

## **Understanding the Effects of Secondary Traumatic Stress of Emergency Nurses and the associated patient outcomes.**

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### **BACKGROUND/ GOALS AND AIMS**

In the fast-paced environment of the Emergency Department (ED), nurses are often tasked with caring for multiple patients at one time that easily decompensate and progress from sick or injured, to critically ill within a matter of minutes. The high stress placed on the nurse is suspected to perpetuate the missing of imperative clinical cues which could be mitigated early and prevent the patient from declining. This high-pressure environment, coupled with the missed cues and deterioration of patients is thought to cause traumatic experiences for the ED nurse progressing to burnout, compassion fatigue, and Post-Traumatic Stress Disorder (PTSD).

Secondary traumatic stress is associated with the emotions and behaviors of people who care for others that have experienced a traumatic event. The emotional effects of the secondary exposure often mimics the effects seen in the individual who experienced the trauma directly. These emotional effects are experienced by ED nurses every day, and can have psychological effects leading to PTSD, burnout, and compassion fatigue. While ED nurses never back away from the care of any patient, the question remains as to what we are doing to limit the exposure to this occupational risk. The Purpose of this pilot study is to explore the connection between the high stress environments of the emergency department and missed clinical cues of patient deterioration to the development of secondary traumatic stress and PTSD among ED nurses.

The goals and specific aims of this Deep South Center ERC funded pilot project include the following:

1. Determine the impact of a simulated high stress work environment on the recognition of clinical cues of patient deterioration among junior ED nurses.
2. Determine the impact of the high stress environment and missed clinical cues on the development of secondary stress, burnout, compassion fatigue, and PTSD among junior ED nurses.

### **Methods**

In order to determine the impact of a simulated high stress work environment on the recognition of clinical cues of a patient deterioration, 13 nurses with less than five years nursing experience and 5 nurses with between five and ten years of nursing experience completed the simulated activity. The research team consisted of 6 faculty members, 2 undergraduate nursing students, and one outside consultant with collections taking place

at the Capstone College of Nursing simulation center. Participants were recruited from the local regional medical center for the study. Following the completion of the simulation, participants completed an evaluation of the simulation experience with a combination of quantitative data and qualitative data for analysis. Participants were recruited from the simulation groups as well as through social media efforts. Currently 10 qualitative interviews have been completed.

#### Current Results

**Aim 1:** Determine the impact of a simulated high stress work environment on the recognition of clinical cues of patient deterioration among junior ED nurses.

-No evidence of difference was noted in the recognition of signs of deterioration of the intended patient. However, critical thinking in the care of all patients involved in the simulation was noted as a deficit.

**Aim 2:** Determine the impact of the high stress environment and missed clinical cues on the development of secondary stress, burnout, compassion fatigue, and PTSD among junior ED nurses.

-Qualitative data is currently being analyzed for common themes. Current data is indicating high levels of burnout, stress, and signs of the development of PTSD among all nurses interviewed.

**New parameter.** While the time to recognition of clinical deterioration was not noted, a lack in clinical judgement was noted. Multiple participants had medication errors or gave medications without regards to changing hemodynamics.

#### PROJECT MILESTONES

- Through this project a framework was develop complex simulations to be used with nurses practicing in critical care areas.
- Secondary stressors give indication of a lapse in critical thinking and clinical judgement among emergency nurses. This was seen in nurses with less than 5 years' experience and replicated in nurses with between 5- and 10-years' experience.
- The additional stressors of the emergency department add to mistakes made by the emergency nurse. These mistakes potentially have detrimental outcomes for the patients but show mental health concerns for the nurse.

#### NEXT STEPS

##### **Plans for presentations, publications, and dissemination of findings:**

- Two manuscripts are being developed currently. One exploring the impact of the secondary stressors on the outcomes of the patients they are caring for. The second paper is exploring the lived experiences of the emergency nurse, the development of PTSD, and coping strategies utilized by emergency nurses.
- Our team has presented the findings of the simulation study locally and will be presenting at the SERRS conference in Chapel Hill.
- Abstracts are being prepared to present the findings through the ENA University.