

# Innovation Across the Spectrum of Dysphagia Care for Vulnerable Older Adults



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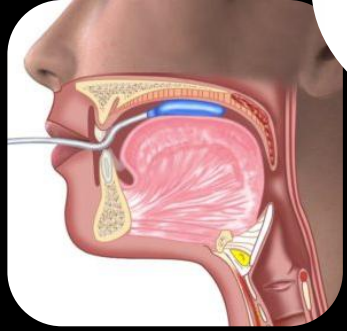
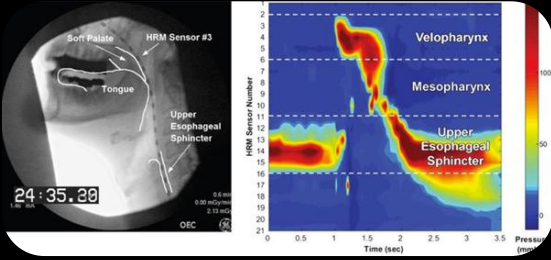
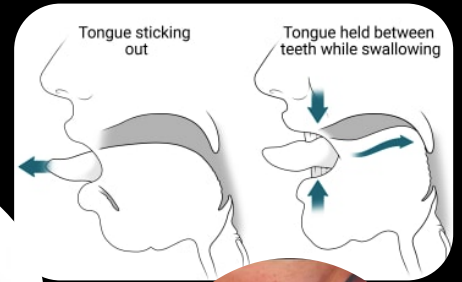
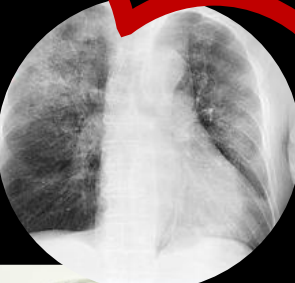
**Deputy Director, Center for Health Disparities Research, School of Medicine & Public Health**

**Geriatric Research Education and Clinical Center (GRECC), William S. Middleton Memorial Veterans Hospital**

**Eating Assessment Tool (EAT-10)**

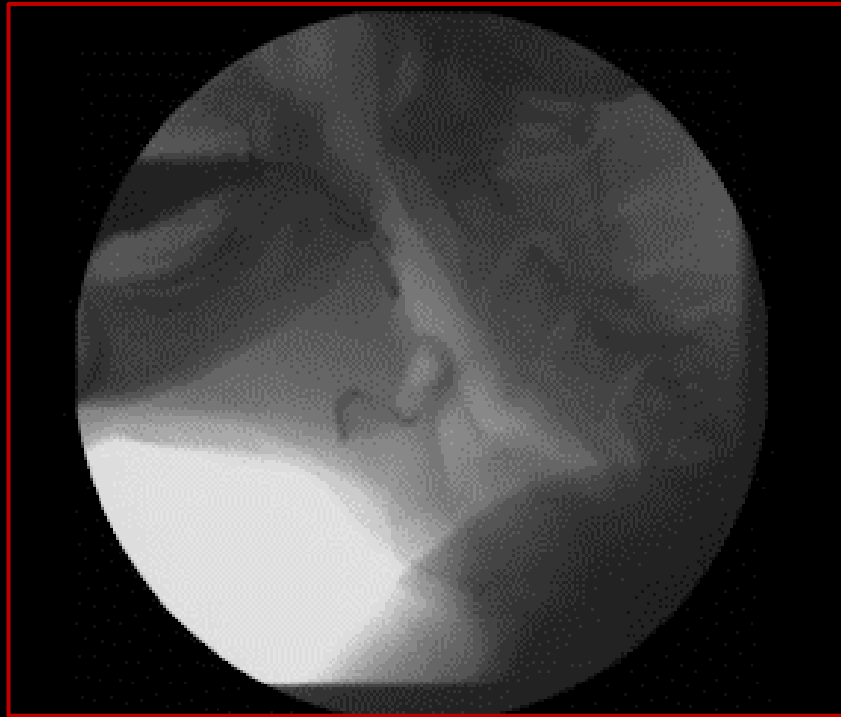
Choose the appropriate response.

