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Successful Academic-Clinical Partnership: Professional Development Project Using Simulation and a Companion Study Measuring Teamwork, Plus Additional Collaborative Endeavors

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Learning Objectives



1. Describe how simulation was used in the intervention for this project.
2. List the constructs of the Teamwork Perceptions Questionnaire (TPQ)
3. Identify the TPQ construct that demonstrated a statistically significant improvement pre-to-post simulation in this project.
4. Explain additional benefits of this partnership.



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- Authors have no conflicts of interest.
- Authors have no disclosures to make.



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Background



- Maximizing nursing resources is imperative for hospitals to meet budget.
- Merging units is often viewed as cost effective.
- Clinical simulation can be used to both cross-train staff and enhance perceptions of teamwork, thus contributing to patient safety.



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Project Overview

- A professional development project implemented to assist med-surg staff to become better skilled in caring for pediatric patients on a newly merged patient unit (pediatrics, adult oncology, and adult medical surgical).
- Project leaders consisted of two nursing faculty experienced in high-fidelity simulation using unfolding scenarios, the clinical educator for unit, and the director of nursing professional development for the hospital.
- Teamwork was measured **Teamwork Perceptions Questionnaire (TPQ)** – Dept. of Defense and Agency for Healthcare Research and Quality (TeamSTEPPS 2.0., 2013).



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Using Simulation to Cross-Train Staff and Build Effective Teams

- Gaumard pediatric simulator was used: a life-like, fully responsive wireless simulator.
- Two unfolding patient scenarios were used: (a) child with asthma exacerbation and (b) an infant with fever, dehydration, and rule out(R/O) sepsis.
- For each 45 minute scenario, one nurse was the patient's primary nurse; the second nurse was the charge nurse. Project leaders played the roles of people to whom phone calls were placed, such as physician, laboratory, respiratory, and pharmacy. The tech played his/her customary role, assisting the nurses, taking vital signs, running to get supplies, and so forth. The third nurse played a key role as patient's mother; this person was "scripted" and was intended to challenge and stress the caregivers.



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Research Study on Teamwork



- Setting: 255-bed regional hospital in mid-south
- State university, non-medical center affiliated
- Sample: 15 RN's and 8 Techs. Of these 23 all completed a pretest, but only 8 also completed a posttest (4 RNs & 4 Techs)
- TPQ is 35-items
 - 5 constructs:
 - Team structure
 - Leadership
 - Communication
 - Mutual support
 - Situation monitoring



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Statistically Significant Results – Effect of the Simulation on Teamwork

- Non-parametric Wilcoxon signed ranks test demonstrated a significant improvement in the Teamwork Perceptions Questionnaire **situation monitoring subscale**
- ($p < .05$; $p = .012$)



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Situation Monitoring Subscale Items

- Staff effectively anticipate each other's needs.
- Staff monitor each other's performance.
- Staff exchange relevant information as it becomes available.
- Staff continuously scan the environment for important information.
- Staff share information regarding potential complications.
- Staff meets to reevaluate patient care goals when aspects of the situation have changed.
- Staff correct each other's mistakes to ensure that procedures are followed properly.



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Conclusions from Study

- Successful simulation training was accomplished, as well as measured improved perception of one aspect of teamwork. During debriefing of the simulation exercises, an additional unexpected benefit of problem-solving transpired.
- Generated favorable collaboration between a non-medical center affiliated nursing program and a non-academic center affiliated hospital
- Our publication: Moore, S. C., Finch, M., MacArthur, S. K., & Ward, K. S. (2018). Using Simulation to Cross-Train Staff and Build Effective Teams. *Clinical Simulation In Nursing*, 201-6. doi:10.1016/j.ecns.2018.04.002



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Limitations of the Study

- Small sample size
- Convenience sample
- Single center



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Additional Collaborative Activities

- Two Nursing Faculty at a time serve on Maury's Scientific Review and Research Council.
- Two other Nursing Faculty have conducted a retrospective study exploring cardiac patients' understanding of discharge instructions.
- A grant was obtained for the institutions to collaborate on a peri-op internship for students (unable to recruit students).
- Dozens of students per year do clinical rotations at this hospital (Critical Care and Capstone Clinical – both precepted).



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