Bayhealth Kent and Sussex Campus

Bayhealth Participants

Cynthia Mather BSN, RN
- Clinical Educator
- Training Center Coordinator
- Course Director for ACLS and PALS

Donna Simon, BS, CCLS
- Educator
- Course Director for BLS
Facility Overview

- Full service community hospitals
- 434 beds
- Level II Trauma Center
- Level II NICU
- Magnet Accreditation
- Outpatient locations
- Multiple staff needing annual CPR training

History of Our AHA Programs

<table>
<thead>
<tr>
<th>Classroom Teaching</th>
<th>Heart Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 hours off the clinical unit</td>
<td>Individual learning accountability</td>
</tr>
<tr>
<td>Multiple people away from the clinical units</td>
<td>Elimination of subjectivity</td>
</tr>
<tr>
<td>More instructors per class (1:6 ratio)</td>
<td>Reduced manikin anxiety</td>
</tr>
<tr>
<td>Set schedule for class</td>
<td>1:1 instructor dedicated time</td>
</tr>
<tr>
<td></td>
<td>More flexibility to meet customer’s needs</td>
</tr>
</tbody>
</table>
History of Our AHA Programs

<table>
<thead>
<tr>
<th>Achievements</th>
<th>Areas to Improve</th>
</tr>
</thead>
<tbody>
<tr>
<td>‣ AHA Guidelines and Best Practice</td>
<td>‣ Skill Retention</td>
</tr>
<tr>
<td>‣ Class consistency</td>
<td>‣ Skills decay in several months if not practiced</td>
</tr>
<tr>
<td>‣ Standardization of delivery</td>
<td>‣ Flexibility and ability to practice CPR skills on own time</td>
</tr>
</tbody>
</table>

RQI: The Solution to Skill Retention

Resuscitation Quality Improvement

The focus of the RQI Program is the Simulation Station, a mobile cart that contains all the elements needed to perform quarterly skills assessments: adult and infant.

- Low dose, high frequency training
- Staff visit cart at their own convenience
- Carts are strategically located
- 24 Hour availability
- Staff are able to practice and compete!
RQI: The Solution to Skill Retention

Resuscitation Quality Improvement

RQI addresses the decay in skills by breaking up the components and having quarterly checks, as well as cognitive modules instead of a certification every two years.

- Adult / Child Compressions and Ventilations
- Infant Compressions and Ventilations
- 2 Rescuer Adult CPR

RQI: The Solution to Skill Retention

The Evidence Behind the Program

Cardiac Arrest: A need to understand the Determinants of Basic Life Support—A Nursing Perspective

Literature has reported that nurses and medical staff possess poor retention of BLS Skills. The aim of this literature review is to identify the facilitation factors in retention of Basic Life Support.

- Poor BLS retention in providers has been identified from the literature review and many factors contribute to the low retention. Infrequent use of the skill is one factor.
- The approach to BLS retention is using a combination of many approach's looked at in the literature one being more frequent training

(Hina Nizar, 2016)
Low-Dose High-Frequency CPR Training improves Skill Retention of in-Hospital Pediatric Providers

This study investigated the effectiveness of brief bedside cardiopulmonary resuscitation to improve the skill retention of hospital-based pediatric providers.

The percentage of healthcare providers performing excellent CPR more than doubled (from 26% to 65%) when healthcare providers were retrained 3 times over 6 months by using an automated manikin system with real-time feedback.  

(Sutton et al., 2011)

High Fidelity Simulation Effects on CPR Knowledge, Skills, Acquisition and Retention in Nursing students

This study examined the effect of using high fidelity simulators on knowledge and skills acquisition and retention.

- Significant differences in favor of the participants in the high fidelity simulator group on both the acquisition and retention of knowledge and skills over time.
- A significant loss of cardiopulmonary resuscitation knowledge and skills occurred at 3 months after training in both study groups.

(Aqel & Ahmad, 2014)
The Evidence Behind the Program

Evaluation of Low Dose High Frequency Case Based Psychomotor Cardiopulmonary Resuscitation Training Demonstrates High Levels of Program Compliance With Good CPR Quality Metrics

High quality CPR is critical for survival from cardiac arrest however for many providers the opportunity to perform CPR in training or clinical is to infrequent to maintain proficiency. Use of RQI was piloted on 2 nursing units in this study.

- Low Dose High frequency case based psychomotor CPR is a feasible method to enhance CPR skill retention in the hospital setting
- Performance metrics demonstrate high quality CPR after 2 quarters of exercises indicating CPR skill retention

(Panchal, Norton, Gibbons, Slattery, & Krak, n.d.)
Feedback and Statistics

Compressions

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Med Surg 1</td>
<td>81%</td>
<td>88%</td>
</tr>
<tr>
<td>Med Surg 3</td>
<td>83%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Feedback and Statistics

2 Rescuer CPR

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>2N CC</td>
<td>61%</td>
<td>80%</td>
</tr>
<tr>
<td>OR</td>
<td>61%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Compressions

Feedback and Statistics

Gives the ability to identify and work with Individuals who have scored low in a particular skill.
Staff Compliance

The Future of RQI at Bayhealth

RQI PALS started in October 2018
What Our Staff Are Saying

In patient Rehab Clinical Educator:

“RQI has provided an exciting opportunity to expand our abilities and capabilities during an emergency situation. This program has made the staff more comfortable and confident when responding to a code requiring initiation of CPR”
Contact Information
Bayhealth AHA Training Center

Cynthia Mather  BSN, RN
Training Center Coordinator,
ACLS and PALS Course Director
Cynthia_Mather@Bayhealth.org
302 430 5797
302 744 6809

Donna Simon BS, CCLS
BLS Course Director
Donna_Simon@Bayhealth.org
302 744 7186

References

References

- Sign in. (n.d.). Retrieved from
  https://laerdalanalytics.juiceboxdata.com/accounts/login/?next=/laerdal/overview#2MbEdBAnYJL

  Low-Dose, High-Frequency CPR Training Improves Skill Retention of In-Hospital Pediatric Providers.
  PEDIATRICS, 128(1), e145-e151. doi:10.1542/peds.2010-2105