty of RQI is this: Yes, the carts are a big up-front capital cost,” said Kurz. “But in the grand scheme, I’m no longer paying for training every two years for 300 staff nurses, as well as 24 to 32 hours of floor coverage while they’re in that training. RQI easily pays for itself many times over.”

One of the program’s key benefits in Kurz’s mind is the tremendous culture change. Having the RQI carts embedded in the ED environment signifies to staff the importance of high-quality CPR.

“It’s the idea that my employees get to touch, see, and perform high-quality CPR every three months — regardless of their schedule, when they’re working, or which patients they’re treating,” said Kurz. “Their ability to maintain mastery and proficiency, for me, is what sells this program.”