	0 = No problem	1 = Mild problem	2 = Moderate problem	3 = Severe problem
1. My swallowing problem has caused me to lose weight	0	1	2	3
2. My swallowing problem interferes with my ability to get full from meals	0	1	2	3
3. Swallowing liquids takes extra effort	0	1	2	3
4. Swallowing solids takes extra effort	0	1	2	3
5. Swallowing pills takes extra effort	0	1	2	3
6. Swallowing is painful	0	1	2	3
7. The pleasure of eating is affected by my weakness	0	1	2	3
8. When I swallow, food sticks in my throat	0	1	2	3
9. I cough when eat	0	1	2	3
10. Swallowing is dramatic	0	1	2	3





## Training in Dysphagia Science



*What is the role of a Medical Speech-Language Pathologist?*



*How can dysphagia care align with best practices in geriatrics?*



## Training in Geriatrics and Dementia Care

“There is a fear of the modified diets recommended, and often that is the only recommendation that seems to be carried forward”

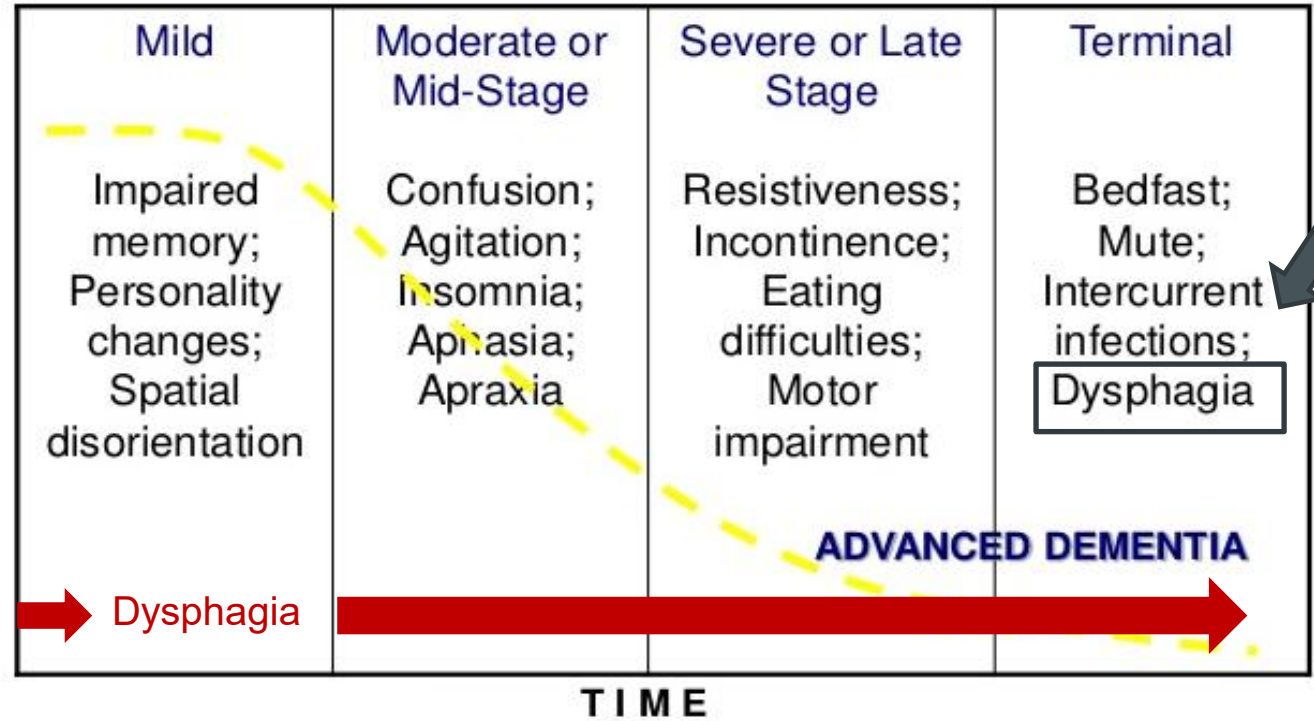
*Loy et al., AJSLP, under review*

“The downstream implications of placing patients on textured diets and use of thickened liquids needs to be carefully considered in light of the goals of care.”

