

Clark Fork Valley Hospital

# Resuscitation Quality Improvement



# Objectives

Participants will be able

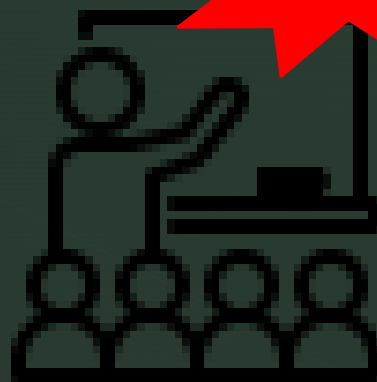
- Recognize the importance of high-frequency, low dose content delivery
- Describe the components of high quality CPR
- Manage implementation of RQI

**Issue:** Staff certifications were expiring for NRP, BLS, ALS, PALS and we lacked instructors to help them maintain certification.

PI Manager retired (whom was an instructor). The new PI Manager was not an instructor, and could not get certified in time to support maintenance of existing staff.

History was that the 4 times a year classes was not enough to support existing staff needs.

"Big picture" revealed that there were 100+ employees and only 19.4% were current with their job description requirements.



Cards  
expired

Classes?

Instructors?

Tracking?

3 Different  
certifications  
+ NRP

Time

Low  
Organizational  
Awareness

Expense

# Current Condition

1. 100+ employees with expiring cards/certifications (for BLS, ALS, PALS, NRP)

Why? Not enough classes

Why? Scheduled in advance 2 to 4 per year

Why? BITWADI

Why? Not enough instructors

Why? Interest

Why? Time dedication

Why? Expense (MD's from patient care, etc.)

2. Low organizational awareness of impact

Why? No centralized tracking process for all employees

Why? Dept Managers track staff certifications

3. Traditional method of classroom activities is expensive

Why? Half day to full day training, per employee attending

Why? Cost of staffing units to replace employees attending classroom activities

Why? Providers (MD's) as instructors

Why? Potential off campus travel to obtain



# Counter Measures

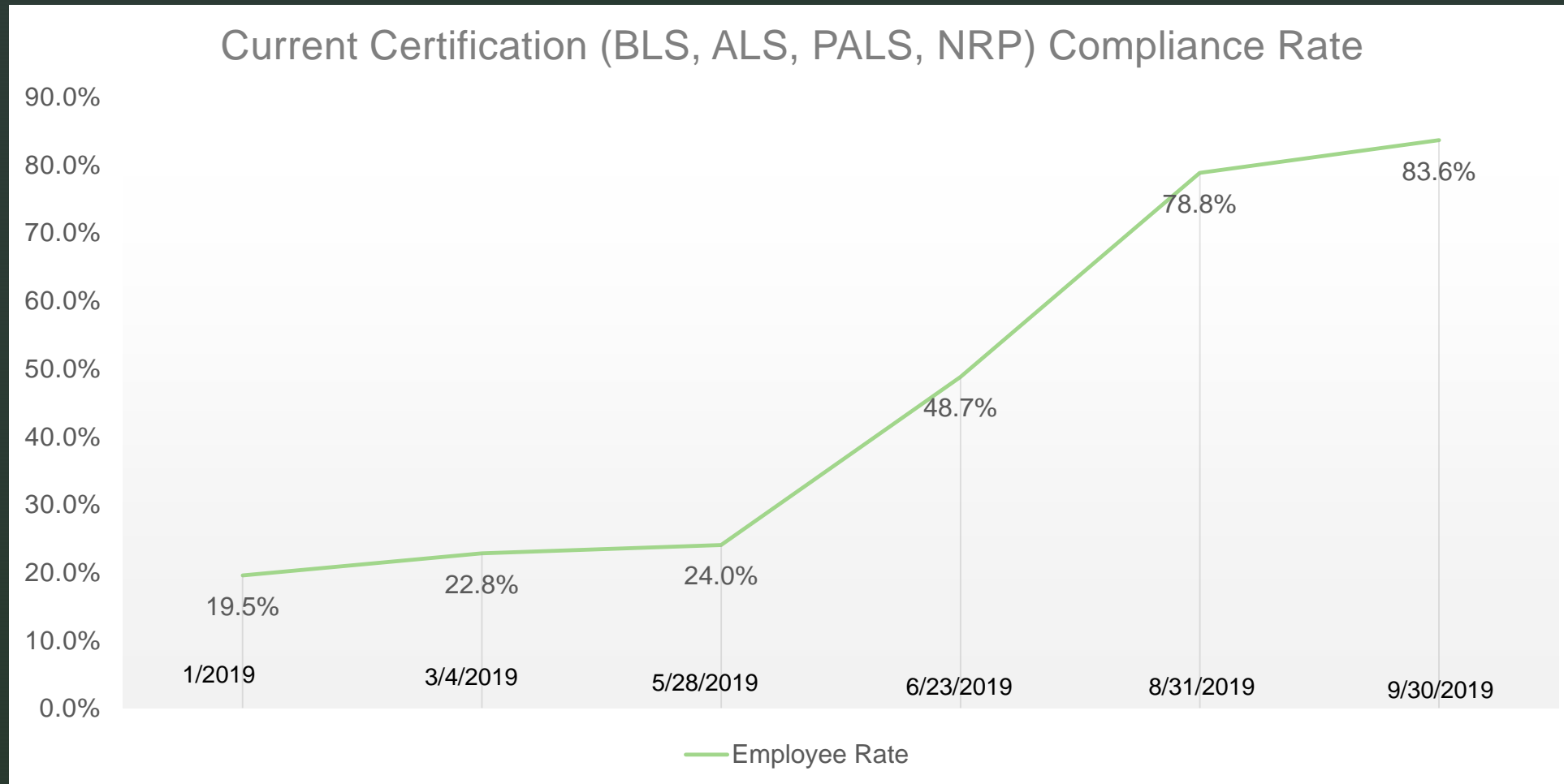


Topic	Pros	Cons
1. Partner with SPH IHI	Current relationship	Not certified, needs work, travel, time
2. Partner with KRMC	New, only BLS	Travel, expense, time, limited to BLS
3. AHA Online	Online, on demand	Still require up to date mannikins,  Still need instructors, Time commitment
4. Perpetual Certification (Lisa)	Perpetual, Affiliates  moving towards RQI	connectivity, LMS, Cost?

