

# **Evaluating and Obtaining Annual Competencies Utilizing Simulation in Pediatric Intensive Care**

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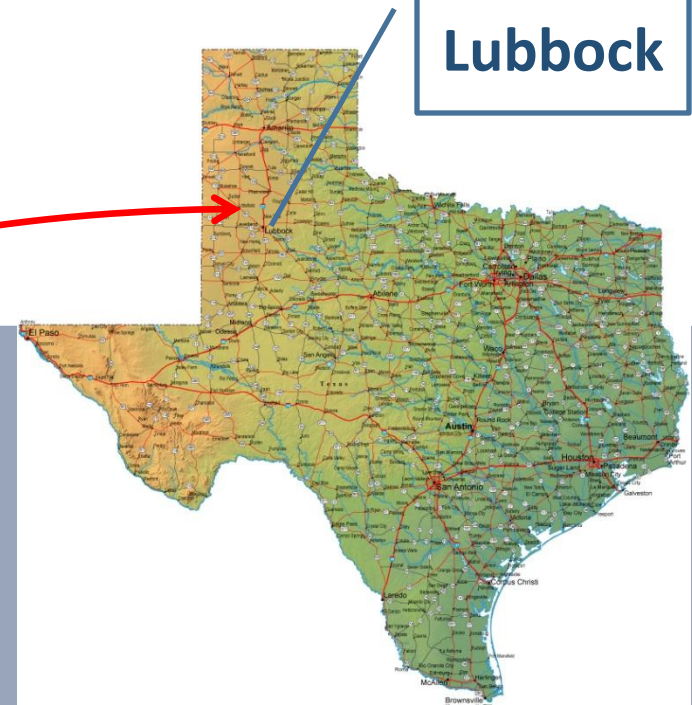
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# LEARNING OBJECTIVES

- Describe the goals of this study
- Describe the methods used for this study
- Briefly describe the unanticipated results



# GOALS

- Introduce simulation to the PICU nursing staff
- Utilize simulation to evaluate PICU staff competency in clinical situations



# METHODS:

- Root cause analysis
- PICU staff needs assessment
- Develop scenario
- Evaluation tool(s)
- Staff orientation to technology

# RESEARCH QUESTIONS:

- Does integrating simulation into existing educational curriculum for PICU nurses have an impact on *proficiency* as measured by annual multimodal exams?



# RESEARCH QUESTIONS:

- Does integrating simulation into existing educational curriculum for PICU nurses have an impact on **knowledge** as measured by annual multimodal exams?



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# RESEARCH QUESTIONS:

- Does integrating simulation into existing educational curriculum for PICU nurses have an impact on skills as measured by annual multimodal exams?



# NEEDS ASSESSMENT

- What skills (technical and non-technical) do you feel you need more experience with?
- What skills (technical and non-technical) do you feel are critical to your nursing success in the PICU?
- What skills (technical and non-technical) do you feel are critical to patient safety?

# SCENARIO DEVELOPMENT

- Results of staff needs assessment
- Scenario written to center around an unplanned extubation
- Scenario written and reviewed prior to implementation



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# EVALUATION TOOLS

- Learner Self-Efficacy Scale
  - Pre & Post Test
- Lasater's Clinical Judgment Rubric (modified)

# Learner Self-Efficacy Scale

|    | Self-confidence in Learning (IV)  | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|----|---|-------------------|----------|--------|-------|----------------|
| 1. | I am confident that I have the knowledge needed to start an IV.                     | 1                 | 2        | 3      | 4     | 5              |
| 2. | I am confident that I have the skills needed to perform an IV start.                | 1                 | 2        | 3      | 4     | 5              |
| 3. | I am confident that I can recognize and assess IV access findings on real patients. | 1                 | 2        | 3      | 4     | 5              |

