

**National Stroke Association**  
and the  
**Great Lakes Regional Stroke Network**  
present

**Swallow Screening, Performance  
Improvement and Stroke in the  
Great Lakes Region**



**Presented by:**

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General Health System



# GLRSN Dysphagia History

- **Feedback told us dysphagia was an issue.**
  - Hosted previous calls on dysphagia that were well attended.
- **Primary stroke centers in the Great Lakes Region also looking at dysphagia.**
- **Request went to list serve looking for volunteers to serve on this workgroup.**
- **Response was overwhelming: over 40!**
- **Mix of SLP, nursing**
- **Mix of hospital size**
- **Some Primary stroke center hospitals**
- **Some outside of Great Lakes region**
- **All participants shared their current swallow screen.**



# Participants presented...

- **When it was developed?**
- **Why it was developed?**
- **Who developed it?**
- **How was it tested?**
- **How is it working?**
- **Compliance?**
- **Documentation?**
- **Frequency?**
- **When is it conducted?**
- **Training?**
- **SLP Coverage/Hospital size.**
- **Anything additional?**



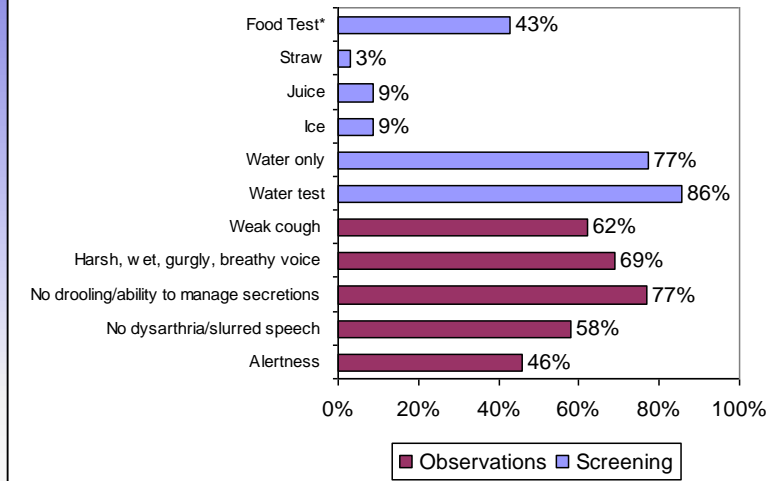
Photo provided by Bay Regional Medical Center