# Resuscitation Quality Improvement 2020

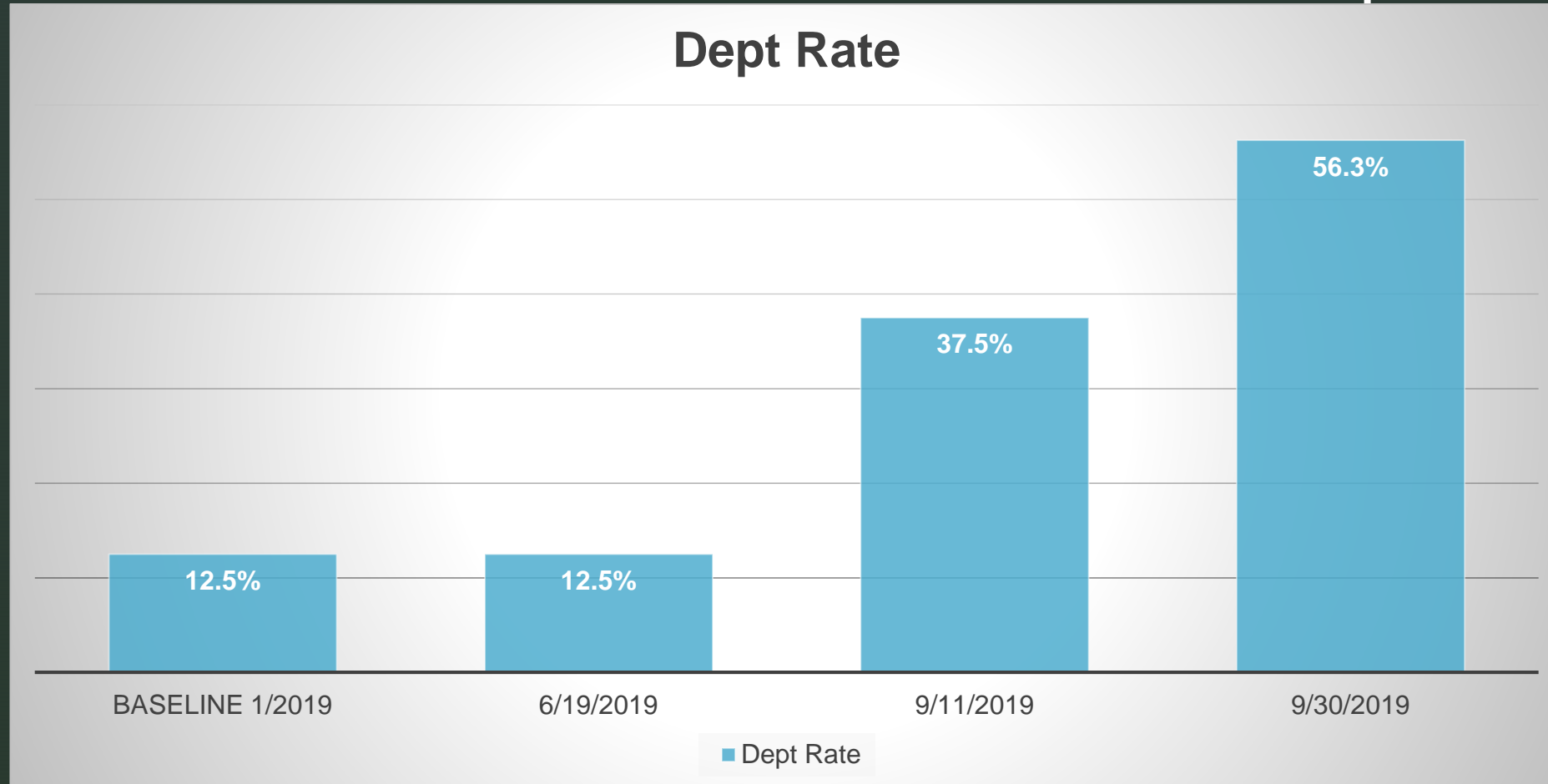
- March – walk in sale rep
- April – negotiation, on board Senior Leadership
- May – signed contract. Location, location, location! Super Users selected, training initiated.
- June 1 Go Live! Effort focused on getting as many through by June 30 2019. OS moments (platform build & jump on cart)
- July – quarterly activities begin. Catch up those Entry assignments. Work with RQI and CareLearning, adjust assignments.
- August – monitor & develop Alerts not working from CareLearning & RQI. Develop RQI Communications distribution in Outlook
- September – Prod and prod some more....email flurries, due date pending!
- October – Quarterly activities begin again, finish onboarding.

Goal: Greater than 55% of employees with certifications will be current by December 31, 2019





# # Departments meeting compliance with Job Descriptions





- Current 85%

# Background of the Problem



- Each year, over **350,000 out-of-hospital** and **209,000 in-hospital** cardiac arrests occur
- **Among EMS-treated patients** with OHCA, *23% have a shockable rhythm*
- Despite advances in resuscitation science, **survival rates are only about 12%**

