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Improving L&D Nurses' Emergency Response Through Implementation of Biweekly Simulation
Author: Linet Llaurado BSN, RN **Project Chair:** Aline Holmes DNP, RN
Team members: Jamie Hellman MSN, CNM, WHNP-BC, Wendy Cervi DO, FACOG

Introduction

- Simulations have been used for centuries to provide students with quality education, improve critical thinking, and avoid patient harm.
- There is a need to implement even more simulations to fill the gap between education and bedside care (AACN, 2017).
- Newly hired nurses are subjected to a training period or orientation once they start a new job (Pasila et al., 2017).
- The lack of exposure to critical events during training period can result in malpractice or negative patient outcome (Lasater et al, 2015).

Background

- Giovanni Antonio Galli was the first who created the first high fidelity simulation glass uterus with a flexible baby.
- During the 1800s, in the United States, simulations were used by medical schools for students' education only to compensate for the lack of hospital-based deliveries since most births occurred at home.
- In 1910, Abraham Flexner advocated that the Carnegie Foundation improved medical training in North America, helping to change the educational model in the 21st century. In 1968, the first mannequin that incorporated computer technology was created and opened the door to develop the now known use of wireless mannequins.
  (Deering et al., 2019).

Significance

- In situ simulations enhance teamwork, communication, knowledge, staff confidence, safety, and patient outcomes, while simultaneously decreasing medical costs related to adverse events (Sorensen, 2015).
- More than 251,000 patients die every year in the US due to medical error (Anderson & Abrahamson, 2017).
- Educating nursing staff helps avoid medical errors and reduces adverse outcomes (Tapia & Muhammad Waseem, 2020).

Aims

To improve nurses' self-efficacy and response to obstetric emergencies.

Steps

- Recruit L&D nurses with less than three years of experience.
- Schedule biweekly simulation on the labor and delivery unit.
- Prepare simulation scenarios related to obstetric emergencies.
- Evaluate nurses' emergency response at the beginning and end of implementation.
- Use of Bandura's General Self-Efficacy Scale adapted with demographics.

Objectives

- Increase nurses' self-efficacy.
- Reduce adverse events on the L&D unit.
- Increase novice nurses' response to obstetric emergencies.

Methodology

- **Intervention:** Biweekly simulations on three different occasions related to obstetric emergencies.
- **Design:** Participants may participate in more than one simulation. Pre and a post survey.
- **Sample:** Nurses with less than three years of experience in labor and delivery.
- **Setting:** The setting for this project is a labor and delivery unit in a large teaching hospital in central New Jersey.
- **Measures:** This project measured changes in self-confidence as a result of the simulation sessions.
Analysis: Descriptive statistics were used to assess the mean scores of each test. Analytical statistics were used to determine the efficacy of this project.

