Effective, Efficacious, and Safe Nurse Driven Dysphagia Screening

Robin Fry[1], BSN, RN, CNRN; Marie Wilson[1,2], BSN, RN, CCRN, CNRN; Carey Heck[1] MS, MSN, RN, ACNP-CS, CCRN, CNRN

[1]Department of Nursing, Thomas Jefferson University Hospital, Philadelphia, PA; [2]Jefferson School of Nursing, Philadelphia, PA

INTRODUCTION

With 795,000 people suffering strokes and more than 140,000 deaths annually, stroke is the third leading cause of death in the United States.

Dysphagia screening can reduce stroke complications, such as aspiration, and can decrease delays in nutritional support. Decreasing nutritional support delays can improve patient outcomes.

BACKGROUND & HYPOTHESIS

- 42-67% of stroke patients may experience dysphagia
- Dysphagia screening has been shown to
  - Improve patient safety
  - Prevent complications such as pneumonia
  - Decrease the time a patient spends NPO
- Up to 50% of stroke survivors are malnourished 3 weeks after the stroke event
- Optimum nutrition improves patient outcomes and ultimately quality of life

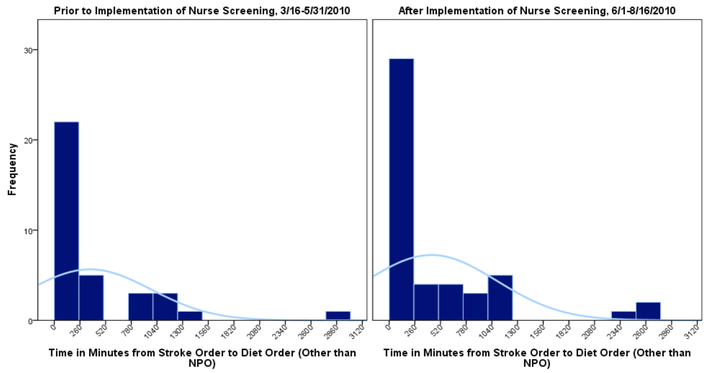
The purpose of this study was to determine if a nurse driven dysphagia screening protocol was effective, efficacious, and safe when compared to dysphagia screening traditionally done by physicians.

This study hypothesized that the nurse driven dysphagia screen resulted in shorter times for diet orders (reducing time to nutrition).

METHODS & RESULTS

Stroke patients admitted 3/16 - 8/16, 2010 were included in this study. Admission, demographic, stroke and diet order information were queried from patient records. Files were merged using patient account numbers. Data were de-identified prior to analysis. Two samples of patients were created based on the stroke screen (by physician or nurse). The two samples were assessed to ensure demographic similarity. In both groups, approximately 50% of the patients were minority and average ages were similar (61.49 and 65.83 years).

For both groups, the data were highly skewed indicating time to diet order was relatively short for about 50% of the patients.



The mean time to first diet order was 362.03 minutes (6 hours) prior to the implementation of the nurse led screen. After the implementation of the nurse led screen, the mean time to first diet order was 427.02 (7 hours). Ranges and standard deviations were similar.

Ranks

		N	Mean Rank	Sum of Ranks
Time in Minutes from Stroke Order to Diet Order	Prior to Nurse Screening 3/16-5/31/2010	35	38.21	1337.50
	After Nurse Screening 6/1-8/16/2010	48	44.76	2148.50
	Total	83		

RESULTS

A Mann-Whitney *U* test was performed to test the hypothesis. Results were not in the expected direction and were not significant, z = -1.223, p = 0.221. The mean rank prior to the implementation of the nurse led screen was 38.21, smaller than the mean rank after the nurse led screen of 44.76.

Statistical Analysis

	Time in Minutes from Stroke Order to Diet Order
Mann-Whitney U	707.500
Wilcoxon W	1337.500
Z	-1.223
Asymp. Sig. (2-tailed)	.221

DISCUSSION & FUTURE RESEARCH

There was no significant difference in time to nutrition for the nurse and physician dysphagia screenings. Study limitations include:

- Pre-study campaign to improve physician compliance with TJC mandate of dysphagia screening
- Using time of stroke order set placement versus actual time of stroke screen
- For RN screens, a lag in time might have occurred until diet order was placed by physician

Future research might include:

- Collection of NIHSS (NIH Stroke Scale) data to equate groups in terms of stroke severity
- Inclusion of hemorrhagic stroke population
- Sampling prior to 4/2009 (pre-TJC compliance campaign)

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