Art Miller
Resuscitation Director-Midwest Affiliate
Get With the Guidelines-Resuscitation
RQI-Resuscitation Quality Improvement

An Evolution in the Quality of Resuscitation
I have no actual or potential conflict of interest in relation to this presentation
2,200 people die each day in the US as a result of heart disease. 1 every 40 seconds!

The direct & indirect costs are estimated at $316B

CHD is the leading cause of death!
- 45% CVD >800K
- 16.5% Stroke
- 8.5% HF
- 9.1% HTN

90K MI’s every year

50% of all blacks have CVD
In-Hospital Cardiac Arrest Incidence & Outcomes

• >200,000 in-hospital cardiac arrests (IHCA) each year
  – (4 per 1000 admissions – Chen 2013, JAMA Intern Med. – GWTG-R)

• Estimated IHCA Survival Rates
  – 19% Adult Survival (AHA 2020 Goal: 38%)
  – 35% Pediatric Survival (AHA 2020 Goal: 50%)

• Why are our survival rates so poor?

• Rapid delivery of High-Quality CPR is the greatest determinant of survival from Cardiac Arrest.
  + electricity
In-Hospital Cardiac Arrest Outcomes

<table>
<thead>
<tr>
<th>Category</th>
<th>Initial Event</th>
<th>Discharged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>65.80%</td>
<td>25.20%</td>
</tr>
<tr>
<td>Pediatric</td>
<td>79.50%</td>
<td>48.80%</td>
</tr>
<tr>
<td>Newborn/Neonate</td>
<td>75.10%</td>
<td>45.90%</td>
</tr>
</tbody>
</table>

Legend: Initial Event, Discharged
HIGHLIGHTS
of the 2015 American Heart Association
Guidelines Update for CPR and ECC

IHCA and OHCA Chains of Survival
Priorities of Hospitals Today

- Compliance
- Staff Competency
- Patient Outcomes and Patient Safety
- Clinical Quality
- Delivering Value to Community
- Reducing Operating Costs
- Staff Satisfaction and Alignment
ACHIEVING
RESUSCITATION EXCELLENCE
Poor CPR Significantly Contributes to Negative Outcomes
Effect of Resuscitation Errors

Fig. 1. Effect of any resuscitation system errors on an IHCA event and the rate of ROSC, survival for 24 h, and survival to hospital discharge for all patients and those with an initial documented IHCA rhythm of non-VF/pVT and VF/pVT.
The (Good?) Old Days
Biennial Training Does Not Prevent Skills Decay

“Studies have demonstrated the deterioration of BLS skills in as little as 3 months after initial training.” — 2015 AHA Guidelines Update on CPR and ECC
The AHA recognized that there must be a CHANGE.

“Two-year retraining cycles are not optimal. More frequent training in basic life support (BLS), and retraining in advanced life support (ALS) may be helpful for providers who are likely to encounter a cardiac arrest.”

- 2015 AHA Guidelines Update for CPR and ECC

2013 AHA Consensus Statement on CPR Quality

Poor-quality CPR should be considered a preventable harm.
“Recent literature in resuscitation education demonstrates improved learning from “frequent, low-dose” versus “comprehensive, all-at-once” instruction...” – 2015 AHA Guidelines Update on CPR and ECC
Efficiency

Training Integrated Into the Workflow
Training comes to you with 24/7 convenience.

24/7/365 Convenience
Measuring CPR Quality: The Science of Mastering Skills

Audio & Visual Coaching

Students are provided a comprehensive and objective debriefing.
CPR Kiosks

Two Steps to Save a Life
1. Call 9-1-1
2. Push hard and fast in the center of the chest

heart.org/handsonlcpr

Hands-Only CPR

American Heart Association
American Stroke Association
life is why
Analytics

Compare Adult performance by Department

<table>
<thead>
<tr>
<th>Department</th>
<th>Compressions</th>
<th>Ventilations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>98.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>6 Ross</td>
<td>93.0%</td>
<td>92.4%</td>
</tr>
<tr>
<td>7 Ross</td>
<td>91.4%</td>
<td>92.3%</td>
</tr>
<tr>
<td>2 Ross</td>
<td>90.3%</td>
<td>92.2%</td>
</tr>
<tr>
<td>4 Ross</td>
<td>90.1%</td>
<td>91.3%</td>
</tr>
<tr>
<td>5 Ross</td>
<td>86.7%</td>
<td>88.6%</td>
</tr>
</tbody>
</table>

Compliance rate: 99.95%

Leaderboards and Compliance Monitoring

RQI BLS Plus ACLS
- 665 learners currently active
- 665 assigned learning activities
- 100.00% of learning activities completed
- 2.26% incomplete but not overdue

RQI BLS
- 1,374 learners currently active
- 1,375 assigned learning activities
- 99.93% of learning activities completed
- 0.29% incomplete but not overdue

American Heart Association | American Stroke Association
life is why
Hospital Priorities

- Compliance
- Delivering Value to Community
- Reducing Operating Costs
- Staff Competency
- Clinical Quality
- Patient Outcomes and Patient Safety
- Staff Satisfaction and Alignment
RQI Priorities

Quality & Competency Improvement

Reduces Risk, Improves Patient Safety & Survival

Reduces Administrative & Labor Costs

Improves Staff Satisfaction & Work Life

Accreditation & Credentialing Compliant
Priorities Match

- Competency
- Compliance
- Quality
- Outcomes
- Value
- Reduce Costs
- Reduce Risk
- **Staff Satisfaction**
RQI’s “low-dose/high-frequency” training is required every three months, which can initially be seen as time-consuming but is easily proven otherwise.