IRB approval

- Site IRB approval granted 11/2021.
- Rutgers IRB approval granted 01/2022

Results

Survey results previous and post simulation

Simulation 1 | Simulation 2 | Simulation 3

Pre-survey Post-survey
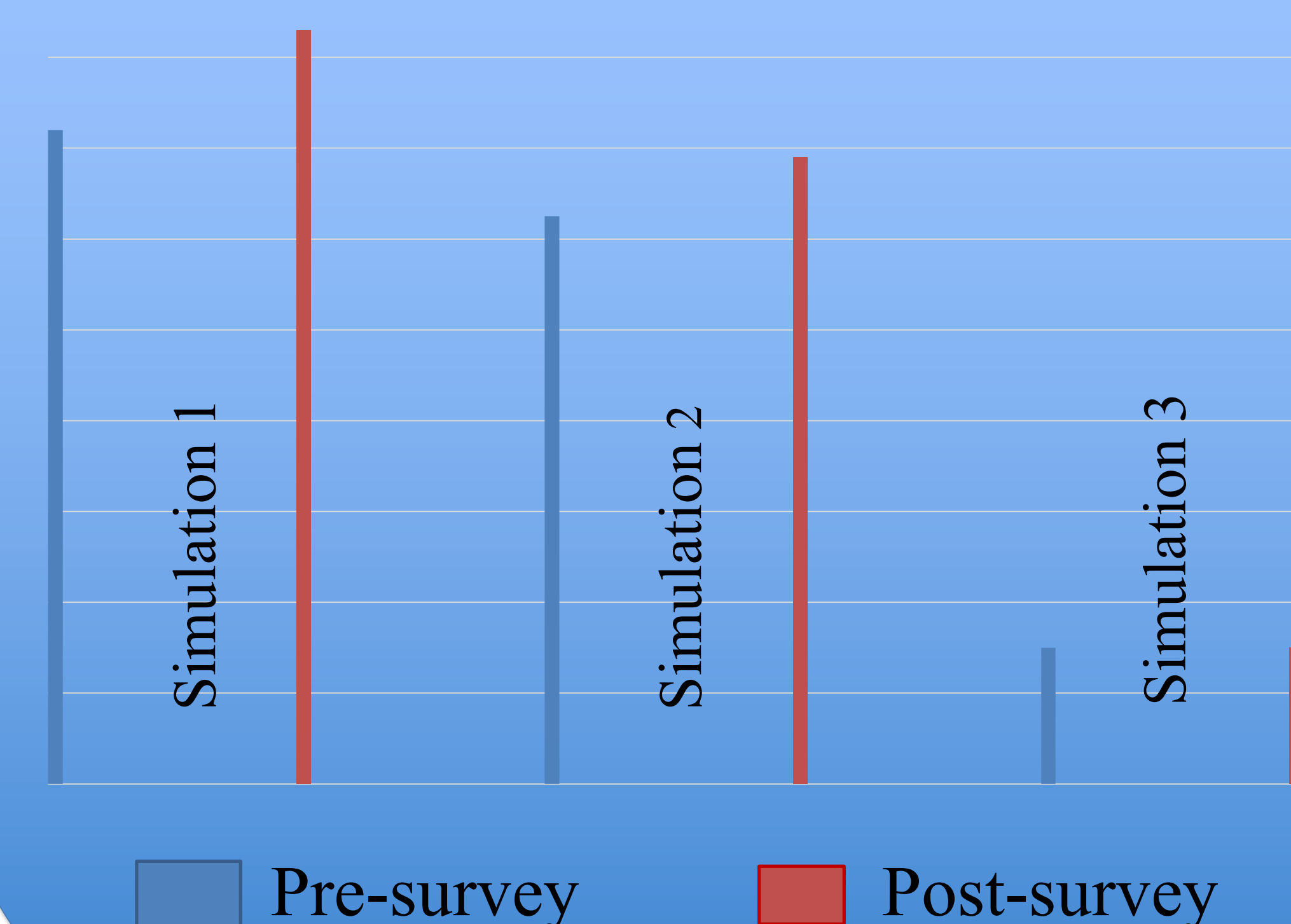
Discussion

- **Economic Benefits:** Training novice labor and delivery nurses using onsite simulations of obstetric emergencies helps reduce the amount of money the hospital spends responding to poor patient outcomes.
- **Impact on Healthcare Quality:** Utilizing this simulation, nurses can practice safely and confidently, avoiding negligence and malpractice claims.
- **Recommendations and Implications:** Continuing the practice of frequent in situ simulations improved self-confidence in novice nurses while decreasing errors and improving patient's outcome.

References
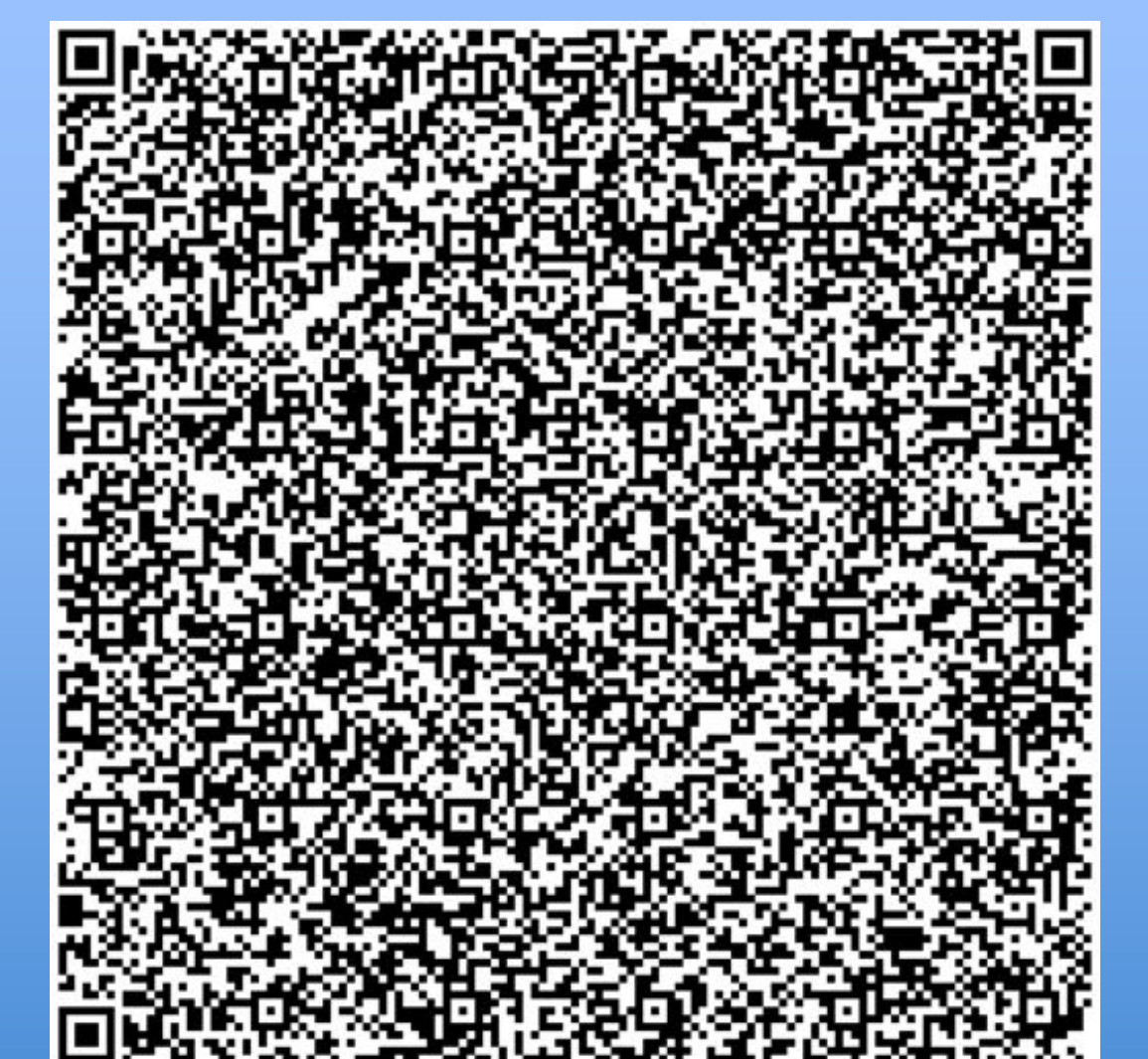
Contact Information
Linet Llaurado
Phone: 484-538-1265
Email: ll840@sn.Rutgers.edu