STANDARDIZING CRITICAL SKILLS AND COMPETENCY VALIDATION TO PROMOTE SELF-EFFICACY AMONG RAPID RESPONSE NURSES

An Evidenced-Based Practice Project

Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Kelli Dail Baker

Liberty University

Lynchburg, VA

July 10, 2024

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Scholarly Project Chair Approval:

Dr. Dana Kaye Smith Woody, DNP, RN

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Abstract

Competency validation is a key component of supporting nurses with necessary skills to provide care for their patients. However, many healthcare organizations do not have a standardized process for determining which skills are evaluated and the method by which evaluation occurs. To address competency validation among rapid response nurses (RRNs), this evidence-based practice project was proposed to increase self-efficacy. This project involved a thorough data review of all rapid response skills, categorizing all interventions based on quantity and acuity, and holding a hands-on educational fair for a set of standardized skills. A quasi-experimental design was used to collect data pre- and post-intervention. The results of this project have important implications for competency validation for RRNs in support of self-efficacy.

Keywords: Rapid response, self-efficacy, skills, competency validation, educational fair, nurses, rapid response nurse

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List of Abbreviations

- Advanced Cardiac Life Support (ACLS)
- Bilevel positive airway pressure (BiPAP)
- Continuous bladder irrigation (CBI)
- Clinical Institute Withdrawal Assessment (CIWA)
- Continuous positive airway pressure (CPAP)
- Electrocardiogram (EKG)
- Jackson-Pratt (JP)
- Oxygen (O2)
- Obstetrics (OB)
- Patient controlled analgesics (PCA)
- Rapid response nurse (RRN)
- Rapid sequence intubation (RSI)
- ST elevation myocardial infarction (STEMI)
- Tenecteplase (TNK)
- Ultrasound guided IV (USGIV)

SECTION ONE: INTRODUCTION

Rapid response nurses (RRNs) are experts in their field and are utilized in emergent situations. RRNs are tasked with screening patients for acute changes, providing professional support during emergent situations, educating nurses, supporting the patient and family, facilitating coordination between various departments, and consulting with the care team regarding high-risk patients to prevent patient deterioration. Providing professional support in the form of skills can include applying high-flow oxygen, completing, and interpreting point-of-care testing, critical care medication administration, emergency airway management, assessing endotracheal tubes, monitoring intubations, adjusting ventilator settings, leading cardiopulmonary resuscitation, and managing critical care drips. Each of these skills are a critical component of the RRN's knowledge base, according to the literature (Currey, Massey, Allen & Jones, 2018).

Additionally, RRNs are tasked with understanding the concept of clinical deterioration. Clinical deterioration is a dynamic state "compromising hemodynamic stability, marked by physiological decompensation accompanied by subjective or objective findings" which may lead to implementing a higher level of care, prolonged hospital stays, resuscitation, and increased mortality (Padilla & Mayo, 2018). This pertains to recognizing trends in deteriorating patients and requires the nurse to be able to intervene to prevent patient decompensation appropriately; this level of knowledge is considered above that of a general RN (Padilla & Mayo, 2018). The knowledge base for the RRNs also includes interpreting chest x-rays, arterial blood gas results, and sepsis warning signs. It is also necessary for RRNs to understand concepts such as advanced life support, airway management through advanced ventilation, and hemodynamic monitoring (Currey et al., 2018). RRNS must be proficient in performing these skills and are confident in their abilities to improve patient outcomes, decrease ICU admissions, shorten the length of

hospital stays, and reduce mortality. The RRN is tasked with critical skills and reducing psychological stress and lightening the workload of the primary nurse during an emergent situation. Being competent in many essential skills of care is a crucial component of the RRN's role (Won & Kang, 2022).

As the role of the RRN has become fundamental to patient care, RRNs must be competent in critical skills. To date, there is not a standardized list of critical skills that require competency validation. Despite support for RRNs from accreditation bodies and healthcare agencies, a standardized competency list is nonexistent. The evidence-based practice (EBP) project sought to determine a standardized critical skills list and validation method for RRNs to promote self-efficacy in the clinical setting.

Background

In 1999, the Institute of Medicine released its report *To Err is Human: Building a Safer Health System*, which highlighted financial effects of increased hospital stays and decreased patient satisfaction. It also recommended patient safety improvement strategies. This was later expanded upon in *Crossing the Quality Chasm* which detailed that "healthcare should be safe, effective, patient-centered, timely, efficient, and equitable" (Stolldorf, 2013). As a result, national organizations instituted processes to improve care delivery and patient outcomes. One such organization, the Institute for Healthcare Improvement, first introduced rapid response teams as part of their "100,000 Lives" campaign. The team was introduced with a goal of improving the quality of care delivered and improving patient safety. This would ultimately decrease the number of cardiac arrests which would decrease healthcare costs and decrease inpatient mortality" (Stolldorf, 2013).

Rapid response teams often consist of a combination of doctors, nurses, and respiratory therapists. The assumption is that this group of individuals will recognize deteriorating patients

and intervene during the time of physiological instability to prevent progression to cardiac or respiratory arrest and subsequently reduce mortality. These teams differ from code teams, who respond after cardiopulmonary arrest has occurred. This makes rapid response team members proactive versus reactive, as the aim is to bring intensive care resources to the patient before a critical event occurs (Stolldorf, 2013).

Rapid responses are often called by staff nurses when they are concerned about a change in patient condition. This could include: seizure activity, a change in neurological status, a respiratory rate of less than 8 or greater than 30, a pulse of less than 40 or greater than 130, a systolic blood pressure of less than 90 mmHg, chest pain, or a threatened airway. Once a rapid response is activated, the team responds with the necessary knowledge, skills, and resources to appropriately intervene to prevent patient deterioration and decrease the risk of cardiopulmonary arrest (Stolldorf, 2013).

The Joint Commission, a healthcare organization accrediting agency, does not explicitly call for rapid response teams; however, they have added the concept to their National Patient Safety Goals (Stolldorf, 2013). The Joint Commission requires “a method that enables healthcare staff members to directly request additional assistance from a specially trained individual(s) when the patient’s condition appears to be worsening” (Stolldorf, 2013). This statement describes the role of the RRN. The implementation of rapid response teams was recognized by The Joint Commission as evidence-based practice. With the recognition from the Joint Commission, healthcare organizations began to define the role of the RRN, and teams were implemented in practice and utilized (Stolldorf, 2013). As this role has been implemented within healthcare organizations, there is a need to provide RRNs with a standardized competency list and validation method to promote self-efficacy in the clinical setting.

Competencies

According to the National Institutes of Health, competencies are defined as “knowledge, skills, abilities, and behaviors that contribute to individual or organizational performance” (National Institutes of Health, 2023). These skills and abilities will vary depending on the job position and requirements. Depending on the requirements of the institution, competency reevaluation may vary. However, according to The Joint Commission, competency should be continually assessed and documented biannually at minimum (Joint Commission Resources, 2023). It is important to note that The Joint Commission does not define which competencies are required to be evaluated for RRNs and instead emphasizes that the competencies should be based on the needs of the patient varying by specialty to provide safe care (Joint Commission Resources, 2023). As each healthcare organization creates their own policy for competencies and validation of competencies based on the needs of the facility and individual position of the nursing staff, the question becomes, without standardized competencies or validation processes, are RRNs adequately prepared to perform critical skills?

Competency Validation Healthcare organizations independently determine competency validation guidelines, including which skills are assessed. Furthermore, competency validation is not often defined within specific healthcare organizations, leaving evaluation to the discretion of individual nurse leaders. Hospitals often have competency assessment policies, which note when competencies should be assessed; this may include the employee being evaluated upon hire, during orientation, and annually with ongoing competency evaluation.

Accrediting bodies do not discuss specifics of how a competency should be validated annually; either in-person, on-line or in simulations (Joint Commission Resources, 2023). This can be problematic for RRNs that are required to have a vast skill set and knowledge base. Without competency validation, nurses may not be adequately prepared to perform necessary skills

leading to patient safety concerns (Joint Commission Resources, 2023). In addition to needing to be competent in providing care, RRNs must possess self-efficacy and believe in their abilities to perform critical skills.

Self-Efficacy

The theory of self-efficacy was derived from psychologist Albert Bandura. Self-efficacy is defined as "the individual's perception of one's ability to perform particular behaviors through four processes including cognitive, motivation, affective and selection processes" and relates to how a person perceives their ability to think, feel, and act (Haugan & Eriksson, 2021). Bandura stated that people would set higher goals based on their perception of self-efficacy. He also stated that people would compare their own standards and knowledge of their individual performance level and would choose what challenges they needed to meet and how much effort was needed to meet those challenges. Self-efficacy determines motivation which, in turn, leads to perseverance to accomplish goals. This directly relates to the intrinsic motivation theory where people must be responsible for their own motivation and actions (Haugan & Eriksson, 2021).

Self-efficacy is developed through overcoming obstacles, building coping skills, seeing social models of successful people performing similar behaviors, and believing that they have the ability to succeed and alter their negative emotions. Training should establish self-efficacy and promote acting independently and competently within the nursing profession. According to the literature, clinical performance is directly linked to individual perceived self-efficacy (Haugan & Eriksson, 2021). Positive feedback during skills validation can promote increased self-efficacy. Self-efficacy is an essential component of competence, providing quality care, and ensuring patient safety (Haugan & Eriksson, 2021).

Problem Statement

Healthcare organizations lack standardized critical skill competencies and validation methods for RRNs (Morrell & Campbell, 2019). Although RRNs must maintain adequate competencies to improve patient outcomes, the Joint Commission does not define standards for critical skills or for the validation of competencies for this specific group (Joint Commission, 2023). Identifying and standardizing competency is critical in improving patient outcomes and preventing mortality (Stolldorf, 2013). Without standardized competencies and validation methods for RRNs, patient outcomes can be compromised. Standard critical skills competencies and validation must be addressed through raised awareness and educational opportunities in order to promote self-efficacy and, ultimately, improve patient outcomes.