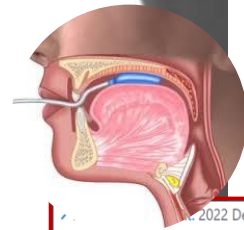
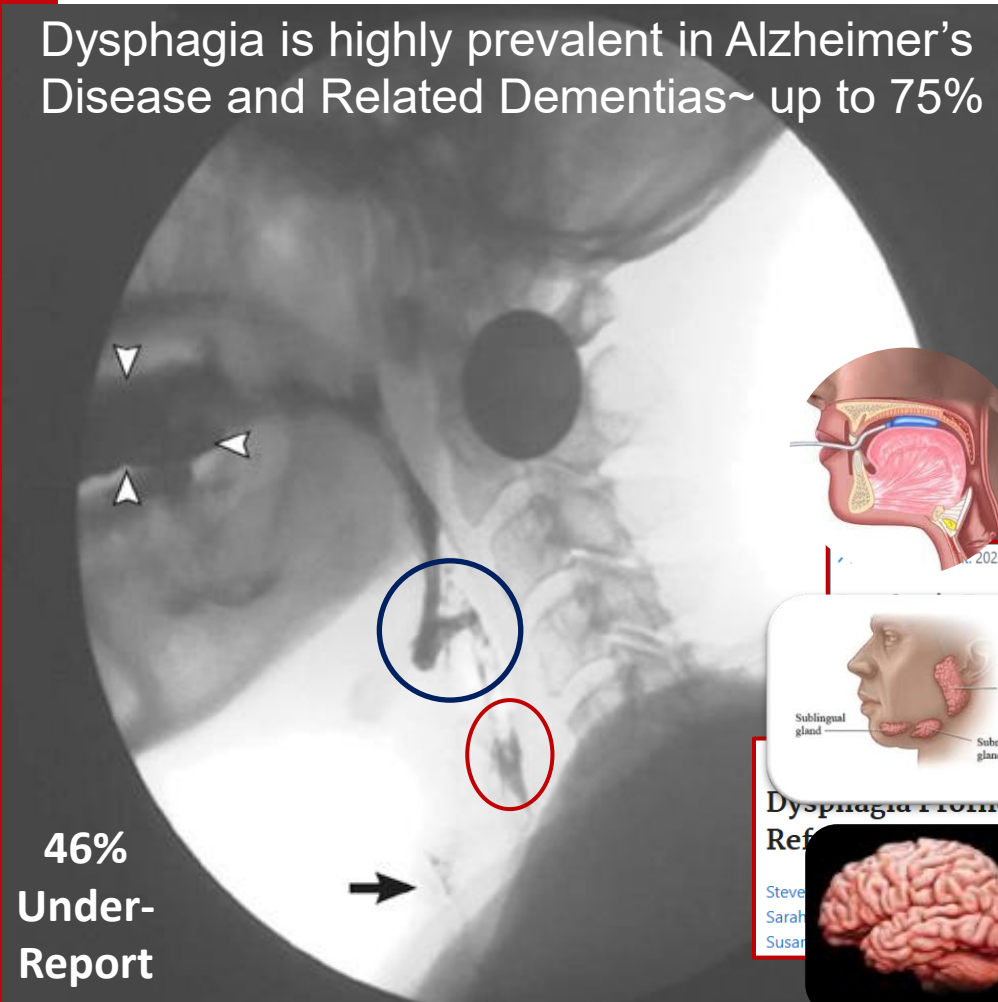




# Progression of Dementia



Dysphagia is highly prevalent in Alzheimer's Disease and Related Dementias~ up to 75%

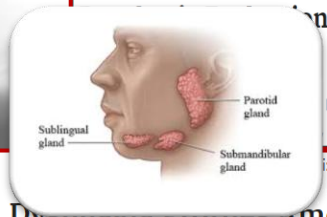


... 2022 Dec;18 Suppl 9:e063955. doi: 10.1002/alz.063955.

