

# Enhancing Self-Efficacy for Emergency Nurses in the Event of Nonaccidental Trauma: A Quality Improvement Project

Jenna Spencer BSN, RN, CPEN; Kimberly McIltrout, DNP, CPNP, CWOCN, CNE, FAANP, FAAN; Erin Spaulding, PhD, BSN, RN; Nicole Kalinowski, MSN, RN, AGCNS-BC



JOHNS HOPKINS  
SCHOOL of NURSING

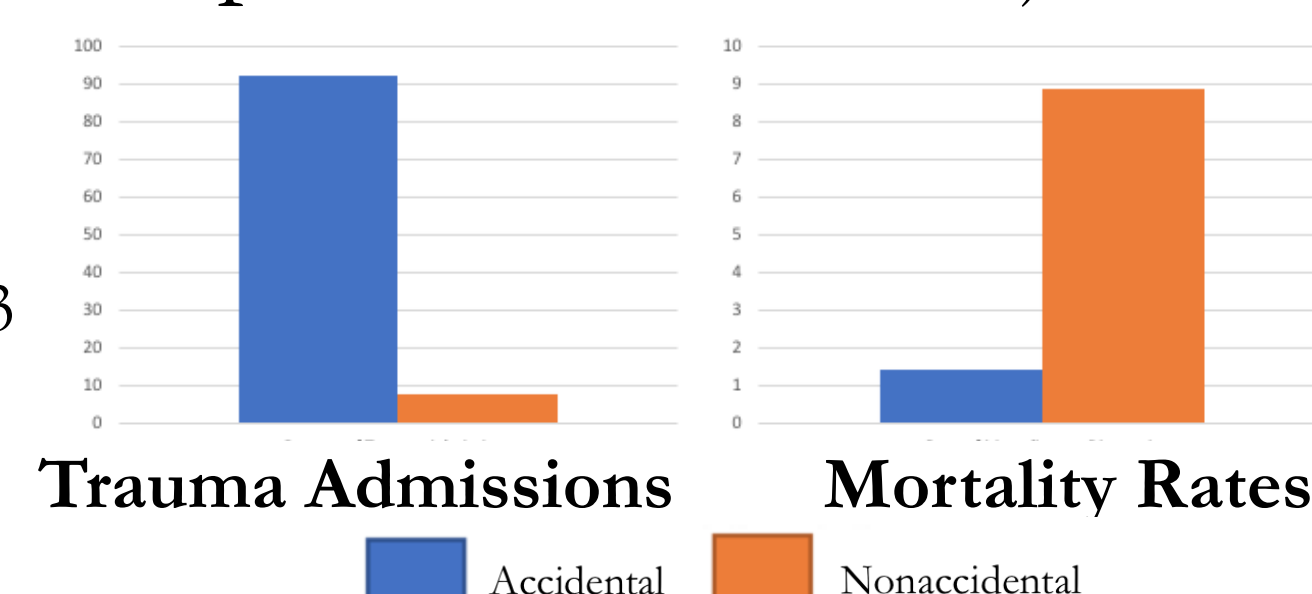
## Introduction

### Nonaccidental Trauma Background

- Nonaccidental trauma (NAT) is a leading cause of childhood traumatic injury and death in the United States (US) <sup>1,16</sup>
- 48% child fatalities each year are related to physical abuse <sup>10</sup>
- Over 700,000 children are victims of abuse and neglect in the US annually <sup>14,26</sup>
- An estimated 1 in 4 children are victims of some form of child abuse or neglect in their lifetimes; 1 in 7 experienced it in the past year <sup>2,5</sup>



- In 2020, approximately 1,750 children died of abuse and neglect in the United States <sup>5</sup>
- Only 1/3 of NAT gets initially recognized in the emergency department and 1/4 of victims have had previous sentinel injuries that went unidentified <sup>2,4,17</sup>
- Escalating injuries are related to significantly higher mortality rates <sup>13</sup>



### Current State

- Inadequate NAT education, practice guidelines, and risk reduction
- Lack of nurse knowledge and confidence in their ability to identify potential victims of nonaccidental trauma
- No standardized approach to maintain proficiency
- No evidence-based, universal screening tool for pediatric abuse in the electronic health record triage narrator

## Purpose/ Aims

To **develop, implement, and evaluate** the effects of an interactive **educational module** detailing the screening and recognition of **nonaccidental trauma** in the **pediatric emergency department**

### To increase:

1. Nurses' self-efficacy in screening and identification
2. Nurses' knowledge of sentinel injuries, indicators, risk factors, and other concerns
3. Awareness throughout the health system