Project Purpose

The purpose of the evidence-based practice project was to standardize a critical skills competency list and validation method for RRNs. The project sought to improve self-efficacy among RRNs through the implementation of education, focused on critical skills. Evidence was used to devise a critical skills list, as well as a validation method in support of improved self-efficacy.

Significance of the Proposed Project

RRNs view their role as important for preventing inpatient deterioration; however, research shows that RRNs lack self-efficacy (Gitte, Barfod, Jenson, & Bucknall, 2022). Their knowledge base is high, while their confidence to perform skills is low (Tschannen, Alexander, Taylor, Tovar, Ghosh, Zellefrow, & Milner, 2021). As self-efficacy has been proven to be a key component in performance, improving self-efficacy is essential to the RRNs' job performance, supporting patient safety, and outcomes (Haugan & Eriksson, 2021). By establishing

standardized critical skill competencies and validation processes, RRNs will improve their self-efficacy in support of life-saving interventions for patients experiencing clinical deterioration.

Clinical Question

The project will address the following clinical question: Does self-efficacy among RRNs improve with a standardized list of critical skills competencies and standard validation processes?

Population

The project population included nurses on a rapid response team. RRNs on the rapid response team generally are experienced clinicians with more than three years experience in critical care or emergency nursing. They are trained in advanced cardiac life support, trauma nurse training, pediatric life support, and neonatal resuscitation; this is a requirement of the project hospital.

Intervention

The intervention included a rapid response call log to identify competencies that are considered critical for the RRN. The New General Self-Efficacy Scale by Chen, Gully, and Eden was utilized to assess self-efficacy among the RRNs before an on-site, critical skills educational intervention. Following the on-site educational intervention, the RRNs will be resurveyed with the self-efficacy scale tool to determine if self-efficacy improved (see Appendix E).

Comparison

Self-efficacy was evaluated by the New General Self-Efficacy Scale pre- and post-intervention. Comparison between the pre-and post-intervention will assess a change in self-efficacy by the RRNs.

Outcomes

Outcomes for the scholarly project included:

1. After a review of rapid response events from January 1, 2023, to December 31, 2023, a list of critical skill competencies for RRNs will be determined.
2. Devise a Critical Skills Competency Fair, as a validation method that acknowledges self-efficacy of competencies necessary for the RRN.
3. After a RRN Critical Skills Competency Fair, RRNs will demonstrate improved self-efficacy of competencies necessary for the RRN.
4. Create and implement a policy for standardized critical skill competencies and a validation process for RRNs that recognizes self-efficacy in support of improved patient outcomes.

SECTION TWO: LITERATURE REVIEW

Search Strategy

The evidence-based practice scholarly project was devised using the Iowa Model of Evidence (see Appendix G). A preliminary literature review was conducted to determine the effectiveness of in-person competency evaluation versus online learning modules (see Appendix A). Furthermore, institutional policies were reviewed. The search was then expanded to identify the role and scope of practice of the RRN and determine competencies that are relevant to their role. The following databases were utilized in the search: PubMed, Elsevier, National Institutes of Health, and CINAHL. The following keywords were utilized*: self-efficacy, rapid response,*

rapid response nurse role, rapid response team role, skills, skills evaluation, competency, nurse confidence, nurse self-efficacy, evaluation preferences, and competency validation. The search was narrowed by the English language and full text articles published by peer reviewed sources. The search was limited to references less than five years old.

The initial search utilizing key words yielded 55 articles. Titles and abstracts of the yielded articles were reviewed and narrowed down to 22 articles. Evaluation of the study design, population, intervention, and outcomes of the remaining articles further narrowed the inclusion of literature down to 11 articles that were included in the scholarly project (see Appendix A). Design types included one expert opinion, two literature reviews, two qualitative studies, an inductive content analysis, a quasi-experimental study, a methodological study, a survey descriptive cross-sectional survey and two qualitative focus groups. Articles were chosen based on their ability to define competencies, the role of the RRN, or their comparison of various competency evaluation methods. Additional articles were chosen that discussed nurse confidence and evaluation preferences.

Quality of Research

The literature review was limited by a lack of research regarding RRN competencies. Although there are studies pertaining to the preferences of nurses regarding competency validation, there is limited information regarding the effectiveness of the various methods of competency validation (see Appendix A). The studies reviewed were primarily low-level evidence, per the Melynk Level of Evidence tool (see Appendix B). The studies reviewed were primarily literature reviews, qualitative studies, surveys, and quasi-experimental studies. There is minimal evidence in the literature pertaining to the most effective competency validation techniques (Morrell & Campbell, 2019). The lack of high evidence level studies available indicates the importance of continued research for standardized critical skills competencies and

validation methods for competencies for the RRN. Further review of the studies revealed several limitations including: limited data received during the study, lack of outcome analysis, lack of information regarding specific skills evaluated in multiple studies, and no evaluation of physical abilities. The literature did not reveal standards for RRN evaluation as part of institutional policies.

Synthesis

The literature indicates the effectiveness of adequately prepared RRNs in improving patient outcomes (Christopher, Scanlon, & Crimlisk, 2022). Rapid responses should be used as a resource to further educate nurses, promote critical thinking, and encourage early intervention by the primary nurse (Bunch, Jones, & Psirides, 2023). Overall, RRNs viewed their role within the healthcare team as balancing responsibilities to prevent deterioration of patients (Gitte et al., 2022). These responsibilities include educating floor nurses, recognizing signs of deterioration, communication, interprofessional collaboration and performing skills such as reading chest x-rays and lab results, and understanding advanced concepts regarding airway management, advanced life support, and hemodynamic monitoring (Currey et al., 2018). However, there was minimal information regarding standardized critical skill competencies and competency validation for RRNs.

Skills Fairs

Studies suggest that skills fairs promote the successful demonstration of competencies through collaborative learning. Skills fairs are relatively well attended but are not ideal for nurses due to time constraints (Bax, Valade, Allen, Drew & Armstrong, 2020). Virtual skills fairs were also noted in the literature and received positive feedback among nurses (McGrath, Lussier, Ewing, & Goldscchmidt, 2022). However, despite determining nurse satisfaction and

engagement when compared to in-person skills fairs, the study did not discuss the effect that virtual or hybrid skills fairs had on knowledge, competency, and self-efficacy (McGrath et al., 2022).

Competencies

Unit-based competencies were considered more effective at portraying competency than skills fairs, as nurses were not affected by time constraints and were more reflective of daily activities (Figueroa, 2018). Simulated experiences were also compared with exemplars for determining competency in managing critical patients. There was minimal evidence regarding the effectiveness of the simulations versus written exemplars in determining competence (Morrell & Campbell, 2019). Through surveys, it was determined that nurses preferred hands-on training and competency demonstration over online modules, as hands-on improved their skills. Hands-on training promotes self-efficacy among nurses (Ruttenberg, Raynor, Scott & Rice, 2020). Based on the above findings, RRNs using hands-on, unit-based competency validation methods had higher self-efficacy.

Resources

RRNs are utilized as a resource not only during a rapid response, but are also commonly used to aid other nurses in between calls. This can include assisting nurses in performing assessments, tasks, and skills as needed. Clinical tasks can range from basic skills, such as IV placement, to critical skills including titrating drips. This increases the responsibilities of the RRN, as presumably underprepared nurses increasingly rely on the rapid response team for assistance with clinical tasks. RRNs need to feel competent in their ability to perform the RRN role and also have confidence in the ability to aid other nurses with essential clinical tasks (Haugan & Eriksson, 2021). Studies have shown that RRNs report that there are not adequate

resources available to train primary RNs to manage clinical tasks, thus increasing the demands of the RRN to become a hospital wide resource (Gitte et al., 2022).

Summary

Studies were evaluated during the literature review to identify skills used by RRNs and determine the best validation method for the RRN to promote self-efficacy. The research found that the role of the RRN has evolved from being reactive to being proactive and includes rounding on deteriorating patients and providing resources for floor nurses (Christopher et al., 2022). RRNs viewed their role as an important component in improving patient outcomes through education of the nursing staff. However, due to lack of resources, the RRNs did express concern regarding the inability to properly educate nurses within the hospital (Gitte et al., 2022).

Literature regarding validation methods was also reviewed. The literature indicated that unit-based in-person skills are more effective than online learning modules and are considered reflective of daily activities (Figueroa, 2018). However, nurses were more receptive to the online modules; this was influenced by the nurses' time constraints (Bax, et al., 2020). Nurses also were in support of virtual skills fairs to increase their knowledge base regarding competencies required in the clinical setting (McGrath et al., 2022). Most importantly, survey respondents preferred hands-on drills versus online modules, as they felt hands-on training improved their skills (Ruttenberg et al, 2020). As confidence is a critical component of self-efficacy, in-person validation methods are the preferred process to confirm competency (Ruttenberg et al, 2020). Evaluating competencies annually while allowing time for hands-on practice is one way to promote self-efficacy. It also ensures that the RRNs' skill sets stay up to date. This will promote efficient and adequate responses during emergent situations and clinical deterioration (Currey et al., 2018).

SECTION THREE: METHODOLOGY

The evidenced-based scholarly project implemented a critical skills competency fair for RRNs. A quasi-experimental approach was considered for data collection and analysis. The Iowa Model for Evidence-Based Practice guided the project (see Appendix G). Success was measured through a pre- and post-intervention self-efficacy survey (see Appendix E).

