

Introduction

PEDIATRIC HEALTH IN ALABAMA

Alabama ranks 48th in child mortality with an average of 40 child deaths per 100,000 compared to 29 per 100,000 nationally.

In Alabama:

- 10.8% of infants are born at low birthweight
- Ranked 46th in overall child health
- 3.9% of children do not have health insurance
- 45.4% of children in Alabama are on Medicaid/CHIP
- 46th in overall prevalence of childhood obesity

Registered nurses specializing in pediatric healthcare must be competent in physical assessment and appropriate interventions to help reduce the risk of pediatric mortality. Ensuring proper training for undergraduate nursing students and newly licensed nurses can drastically improve pediatric patient outcomes.

ROLE OF SIMULATION-BASED EDUCATION IN IMPROVING PEDIATRIC PATIENT OUTCOMES IN ALABAMA

Clinical practice is a critical, complex, and challenging component of professional development for student nurses.

Simulation-based educational training activities are used in nursing education to bridge the gap between theoretical knowledge and practical application of clinical experiences.

Incorporating simulation-based educational training best practices can develop student and new nurses' skills, attitudes, and professional knowledge while allowing them to train in a safe and controlled environment.

In 2023, the University of South Alabama College of Nursing received grant funding from the Health Resources and Services Administration (HRSA) to enhance simulation education training.

SUCCESS: <u>Serving the Underserved</u> by <u>Collaborating with Clinical partners</u> to expand nursing <u>Education utilizing</u> <u>Simulated</u> <u>Scenarios</u>



PURPOSE

Faculty developed and implemented a multi-dimensional, Hybrid, simulation-based, educational scenario focused on a complex pediatric condition. A gap analysis identified pediatric respiratory distress as a top priority learning experience for student nurses. The goal is to improve student knowledge and enhancement of skills while caring for pediatric patients in respiratory distress.

Using principles from the NCSBN Clinical Judgment Measurement Model(NCJMM), this hybrid simulation

increased nursing students' knowledge and readiness for practice through a clinical judgment framework.



Driving SUCCESS: A Hybrid High-Fidelity Simulation to Enhance Undergraduate Nursing Education Carol Pierce, MSN, RN; Lori Prewitt Moore, DNP, FNP-BC, CHSE Brady Urquhart DNP,RN; Candice N. Selwyn, PhD; Ashleigh Bowman DNP, RN, CPNP-AC, SANE-A, SANE-P



In Spring 2024, the first simulation-based education experience of 91 undergraduate nursing students enrolled in maternal-child nursing courses was implemented. Since the initial launch, over 328 learners have completed the pediatric respiratory distress simulation experience. Prior to arriving to the simulation building, learners are required to watch an introduction to simulation video as well as to complete assignments involving case objectives. NCLEX style questions regarding respiratory distress were included in the prep work. Learners were divided into groups of 4 learners utilizing a high-fidelity simulator. A standardized patient (SP) was also utilized as the infant's care giver.

Part 1: Prebriefing session with event details	
Part 2: High Fidelity Simulation Immersion	
Part 3: Group Debriefing session utilizing modified PEAR nethod	LS

LEARNING OBJECTIVES

- Identify signs and symptoms of an infant respiratory distress
- Determine priorities for the treatment of respiratory distress
- Implement therapeutic interventions when caring for an infant with respiratory distress
- Evaluate effectiveness of nursing interventions for an infant in respiratory distress
- Demonstrate effective communication with provider(s) and family member(s) in a high-intensity medical situation
- Apply therapeutic communication techniques to provide clear and easy-tounderstand information to caregivers

CASE HIGHLIGHTS

Meet "Pete O'Rourke"



Age: 5 months **Race/Ethnicity:** African American Arrival to ED: EMS **Complaint:** Wheezing & fever Weight: 16.6 pounds

- Patient arrives to the ED. Per EMS, patient is a 5-month-old African American male who was picked up from the maternal grandmother's house where he was noted to be wheezing upon initial assessment. The 02 sat was 92% on room air.
- Grandmother reported a temperature of 102.2 F axillary
- Weight is 16.6 lbs. on arrival to ED per patient care assistant
- Learners implemented multiple interventions for respiratory distress and dehydration
- Learners were required to utilize effective communication techniques with the provider regarding patient condition status and further orders
- Using a standardized patient, an anxious caregiver is at bedside who has medical and social concerns



69.23% of learners reported either very or extreme regarding enhancement in knowledge and 68% of learners reported either very or extreme regarding enhancement of clinical skills.



Post-Survey Data

INDICATE YOUR LEVEL OF AGREEMENT WITH THE FOLLOWING STATEMENTS:

■ Not at all ■ Slightly ■ Moderately ■ Very ■ Extremely







SIMULATION

THE SIMULATION SCENARIO

What went well during today's simulation training?

- Feedback from instructor(s)
- Communication between peers
- Teamwork
- Communication with parent
- Communication with provider

What could be improved for the next simulation?

- Having smaller groups
- More prepared to communicate with family member
- Offers simulation prior to respiratory exam and after this lecture



Conclusions

Simulation educational training is beneficial for increasing clinical judgment, to meet the desired learning objectives, and implement required nursing concepts (Wright & Stuckey, 2023). Utilizing simulation education in the undergraduate nursing curriculum allows learners to "connect the dots" between classroom theory and bedside, clinical nursing focusing on real-life concepts. Pete O'Rourke exhibits common symptoms of respiratory distress that nurses would encounter in the pediatric clinical setting, Simulation training for prelicensure nursing students is needed to improve patient outcomes in Alabama.

Using Standards of Best Practice and Guidelines from INACSL and the NCSBN post-event surveys showed learners reported the following:

- 97.8 % reported at least moderate increase in knowledge
- 94% reported at least moderate increase in clinical skills

LIMITATIONS & FUTURE CONSIDERATIONS

Both Accelerated and Traditional BSN learners participated in the simulation educational training. Feedback surveys were provided to learners after each simulation. In the original implementation of this simulation, an SP caregiver was not involved. Students provided feedback requesting a caregiver at the bedside to facilitate the ability to obtain a more thorough patient history. In fall 2024, an SP (caregiver) was added. While striving to keep simulation events standardized, all SPs received two hours of case-related training. During the debriefing sessions, faculty continued to urge learners to provide insightful feedback of the experience so adjustments can be made for future cohorts. Post-event surveys will be provided to leaners after each simulation experience to ensure the students' voices are heard and that continued improvements are made to all simulation educational training events.

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