

# **DO YOU SEE WHAT I SEE?**

## **STANDARDIZING NEUROLOGICAL ASSESSMENT IN AN ADULT NEURO ICU**

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### **Purpose**

The purpose of this evidenced-based practice (EBP) project was to determine if implementing a standardized assessment improved detection of neurological deficits in patients with actual or increased risk of stroke.

### **Background**

The Adult Neuro/Trauma ICU at Stanford cares for neurological, neurosurgical, and traumatic brain injury patients who are at a heightened risk for stroke. Subtle neurological changes in this population can be indicative of acute complications; therefore, it is important to have an accurate tool that documents patient neurological status, neurological changes, and clearly communicates this information to the healthcare team. Currently, Stanford ICU does not utilize a standardized neurological assessment tool. The National Institute of Health Stroke Scale (NIHSS) is a valid and reliable assessment tool, and is identified as the gold standard in best practice guidelines for the assessment of stroke. The NIHSS assigns points for deficit severity with a total range of 0-42 points. The NIHSS was chosen as the standardized assessment tool for this evidence-based practice project.

### **Methods**

Baseline data was collected on the components of the Stanford ICU neurological documentation and time required for assessment (n=9). Volunteer ICU nurses (n=13) completed the NIHSS on-line certification course. Post certification, each nurse completed a neurological assessment using the NIHSS on a selected stroke or potential stroke patient. Each patient (n=10) was independently assessed twice using the NIHSS by two different nurses then, their total NIHSS scores were compared. Additionally, the independent NIHSS findings were compared to the neurological assessment documented the previous hour.

### **Results**

In 10 patients, a total of 14 deficits were documented in the neurological assessment of the previous hour using the SHC documentation. In contrast, the NIHSS identified 32 patient deficits: 60% of total NIHSS patient scores were identical, 30% differed by 1 point, and 10% by 2 points. Average length of time to complete the NIHSS was 7.23 minutes (range 4.39-14.53). This compared to an average of 2.9 minutes (range 2.47-3.45) to complete Stanford ICU assessment.

### **Conclusion**

More patient neurological deficits were identified using the NIHSS versus the current Stanford ICU assessment approach. Challenges to implementing the NIHSS include: increased time required to conduct NIHSS assessment, updating the electronic medical record, and providing staff support throughout implementation process. Based on this project, use of the standardized NIHSS scale could greatly improve the identification of patient neurological deficits and thus lead to improved patient outcomes.

## **References**

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**Key Words:** Nursing Neurological Assessment, Best Practice guidelines for stroke assessment, NIHSS