Design

The scholarly project was an evidence-based practice project utilizing the Iowa Model for Evidence-Based Practice (see Appendix G). Following the Iowa Model, a pilot study is necessary before a practice change. The pilot study was a quasi-experimental design that guided outcomes (Iowa Model Collaborative, 2017). The project included a detailed review of rapid response calls from January 1 through December 31, 2023. From this data, a list of critical skill competencies was determined. The New General Self-Efficacy Scale by Chen, Gully, and Eden was used pre-intervention to assess the self-efficacy of the RRN regarding the determined critical skills needed. A RRN Critical Skills Competency Fair was held as the intervention. The fair included hands-on opportunities for the RRN to practice the determined critical skills. Then, the same tool was used post-intervention to evaluate improvement in the RRN's self-efficacy.

Measurable Outcomes

Measurable outcomes included:

1. After a review of rapid response events from January 1, 2023, to December 31, 2023, a list of critical skill competencies for RRNs will be determined.
2. Devise a Critical Skills Competency Fair, as a validation method that acknowledges the self-efficacy of competencies necessary for the RRN.
3. After a RRN Critical Skills Competency Fair, RRNs will demonstrate improved self-efficacy of competencies necessary for the RRN.

4. Create and implement a policy for standardized critical skill competencies and a validation process for RRNs that recognizes self-efficacy in support of improved patient outcomes.

Setting

The setting of the scholarly project was a non-profit hospital. The project aligns with the mission of the organization as it promotes providing quality care to improve the health of patients. Improving patient health is in direct alignment to the facility's mission, as the facility specifically aims to help those in need. Project support was obtained from the hospital administration (see Appendix D).

Population

The population of interest for the evidence-based practice project was nurses currently practicing as RRNs in a community-based, non-profit designated hospital. The sample was a convenience sample, as only volunteers were included. Nurses outside the rapid response department and the director of the rapid response department were excluded from the project.

Subjects

A total of nine RRNs were invited to participate in the project using secure workplace email. Participants were asked to be a part of the skills fair and complete a pre-and post-self-efficacy survey.

Ethical Considerations

Protection of human subjects was considered for this project. The project team, the project leader, and the project Chair completed research ethics training, Collaborative Institutional Training Initiative (CITI), to ensure that all human rights were protected (see Appendix C). The project was presented to the Director of Nursing for Critical Care for

approval. A letter of support from the Director of Nursing Resources was obtained (see Appendix D). After obtaining approval from the project's Chair, the scholarly project was submitted to the Institutional Review Board (IRB) for both the university and healthcare organization.

Informed Consent

The project leader obtained IRB approval from the university and participating hospital organization before obtaining informed consent from the participants. Each participant received a copy of the informed consent in paper form before the competency fair. The informed consent presented a description of the proposed project, along with the purpose of the study. Participating rapid response nurses were ensured of their anonymity and confidentiality. Those that did not wish to participate were not penalized. Participants were required to sign informed consent before initiation of the intervention.

Human Subjects Participation

The proposed scholarly project presented a minimal risk to participants. Participating nurse's rights were protected through the presentation of information on the proposed project and the provision of informed consent before the initiation of the project. Participants were further protected, as their names were not disclosed. The self-efficacy tool was given to each participant to complete anonymously. No identifying information was collected.

The data compiled from the surveys, along with the demographic data collected from the informed consent, was compiled and contained by the project leader in an Excel file on a password-protected computer. Data on the password-protected computer Excel file was only accessed by the project leader to ensure the privacy and confidentiality of the participants. The paper self-efficacy tools completed by the participants were shredded to protect participants by

ensuring no identifying information can be found other than on the password-protected computer Excel file. A separate password-protected computer Excel file was utilized to display the results from the study. The participating nurses were not compensated. No copies of the questionnaires were created and after three years, using commercial software, the data will be permanently deleted from the computer.

Also of note, rapid response cases were reviewed from January 1, 2023, through December 31, 2023 at the designated hospital. The review was used to collect a list of critical skills used by the RRN; no other data was used for the project from this review.

Tools

Several tools were used as part of the project methodology. A charting tool was used to review rapid response calls that ran in 2023. This chart tracked the skills most utilized by the RRN. From this data, a list of critical skills was determined (see Appendix J).

The New General Self-Efficacy Scale by Chen, Gully, and Eden was utilized to determine pre- and post-self-efficacy measurements (see Appendix G). This tool is based on Bandura's socio-cognitive theory and utilizes eight items to measure one's belief of success despite facing challenges (Riopel, 2019). This includes a five-point rating scale of survey questions about the belief that one can achieve their goals, obtain outcomes, succeed at any endeavor, successfully overcome challenges, perform tasks effectively, and perform tasks well in comparison to others despite difficult situations (Stanford University, 2023). Self-efficacy has a profound effect on behavior. This is related to the belief that an action will lead to a certain outcome and a belief that one can successfully perform that action effectively (Riopel, 2019).

Intervention

The scholarly project consisted of standardizing a list of skill competencies gleaned from an RRN response log review. This was followed by implementing a RRN Educational Fair for RRNs who are part of a team at a non-profit, community-based hospital. Literature supports hands-on education as an effective way to improve self-efficacy (Ruttenberg, et al, 2020). Self-efficacy is critical to the RRN in support of optimal patient outcomes. To promote self-efficacy, a team of subject matter experts was utilized to allow for an opportunity for RRNs to receive additional education and hands-on practice.

Team Members

The project team consisted of the project leader, the project Chair, the hospital educator, and the RRN director. The project leader created and implemented the RRN Critical Skills Competency Fair. The project leader was responsible for all data collection, analysis, and dissemination. The project Chair guided the project development, implementation, and evaluation. The hospital's nurse educator and RRN director aided in assembling the RRN Critical Skills Competency Fair at the designated hospital.

Feasibility Analysis

The proposed scholarly project feasibility will be discussed in regards to the following: personnel, resources, technology, and cost/benefit.

Personnel

Support for the proposed scholarly project was obtained from the RRN director. The director and hospital educator were involved in the development of the RRN Critical Skills Competency Fair based on the creation of the standardized competency list. The essential personnel for the proposed scholarly project included: the project leader, the project Chair, the RRN director, the hospital educator, and the RRNs.

Resources and Technology

The necessary resources and technology needed to collect and analyze data included:

- Personal computer
- Excel
- SPSS Software
- Conference room
- Belmont rapid infuser
- LifePak
- Cardiac rhythm simulator
- IV tubing
- 1000 cc saline bags
- Ultrasound
- Extended dwelling IV catheters
- IV pumps

Cost and Benefit Analysis

There were no direct costs associated with the project. Training hours for the participating RRNs were paid per scheduled hospital education as allotted by the department director. The benefits of the scholarly project outweighed the costs as standardized RRN critical skill competencies and standardized validation efforts that acknowledge self-efficacy will improve patient outcomes.

Data Collection

Data was reviewed initially from the rapid response call logs to determine a standardized, critical skills competency list for the RRNs. The time for analysis was from January 1, 2023,

through December 31, 2023. Data collected from RRN call logs was inputted into an Excel spreadsheet and trends were analyzed. A list of standardized competencies was then created. This included: ultrasound guided IV insertion, cardioversion, external pacing, rapid blood transfusions, sepsis protocol, TNK administration, and drip titration. The educational skills fair was created.

Data was further collected via the New General Self-Efficacy Scale pre-and post-competency fair via a paper survey. The results were evaluated via statistical analysis. Descriptive statistics were used to analyze the statistical significance of the data results. The data from the pre-intervention and post-intervention self-efficacy tool was coded as "pre-intervention" and "post-intervention." The level of efficacy was reported by the participants using a Likert-based scale. The differences between the "pre-intervention" and "post-intervention" will be examined utilizing percentage point change and percent change. Demographics and qualitative information collected during the project pre-survey were analyzed in Excel to gain insight into RRNs' preference for RRN critical skills competency validation.

Dissemination

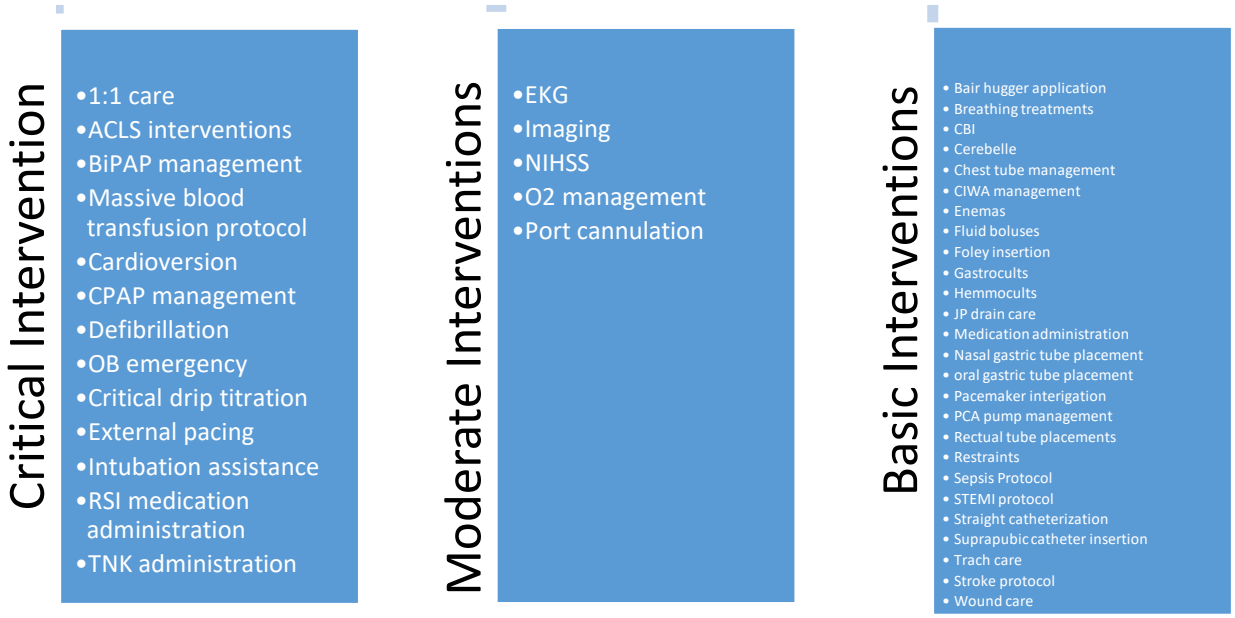
After the data had been analyzed, the results were disseminated to the hospital. This included a critical skills competency list for RRNs, as well as pre-and post-self-efficacy scores. Recommendations were made in support of hospital policy that acknowledges a standardized critical skills competency list, and a standardized validation process for RRNs that recognizes self-efficacy in support of improved patient outcomes. Further recommendations were made to the supporting hospital organization to adopt and host an annual RRN Critical Skills Competency Fair.

