

# Implementation of a Critical Care Transition to Practice Program to Improve Nurse Competence and Readiness to Practice Within an Emergency Department

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## Background & Significance

### Anticipated Nursing Shortages

- Significant # of experienced RNs nearing retirement
- ED specialty with especially high burnout/turnover rates, further contributing to staffing challenges
- As patients live longer and become increasingly ill, there will be an increased need for more nurses to enter workforce and an increased need for *experienced* RNs to deliver complex/high-quality care

### Experience and Quality of Care

- To fill these vacancies → increased reliance on newer nurses who lack experience
- Lack of experienced nurses in a fast-paced, critically acute environment → narrow margin for inexperienced nurses to make errors without serious patient outcomes

### Practice Setting



- NYS Adult ED with ~117,000 visits/year
- One of the region's largest emergency facilities, serving a multitude of complex specialties (Level 1 Trauma Center, Comprehensive Stroke Center, etc.)

### Identified Practice Problem

- Inexperienced staff and high acuity patients
  - **March 2022:** 58/92 RNs with ≤ 2 years experience
    - 38 ≤ 1 year of experience
    - 15 New Graduates (0 experience)
- Large # of staff not equipped to care for critically ill ED patients, filling vacancies with new graduates *but* leading to most staff having limited experience

### Purpose and Guiding Framework

#### Project Aim

To design, implement, and evaluate an evidence-based, multi-component Critical Care-Transition to Practice program (CC-TTP) to build capacity and improve critical care competence among new ED nurses

#### Benner's Novice to Expert Theory Application

- Nurses progress along a continuum of acquiring skills and developing understanding through both **formal education** and **real-world practice experience**; knowledge acquisition is experiential, and competence is gained over time through exposure
- New graduates enter nurse residency as "novice" ED nurses → deemed "competent" ED RNs post-residency program at 6 months, but are still "novice" ICU RNs

