# Implementing a Frequent Neonatal Resuscitation Program Educational Refresher Course to Improve Nursing Knowledge

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## Background

It is estimated that 10% of newborns need assistance breathing at birth (American Heart Association [AHA], 2020). Successful neonatal resuscitation depends on critical actions that occur promptly to increase chances of survival (AHA, 2020). Researchers have revealed the knowledge and skill retained from the neonatal resuscitation program (NRP) begins declining as early as three months after completing the program (Smith, Gilcreast & Pierce, 2016). The purpose of this evidence-based project was to implement an educational review of NRP basic skills every three months to improve nurse's confidence in neonatal resuscitation. A validated Self-Efficacy 14-item Scale (SES-14) was used to measure nurse's confidence specific to NRP skills prior to and after reeducation. The Evidence-based Practice Improvement Model and Lewin's Change Model provided the framework for the development, planning, implementation, and dissemination of this project. The aim for this project is that 80% of nurses working in the neonatal intensive care unit (NICU) in southeast Tennessee that receive the NRP educational refresher course will have improved scores on the post-test evaluation indicating retaining knowledge and improved confidence in neonatal resuscitation over three months.

## Process

This DNP student guided the scholarly project through implementation of NRP refresher course every three months to increase NICU nurses' confidence and knowledge in neonatal resuscitation. Participation included 18 nurses working in a level 4 NICU located in Southeastern Tennessee. Eighteen nurses that provided direct patientcare to neonates participated. Individuals were given a pre-test using a validated self-report screening tool including a 14-point Likert Scale. This tool included self-efficacy questions regarding confidence in resuscitation efforts. A pre-test was performed followed by an educational PowerPoint and a post-test. Following IRB

approval, Qualtrics was used to place the PowerPoint as well as the confidence questionnaire. The Qualtrics survey is compliant with Health Insurance Portability and Accountability Act (HIPPA) and Protected Health Information (PHI) and can securely export data to other software.

## Results and Conclusion

Data revealed that confidence scores increased in the post-test following the educational PowerPoint. One question was eliminated as deemed not applicable to this population. Nine of the questions were found to be statistically significant in increasing confidence scores after education. Eight individuals participated at two intervals with a three-month gap between receiving educational material. Statistical significance could not be determined based on this population size; however, clinical significance was found in 7 of the questions in increasing confidence scores in the initial pre-test to the pre-test after receiving one time of education and waiting 3-months. Results of the study should be viewed with caution based on the low response rate. Limitations included high turnover rate in nurses, mandatory overtime, and current levels of suboptimal staffing at this facility.

## Recommendation

Having the knowledge to complete resuscitation efforts in the NICU is crucial to the health of the infant; however, having confidence along with knowledge has been proven to improve the quality of care that nurses provide to patients (Makarem, et al., 2019). Having a neonatal educational refresher course was shown to increase nurse's confidence in neonatal resuscitation efforts. Further research is recommended to determine the appropriate time interval between receiving educational material on neonatal resuscitation to improve the confidence of neonatal nurses. To sustain this project, education will need to be updated as necessary when new literature about neonatal resuscitation or neonatal resuscitation guidelines are revised.