

Great Lakes Regional Stroke Network: Swallow Screening Project

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Purpose/Background

Data from the Paul Coverdell National Acute Stroke Registry programs in the Great Lakes Region showed dysphagia screening prior to any oral intake as one of the three lowest quality indicators. The Great Lakes Regional Stroke Network Quality of Care work group identified dysphagia screening as a quality improvement project for the region.

Objectives

The purpose of this study was:

1. To implement a regional quality improvement project to review current swallow screens in use
2. Develop regional expert consensus on the best bedside swallow screen for nursing to use in an attempt to standardize and improve dysphagia screening in the region.

Methods

A dysphagia subcommittee of the quality improvement work group was formed of speech language pathologists and nurses from the hospitals of varying sizes, credentials, and locations. Most were located in Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. All swallow screens in use by subcommittee members were presented and reviewed. Separately, a literature review was conducted identifying swallow screens that had been tested for reliability and validity.

Results

A comparison of all screens being used by work group members found that swallow screens varied widely from the use of a water test to others using multiple consistencies. Few had been tested for reliability and validity.

Similarities include:

- Water swallow test (31/35)
- Food as part of screen (15/35)
- Specifically mentioned done in emergency department (20/35)
- The majority of the screens were created through a partnership between speech language pathology and nursing which is consistent with findings in the literature as the best approach to dysphagia management.
- Many of the swallow screens and processes were developed when hospitals started to pursue The Joint Commission Primary Stroke Center certification.
- Everyone had speech language pathology (SLP) follow-up if the patient failed, however, many had SLP follow-up on all stroke patients, even if the patient passed the swallow screen. No one had speech language pathology coverage 24/7.

• The majority (74%) had a type of "Pre-screening" criteria. The most common components of the dysphagia pre-screen are:

1. Alertness (46%)
2. No dysarthria/slurred speech (58%)
3. No drooling/ability to manage secretions (77%)
4. Harsh, wet, gurgly, breathy voice (69%)
5. Weak cough (62%)

Bed Side Swallow Screen Comparison

Screening Tool	Frequency	Water Swallow Test	Food as part of screen
1	ADM, Change in status	Yes. sips	applesauce
2	ADM	Yes. sips	cracker
3	ADM, repeat if pt deteriorates	Yes. 1 tsp. x 3, half glass	No.
4	ADM In ED, repeat on neuro unit	Yes. 2 tsp, then sip from cup	No.
5	ADM & repeat 8 hr.	Yes. 1 tsp., sips	No.
6	ADM Repeat 8-12 hrs or am	Yes. 1 tsp., 30 cc.	bites of solid food
7	On unit	Yes. ice chips, sips, sips with straw.	No.
8	Start in ED, on unit screen repeated	Yes. Sips	No.
9	ADM	Yes. Ice chips 2-3 oz.	No.
10	ED or immediately after admission	Yes. sips	cracker
11	ED	Yes. 1 tsp., 3 sips	No
12	ED mostly.	Yes. thin, nectar-thick & honey-thick	puree, mechanical soft, regular
13	ED, repeated if change in status	Yes. sip, half glass	No.
14	ED or ADM	Yes. 3 oz.	No.
15	ADM, and beginning oral intake following a change from NPO status	Yes. sips, thick liquids	pureed solids
16	Every shift	No.	No
17	ED	Yes. sips	applesauce, banana, crackers, toast
18	Prefer ED but usually on floor	No. Juice instead	applesauce, graham crackers
19	Stroke	Yes.	applesauce
20	Prior to any oral intake	Yes. sips	pudding, graham cracker
21	ED, ADM	Yes. 5-90 ml	No.
22	ED. Repeated if change in status.	Yes. 30 ml	small bites
23	ADM	Yes. 1 tsp, 60cc	No
24	ED	Yes	No.
25	ED or ADM	Yes. 5 ml 3x	No
26	?	No.	No
27	?	No.	No
28	ED if PO meds ordered; otherwise on floor.	Yes. 3 oz.	Cracker
29	On floor. Repeated daily for patients that fail.	Yes. 1 tsp, 1 cup w/ straw	No
30	ED	Yes. 30 ml	No.
31	ED or ADM. Repeated if change in status.	Yes. tsp, cup	applesauce
32	ED. Not repeated.	Yes. ½ tsp., sips	Puree, cracker
33	ED preferred. Some on floor. Repeated if change in neuro status.	Yes. tsp, 3 oz., ice chips	Soft chewable item
34	ED or floor. As status changes.	No.	No
35	ED or floor.	Yes. sips	No.

Conclusion

We found a great deal of variability across the Great Lakes region in terms of methods of dysphagia screening. A regional approach to quality improvement was effective in developing consensus guidelines on dysphagia screening. A list of swallow screen considerations is in development for healthcare facilities to evaluate their swallow screen process. Other regions may want to consider approaching swallow screen process from a regional perspective as this measure is a struggle for many.