The goal of this quality improvement project was to provide an educational program on an early warning scoring system (EWSS) to students enrolled in the University of South Florida (USF) Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) program. Improvements in knowledge of an EWSS tool, confidence in its application, and ability to identify signs of early patient clinical deterioration, as well as attitudes towards its implementation in advanced practice and impact on patient outcomes were then evaluated. Perceptions and attitudes related to how it will support the APRN, nursing staff, and reduce adverse events were also assessed in a pre- and post- survey structure.

### Background

- According to the U.S. Department of Health and Human Services (HHS) (2018) & the Office of Inspector General (2010), nearly 1 in 5 hospitalized patients experience an adverse event and almost 45% of these adverse events were distinctly or possibly preventable.
- Several studies demonstrate inpatient cardiac arrest was preceded by many hours of physiological derangement (8-72 hrs) (Royal College of Physicians, 2017).
- In 2012, the Royal College of Physicians (RCP) & National Health System (NHS) developed a standardized EWSS, called the National Early Warning Score (NEWS); an updated version, called the National Early Warning Score 2 (NEWS2) was introduced in 2017. (Royal College of Physicians, 2017)
- Studies have shown EWSS protocols and tools to be useful in identifying patients exhibiting physiological alterations that are consistent with clinical deterioration, however their efficacy can be limited by inconsistent application by nurses and providers.
- There is an insufficient amount of literature available toward the attitudes and confidence in the use of EWSS by nursing & advanced practice providers on the perceived benefit to clinical practice.

### Methods

**Design**
- Pre- and post-intervention evaluation design
- Survey data collected at baseline regarding knowledge and comfort level in using an early warning system in acute care
- 60-minute Blackboard Collaborate EWSS didactic session with Q&A
- Survey data post EWSS blackboard collaborate session

**Sample**
- 21 AGACNP students at USF completed the baseline pre-survey.
- 15 AGACNP students attended the blackboard collaborate EWSS didactic session and completed the post-survey

**Setting**
- University of South Florida College of Nursing via blackboard collaborate

### Results

- **Figure 1. Mean scores of pre- and post-intervention outcome measures**

  - **Intent to Apply Knowledge of an EWSS in Clinical Practice**
  - **Better Utilization of Clinical Resources**
  - **APRN’s Influence on Patient Outcomes**
  - **Confidence in Applying an EWSS Protocol**
  - **Confidence in ability to Implement Change**
  - **EWSS Impact on Patient Outcome**
  - **EWSS Benefit to Apps**
  - **Confidence in Using an EWSS**
  - **Impact of an EWSS education session on patient identification**
  - **Usefulness of EWSS Knowledge**
  - **Understanding the Physiologic Parameters of an EWSS**
  - **Confidence in Calculating an EWSS Score**
  - **Understanding of an EWSS Protocol**
  - **Confidence in Caring for Deteriorating Patient**
  - **Confidence in Identifying Clinical Decline**

### Discussion

- The use of an EWSS is not used in every institution, however the concepts included in the scoring system can be adapted for the AGACNP as they are confronted with the patient who is exhibiting signs of clinical deterioration.
- An EWSS is a useful clinical severity index tool that is calculated using less clinical variables than other severity assessment tools (i.e. APACHE IV & SOFA), as well as being an effective screening tool for early clinical decline outside of the intensive care unit (ICU).

### Implications for Practice

- Education increased participant’s confidence in their ability to identify and care for a clinically deteriorating patient
- Participants viewed an EWSS tool as a beneficial resource to APP practice that would improve patient outcomes
- Largest improvements were in participants confidence in utilizing an EWSS, knowledge of an EWSS, and calculating a score

### Next Step

- An EWSS can be a useful tool for future APRN practice & can be utilized by the APRN to identify patients at risk for clinical decline and across various levels of care in the hospital setting.
- AGACNP can disseminate knowledge of an EWSS to improve clinical pathways and protocols in the hospital setting

### Acknowledgments

I would like to personally thank Dr. Marcia Johansson for her continued support and guidance throughout the DNP program and this project. I would also like to thank the University of South Florida & the AGACNP students who participated in this project.

---

**References**