## Methods

**Design:** Quality Improvement initiative to virtually educate pediatric emergency nurses on key nonaccidental trauma elements with pre-/ post- intervention Likert-style self-efficacy & knowledge questionnaires

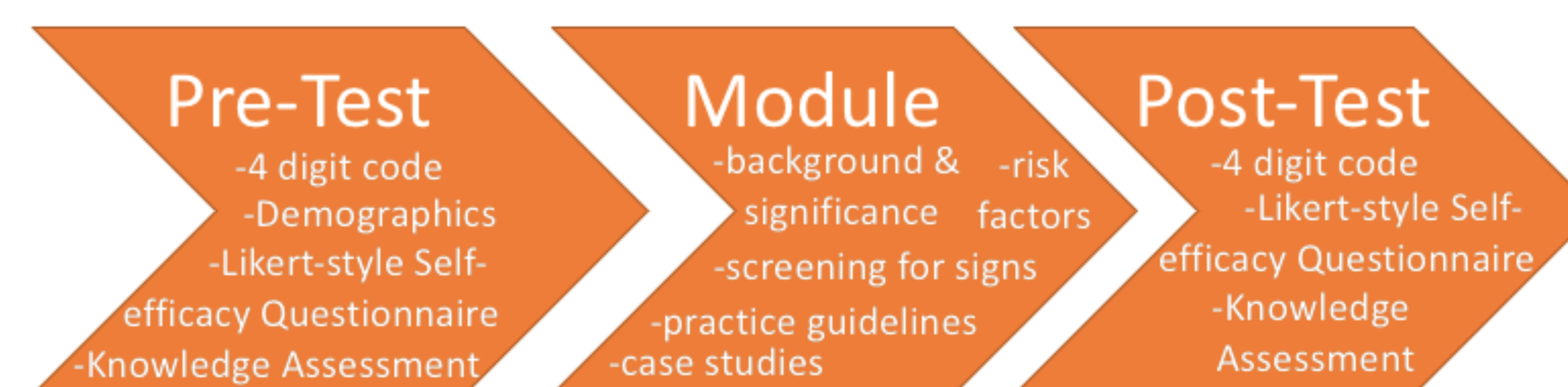
**Setting:** Pediatric emergency department at an urban academic medical center with a Level 1 trauma designation

**Sample:** 37 nurses

| Demographic characteristics            | (N = 37)    |
|--|-------------|
| Age, mean (SD)                         | 30.84 (7.8) |
| Years of nursing experience, mean (SD) | 6.83 (7.8)  |
| Years in pediatric ER, mean (SD)       | 3.86 (4.7)  |
| Prior NAT education, n (%)             |             |
| Yes                                    | 14 (38)     |
| No                                     | 23 (62)     |
| Trauma trained, n (%)                  |             |
| Yes                                    | 21 (57)     |
| No                                     | 16 (43)     |
| Gender Identity, n (%)                 |             |
| Male                                   | 4 (11)      |
| Female                                 | 33 (89)     |
| Other                                  | 0 (0)       |
| Prefer not to say                      | 0 (0)       |

ER=emergency room  
SD=standard deviation

### Intervention and Procedures:



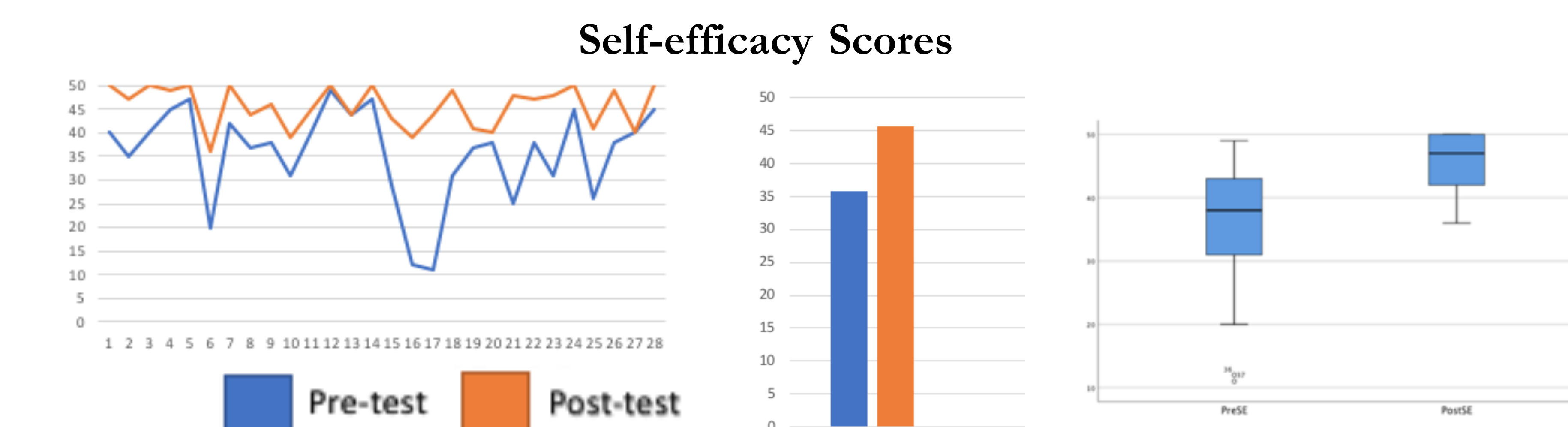
**Data Collection:** Summary scores were calculated at two timepoints during this 12-week project via anonymous Qualtrics surveys

