

EFFECTIVENESS OF A MULTIMEDIA-BASED DYSPHAGIA TRAINING PROGRAM FOR STAFF NURSES ON A PROGRESSIVE CARE UNIT

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Purpose

Can a multimedia-training program for an evidence-based swallowing screening test (SST) improve the knowledge and competency of staff nurses and increase the screening rate of stroke patients on a progressive care unit?

Background

Of the 700,000 Americans who experience a stroke annually, there is a 3-fold risk of mortality when diagnosed with pneumonia (PNA). Current evidence suggests that post-stroke PNA is attributable to the aspiration of oral secretions or other intake in the presence of dysphagia. This risk is reduced by two-thirds when nurses are educated to use a screening tool.

Methods

A review of the literature evaluated the validity and reliability of tools used for dysphagia screening, and best practices for educating adult learners. The elements of assessment found with higher statistical performance measures (sensitivity, specificity, and reliability) were included in the SST. The theoretical underpinnings of "Diffusion of Innovations" by Rogers were applied in the development of the educational program. Current practice and post-intervention screening documentation were investigated through retrospective chart audits.

A multimedia-educational program was developed with expertise from an interdisciplinary team. Incorporated within a 2-1/2 hour PowerPoint presentation was an 11-minute teaching video utilizing staff nurses to demonstrate the SST. The video, slides and a downloadable version of the SST were posted to a website. Printed visual aids were also made available throughout the unit.

An anonymous, cross-sectional, survey was conducted pre and post-training to evaluate the knowledge and competency of staff nurses in dysphagia screening. All the data was statistically analyzed.

Results

The RNs employed on the Progressive Care unit at SFGH were the target population of this study. A baseline, online questionnaire was obtained with a 54% response rate (n=28). Seventy-six percent of RNs (n=40) received the training program on Dysphagia. The post-survey response was 33% (n=17).

Initially, 36% of nurses cited expertise as the primary barrier preventing consistent screening. Post-implementation, only 22% of nurses identified expertise as a barrier. On

average, post-training knowledge and competency increased from 72% to 92%. Also, 72% of nurses reported performing a screening at baseline, compared with 88% post-intervention. When nurses were asked to explain the role of the RN in dysphagia screening, role-oriented responses increased from 56% to 69%, and task-oriented responses decreased from 44% to 31%.

By adding assessment elements with higher performance measures to the SST, the overall values increased; sensitivity (74% to 75%), specificity (45% to 75%), and reliability (30% to 45%).

In less than 2 months post-implementation, the nurse-led SST reached the previous years' hospital benchmark of 67%.

Conclusion/Implications

This study suggests that a multimedia-based training program can improve the knowledge and competency related to dysphagia screening. Low response rate may be directly related to nurses uncomfortable with online communication and may have skewed the results. Remaining current with recent evidence and changing practice can improve patient safety and reduce morbidity. Further investigation should include an analysis of aspiration pneumonia, pre and post implementation. Challenges remain in disseminating practice changes to other inpatient units and maintaining competencies.

Keywords: Multimedia-based Dysphagia Training — Nursing staff — Competency

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