# Comparison Overview of Screens

Screening Tool	Population	Frequency	Water	Food	Mention Diet or Med Order	PSC? Ref?
(1) Adult Nursing Dysphagia Screen F.A.H.O. 1061 bed doc 93% of video assessment skills validation chart	Screens for delivery of oral medications, other patients	ADM, anytime pt diff swallowing doc tool	Sips	Applesauce	Yes - call Ev for all to posted	FSC Staff/SLP, staff Neuro unit tested with SLP
(2) Aurora St. Luke's Medical Center (Madison, WI) 670 beds stroke coord., validated food research diet sensitive, training SLP, 90% compliance, all pts. Seen SLP within 24 hr	First ED Fall SLP to see response any 9 hrs only for stroke pts, neuro ICU unit nurse goes to ED for swallow screen and NIHSS	ADM, doc: EMR	sips	cracker	Needed to eat: Does not to order	FSC Ref - EDU Ontario, Steele & Seltzer
(3) North Michigan Regional Hospital (Pawtucket, RI) SLP - trauma nurse, 200 beds, 90% doc, aspiration rate low	Stroke/TIA, all pts. ED nurse	ADM, repeat if pt deteriorates	1 tsp, w/ 3, half glass	no	Full call Ev app. Presentations, diet as ordered	FSC England research study
(4) Huron, Bedside Dysphagia screening Metro, SS 85% (lowest 50%), training SLP and assisted in coding tool, 100%	No differentiation, 1 <sup>st</sup> past assessment in ED, ED doc research 50 pts (27% found to have dysphagia) ED nurse talk 100% chart review, if not done in ed notified, before discharge screen + team to EMR, automatic consult to SLP, screen repeated on neuro unit	Adm. In ED, repeat in ICU, Floor status	2 tsp, then sip from cup,	First meal screen	Refer dry consult	FSC
(5) St. Vincent Health (Indianapolis, IN) 95-100% compliant, 600 bed,	Home nursing dysphagia screen, tested on neuro unit by SLP predictive values + +, in ED giving PO ASA then moved to rectally	Adm & repeat 8 hr if fails again SLP order	1 tsp., sips	observe swal.	NFOIV third call MD order for IV & SLP	FSC AANC literature SLP & nurses developed
(6) Bronson (Kalamazoo, MI) not lean	Adm. Repeat 8-12 hrs or am		30 cc	bites of solid food		FSC, Ref
(7) Saint Joseph Mercy Health System (Ann Arbor, MI) not lean			ice chips, glass			FSC
(8) Carolus Medical Center (Charlotte, NC) SLP 7 days, one call, 100% chart audit 90% best doc. Has been poor video training for nurse nurses, meeting to return item, Testing.	All stroke pt in ED,	Start in ED, all stroke, on unit screen repeated, use paper form now EMR	Sips, most difficult to coordinate and swallow so not into food.			FSC, multidisc nurse SLP
(9) Dysphagia screen WI, reviewed with SLP, 100% chart, 100% doc. Problem in ED with app ASA, 200 bed, training nurse preceptor	Ischemic stroke or head bleed prior to oral intake	Adm stroke pt and some post stab. Pts. Paper form	Ice chips 2-3 oz.	Monitor first meal		No, FSC
(10) Aurora West Allis Medical Center (West Allis, WI)	?	ED or immediately after admission	sips	cracker	?	Ref
(11) Adult Nursing Dysphagia Screen	All stroke pts	?	1 tsp., 2 sips		?	Yes
(12) Bloomington Hospital (Bloomington, IN)	?	?	1/2 cup, mechanical thick & honey-thick	puree, mechanical soft, regular	?	FSC
(13) Health East Care System (St. Paul, MN)	?	?	sip, half glass		?	?
(14) Adult Nursing Dysphagia Screen	?	?	2-3 cc		?	?
(15) Adult Nursing Dysphagia Screen	CVA, COPD, CHF, degenerative neuron disease, head & neck symp., poor coordination, >85%o, altered consciousness, dependent for oral feeding and oral care	ADM, and beginning oral intake following a change from NPO status	sips, thick liquids	pureed solids	?	Ref
(16) Adult Nursing Dysphagia Screen	?	?	✓	✓	?	?
(17) McLaren Regional Medical Center (Flint, MI)	?	?	sips	applesauce, banana, crackers, toast	?	Ref
(18) Adult Nursing Dysphagia Screen	Stroke pt., decreased level of consciousness, neuromuscular disease, post intubation, pt w/ tracheostomy or device that places them in position to aspirate (ie. halo vest)	?	6 oz juice	applesauce, Graham crackers	Yes	Ref
(19) Beaumont Hospital (Grosse Pointe, MI)	?	?		applesauce	?	

## Components used in swallow screening



\* All food test were in addition to the water swallow test.

\*\* Observation components are from the 74% of hospitals performing pre-oral intake observation. Reported n may be greater than 35 due screening tools that administer more than one substance or consistency.



## What we found

- The majority of the screens were created through a partnership between SLP and nursing.
- Developed for PSC certification.
- Everyone had SLP follow-up if the patient failed
- No facility had speech language pathology coverage 24/7.
- All facilities shared the same challenges with compliance, on-going education, and documentation
- This effort a welcome collaboration



## What we did.....

### **After all screens reviewed...**

- **Literature review**
- **Identified screens in the literature**
- **Developed consensus**
- **Hosted conference calls:**
  - Site reviewer from TJC to better understand the measure,
  - Creator of the TORBSST to better understand that screen and rationale,
  - Presented findings on a GLRSN quality of care teleconference
- **Follow up evaluation**



## Screen vs. Evaluation/Assessment\*

### SCREEN

- **Seeking signs and symptoms that suggest patient is at risk**
- **Quick, efficient, safe for patient at highest risk**
- **Does not give: physiology, merely provides information**

### EVALUATION/ ASSESSMENT

- **Provides physiological data**
- **In depth history**
- **Observation**
- **Considerable expertise by clinician**
- **Invasive**

Westergren, A. *Detection of eating difficulties after stroke: a systematic review*. International nursing review, 53, 143-149. Smith and Connolly. *Evaluation and treatment of dysphagia following stroke*. Topics in Geriatric rehabilitation, 19 (1), 43-59.