SECTION FOUR: RESULTS

Summary of Findings

A review was conducted of each rapid response call from 2023. A total of 2115 interventions were reviewed. From this review, data was collected pertaining to the interventions that were conducted by the RRNs. Each result was quantified to determine the frequency. The data was then itemized based on level of severity; this included critical level, moderate level, and basic level skills (see—Figure 1). Critical level interventions were performed during 18.6% of calls; moderate level skills were performed during 39.1% of calls; and basic level skills were completed during 42.3% of rapid response calls. Thirteen skills, including things such as defibrillation, cardioversion, and drip titration, were deemed as critical level interventions (see—Figure 1). EKG interpretation, ordering radiology imaging, completing stroke evaluations, managing high flow oxygen, and cannulating ports were all deemed as moderate interventions. An additional twenty-six skills were identified and categorized as basic level interventions (see—Figure 1). These skills included things such as chest tube management, urinary catheterizations, wound care, and breathing treatments; each of these are skills that require no additional education or training past that of a registered nurse working in inpatient Medical Surgical units, thus were deemed as basic.

FIGURE 1
Level of interventions



From this, competency worthy skills were determined based on interventions that were deemed most essential. This was determined by reviewing which critical interventions were performed by RRNs at the highest rate. The following skills were included: massive blood transfusions via rapid infuser, cardioversion, external pacing, ultrasound-guided IV insertion, drip titration, TNK administration, and sepsis protocol (see Appendix J). An educational fair was then planned to allow instructional review and hands-on practice for each of the skills. Subject matter experts attended the educational fair to provide review and assist with practicing skills. These experts included nurses from cardiovascular services, the stroke and sepsis coordinator, and the equipment representative for the rapid infuser of blood products. Equipment utilized for the educational fair included: LifePak, cardiac rhythm simulator, Belmont rapid infuser, IV pump, ultrasound, and IV start pad. During the educational fair, the experts discussed the skills, when they were deemed necessary to perform, and demonstrated the process. The participants

were then able to participate in hands-on practice utilizing the equipment with assistance from the experts, as needed.

A total of nine rapid response nurses were invited to participate in the Rapid Response Education Skills Fair. Of the nine invited, six rapid response nurses attended. Each participant was given a paper copy of informed consent to complete prior to the intervention. They were also given a pre- and post-self-efficacy survey (see Appendix E). The surveys were printed and provided on paper to the participants. Each survey was anonymous and did not contain any identifying information. Participants were asked to complete a pre-survey in which they rated their initial self-efficacy. After the educational fair, the participants were asked to complete a post-self-efficacy survey.

Demographics

Sample Size

Pre- and post-surveys were collected from 6 participants (n=6). Of these participants, all 6 completed the post-self-efficacy survey; however, only 4 completed the pre-survey. Results of the surveys were included in the study as it demonstrates increased self-efficacy regarding performing skills after the educational intervention.

Gender

Pre-intervention demographic results revealed that 50 percent of the participants were male, and 50 percent were female.

Missing Data

Two pre-surveys were missing from the data. There was no other missing data.

Assumptions

Assumptions made prior to the statistical analysis is that all participants have completed all orientation and trainings associated with becoming a rapid response nurse, per facility

standards. The second assumption was that participants did not discuss the surveys before or during the educational fair.

Key Findings

First, a pre-survey rating self-efficacy was completed. After the educational fair and hands-on opportunities, a post survey regarding self-efficacy was completed. Both were completed using a Likert scale of one to five that represented the level of self-efficacy with one (strongly disagree) to five (strongly agree). The New General Self-Efficacy Scale was utilized to rank the effectiveness the fair had on improving self-efficacy for RRNs (see Appendix E). The following were noted as key findings. Questions from the self-efficacy survey pertained to RRNs believing that they could accomplish difficult tasks, perform tasks well, and overcome challenges (see—Figure 2). Hands-on training increased self-efficacy in every category based on the New General Self-Efficacy Scale (see—Figure 3-10). 100% of participants marked *strongly agree* for six of the eight questions on the New General Self-Efficacy Scale. Five out of six participants answered *strongly agree* when asked to rate questions 7 and 8, while one participant answered *agreed* to each of these questions. These two questions state: question 7 *compared to other people, I can do most tasks very well* and question 8 *even when things are tough, I can perform quite well* (see—Figure 2).