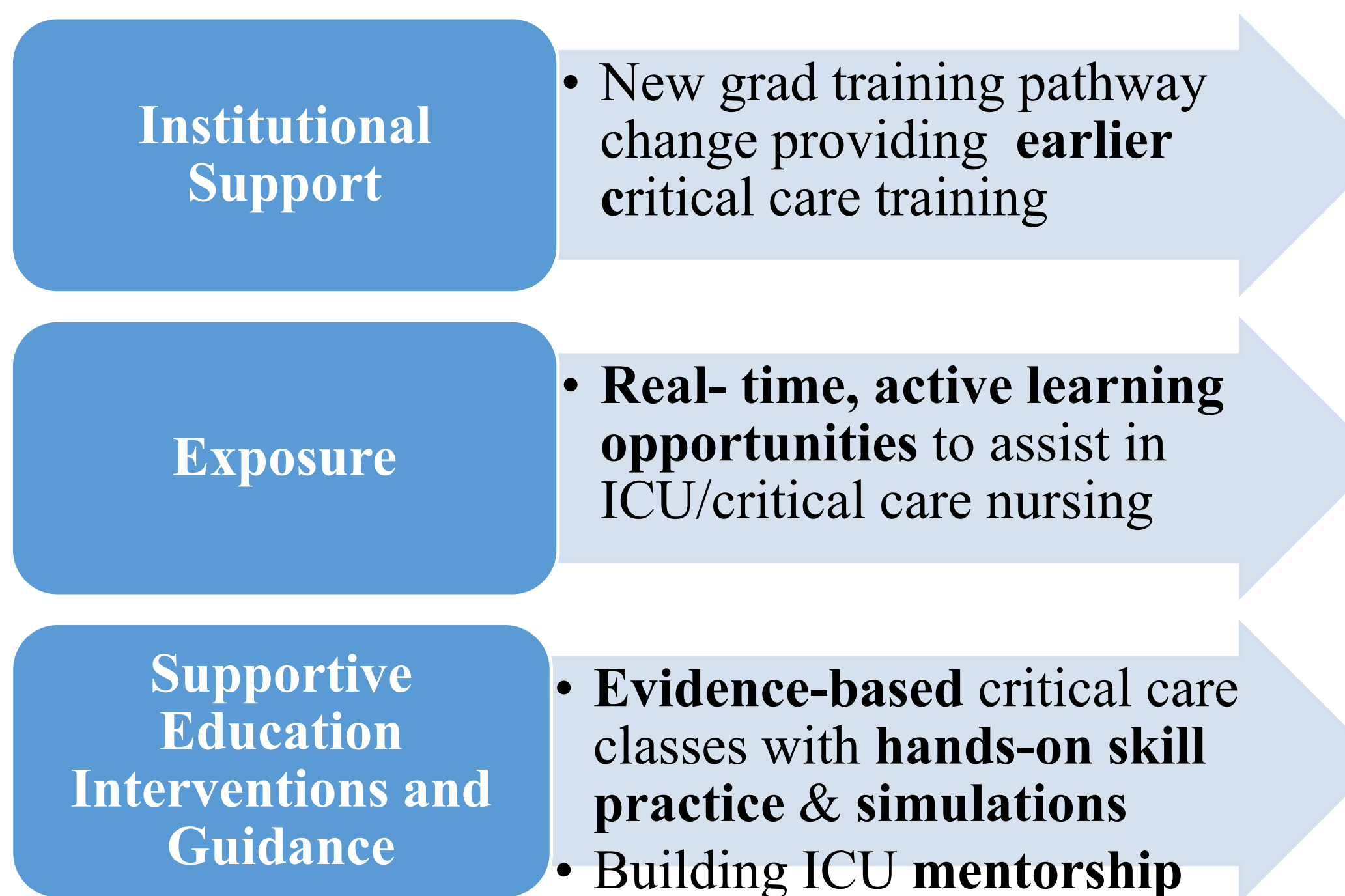


## Methods

### Participants

- 14 ED RNs (post-residency) selected to enter the CC-TTP program as "novice" critical care RNs over 3-month period (Oct-Dec 2022) with goal to advance along competence spectrum

### CC-TTP Program Components



### Design

- Quasi-experimental approach, quantitative and qualitative data collected
- Using a paired *t*-test sample design, nurse participants were evaluated pre- and post-program implementation using the ED-BKAT3r as the primary outcome measure to evaluate program effectiveness

### Basic Knowledge Assessment Tool (BKAT)

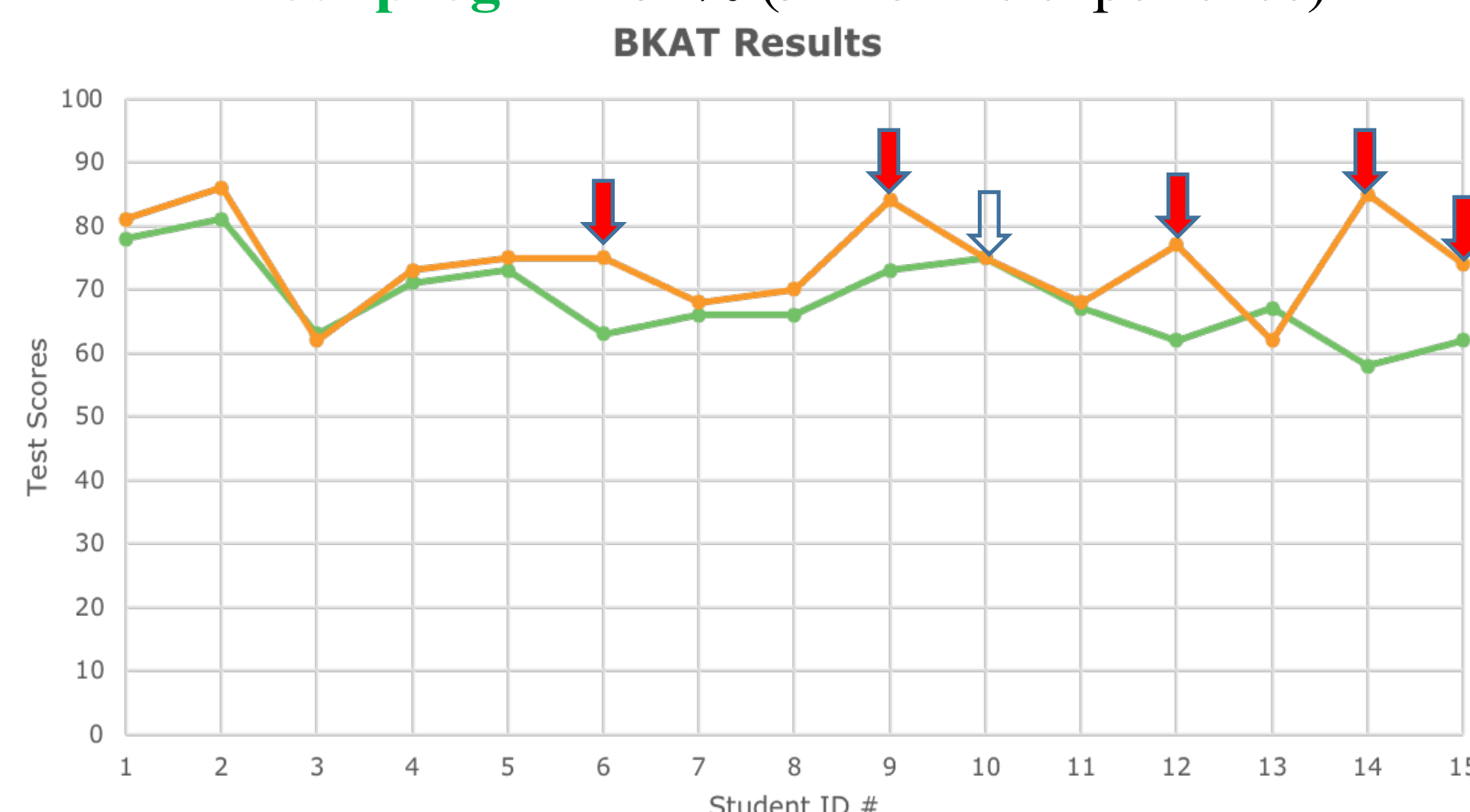
- Multiple-choice test, accepted standard to evaluate baseline critical care knowledge necessary for safe practice and to objectively measure critical care knowledge acquisition
- Validated, reliable tool (Cronbach alpha 0.80-0.83)