**1960** – American Heart Association develops cardiopulmonary resuscitation

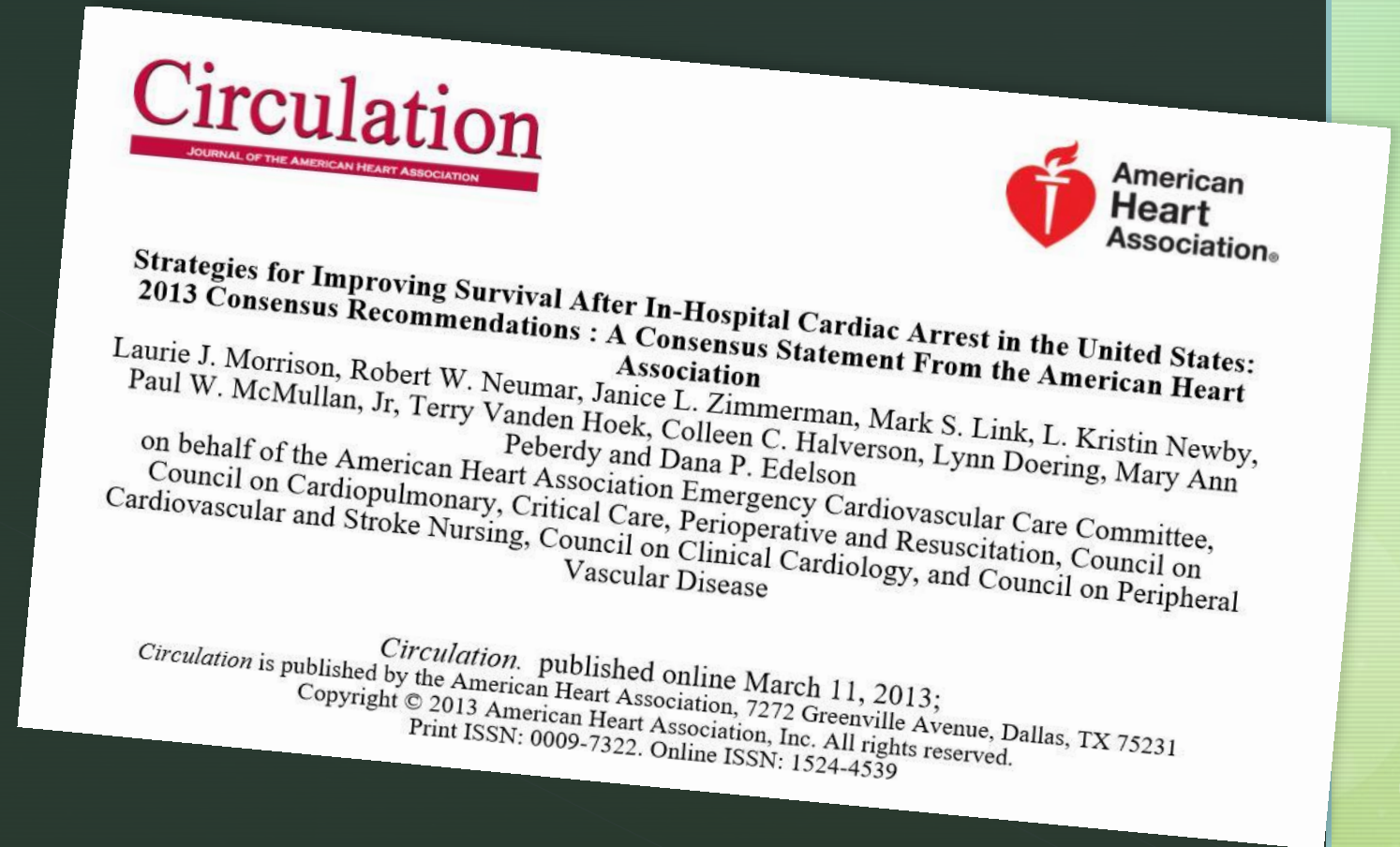
**2005** – American Heart Association Guidelines for CPR and ECC recommend “high-quality CPR”

**2010** – AHA Guidelines recommend more frequent training intervals to reduce skills decay as move to competency

**2013** – AHA Consensus Statement recommendation to healthcare providers and institutions

“Establish **competency** of all hospital staff in recognizing cardiac arrest, performing chest compressions, and using an AED”

# High-Quality CPR





# High-Quality CPR

High-Quality CPR is the “***single greatest determinate for survival***” from cardiac arrest and is the foundation for which all other therapies should be built on”

2013 AHA Consensus Statement

A recent study concluded that healthcare providers “often do not meet 2015 AHA guideline CCF, CC rate and CC depth targets. Compliance is poor for both infants and children”

Niles, et al, “Characterization of Pediatric In-Hospital Cardiopulmonary Resuscitation Quality Metrics Across an International Resuscitation Collaborative”