FIGURE 2
Self-efficacy questions

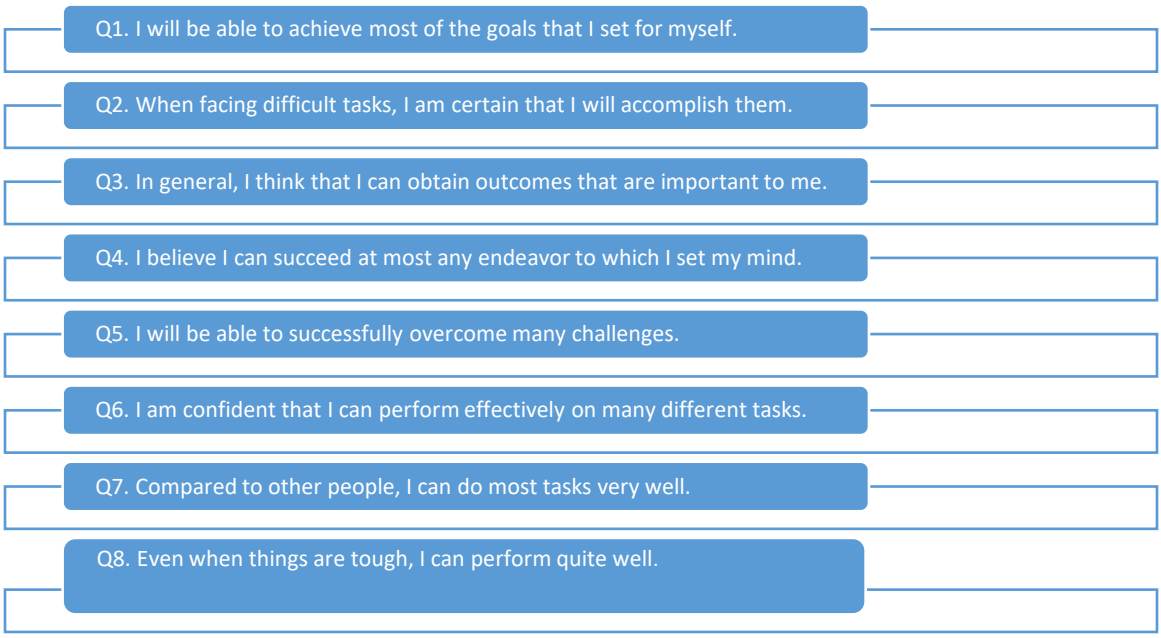


FIGURE 3
New general self-efficacy scale question 1

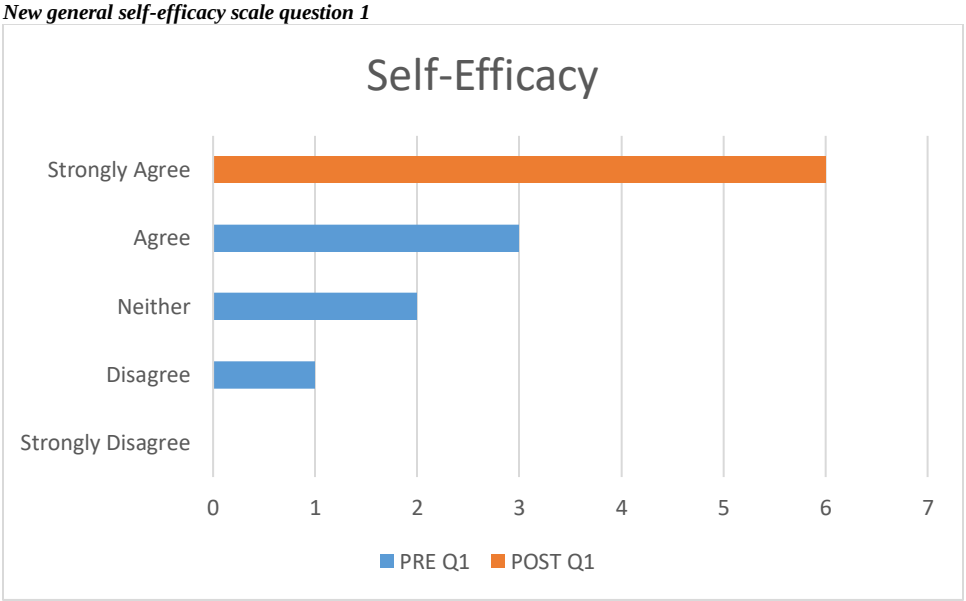


FIGURE 4
New general self-efficacy scale question 2

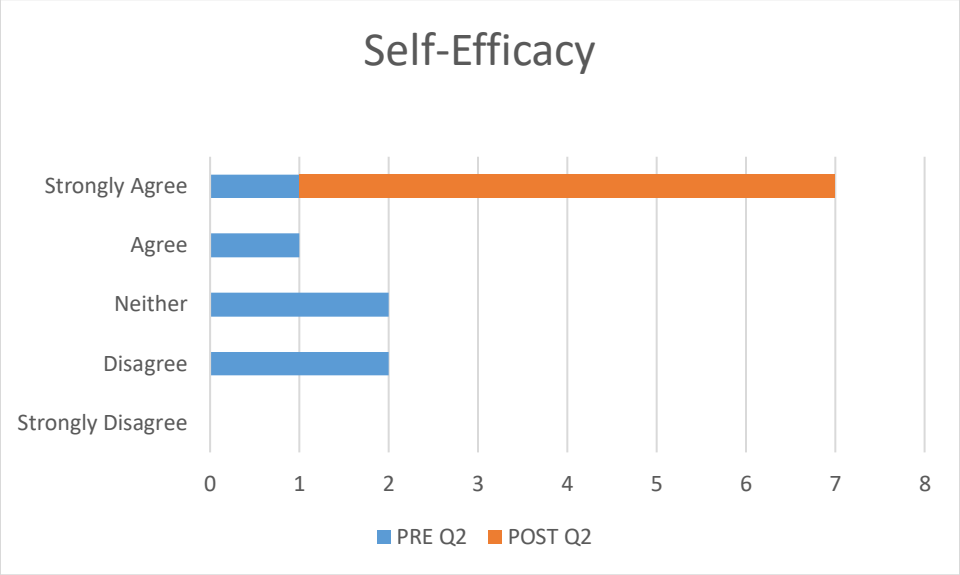


FIGURE 5
New general self-efficacy scale question 3

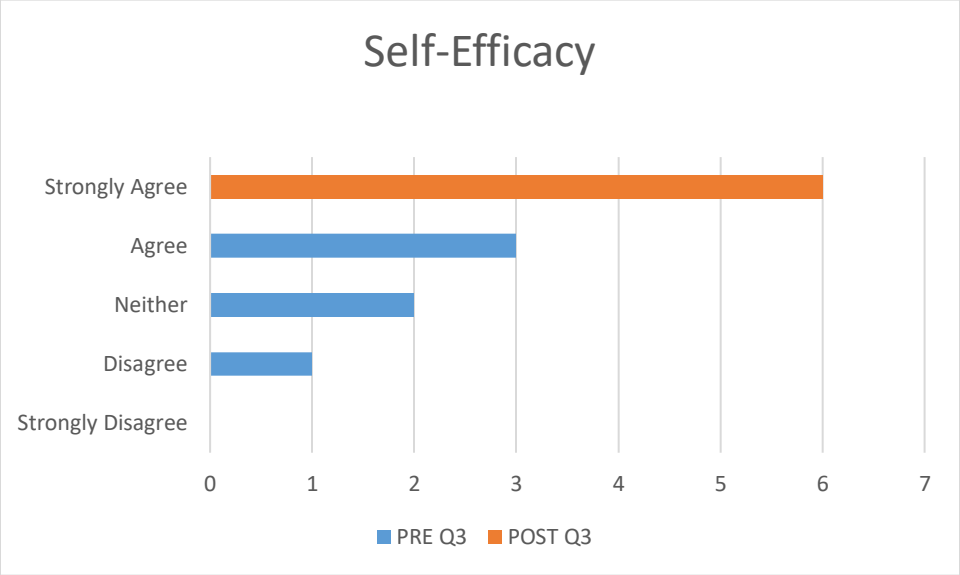


FIGURE 6
New general self-efficacy scale question 4

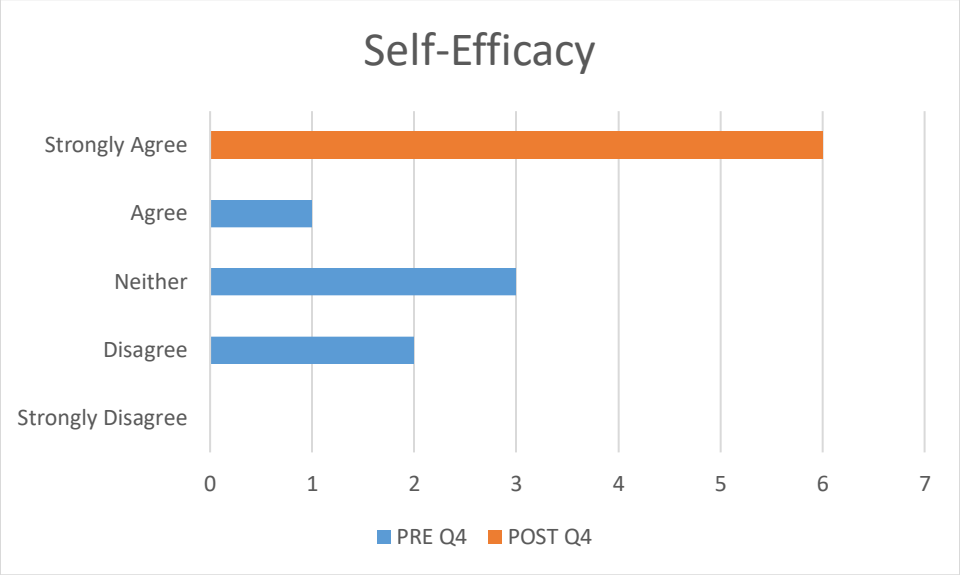


FIGURE 7
New general self-efficacy scale question 5

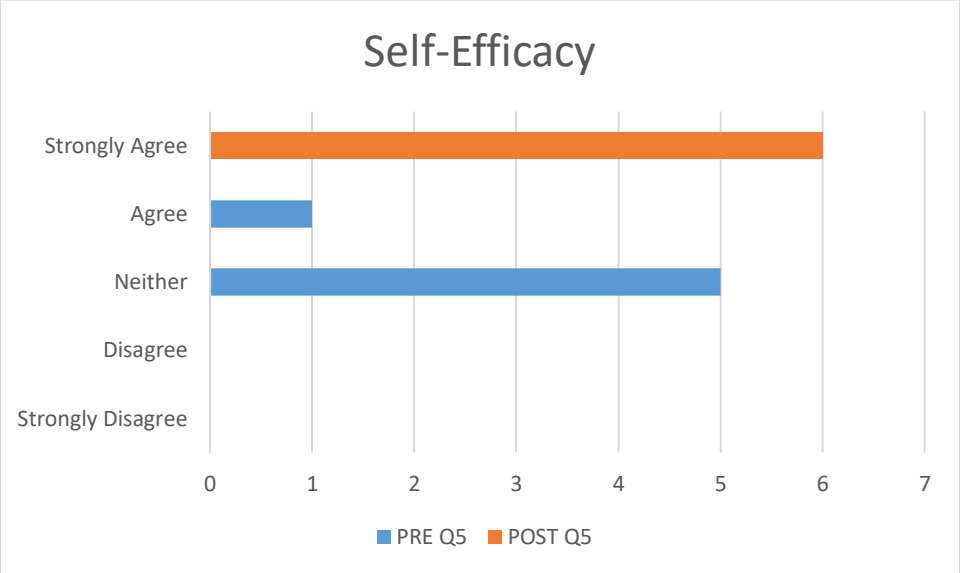


FIGURE 8
New general self-efficacy scale question 6

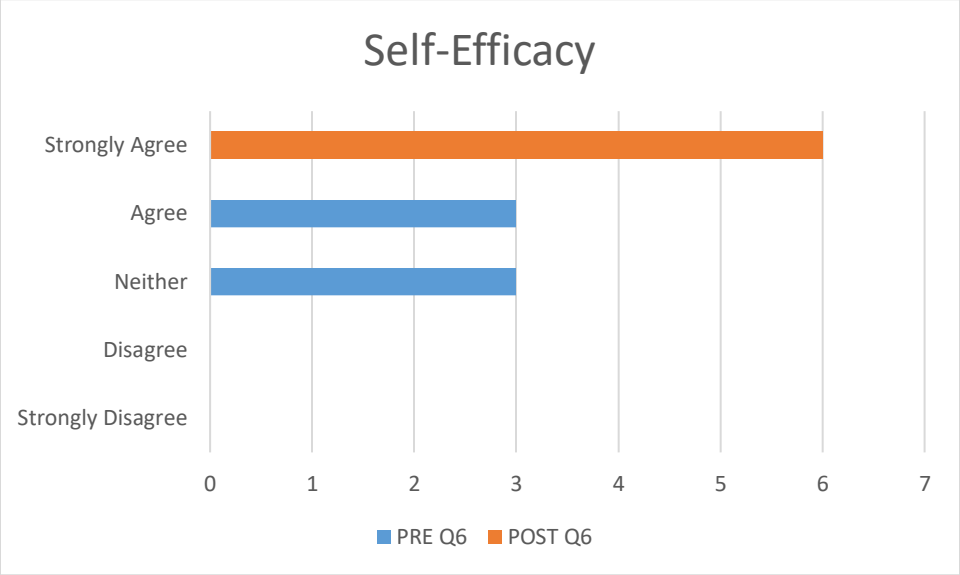


FIGURE 9
New general self-efficacy scale question 7

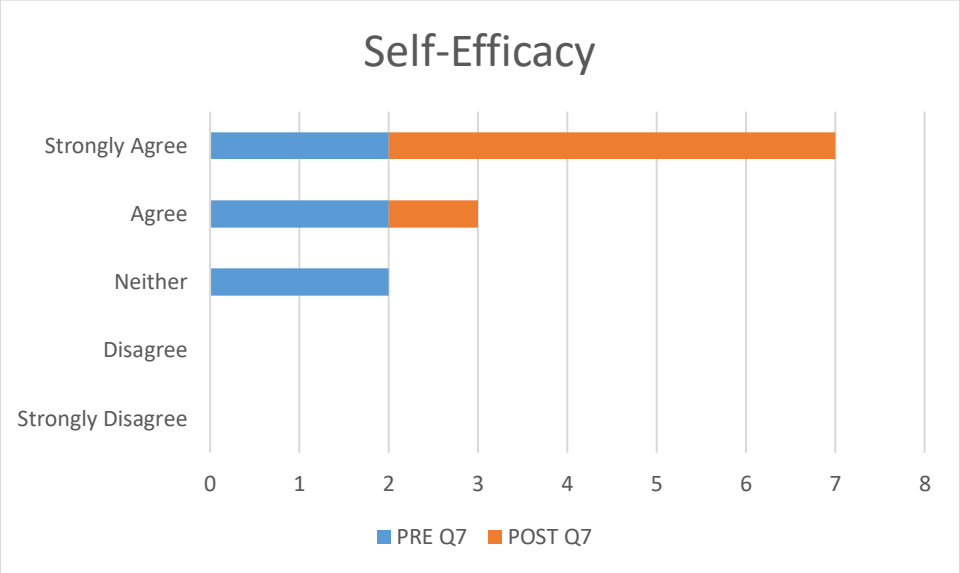
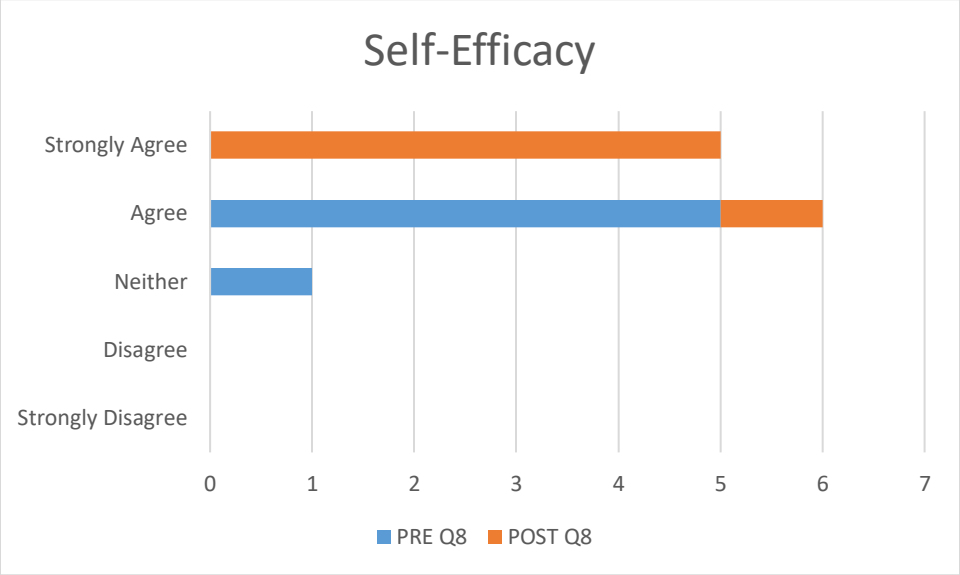


FIGURE 10
New general self-efficacy scale question 8



Descriptive Statistics

Descriptive statistics were used to determine change in the pre- and post-intervention scores for survey questions as utilized by the New General Self-Efficacy Scale (see Appendix E). Statistics demonstrated a significant percentage-point change. For each self-efficacy survey question, the percentage-point change increased significantly with a mean increase of 76.75% (see—Table 1). The percent change rate also had a significant increase with an increase in as much as 488% (see—Table 2). This is a clear indicator that the educational intervention directly related to an increase in self-efficacy.

TABLE 1
Percentage- point change

Percentage- Point Change for pre/post survey results			
Post survey - Pre-survey = Percentage- Point Change			
Question	**Pre-survey**	**Post survey**	**Percentage- Point Change**
1	50	100	50
2	17	100	83
3	50	100	50

4	0	100	100
5	0	100	100
6	0	100	100
7	35	83	48
8	0	83	83

TABLE 2
Percent change rate

Percent Change Rate				
	(Post-survey - pre survey)/ pre survey		X 100%	
Question	Pre-survey	Post survey	Change Rate	Percent Change Rate
1	50	100	1	**100**
2	17	100	4.882352941	**488.2352941**
3	50	100	1	**100**
4	0	100	n/a	n/a
5	0	100	n/a	n/a
6	0	100	n/a	n/a
7	35	83	1.371428571	**137.1428571**
8	0	83	n/a	n/a

Clinical Significance

The surveys demonstrated a statistically significant improvement of self-efficacy to perform skills in a RRN role. Furthermore, the results concluded that the educational fair itself had a direct impact on the mean difference in self-efficacy among RRNs. As demonstrated by Figures 3-10, there was a substantial improvement among each question on the self-efficacy survey. This emphasizes the effect of the educational fair on self-efficacy.

SECTION FIVE: DISCUSSION

Project Limitations

A limitation of this study was the small sample size. As the department is small with only 9 employees, there was a limited number of participants that were invited to attend. Despite the small size, 66% of participants were able to attend the educational fair and partake in the study. Convenience sampling was utilized for the project; therefore, the generalizability of the results was impacted.

Significance and Implication for Practice

Creating a standardized competency list for annual in-person evaluation is essential to increasing self-efficacy among RRNs. Self-efficacy has been proven to improve patient outcomes and is essential to promoting patient health and safety (Haugan & Eriksson, 2021). Standardizing competency validation may lead to not only knowledgeable nurses, but also confident nurses. Nurses should possess self-efficacy and confidence in their ability to perform skill sets as demonstrated through the competency validation process. Results from this project have strongly perceived benefits for future application into clinical practice. Statistically significant improvement in self-efficacy was demonstrated among RRNs that participated in the hands-on educational fair. This scholarly project demonstrated the benefit that hands-on education has on increasing self-efficacy. This type of education and training could be utilized in future clinical practice to prepare nurses within the rapid response department. Future practice should include annual hands-on education for RRN specific skills based on the interventions that are utilized by the department. This should be a top priority for improving self-efficacy and thus patient care. This project demonstrated the benefits of utilizing hands-on education and shows the vitality in healthcare organizations supporting a standardized approach to RRN skills.

Sustainability

The results from this evidence-based practice project demonstrated that the practice change intervention had a statistically significant improvement in self-efficacy regarding the role of RRNs and individual skills. The long-term success of this project in practice would be dependent on barriers to implementation due to time constraints and resources. RRNs would benefit from annual educational fairs with hands-on skills specifically geared towards their position. There were no costs associated with the implementation of this scholarly project, which further supports the sustainability of this practice. However, there was a lack of support from the hospital's education department. This led to recruiting subject matter experts to provide in-services and hands-on training versus the utilization of the educational department staff. Each of the experts willingly volunteered to participate in support of this scholarly project. However, it is unrealistic to expect these experts to volunteer their time annually for an educational skills fair. For this project to be a sustainable practice change, the RRN department would need further buy-in and support from the hospital's educational team.