## Limitations

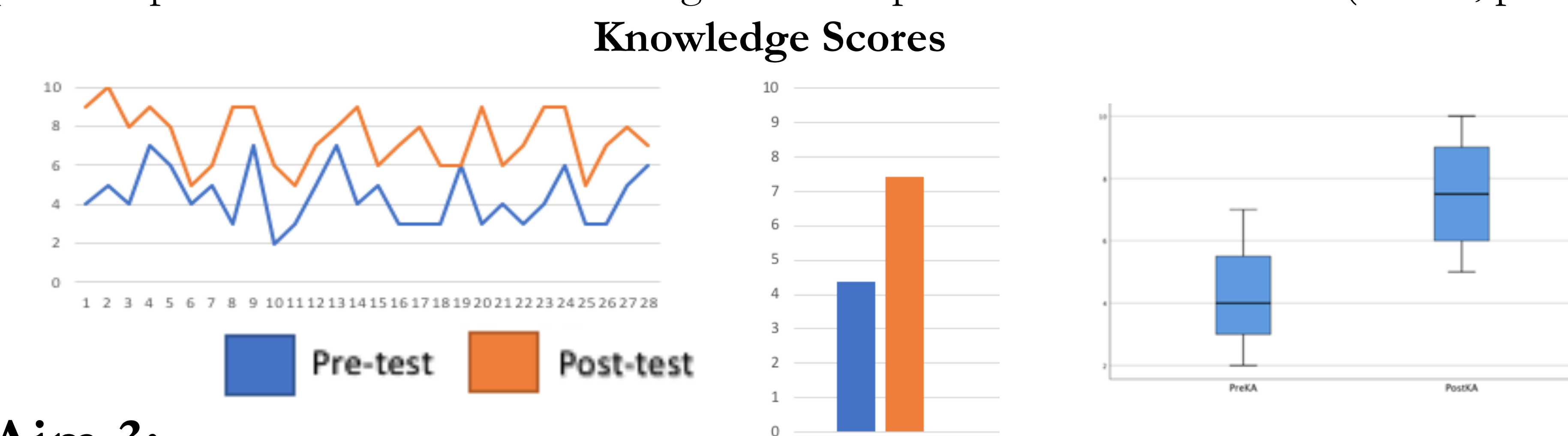
- **Virtual education:** lacks essential team building aspects, live discussion, time for feedback
- **Pre/post-test design:** threats to internal validity, response shift bias, overestimation, hints to search for answers in module
- **Time frame:** too short to assess for lasting affects and application of concepts learned

## Results

**Aim 1:** The pre-test self-efficacy scores were moderate with an average score of  $35.75 \pm 9.9$ . At post-test, scores were high with an average score of  $45.68 \pm 4.3$ . The mean difference in scores from pre- to post-test increased significantly by  $9.93 \pm 8.2$  ( $t=6.45$ ,  $p<.001$ ).



**Aim 2:** Initially, knowledge summary scores were low with an average score of  $4.39 \pm 1.5$ . At post-test, scores were high with an average score of  $7.43 \pm 1.5$ . The difference in scores pre- and post-intervention revealed a significant improvement of  $3.04 \pm 1.7$  ( $t=9.39$ ,  $p<.001$ ).



### Aim 3:

- Clinical Significance
- Numerous stakeholders, nursing leaders, educators, clinical nurse specialists, and interdisciplinary team members were made aware of this project and support advancement

## Conclusion

### Main Findings:

- Significant improvement in nurses' self-efficacy and knowledge of nonaccidental trauma recognition in the emergency department
- Highlights the importance of implementing formal education to increase awareness and guide identification of victims of nonaccidental trauma

**Implications:** These findings can serve as a foundation for additional initiatives that draw attention to nonaccidental trauma and educate professionals in a variety of settings.