—Heidi Dixon, RN
Charge Nurse, Post Anesthesia Care Unit, Harrison Medical Center

Our employees were so excited. They knew RQI was coming and they couldn’t wait for us to roll it out. We had no pain points during implementation and we had all the help and services we needed.

—Sarah Luyet, BS
Conway Regional Health System, Education program coordinator and America Heart Association training center coordinator

My confidence level was high due to my recently-completed CPR training through the AHA’s RQI program. The RQI program keeps CPR skills intact and fresh through quarterly skills practice. It’s absolutely amazing.

—Christiana Adams
Unit Assistant in Labor and Delivery, Salem Health

Employees like knowing they can work on their CPR skills on their own schedule. I’ve received a lot of great feedback.

—Jamie Martin, RN, BSN
Trauma Coordinator, Emergency Room and Assistant Director of Nurses, Coon Memorial Hospital
Texas Health Dallas implemented RQI in 2014 and since then has seen more than a 20-percent increase in CPR survival rates within the hospital. As a result of Dallas’ success, RQI was implemented systemwide earlier this year.
• Initial CPR competencies was **68%**

• Staff report that RQI has improved their competence in CPR skill performance

• Staff stated they had an increased confidence in CPR skills since starting the program 2 years ago

• CPR providers continue to complete the program at rates averaging over **98%**
Financially, the organization continues to benefit with a savings of over _____________ per year in training costs.

Texas Health noted a 21% increase in survival rates following cardiac arrest based on a pre-and post-implementation study.

39% to 60%!!!
50,000 Lives Saved
How RQI Makes The Difference

RQI → HIGH-QUALITY CPR → 50,000 LIVES SAVED

More than 200,000 CARDIAC ARRESTS in U.S. hospitals annually; LESS THAN 25% SURVIVE.
INCREASING THE NUMBER OF HEALTHCARE PROVIDERS USING THE RQI PROGRAM WILL SAVE MORE LIVES.

WHAT IS RQI?

Resuscitation Quality Improvement® is an innovative program that ensures healthcare providers achieve and sustain high-quality resuscitation competency, and is supported by data and analytics that track and measure performance.

- Offers “low-dose, high-frequency” hands-on sessions; refreshes vital CPR skills in 10 minutes every 90 days.
- Places RQI stations on the floor and provides 24/7 access to staff.
- Provides real-time voice and visual feedback via high-fidelity manikins.
- Achieves compliance with accreditation and credentialing standards.

RQI Value

- Delivers CPR competency and quality, increasing survival rates for cardiac arrest victims.
- Improves staff confidence and readiness to respond.
- A self-service, highly-effective quality improvement program designed to raise and sustain the quality of CPR and the quality of care, all while reducing risk and reducing administrative and labor costs.

RQI Features

- Delivers on-going resuscitation education 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 audio and visual feedback on skills performance.
- Provides quarterly CPR skills practice to eliminate “skills decay” and replace with “skills mastery,” resulting in high-quality CPR performance.
- Renews AHA course completion cards, allowing staff to obtain a perpetual card and meet their credentialing requirements.

RQI Cost Benefits

- Measurably improves CPR competence and quality while saving time and money.
- Reduces and eliminates labor expenses by assimilating sessions into the learner’s normal work schedule, without need for replacement staff.
- Eliminates and reduces administrative and materials expenses associated with traditional classroom training.

RQI Culture of Resuscitation Excellence

- Low-dose, high-frequency program design with enhanced audio and visual feedback transforms CPR quality, leading to improved patient outcomes.
- Staff credit their RQI program as motivating and empowering, increasing their confidence and readiness to respond.
- Provides a high-value experience for learners and improves staff satisfaction and work life.

©2017 American Heart Association. D012569 B/17
Fig. 1. Effect of any resuscitation system errors on an IHCA event and the rate of ROSC, survival for 24 h, and survival to hospital discharge for all patients and those with an initial documented IHCA rhythm of non-VF/pVT and VF/pVT.
• an efficient and consistent tool for hospitals to collect and analyze resuscitation data
• evaluate resources, training, practices & equipment …
• visual reports for committees and staff

and ultimately save lives!
• nearly 900 hospitals participating
• almost limitless benchmarking opportunities
• 4 common process measures
• adult, pediatric, neonate & newly born
• hospital awards
• publishing opportunities (>15 in 2017)
• process & review resources
• affordable
Resuscitation Quality Cycle

Feedback — Skills (RQI) — Event Measurement — Data — Feedback

Guideline Driven
QUESTIONS?

art.miller@heart.org