Art Miller

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



An Evolution in the Quality of Resuscitation

Emergency Cardiovascular Care



life is why[™]



I have no actual or potential conflict of interest in relation to this presentation



Resuscitation Quality Cycle





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



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In-Hospital Cardiac Arrest Outcomes





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HIGHLIGHTS of the 2015 American Heart Association Guidelines Update for CPR and ECC



Priorities of Hospitals Today

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Poor CPR Significantly Contributes to Negative Outcomes





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Effect of Resuscitation Errors

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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



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"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

Poor-quality CPR should be considered a preventable harm 2013 AHA Consensus Statement on CPR Quality

AHA Consensus Statement

CPR Quality: Improving Cardiac Resuscitation Outcomes Both Inside and Outside the Hospital A Consensus Statement From the American Heart Association Endorsed by the American College of Emergency Physicians



Farhan Bhanji, et al. Part 14: Education: 2015 American Heart Association Guidelines Update for CPR and ECC. Circulation. 2015;132:18 S561-S573

AHA Guidelines Support More Frequent Training

"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



Resuscitation Quality Improvement – RQI



Efficiency



Training Integrated Into the Workflow



Resuscitation Quality Improvement – RQI

24/7/365 Convenience





Measuring CPR Quality : The Science of Mastering Skills



Students are provided a comprehensive and objective debriefing

Audio & Visual Coaching

CPR Kiosks







Analytics

Compare Adult performance by Department ~

ICOK AT: Top 20 Bottom 20 Top & Bottom

Compressions		Ventilations		
Unknown	98.0%	Unknown	98.0%	
6 Ross	93.0%	6 Ross	92.4%	
7 Ross	91.4%	5 Ross	92.3%	
2 Ross	90.3%	2 Ross	92.2%	
4 Ross	90.1%	7 Ross	91.3%	
5 Ross	86.7%	4 Ross	88.6%	

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

1.374k learners currently active

1,375 assigned learning activities

99.93% of learning activities completed

0.29% incomplete but not overdue

Compliance rate: 99.95%





Hospital Priorities

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RQI Priorities



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Quality & Competency Improvement

> Improves Staff Satisfaction & Work Life

Reduces Risk, Improves Patient Safety & Survival Reduces Administrative & Labor Costs

Accreditation & Credentialing Compliant

RESUSCITATION QUALITY IMPROVEMENT®



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



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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.

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HIGH QUALIT CPR





RQI

Outcomes and Sustainability at

- 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%

Nurse Leaders as Disruptive Innovators in Cardiopulmonary Resuscitation Competency Cole Edmonson, DNP, RN, FACHE, NEA-BC, Alex Klacman, MSN, RN-BC, CCRN http://www.nurseleader.com/article/S1541-4612(16)00077-X/fulltext



Texas Health

Nurse Leaders as Disruptive Innovators in Cardiopulmonary Resuscitation Competency Cole Edmonson, DNP, RN, FACHE, NEA-BC, Alex Klacman, MSN, RN-BC, CCRN http://www.nurseleader.com/article/S1541-4612(16)00077-X/fulltext

rates following cardiac arrest based on a preand post-implementation study.

39% to 60%!!!

- Texas Health noted a 21% increase in survival
- Financially, the organization continues to benefit with a savings of over _____ per year in training costs









American Heart Stroke Association Association Association



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.



- 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 Cost Benefits

- Measurably improves CPR competence and quality while saving time and moncy.
- 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.



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.
- O Places RQI stations on the floor and provides 24/7 access to staff.
- O Provides real-time voice and visual feedback via high fidelity manikins.
- O Achieves compliance with accreditation and credentialing standards.

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 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.



heart.org/resuscitation





Formerly NRCPR® (The National Registry of Cardiopulmonary Resuscitation)

©2010, American Heart Association

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Effect of Resuscitation Errors

Joseph P.Ornato^aMary AnnPeberdy^{ab}Renee D.Reid^aV. RamanaFeeser^aHarinder S.Dhindsa^afor the NRCPR Investigators^o

No resuscitation system errors

Resuscitation system 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.





Formerty NHCPHB (The National Hegistry of Cardioputnicesity Hereinstration)

- 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!





Formerty NRCPHR (The Mallocal Hispatry of Cardioputnionary Hammanitation)

- 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





QUESTIONS?

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