# LASATER'S CLINICAL JUDGMENT RUBRIC


| Dimension                            | Exemplary  | Accomplished  | Developing  | Beginning   |
|--------------------------------------|--|---|---|---|
| Effective noticing involves:         |  |   |   |   |
| Focused observation                  | Focuses observation appropriately; regularly observes and monitors a wide variety of objective/subjective data to uncover any useful information | Regularly observes and monitors a variety of data, including both subjective and objective; most useful information is noticed; may miss the most subtle            | Attempts to monitor a variety of subjective/objective data but is overwhelmed by array of data; focuses on most obvious data, missing some important information  | Confused by the clinical situation and amount and kind of data; observation is not organized and important data are missed, &/or assessment errors are made         |
| Recognizing deviations from expected | Recognizes subtle patterns & deviations from expected patterns in data and uses these to guide assessment  | Recognizes most obvious patterns and deviations in data & uses these to continually assess  | Identifies obvious patterns & deviations, missing some important information; unsure how to continue assessment   | Focuses on one thing at a time & misses most patterns & deviations from expected; misses opportunities to refine assessment   |
| Information seeking                  | Assertively seeks information to plan intervention; carefully collects useful subjective data from observing & interacting with patient/family   | Actively seeks subjective information about patient's situation from patient/family to support planning interventions; occasionally does not pursue important leads | Makes limited efforts to seek additional information from the patient/family; often seems not to know what information to seek &/or pursues unrelated information | Is ineffective in seeking information; relies mostly on objective data; has difficulty interacting with patient/family & fails to collect important subjective data |

## 4 dimensions

- Noticing
- Interpreting
- Responding
- Reflecting

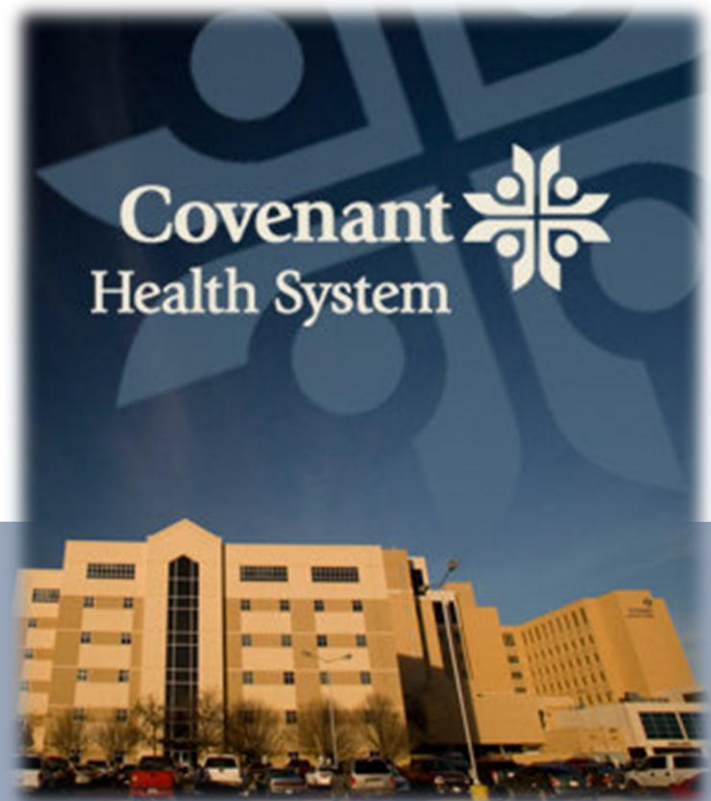
# **LIMITATIONS**

## **Exploratory pilot study**

- One unit
  - Small sample size (n=33)
  - First time simulation was used to evaluate staff
  - First time video taping was used to evaluate staff
  - More stringent inter-rater reliability
  - Staff was not in professional attire
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# RESULTS

- Pre/Post self evaluations
- Clinical Impact



# UNANTICIPATED RESULTS

- Arterial lines
- Resuscitation cart





# FUTURE PLANS