## Literature Review

- **Systematic Review of literature by members**
- **All completed the same review sheet**
- **Shared findings of article with group**
- **Bibliography created**
- **Continually updated with new information**
- **Focus on what the literature says**
  - Limited to stroke dysphagia
  - Particularly interested in levels of evidence



## Identified Screens in the Literature

- **Bedside Swallow Assessment**
- **Bedside Swallow Assessment EATS**
- **Burke Dysphagia Screening Test (BDST)**
- **Gugging Swallow Screen**
- **Kidd Water Test**
- **Massey Bedside**
- **Nishiwaki et al.**
- **Scottish Intercollegiate Guidelines Network (SIGN)**
- **Standardized Swallowing Assessment (SSA)**
- **Timed Test**
- **TORBSST©**



## Expert Consensus

- Maintain NPO until swallowing status is determined.
- Regular oral care. Oral care completed prior to dysphagia screen.
- Screen for swallowing status by team member that is licensed and trained in swallow screen protocol once patient is awake and alert.
- Swallowing assessment by speech language pathologist for all those who fail bedside screen.
- Where appropriate, feeding assistance or mealtime supervision by individuals trained in aspiration precautions.
- Education of patient and family regarding recommendations and feeding/swallowing plan of care.



## Future Directions

- Further definition.
- Development of a standardized tool.
- Correlation to an outcome measurement such as nutrition.
- Correlation to speech pathology evaluations.
- Hospitals need to continue to test, validate and modify their screening tool and process to establish reliability, validity, inter-rater reliability and then publish their results in peer related journals.
- A cost savings analysis on a bedside swallow screen should also be considered.
- Failure criteria
- Amount of water
- The location of the screen and who performs the screen also warrants further discussion.



## The Joint Commission Measure

**All core measures are endorsed by the National Quality Forum (NQF).**

The stroke set (10 measures) were submitted for their review in July 2008. NQF endorsed eight of the measures. They decided not to endorse STK-7 because the measure allowed the hospital to choose the dysphagia screening protocol. There are several evidence-based protocols available; however, there is lack of consensus as to a single, universal protocol that should be used by all. Therefore, the measure did not receive NQF endorsement. Clinically speaking, there is agreement that dysphagia screening is very important in the early management of the stroke patient. That has not changed and PSCs should continue the practice. At this time, there are no plans for development of a new dysphagia screening measure.





### GLRSN Swallow Screen Checklist\*

#### PART ONE: Your swallow screen

- |   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| 1. is evidence based (were external sources referenced when developed)?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. is validated (were swallow screen results compared to SLP swallow <u>eval</u> results)?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. published in the literature?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. begins with oral care?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. starts with behavioral observation? (cognition, postural control, speech/oral motor coordination and respiratory status)           | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. includes a progressive water swallow test?   | <input type="checkbox"/> | <input type="checkbox"/> |
| a. Controlled small sips of water (sps)   | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Single sips from a cup   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Multiple sips from cup (Does <b>not</b> use straws)  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. is conducted in the emergency department?  | <input type="checkbox"/> | <input type="checkbox"/> |
| a. is a part of your care pathway in the ED?  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. If not done in ED, patients are kept NPO including meds until screened on the inpatient unit?                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Criteria for completing screen clearly identified  |                          |                          |
| a. Upon arrival in ED   | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Change in <u>neurostatus</u> .   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. After admission to floor   | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. is included in standing orders?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. <u>completion</u> clearly documented in the patient's chart?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. <u>R</u> esults are clearly documented in patient's chart.  | <input type="checkbox"/> | <input type="checkbox"/> |
| a. if passed, diet is ordered.  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. if failed, kept NPO and SLP order solicited.   | <input type="checkbox"/> | <input type="checkbox"/> |
| c. if unable to assess on admission the reason is documented and the task to screen continues before the patient can take <u>go</u> . | <input type="checkbox"/> | <input type="checkbox"/> |