# Utstein Formula for Survival



X



Education  
Efficiency

X



Local  
Implementation  
Efficiency

=



Quality CPR  
Simulation and Role  
Playing

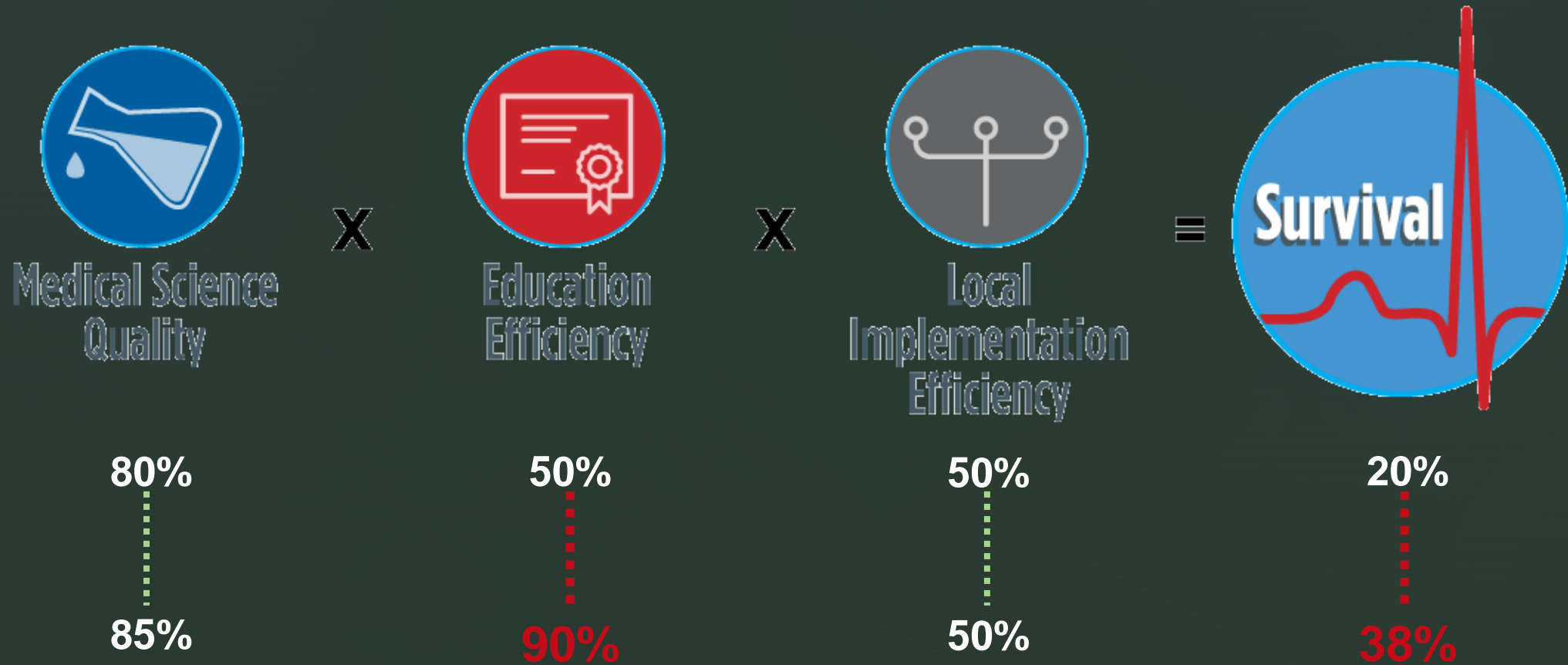
Low-Dose, High-  
Frequency Training

Rapid Dispatch  
Dispatcher CPR  
Cardiac Arrest Registries

Case Reviews  
and Feedback



# Utstein Formula for Survival



**AHA SCIENTIFIC STATEMENT**

## Resuscitation Education Science: Educational Strategies to Improve Outcomes From Cardiac Arrest

A Scientific Statement From the American Heart Association

**ABSTRACT:** The formula for survival in resuscitation describes educational efficiency and local implementation as key determinants in survival after cardiac arrest. Current educational offerings in the form of standardized online and face-to-face courses are falling short, with providers demonstrating a decay of skills over time. This translates to suboptimal clinical care and poor survival outcomes from cardiac arrest. In many institutions, guidelines taught in courses are not thoughtfully implemented in the clinical environment. A current synthesis of the evidence supporting best educational and knowledge translation strategies in resuscitation is lacking. In this American Heart Association scientific statement, we provide a review of the literature describing key elements of educational efficiency and local implementation, including mastery learning and deliberate practice, spaced practice, contextual learning, feedback and debriefing, assessment, innovative educational strategies, faculty development, and knowledge translation and implementation. For each topic, we provide suggestions for improving provider performance that may ultimately optimize patient outcomes from cardiac arrest.

**D**espite ongoing advances in resuscitation science, cardiac arrest survival rates remain suboptimal for both in-hospital and out-of-hospital settings. High-quality cardiopulmonary resuscitation (CPR) in compliance with American

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On behalf of the American  
Heart Association Education  
Science Investigators; and on  
behalf of the American Heart  
Association Education Science  
and Programs Committee,  
Council on Cardiopulmonary,  
Critical Care, Perioperative  
and Resuscitation; Council

# Shift in Education Strategy of Resuscitation-based Learning

- Effective educational strategies implemented may increase resuscitation survival
- Moving towards mastery learning and deliberate practice in resuscitation education
- Debriefing and feedback
- Spaced-learning
  - Low-dose, high-frequency
- Contextual learning



# What is High-Quality CPR?

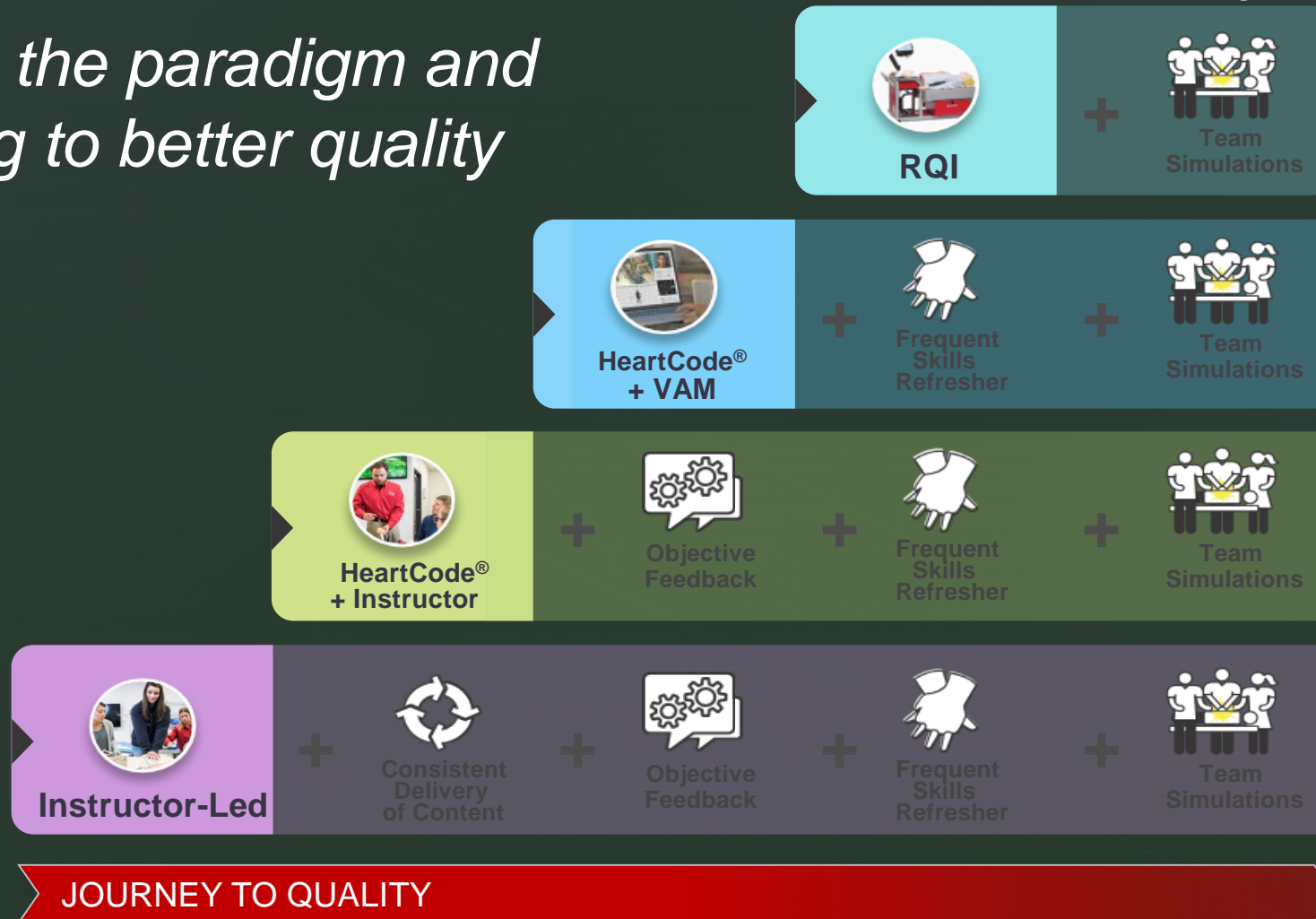
“There is an evolving understanding about the components of CPR (compression rate, depth, release, interruption, and ventilation) can individually and collectively influence the likelihood of resuscitation.”