... in a Multidisciplinary VA

Lindsay R Clark <sup>1,2</sup>, Ellen Wanninger <sup>1</sup>,  
Raele Robison <sup>2</sup>, Amy J Kind <sup>1,2</sup>, Nicole M Rogus-Pulia <sup>1,2</sup>

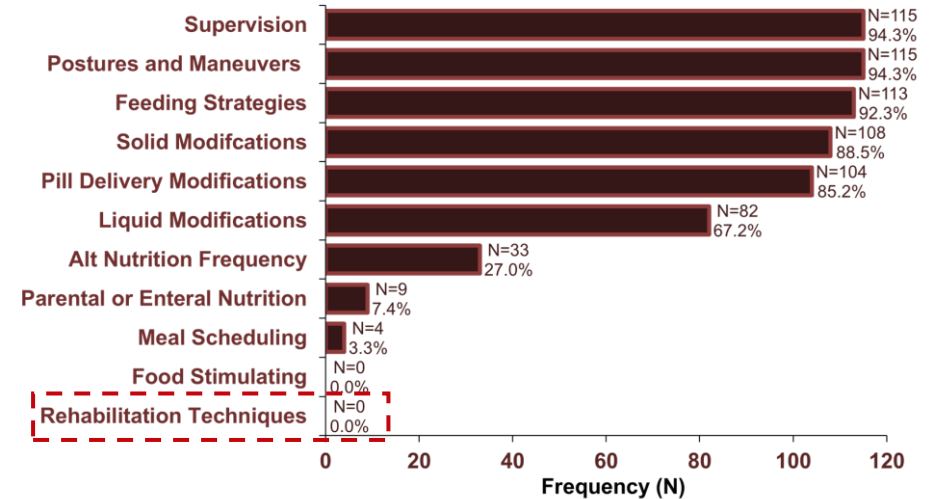
... 10.3233/JAD-220402.



**Dysphagia Promotes Among Inpatients with Dementia**

Ref: ... Evaluation

Steve ... , Celia Deckelman <sup>2,3,4</sup>, Emmanuel Sampene <sup>5</sup>,  
Sarah ... e Robison <sup>2,3</sup>, Michael S Pulia <sup>6</sup>, Molly Knigge <sup>7</sup>,  
Susan ... /kovskiy <sup>6,8</sup>, Amy Kind <sup>2,8</sup>, Nicole Rogus-Pulia <sup>2,3,4,7</sup>