Last revised 02.15.10

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#### PART TWO: Your swallow screen training

- |  | YES                      | NO                       |
|--|--------------------------|--------------------------|
| 1. Is a <u>collaboration</u> between SLP and Nursing?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Includes a <u>teach</u> back opportunity? (formal training for the person conducting the screen with competency validated includes provider feedback) | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Is covered in nursing orientation?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Has an annual competency requirement?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is taught during unit orientation training?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Includes behavioral observations (cognition, postural control, speech/oral motor coordination and respiratory status)                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Includes signs of <u>dysphagia</u> .  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Observation of eating and drinking  | <input type="checkbox"/> | <input type="checkbox"/> |

If you answered "yes" to all of these questions, you are already using best practice strategies for swallow screening. Keep up the good work and share your successes. If you are interested in sharing your success and helping out hospitals do the same, please contact Angela at [bedworth@quc.edu](mailto:bedworth@quc.edu).

If you answered "no" to any of these questions, you may need to consider revising your swallow screen tool, and/or training process to include these items that were identified as best practices. Follow up with your speech language pathology department and refer to the screens published in the literature as well as the literature review (which can be found at: <http://www.uic.edu/ehs/igsh/inel/dysphagia.html>). You may also contact [bedworth@quc.edu](mailto:bedworth@quc.edu) for more information or to be matched with a hospital mentor.

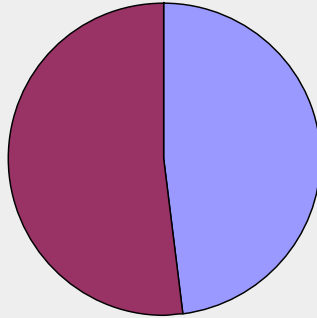
This online version checklist was developed by through open consensus of Great Lakes Regional Stroke Network Quality work group

Last revised 02.15.10

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# Follow Up Evaluation

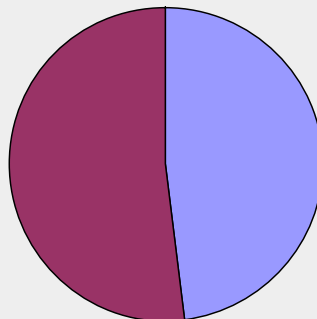
Did you make any modifications to your swallow screen as a result of participating in the GLRSN dysphagia work group?



□ Yes  
■ No



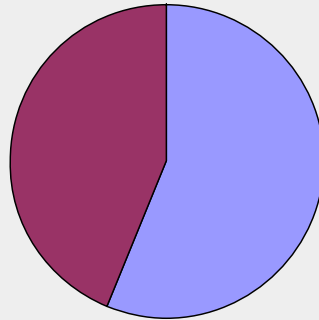
Did you make any changes to swallow screen process as a result of participating in the GLRSN dysphagia work group?



□ Yes  
■ No



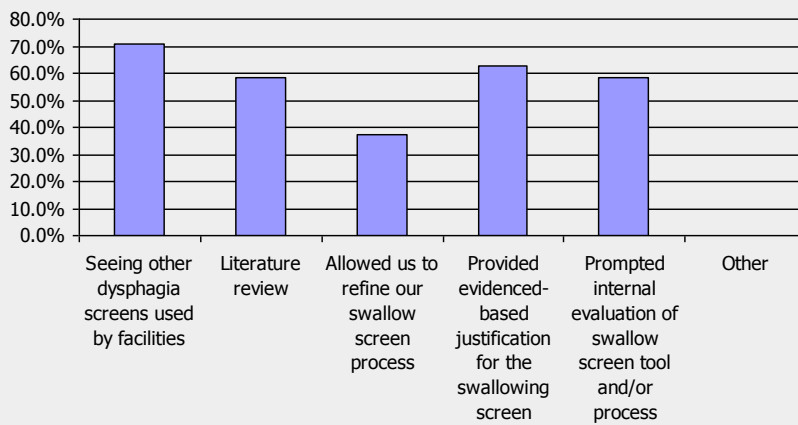
**Did you make any changes to your training process as a result of your participation in the dysphagia work group?**