The American Heart Association's Response to the 2015 Institute of Medicine Report on Strategies to Improve Cardiac Arrest Survival



# Resuscitation Education: Journey to High-Quality

*Shifting the paradigm and moving to better quality*



HIGH-QUALITY RESUSCITATION PROGRAM



# What is RQI?



**Simulation Station**  
**Located in the Care Setting**  
Frequent access without loss of productivity

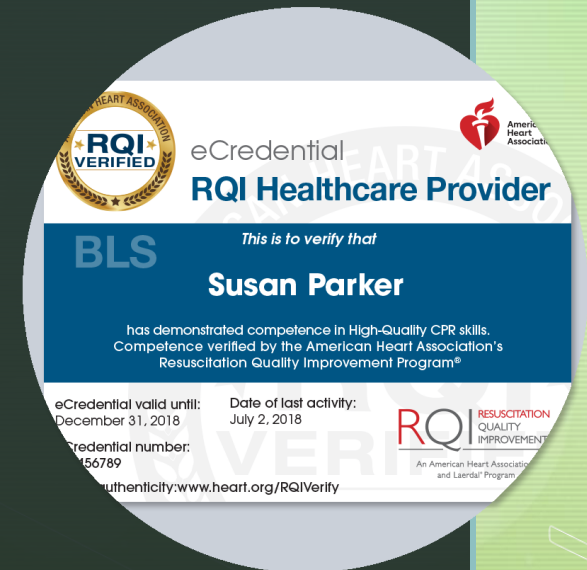
**Autonomous Skill Mastery**  
Quarterly practice with audio and visual feedback



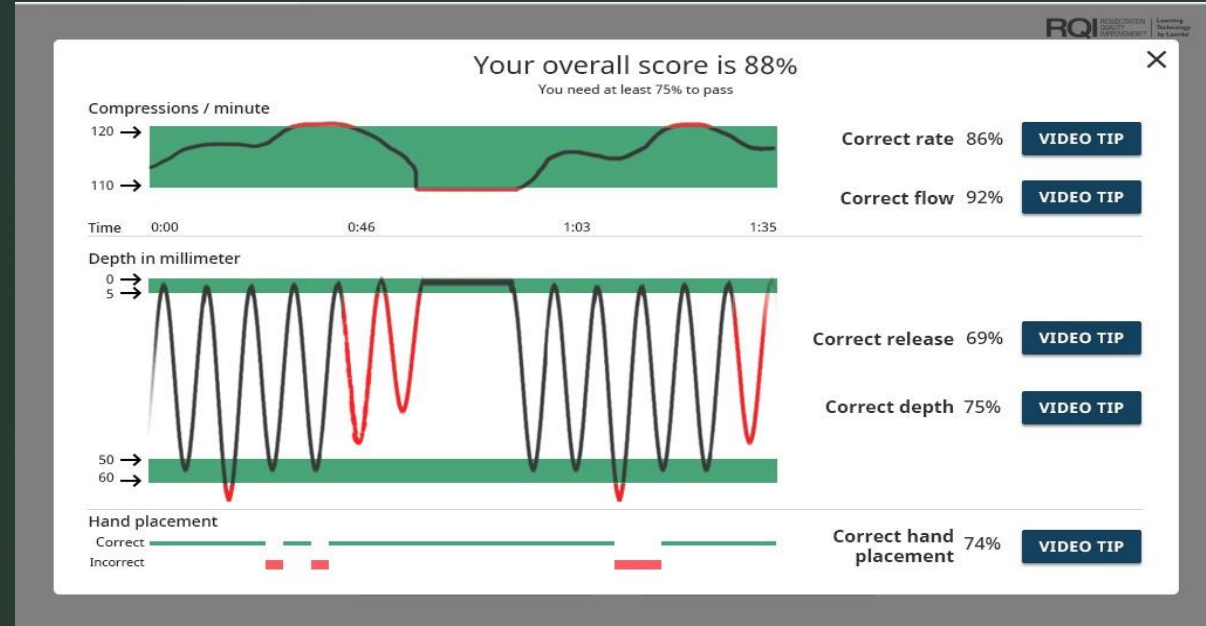
**Online Quarterly Spaced Learning Activities and Automatic Science Updates**  
Knowledge activities are now in quarterly increments. Participants are provided with expedited AHA updates to new science and guidelines changes.