Dissemination

This EBP scholarly project intended to translate evidence related to hands-on education's effect on self-efficacy. Results from this EBP project will be reported to practice leaders and clinical staff. Results will then be shared with the community-based hospital through presentation and email. This will include disseminating results to the department, department director, and the nursing administrative team. Along with the results of this study, a policy recommendation will be made that RRNs should have an annual hands-on educational fair to promote self-efficacy in their specific skills.

This scholarly project was intended to define the process that will provide education to RRNs on an annual basis. Recommendations will be made to the supporting hospital organization to

adopt the hands-on-based educational fair as the method by which RRNs are continually educated to improve self-efficacy in their standardized skills.

Conclusion

Hands-on education offers an opportunity to increase self-efficacy among RRNs. Literature review has demonstrated the vital role that RRNs play in providing professional support to other nurses when delivering care to critical patients (Currey et al., 2018). RRNs are tasked with not only being competent in performing advanced skills, but also with having the knowledge to recognize clinical deterioration and intervening to prevent patient decompensation (Padilla & Mayo, 2018). As the role of the RRN is deemed as crucial to improving patient outcomes, it becomes increasingly important to ensure that RRNs are not only competent but also confident in their abilities. Promoting self-efficacy among RRNs increases independence and competence within the nursing profession thus making self-efficacy an essential part of RRN training (Haugan & Eriksson, 2021). The first step in increasing self-efficacy is to identify and standardize competency (Stolldorf, 2013). The following step is hands-on training, as it promotes self-efficacy among RRNs (Ruttenberg et al, 2020). This was further demonstrated by use of the New General Self-Efficacy Scale, which showed a mean increase of 76.75% in self-efficacy after hands-on training was utilized. Continuing to utilize the standardized skills list and a hands-on educational fair for RRN training has a strong perceived benefit, according to the EBP and previous literature, and thus should be implemented into practice.

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Appendix A

Research Matrix

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
Bax, C., Valade, N., Allen, C., Drew, K., Armstrong, G. (2020). Critical care skills fair- success of frontline critical care staff in running a sustainable, interdisciplinary and educational team activity to promote critical care…dynamics of critical care conference, September 28-30, 2020, Windsor, Ontario	Promote skills, practice guidelines and demonstrate success of skills through collaborative learning.	Critical care nurses at conference in Windsor, Ontario	Non-experimental, expert opinion	Skills fair was well attended	Level 7	No control Data not collected- unsure if skills fair successfully educated nurses.	No, because data was not actually collected.
Bunch, J., Jones, D., Psirides, A. (2023). Are we deskilling or reskilling our hospital ward clinicians?	To determine if the use of rapid response teams is “deskilling” nurses.	Not identified	Literature review	Rapid responses should be used as an opportunity to educate nurses	Level 7	Data not included. No study conducted.	No- not enough data included

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
				to promote critical thinking and skills to promote early intervention by the primary nurse.			
Christopher, K., Scanlon, K., Crimlisk, J (2022). Critical care resource nurse team: A patient safety and quality outcomes model.	Discuss benefits of a critical care resource nurse team as an evolution of a traditional rapid response team to improve patient outcomes and provide resources throughout the facility.	Inner- city, level 1 trauma center- Boston Medical Center	Quality improvement, literature review	Traditionally, rapid response teams were reactive. By adding a CCRNT to proactively round on deteriorating patients and provide resources to floor nurses, there is a decrease in code blues and an increase in rapid responses.	Level 6	Numerically data not included- interpretations only.	Yes, this provides examples of skills that are necessary for an appropriate RRN to prevent deterioration and improve patient outcomes.