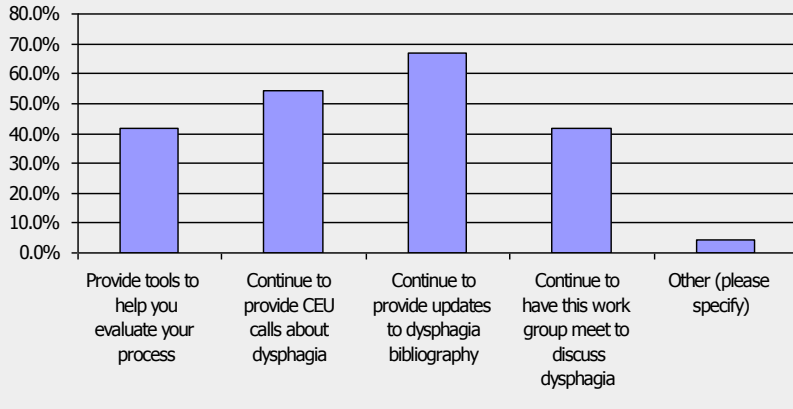
Yes  
 No



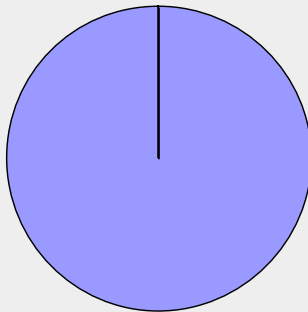
**What did you find most beneficial about this work group?**



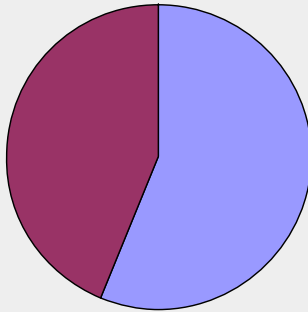
**What more could the GLRSN do to help you with your dysphagia screening process?**



**Will you still continue to monitor swallow screening in your facility even though it is not a TJC measure?**



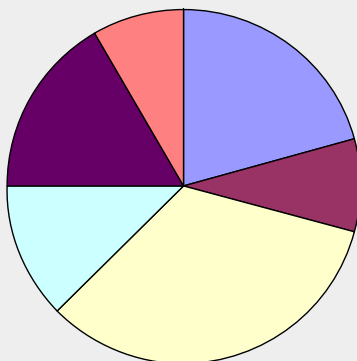
**Do you monitor the correlation of dysphagia screening with the rate of nosocomial pneumonia?**



■ Yes  
■ No



**Where are you located?**



■ Illinois  
■ Indiana  
■ Michigan  
■ Minnesota  
■ Ohio  
■ Wisconsin



## Resources

- Dysphagia Checklist
- Swallow Screen Assessments in the Literature
- Dysphagia Bibliography

**GLRSN** <http://glrsn.uic.edu> – main page

<http://www.uic.edu/depts/glstrknet/doc/dc.pdf>

**BrainWave**

<http://nationalstrokeSCN.ning.com/>

<http://nationalstrokeSRN.ning.com/>



## Resources

**To contact today's presenters:**

**Anne C. Hansen**

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**Jeanette Stebelton**

[JDStebelton@mgh.org](mailto:JDStebelton@mgh.org)



**SPECIAL THANK YOU!**

**Angela Hedworth**

and the

**Great Lakes Regional  
Stroke Network**



**Questions?**

**National Stroke Association Professional Members  
are invited to continue today's discussion on**

***BrainWave***

**Not a member?**

**Visit our website or contact us for information:**

**[www.stroke.org/memberships](http://www.stroke.org/memberships)  
[memberships@stroke.org](mailto:memberships@stroke.org)**



# **SAVE THE DATE!**

## **National Stroke Association Members-Only Dysphagia Webinar Wednesday, June 23, 1 – 2 pm eastern**

### **Presented by:**

**Marlís González-Fernández, MD, PhD**  
Medical Director  
Outpatient PM&R Clinics  
Johns Hopkins Hospital  
Assistant Professor, PM&R  
Johns Hopkins University

**Genevieve McKeon MS CCC -SLP**  
Speech Language Pathologist  
Johns Hopkins Bayview Medical Center

**[www.stroke.org/memberships](http://www.stroke.org/memberships)**

