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# Oregon Region Standard Stroke Neurological Assessment Utilizing AACN Synergy Model

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## Background / Purpose

- Background:** Best practice guidelines recommend using standardized valid assessment tools to trend neurological assessment of acute stroke patients. Stroke experts of a large multicenter stroke program and nationally recognized accrediting bodies for stroke certifications have identified Glasgow Coma Scale (GCS) as inadequate for quickly trending a patient's neuro status after IV alteplase (t-PA) and/or thrombectomy.
- Purpose:** Develop a stroke neurological check that is quick to perform, more complete than a GCS, and provides a snapshot of patient status including original neuro symptoms.

## Methods

- Stroke program coordinator nurses and clinical experts from the Oregon region collaborated, conducted literature reviews, and developed a recommendation for a new standard quick stroke neuro assessment check.
- The new quick stroke neuro assessment check or Stroke Neuro Assessment by Providence (SNAP) requires 4 major steps:
  - Step #1 Level of consciousness defined as NIHSS 1a, 1b, 1c, or GCS
  - Step #2 Pupil reactivity to light
  - Step #3 Movement of extremities defined as NIHSS 5a, 5b, 6a, 6b
  - Step #4 Trending patients original stroke symptoms
- Throughout development of standard work flow for quick stroke neuro assessment checks or SNAP we applied the AACN Synergy Model combining stroke patient characteristics, health care environment, and nurse competencies.
- As a professional model of care, we incorporated the AACN Synergy Model to standardize RN education tools for implementation throughout the ED, critical care, and stroke units.
- SNAP is appropriate for acute ischemic strokes (post alteplase and/or thrombectomy), head bleeds (ICH & SAH), post neuro procedure monitoring, and as directed by stroke neuro check/assessment orders.
- The synergy between RN training and competency with the stroke population (including NIHSS) and matching the healthcare environment optimized adoption of a new standard workflow.
- Ongoing electronic health record optimization to harmonize environment of documentation reinforced RN workflow with stroke population.

## Results

- One certified comprehensive stroke center (CSC) and three certified primary stroke centers (PCS's) implemented SNAP in various stages within a 9 month time period.
- Multiple education methods were used including:
  - 1:1 staff education (Figure 1, 2, and 3)
  - Laminated tip sheets which include Epic (electronic health record) tips (Figure 2)
  - Computer sticker reminders
  - Department safety huddle presentations (Figure 1 and 2)
  - Staff meetings, stroke specific classes
  - Continuous quality improvement feedback aimed at improving nurse competency
  - Ongoing electronic health record (Epic) enhancements to harmonize environment of documentation with RN workflow (Figure 2)
  - Developed standard education using HealthStream® for Providence System
  - SNAP pen light with the 4 steps outlined (Figure 3)
  - Communication tools during rollout using SBAR (Situation, Background, Assessment, Recommendation)

## Conclusions

- The definition of a quick stroke neuro assessment check continues to be controversial.
- Successful multicenter stroke program development and implementation of SNAP through AACN Synergy Model, meets regulatory and practice requirements as a standard quick stroke neuro assessment check.
- Applying AACN Synergy Model creates standard work for standard stroke nursing care.

## Contributors

- Providence Saint Vincent Medical Center (CSC), Providence Portland Medical Center (PSC), Providence Willamette Falls Medical Center (PSC), Providence Medford Medical Center (PSC)

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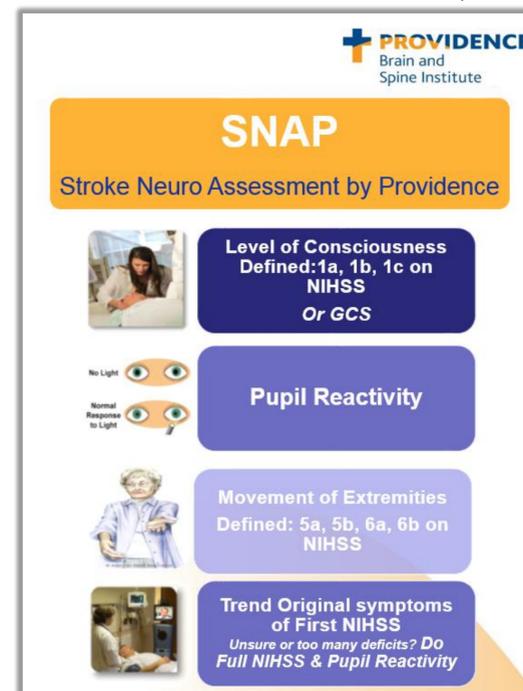


Figure 1. SNAP visual laminated tool

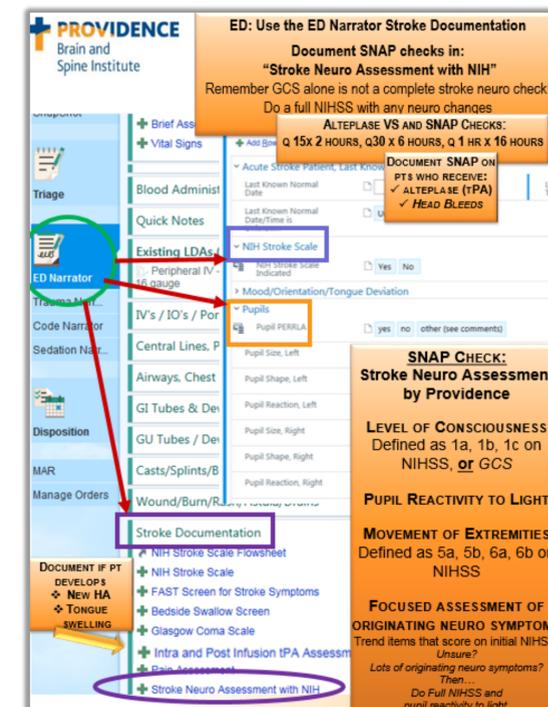


Figure 2. Epic tip sheet



SNAP: STROKE Neuro Assessment by Providence  
Level of Consciousness: 1a, 1b, 1c of NIHSS  
Pupil Reactivity  
Movement of Extremities: 5a, 5b, 6a, 6b of NIHSS  
Trend original symptoms of first NIHSS

Figure 3. SNAP pen light