

# Does Quarterly Versus Every Other Year BLS Training Improve Knowledge, Skills, and Attitudes to Perform CPR?



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## Purpose

The purpose of this research study was to determine if Resuscitation Quality Improvement (RQI) quarterly Basic Life Support (BLS) skills training improves overall confidence and competence to perform CPR compared to standard every other year Basic Life Support (BLS) skills training.

## Background

- American Heart Association recommends that healthcare workers in the acute care setting be certified in basic life support (BLS) every two years (AHA guidelines, 2015).
- The current BLS training program used at The Christ Hospital Health Network (TCHHN) involves a computerized testing module on an e-learning system called Healthstream. Certification requires every other year completion of a comprehensive test for basic life support and demonstration of skills (compressions and ventilations) using a manikin that provides immediate auditory feedback as skills are completed
- Current research suggests more frequent practice and testing of compression and ventilation skills supports improved patient outcomes (Oerman, M., et al., 2012) since CPR compression and ventilation skills degrade with lack of use and practice, as does the overall effectiveness of CPR, which can result in increased risk to patients experiencing life threatening emergencies (AHA, 2016).

## Methods

### Setting:

- The Christ Hospital Health Network(TCHHN) 2139 Auburn Ave. Cincinnati, Ohio 45219 Joint and Spine Center (JSC) medical unit and Cardiac telemetry unit.
- This study took place at the Christ Hospital for approximately one year (July 1, 2017 to July 1, 2018). The Intervention Group received BLS training using RQI quarterly on the Joint and Spine Center. The Control Group received standard BLS training regimen every other year in the Network Learning Lab located on 3 North.

## Methods (Cont'd)

### Intervention

This prospective observational study compared the knowledge, skills and attitudes to perform BLS among RNs and PCAs receiving quarterly RQI BLS skills training compared with employees receiving the standard BLS skills training offered every other year.

- The control group completed the standard BLS program of skills training and testing every other year in the Skills Lab. Participants (n=40) received a 14 question survey identical to the pre-survey items administered to the intervention group following the training. Surveys assessed the confidence and competence to perform BLS using current practice of every other year training in the Skills Lab.
- The intervention group received a pre-survey (n = 64) to assess baseline perceptions prior to the RQI intervention. Post-surveys (n = 62) were administered at the conclusion of the one year RQI intervention. Surveys assessed confidence and attitudes before and after the change of timing to quarterly BLS training with training occurring on the unit.

### Instruments:

- Measurements of Attitudes (Surveys)
  - Surveys (Likert and short answers ) were used to measure confidence and competence to perform CPR before and after implementation of the RQI system.
- Skills were measured in each group by:
  - 1) Total number of attempts required to successfully demonstrate BLS skills, and
  - 2) Scores on competency of performance of skills: Measurements of knowledge, skills, and attitudes *for comparisons between the control and intervention groups.*



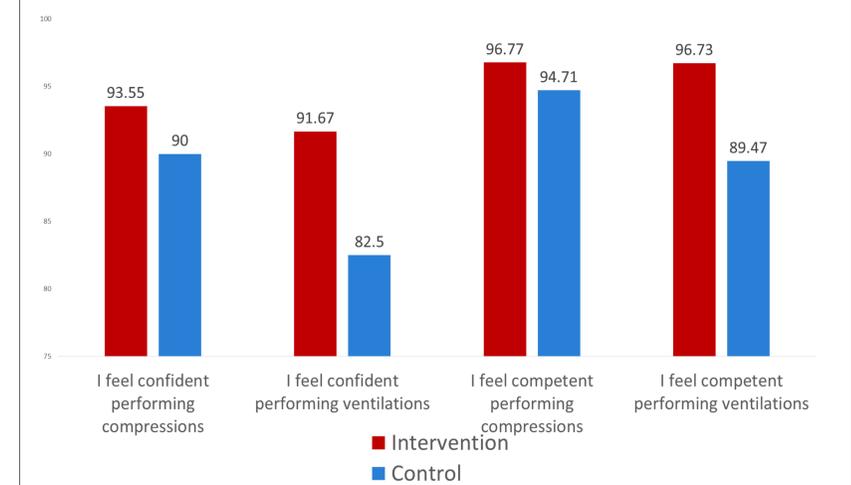
<https://www.laerdal.com/us/RQI>

## Preliminary Data Analysis

Data collection is now complete and analysis of survey data is underway. Preliminary findings reveal that **participants receiving quarterly BLS training on their unit reported higher perceptions of confidence and competence to perform BLS compared to the every other year BLS control group** in the following categories:

- **3.6%** higher on confidence to perform compressions
- **9.2%** higher on confidence to perform ventilations
- **2.1%** higher on competence to perform compressions
- **7.3%** higher on competence to perform ventilations.

### Percentage of Participants Who Agreed/Strongly Agreed



## Conclusion

Preliminary findings suggest that a quarterly program of BLS training on the unit has the potential to produce higher perceptions of confidence and competence when performing CPR compared to every other year BLS training in the Skills Lab. Statistical analysis is planned to determine if these differences are significant.

## Implications for Nursing

- Institutional metrics are being analyzed to determine quality of compressions and ventilations (Healthstream), mortality rates on codes, total length of stay after code.
- Lessons learned from this study could be used to inform The Christ Hospital Health Network's decision whether or not to replace standard every other year BLS/ACLS training in the Lab with quarterly BLS system on the unit.