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
				This bridges the gap between the nursing practice and improves patient outcomes.			
Figueroa, S. (2018). Nurses' perception of unit-based competency assessment compared to traditional skills fair.	Examine skills fairs and unit-based competency assessments to determine patient care competency.	Focus groups of 47 nurses in a non-profit multi-hospital healthcare organization in southeast Florida.	Qualitative study with focus groups and interviews.	Unit-based competencies were considered to be more reflective of daily activities and skills than skills fair.	Level 5	Critical care areas were not included.	Yes- this provides information pertaining to the importance of unit-based in person competencies as an alternative to skills fairs.
Gitte, B., Barfod, M., Jensen, H., Bucknall, T. (2022). Balancing responsibilities, rewards and challenges: A qualitative study illuminating the complexity of being	Explore the preception of the meaning of being a RRN.	8 focus groups, totaling 27 nurses, in three regions and acute care settings in Denmark.	Qualitative focus group interviews and inductive content analysis	RRT nurses viewed their role as balancing responsibilities to prevent deterioration of patients and reported that there are not adequate	Level 5	Limited confidentiality could have limited data received.	Yes, this will be beneficial in understanding if RRT nurses feel confident and competent in completing their role.

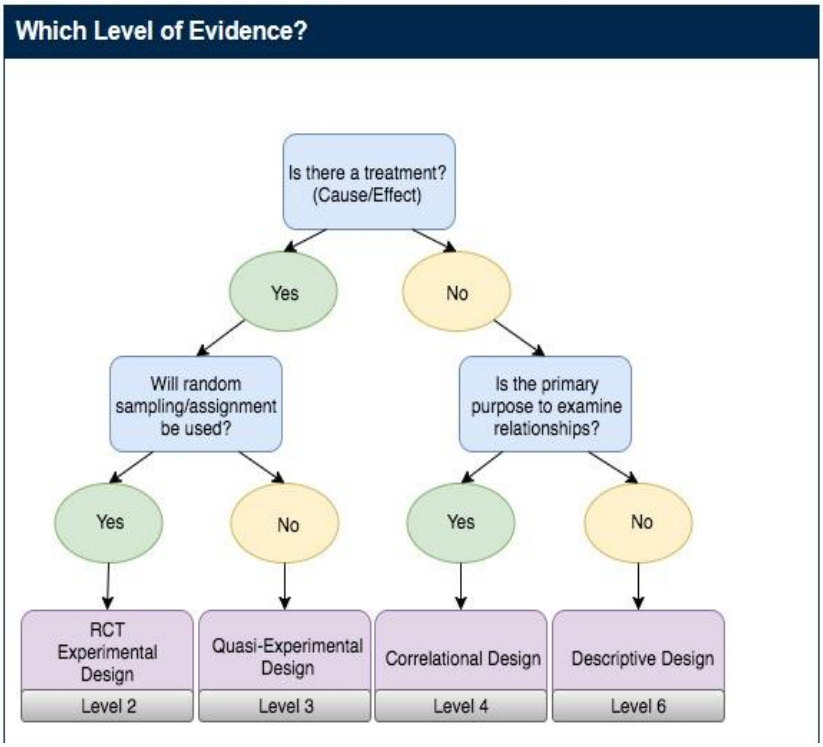
Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
a rapid response team nurse				resources available to train primary RNs to manage clinical tasks.			
McGrath, J., Lussier, C., Ewing, J., Goldscchmidt, K. (2022). Transition to an interactive virtual skills-fair for a pediatric ambulatory care center.	Determine nurse satisfaction and engagement in virtual skills fairs when compared to hybrid or in-person skills fairs.	130 pediatric ambulatory care nurses in Pennsylvania, Delaware and New Jersey.	Skills fairs conducted in various formats over 3 years in a case control.	Nurses showed positive feedback to the virtual skills fair.	Level 4	The in person skills fair was a 4 hours skills fair a far distance from the nurses which may have falsely increased negative feedback that could be avoided with in-person skills fairs within the facility.	Yes, provides details about nurse satisfaction.
Morrell, B., Campbell, N., (2019). Two paths to competency validation.	Compare simulated experience versus exemplars in determining competency in	127 nurses from 3 medical-surgical units in Indianapolis	Quasi-experimental Studies	Minimal evidence regarding the effectiveness of simulation	Level 3	Outcome data was not evaluated.	No, outcome data was not evaluated.

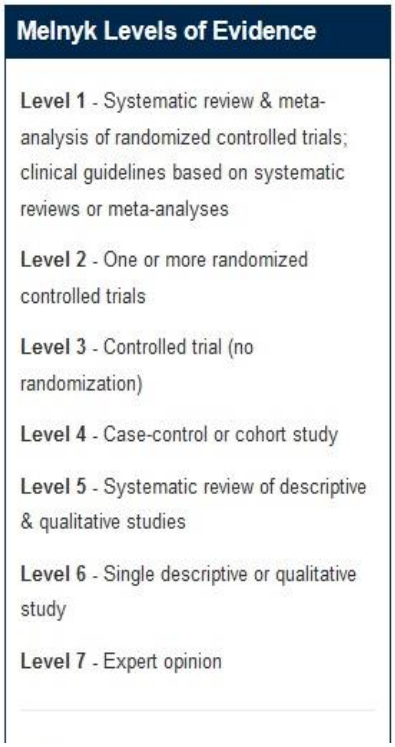
Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
	managing a critical patient.			versus written exemplars in determining competence.			
Piedade, T., Cristina, R., Kowal, I., Pazetto, A. (2022). Validation of competencies assessment scale in a university hospital nursing team.	Analyze the validity of using an evaluation assessment scale	143 employees in the nursing team in a University hospital in Brazil.	Methodological study	The assessment scale shows good validity in evaluating competencies.	Level 4	Does not evaluate physical competency but instead evaluates only the preception of competence.	No, physical competency not evaluated.
Ruttenberg, R., Raynor, P., Scott, T., Rice, C (2020). Perception of impact of frequent short training as an enhancement of annual refresher training.	Determine the effectiveness of hands-on competencies in comparison to online modules.	59 trainees.	Survey and group discussion	Respondents preferred hands-on drills versus online modules. Respondents felt hands-on training improved their skills.	Level 4	Physical ability to perform competency was not evaluated.	Yes, this shows that emergency responders felt that hands-on skills improved their confidence and competence.
Tschannen, D., Alexander, C., Taylor, S., Tovar, E., Ghosh, B.,	Describe quality improvement competence of nurses.	681 nurses from a level 1 trauma center in the midwest	Descriptive, cross sectional survey with a	Nurses averaged 5 correct answers out of	Level 4	Does not discuss which skills were	Yes, nurses' perception of competency is low implying the need for additional hands-on

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
Zellefrow, C., Milner, K. (2021). Quality improvement engagement and competence: A comparison between frontline nurses and nurse leaders			convenience sampling	7 on the knowledge questions and rated themselves at a 2.82 (out of 6) in proficiency. Nurse knowledge is considered to be high which does not equate to the confidence to perform skills.		evaluated in survey.	training to improve competency and confidence.