# Behavioral Rehabilitation of Swallowing Disorders in Patients with Neurocognitive Disorders

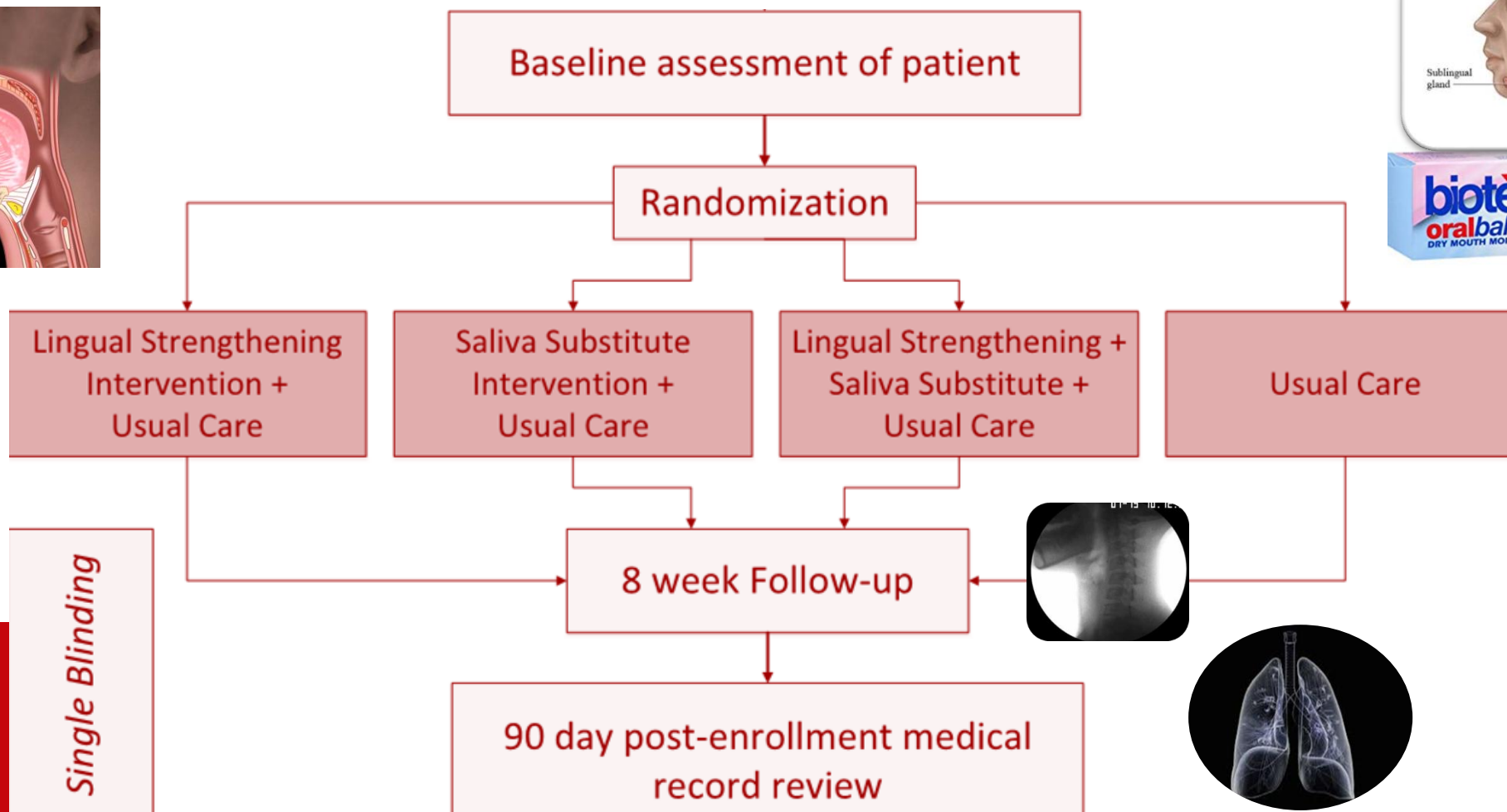
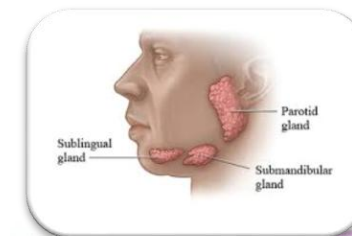
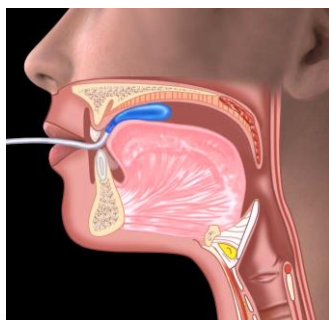
January 2025 · Current Physical Medicine and Reha... 13(1)

DOI: 10.1007/s40141-024-00473-3

Joanne Yee · Nicole Rogus-Pulia

## Enrollment Criteria

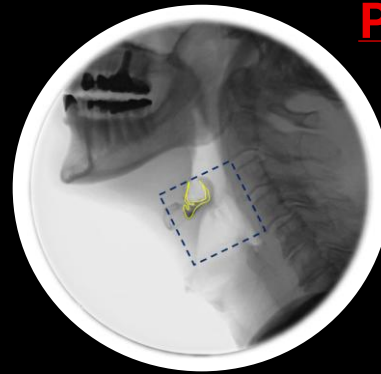
- Clinical Dementia Rating (CDR) scale score of 0.5 (*very mild*), 1 (*mild*), or 2 (*moderate*)
- Actively involved care partner
- Oropharyngeal Dysphagia on Modified Barium Swallow Study (Airway invasion OR Residue)