## Results

- Comparison of sample means, alpha=0.05
- Paired *t* test: p=0.015, statistically significant difference in pre and post-program BKAT test scores

**Pre-program** 68% (3-months experience)

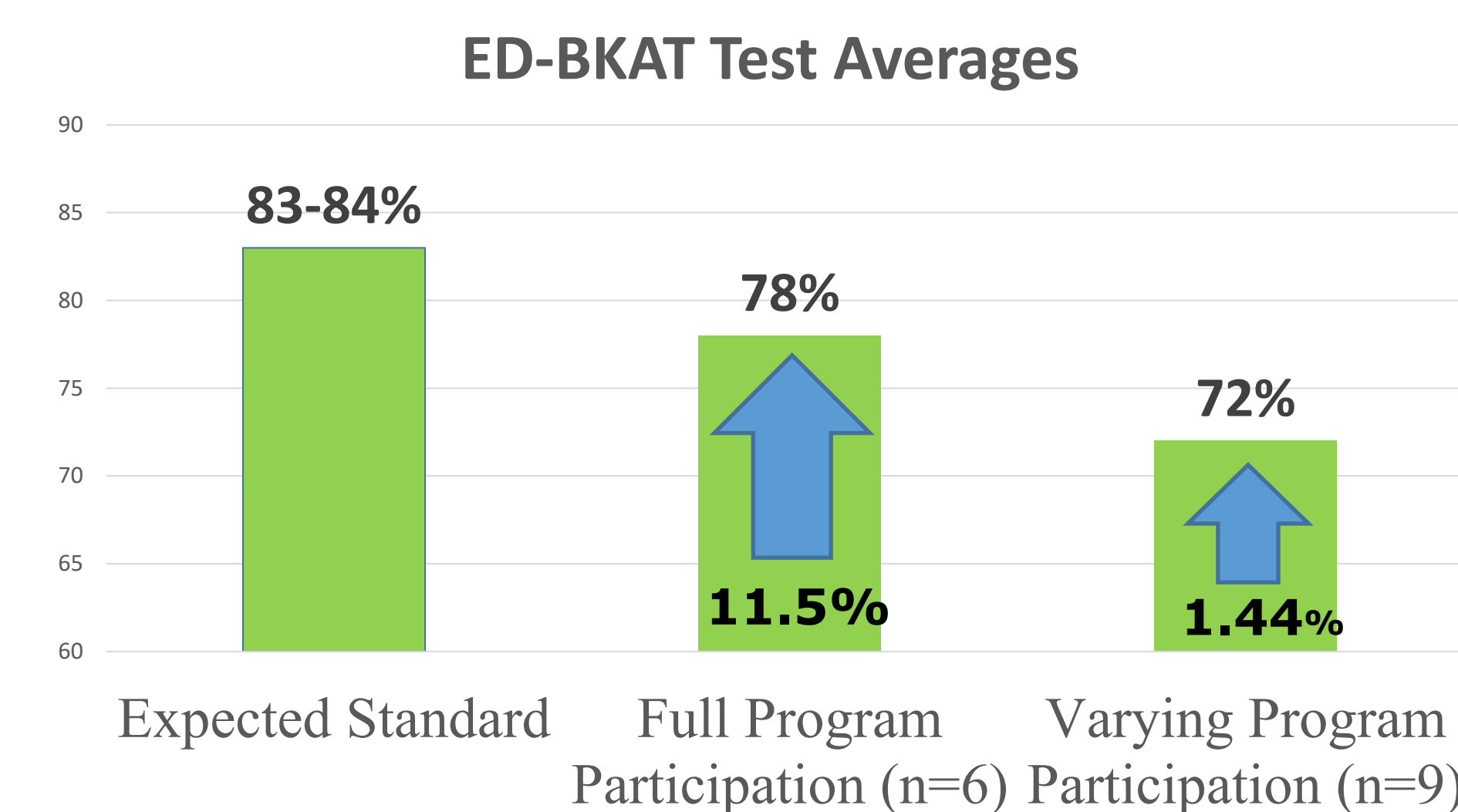
**Post-program** 74% (9-months experience)