Appendix B

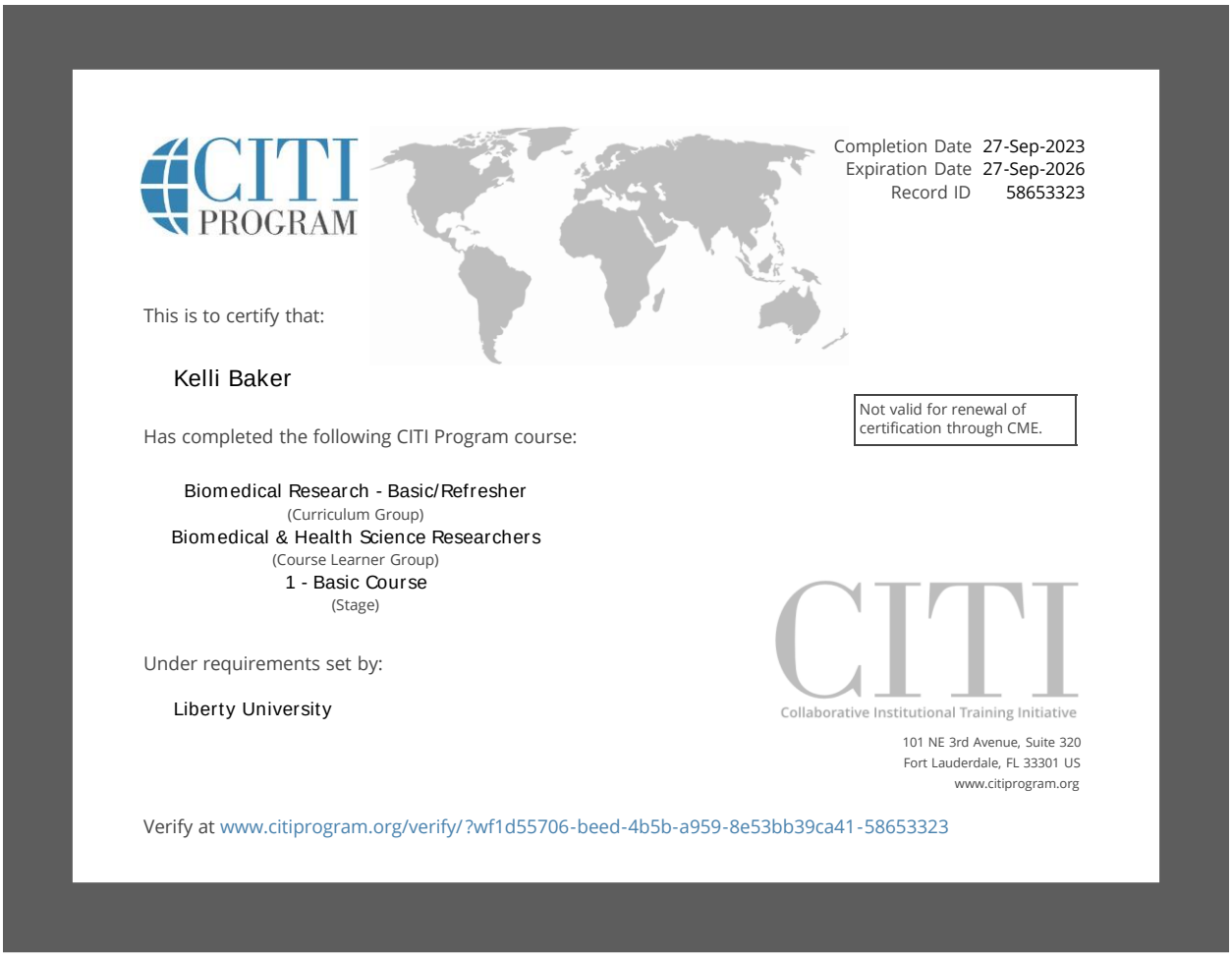
Melnyk Level of Evidence Pyramid





Appendix C

CITI Certificate



Appendix D

Letter of support

October 8, 2023

Attention: IRB
Liberty University
1971 University Blvd.
Lynchburg, VA 24593

IRB Members:

Ms. Kelli Baker, MSN, RN, Liberty University Doctor of Nursing Practice student has proposed to conduct a Doctor of Nursing Practice Scholarly Project: In-person Annual Competency Validation in Comparison to On-line Learning Modules in Rapid Response Nurses.

[redacted] is committed to providing the most advanced, comprehensive, and safe care to those in need, facilitated by the pursuit of quality improvement and evidenced- based practice. Ms. Baker's Doctor of Nursing Practice Scholarly Project aligns with our commitment that every patient receives quality health care.

[redacted] is pleased to support Ms. Baker's Doctor of Nursing Practice Scholarly Project: In-person Annual Competency Validation in Comparison to On-line Learning Modules in Rapid Response Nurses.

Please feel free to contact me if I can be of further assistance.

Respectfully,

[redacted]

Appendix E

New General Self-Efficacy Scale

Access and Use

Link: https://docs.google.com/document/d/1USKjqQlj4NEUzX3L5IPMAxgugWso68d3Z6xC7lxtZsY...
Open Access: Yes
Use in Research
Davidson, O. B., Feldman, D. B., & Margalit, M. (2012). A focused intervention for 1st-year college students: Promoting hope, sense of coherence, and self-efficacy. *The Journal of Psychology*, *146*(3), 333-352. https://doi.org/10.1080/00223980.2011.634862

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New General Self-Efficacy Scale

This survey accompanies a measure in the SPARQTools.org Measuring Mobility toolkit, which provides practitioners curated instruments for assessing mobility from poverty and tools for selecting the most appropriate measures for their programs.

Age: Adult
Duration: < 3 minutes
Reading Level: 6th-8th grade
Number of items: 8
Answer Format: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree.

Scoring:
To calculate the total score for each participant, take the average rating of the items by adding respondents' answers to each item and dividing this sum by the total number of items (8).

Sources:
Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods*, *4*(1), 62-83.

Instructions: Participants are told that (a) general self-efficacy relates to "one's estimate of one's overall ability to perform successfully in a wide variety of achievement situations, or to how confident one is that she or he can perform effectively across different tasks and situations," and (b) self-esteem relates to "the overall affective evaluation of one's own worth, value, or importance, or to how one feels about oneself as a person."

Instructions: Please circle your answer below.

1. I will be able to achieve most of the goals that I set for myself.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

2. When facing difficult tasks, I am certain that I will accomplish them.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

3. In general, I think that I can obtain outcomes that are important to me.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

4. I believe I can succeed at most any endeavor to which I set my mind.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

5. I will be able to successfully overcome many challenges.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

6. I am confident that I can perform effectively on many different tasks.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

7. Compared to other people, I can do most tasks very well.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

8. Even when things are tough, I can perform quite well.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Appendix F

Permission to Use the Iowa Model & the Iowa Model Schematic

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care.* Click the link below to open.

The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

Citation: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing, 14(3), 175-182. doi:10.1111/wvn.12223*

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Please contact UIHCNursingResearchandEBP@uiowa.edu or 319-384-9098 with questions.

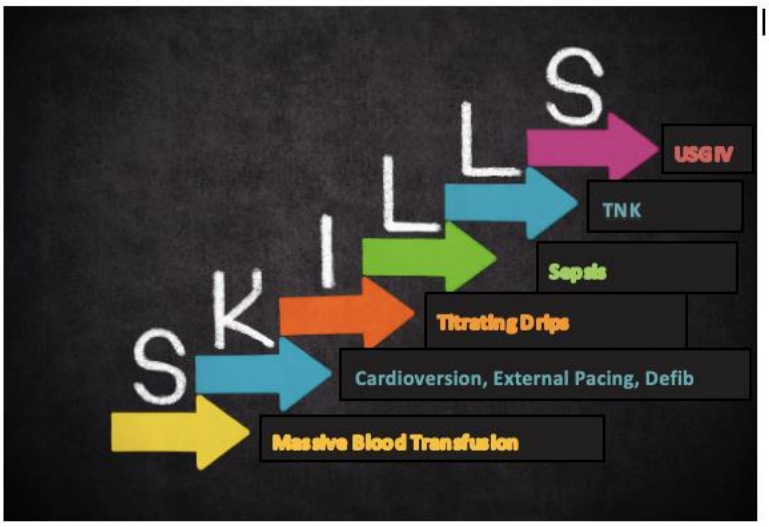
Appendix G

Iowa Model

Image removed for copyright compliance.

Appendix H

Skills Fair Flyer



Rapid Response Educational Skills Fair

Come and join us to get hands-on practice for our most utilized critical skills. Lunch will be provided.

May 23, 2024

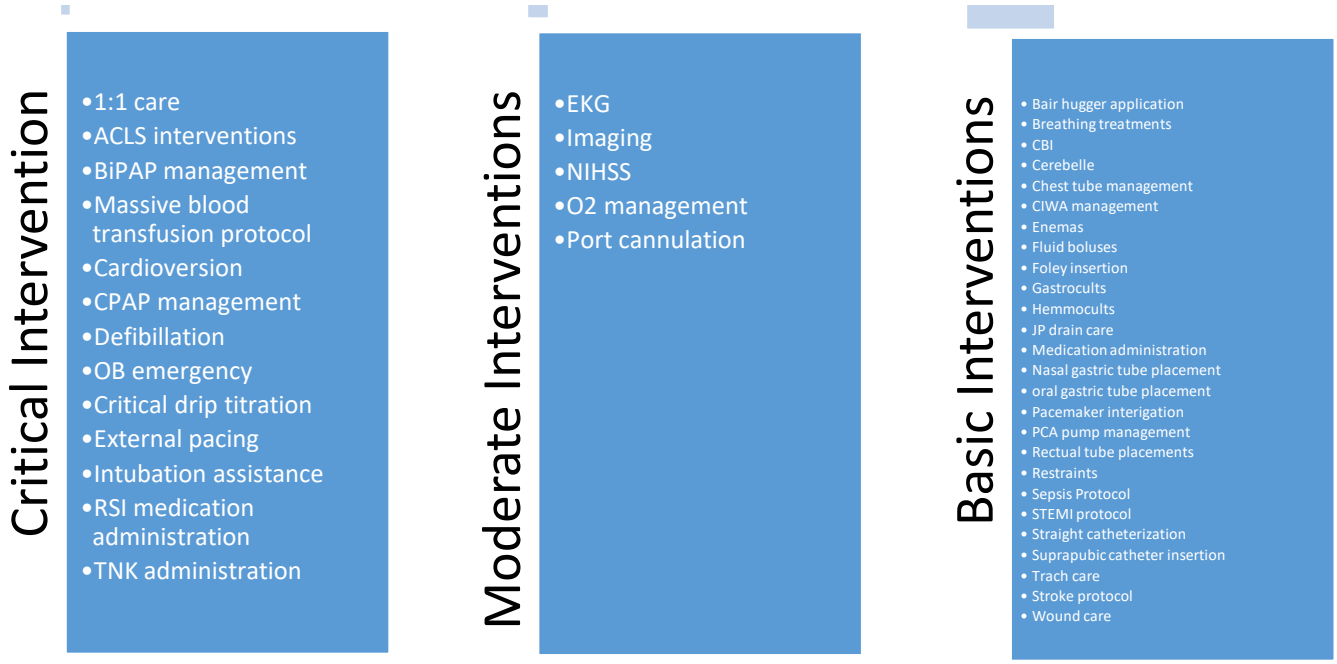
1230 am- 1630 pm
Assisi Boardroom

RRT

Appendix I

2023 Rapid Response Intervention Data

Month	Interventions	Critical Interventions	Moderate Interventions	Basic Interventions
2023 TOTALS	2115	394	827	894



Appendix J

Standardized Skills List

1. Ultrasound-Guided IVs (USGIV)
2. Tenecteplase (TNK) administration
3. Sepsis Protocol
4. Massive Blood Transfusion via Belmont rapid infuser
5. Cardioversion/External Pacing/ Defibrillation
6. Drip titration