## **American Heart Association RQI Healthcare Provider eCredential**

Verifies compliance of guideline-compliant Healthcare Provider



# An Evolution in the Quality of Resuscitation Training



## Audio & Visual Coaching

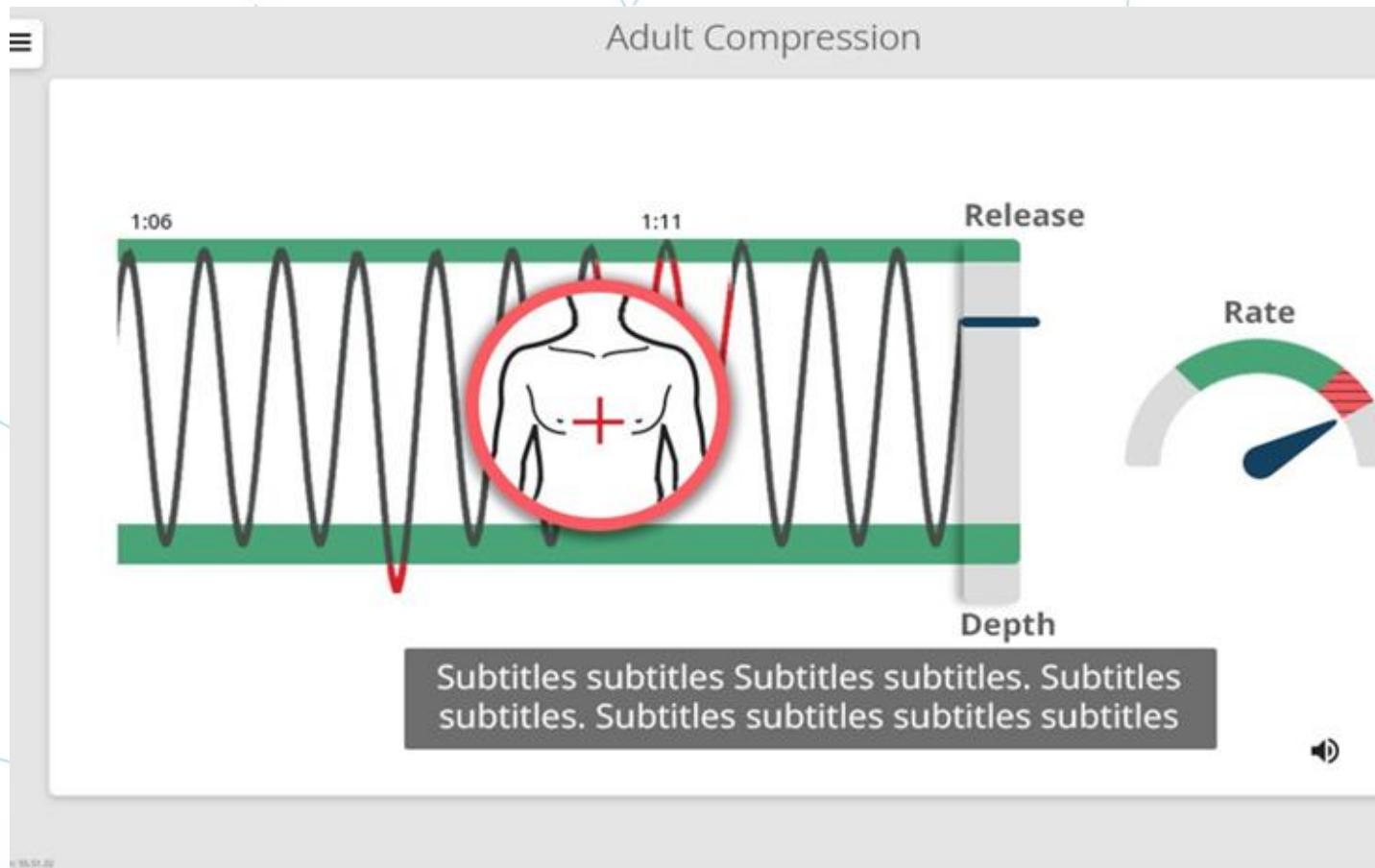
- Provides simplified real-time feedback and debriefing
- Coaching through tips during sessions and in tips for improvement videos

Students' **confidence** in their abilities increases as well as their **willingness** to respond!



# RQI Provider: Core Skills

- Quarterly repetition of Core CPR skills
  - Adult/Child Compressions and Ventilations
  - Infant Compressions and Ventilations
- Real-time feedback and post-activity debriefing
- Structured feedback for improvement videos



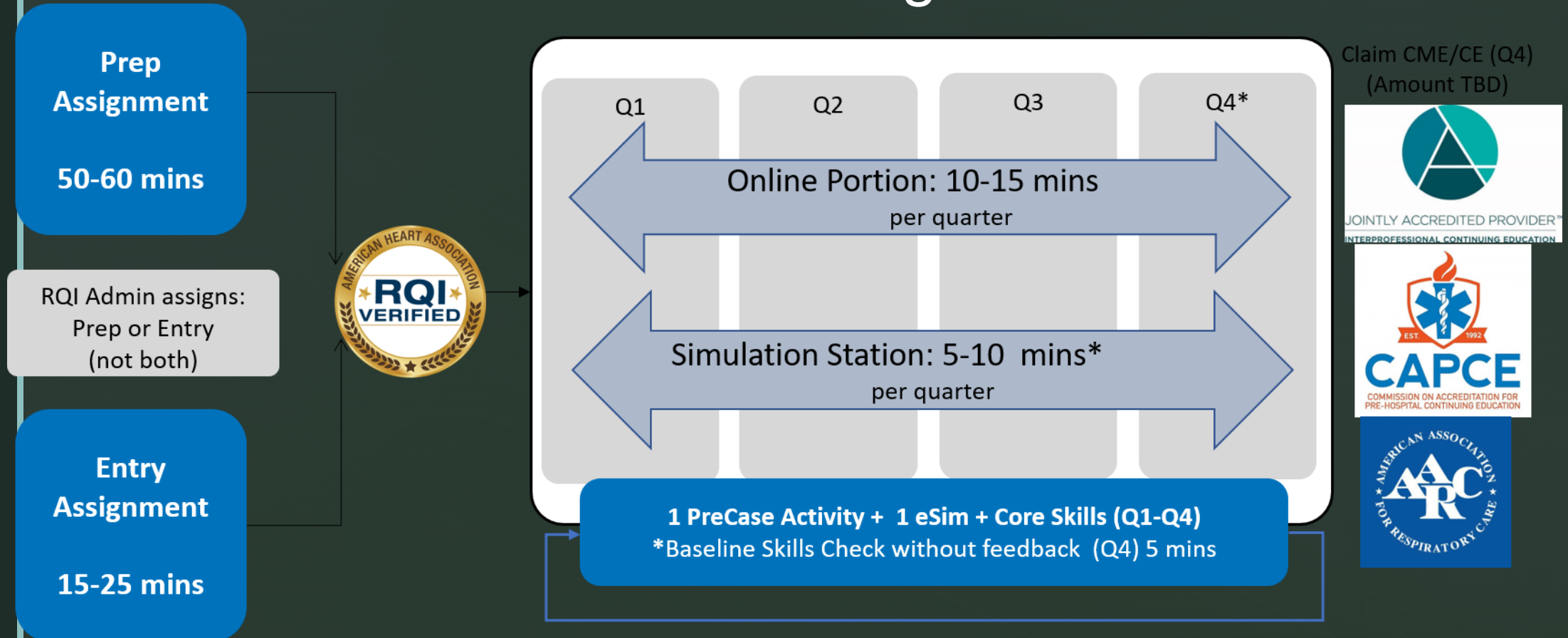
# RQI 2020 Content:

## Quarterly Knowledge Activity

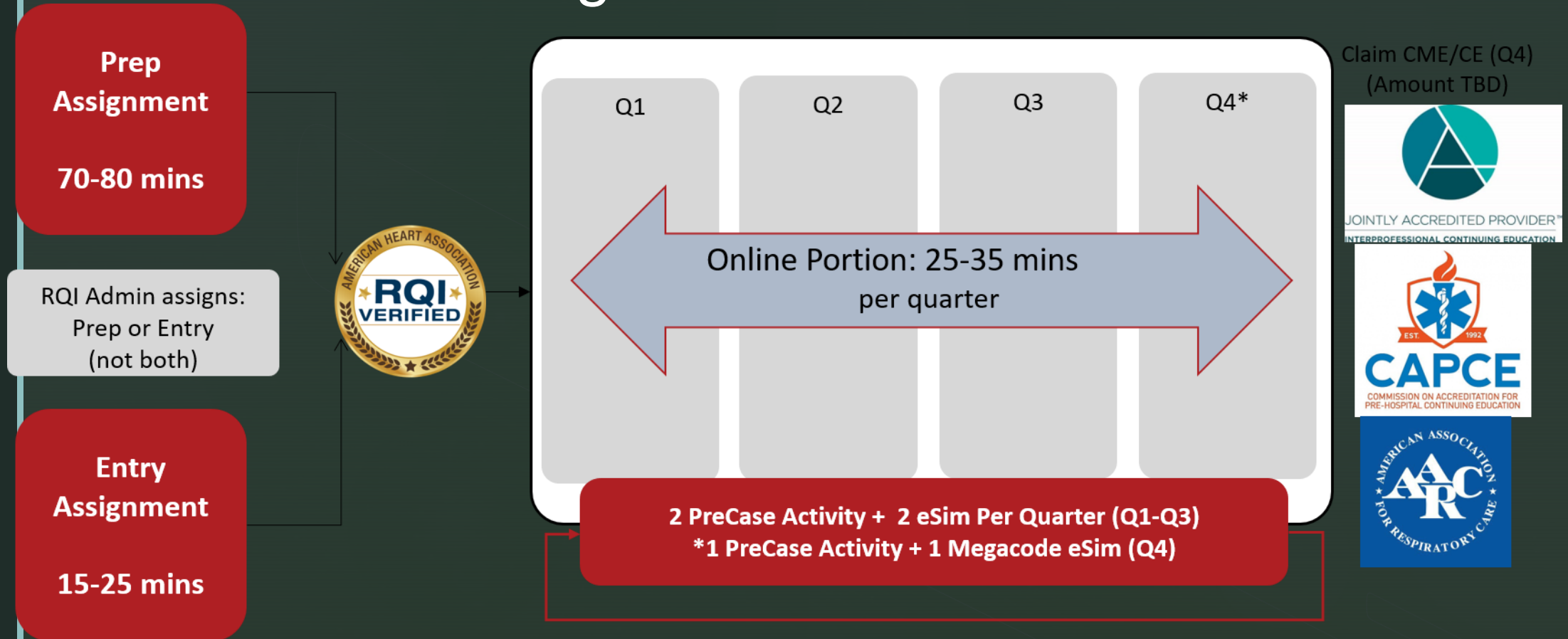
- Spaced Learning delivery
- Includes Pre-Case Activity and eSimulations
- Clear graphics and animations
- Simple menu selections for desired actions



