



This study evaluated the impact of a simulation-based mastery learning (SBML) curriculum on central line maintenance and care among a group of ICU nurses” Barsuk et al (2015).

Abstract:

OBJECTIVE: This study evaluated the impact of a simulation-based mastery learning (SBML) curriculum on central line maintenance and care among a group of ICU nurses.

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METHODS: The intervention included 5 tasks: (a) medication administration, (b) injection cap (needleless connector) changes, (c) tubing changes, (d) blood drawing, and (e) dressing changes. All participants underwent a pretest, engaged in deliberate practice with directed feedback, and completed a posttest. We compared pretest and posttest scores and assessed correlations between demographics, self-confidence, and pretest performance.

RESULTS: The number of nurses passing each task at pretest varied from 24 of 49 (49%) for dressing changes to 44 of 49 (90%) for tubing changes. At pretest, scores ranged from a median of 0.0% to 73.1%. At posttest, all scores rose to a median of 100.0%. Total years in nursing and ICU nursing had significant, negative correlations with medication administration pretest performance ($r = -0.42, P = .003$; $r = -0.42, P = .003$, respectively).

CONCLUSION: ICU nurses displayed large variability in their ability to perform central line maintenance tasks. After SBML, there was significant improvement, and all nurses reached a predetermined level of competency.

Reference:

Barsuk, J.H., Cohen, E.R., Mikolajczak, A., Seburn, S., Slade, M. and Wayne, D.B. (2015) Simulation-Based Mastery Learning Improves Central Line Maintenance Skills of ICU Nurses. The Journal of Nursing Administration. 45(10), p.511-7.

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