↓ Nurses with full CC-TTP program participation

## Competence Changes & Program Dosing

- Nurses who participated fully in all program components (n=6) had overall higher mean post-test scores and a significantly greater increase in post-test scores (78.33%, SD=4.86; pre and post-test mean delta of 11.5%, SD=9.14), compared to nurses with varying amounts of program participation (n=9, 71.67%, SD=8.08; pre and post-test mean delta of 1.44%, SD=2.96).



### 2022 vs 2023 New Grad Confidence Changes

- Program participants reported higher overall knowledge and confidence levels regarding their ability to care for critically ill ED patients, compared to the past nurse graduate cohorts
- Nurse residents orienting to ED in March of 2021 (prior to program) and nurse orienting in March of 2022 (who participated in CC-TTP program) were asked to rank the following statements at 1 year experience from:

1 = "Strongly Disagree" to 5 = "Strongly Agree"

- ☐ "I feel confident in my skills to care for critically ill/emergently decompensating patients."

- Non-Program Participants (n=6,  $\bar{x}$  = 3.17)
  - 17% "Agree"
- CC-TTP Program Participants (n=13,  $\bar{x}$  = 3.85)
  - ★ 77% "Agree" or "Strongly Agree"

- ☐ "I am knowledgeable about the disease process/pathophysiology of the patients I care for."

- Non-Program Participants (n=6,  $\bar{x}$  = 3.33)
  - 33% "Agree"
- CCTTP Program Participants (n=13,  $\bar{x}$  = 3.92)
  - ★ 85% "Agree" or "Strongly Agree"

## CC-TTP Program Summary

- Meets staff requests for additional critical care learning opportunities → empowering RNs < 2 years of experience to competently care for critically ill patients
- Increase new nurse exposure to critically ill patients earlier → leading to increased knowledge and confidence levels among new nurses in providing care to critically ill ED patients
- Increase new nurse job satisfaction, decreasing burnout

### Implications for Practice

- Findings from this project suggest that a foundational provision of critical care education and exposure opportunities through a CC-TTP program, critical care experience, competencies, and confidence can be acquired among inexperienced ED nurses
- Tasking inexperienced ED nurses to care for increasingly acute and critically ill ED patients requiring ICU level or critical care nursing will require continued educational support and additional exposure to critical care training.

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