# Becoming an RQI Provider



# Becoming an Advanced RQI Provider



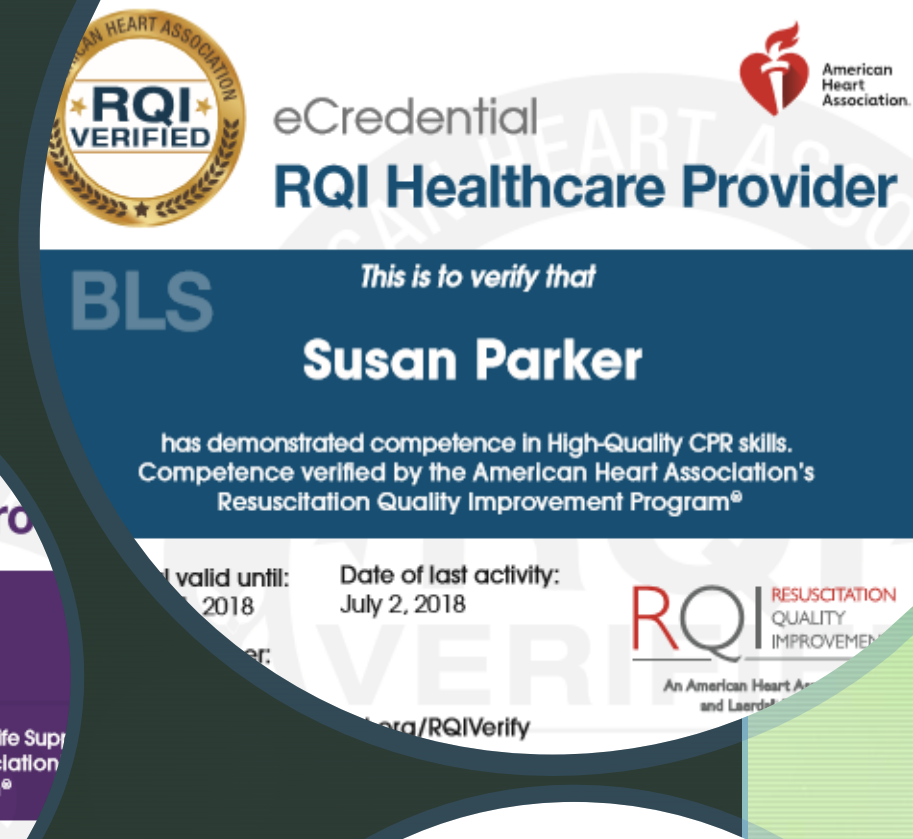


# The AHA eCredential: Verified Competency

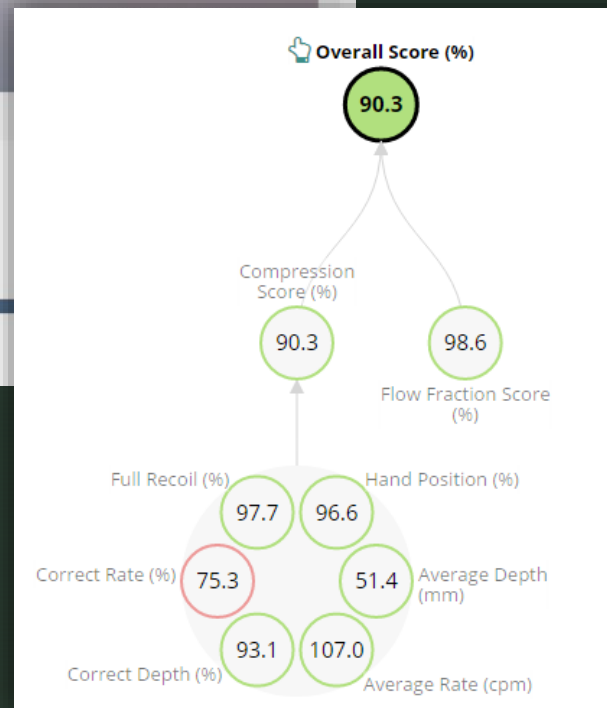
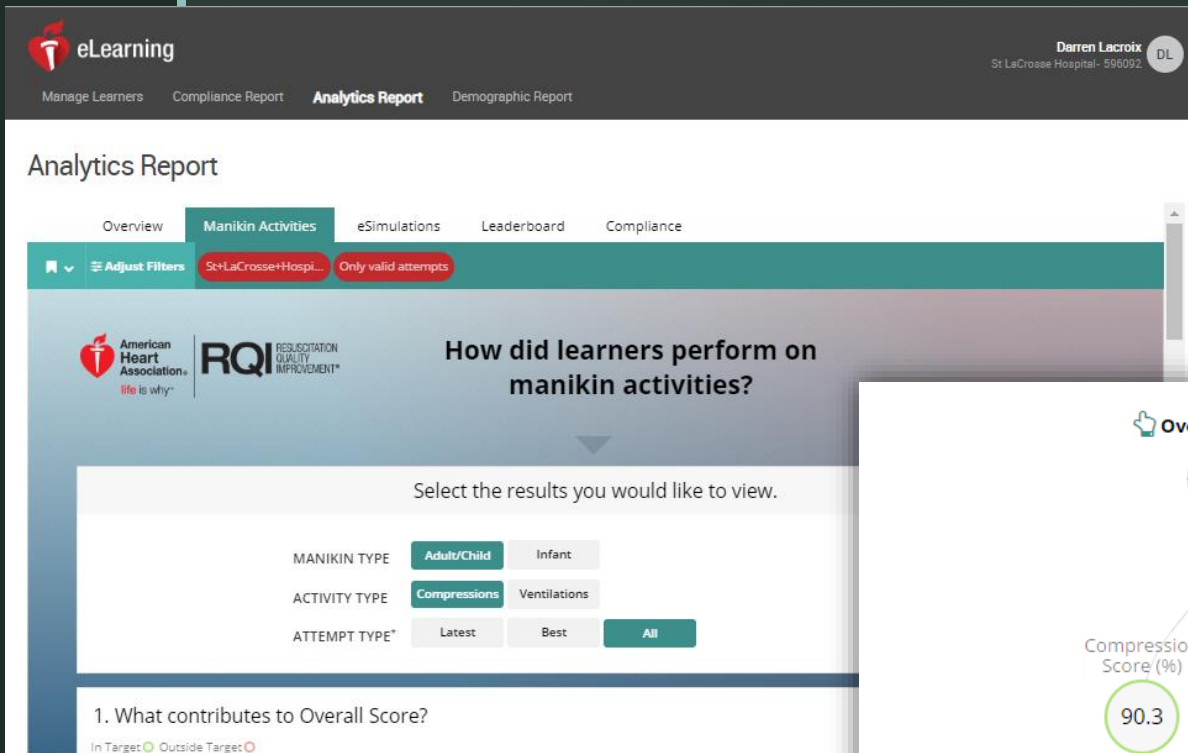
The AHA RQI eCredential is  
the gold standard of  
resuscitation training

Verified competency of a  
compliant, credentialed  
provider

Update with each successful  
quarterly completion



# Continuous Quality Improvement



- User performance is collected into concise analytic report
  - Skills performance
  - Case-based activity
- Development and improve programs to improve quality in programs





- Touch and Play

