Adding neurological insult to injury: do neuro checks contribute to post-stroke delirium?

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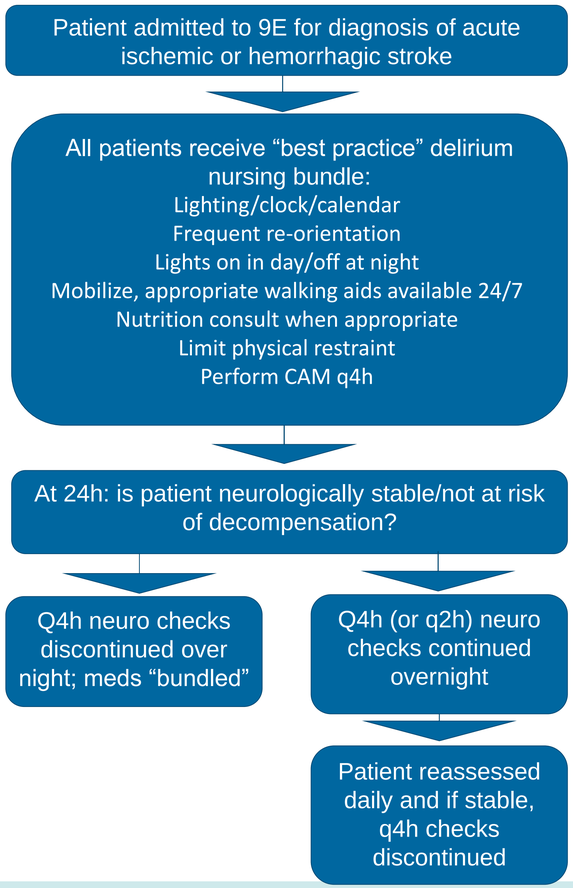
ABSTRACT

Acute stroke is one of the most common causes of neurological presentation to the hospital and carries significant morbidity and mortality. Previous studies have shown that approximately 25% of patients with stroke will develop delirium during hospitalization. Delirium in stroke patients leads to poorer long-term outcomes; specifically, patients tend to have a higher 28-day modified Rankin scale (mRS), higher mortality, significantly longer length of stay, increased odds of developing long-term cognitive impairment including dementia, and increased odds of discharge to a nursing home or institution. This study describes the incidence of delirium in the acute stroke population at a comprehensive stroke center and seeks to decrease this rate through a stroke-specific care bundle including reduction of overnight neuro checks.

GOAL

Decrease the incidence of post-stroke delirium on patients admitted to 9E with a diagnosis of acute stroke by 10%

DESIGN



RESULTS

	Pre-intervention (September, October, November) N=51	Post-Intervention (December, January) N=39
Age	66	69
Percentage of patients initially admitted to ICU	18%	**35%**
Percentage ICH	14%	18%
Average mRS on admission	1.3	0.74
Average mRS on discharge	2.1	2.5
Average NIHSS on admission	5.3	**7.8**
Average NIHSS on discharge	4.4	**6.2**
Percentage CAM positive	17.6%	**33.3%**
Percentage CAM positive with diagnosis of ischemic stroke	15.9%	**34.4%**
Of CAM positive, percentage positive on arrival	97%	84%

BARRIERS

- Limited number of patients included in analysis given restriction on participating unit and limited time to collect data
- Differences in pre/post intervention patient demographics: level of severity, need for ICU, discharge NIHSS
- Unclear how many patients received intervention

NEXT STEPS

- Expand pre-intervention data
- Expand patient population to other floors at MUSC where acute stroke is managed, including 9W, 8W, and the NSICU
- Further identify the potential safety risk of neuro check discontinuation
- Develop an algorithm to identify high-risk patients and Epic intervention to allow for automated or semi-automated discontinuation of neuro checks
- Expand population outside of acute stroke, ie general neurology patients

REFERENCES

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