

Improving Pediatric Intensive Care Unit Staff Continuous Renal Replacement Therapy

Competence, Knowledge, and Confidence

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*“On my honor, I pledge that I have neither given nor received any unauthorized assistance on
this assignment.”*

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Abstract

Aim: The aim of this quality improvement study was to explore the effectiveness of an education program in improving Pediatric Intensive Care Unit (PICU) nurses' knowledge, confidence, and competence in managing Continuous Renal Replacement Therapy (CRRT).

Background: High Risk Low Volume (HRLV) procedures such as CRRT are acute therapies requiring a high level of knowledge and competence with complicated equipment and procedures. The complexity of these procedures is mainly related to their infrequent occurrence in the pediatric setting. As a result, maintaining staff competence with these therapies is extremely challenging.

Design: Pretest posttest quality improvement study.

Methods: A CRRT educational intervention, consisting of a CRRT online module and a CRRT simulation-based learning workshop, was developed and implemented with the aim of improving and sustaining PICU nurses' knowledge, competence, and confidence in performing CRRT procedures. Ten PICU nurses were included in the educational program.

Results: The project resulted in an increase in PICU knowledge, competence, and confidence levels in managing CRRT procedures. Scores of the knowledge test, competency checklist, and confidence level increased from the pre-intervention to the post-intervention assessment. The observed improvement lasted for 3 months following the intervention period.

Conclusion: The undertaken educational intervention was found to be effective in improving PICU nurses' knowledge, competence, and confidence in managing CRRT. The observed improvement was sustained over a period of 3 months after the intervention.