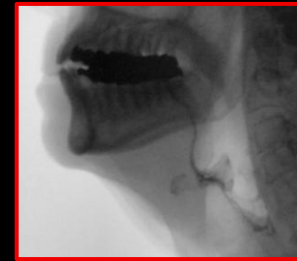
# Clinical Trial Results

75 patient-care partner dyads enrolled

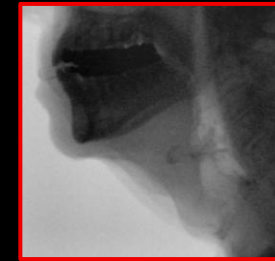
- 58 patients with dysphagia
  - Usual Care= 14
  - Lingual Strengthening (LS)= 14
  - Saliva Substitute (SS)= 16
  - LS+SS= 14



## Primary Outcome



Thin liquid Pre LS



Thin liquid Post LS



Semi-solid Pre LS+SS



Semi-solid Pre LS+SS

**Secondary Outcomes**  
**Lingual strength increased in LS group (p<.0001)**  
**Salivary flow rate increased in SS group (p<.05)**

## 85% completed study

**Lingual Strengthening**  
 79% adherent to ≥80%

**Saliva Substitute**  
 94% adherent to ≥80%

## Feasibility

"I knew what I was supposed to do...wasn't confusing"

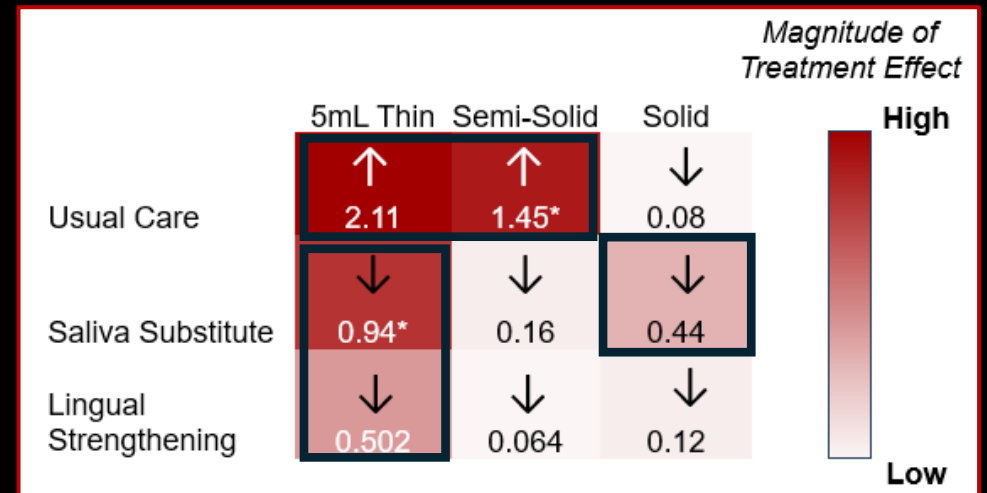
"I don't think the machine is really made for somebody with dementia"

## Acceptability/Satisfaction

"He seemed kind of into it actually"

"What it's going to do to help people...I really don't know much about it"

Characteristic	Overall
	N = 58
Age (y)	78.0
Median (Q1, Q3)	(76.0, 85.0)
Sex, N (%)	
Female	13 (22%)
Male	45 (78%)
Race, N (%)	
Black or African American	1 (1.7%)
White or Caucasian	57 (98%)
Ethnicity, N (%)	
Hispanic	1 (1.7%)
Non-Hispanic	55 (95%)
Unknown	2 (3.4%)
Dementia Severity, N (%)	
Very mild (0.5)	24 (41%)
Mild (1)	27 (47%)
Moderate (2)	7 (12%)





## Community Registry for Swallowing Health

**About us:**  
The Swallowing Registry was created to help connect people with resources and research studies for Swallowing Health

**PARTICIPATION INVOLVES:**

- JOINING**
- CONNECTING TO RESOURCES**
- CONNECTING TO RESEARCH STUDIES**
- ANNUAL PHONE CALLS**

**WHAT INFORMATION IS INCLUDED IN THE REGISTRY?**

- NAME, AGE, AND OTHER GENERAL INFORMATION
- INFORMATION ABOUT YOUR EXPERIENCES WITH EATING, DRINKING, AND SWALLOWING

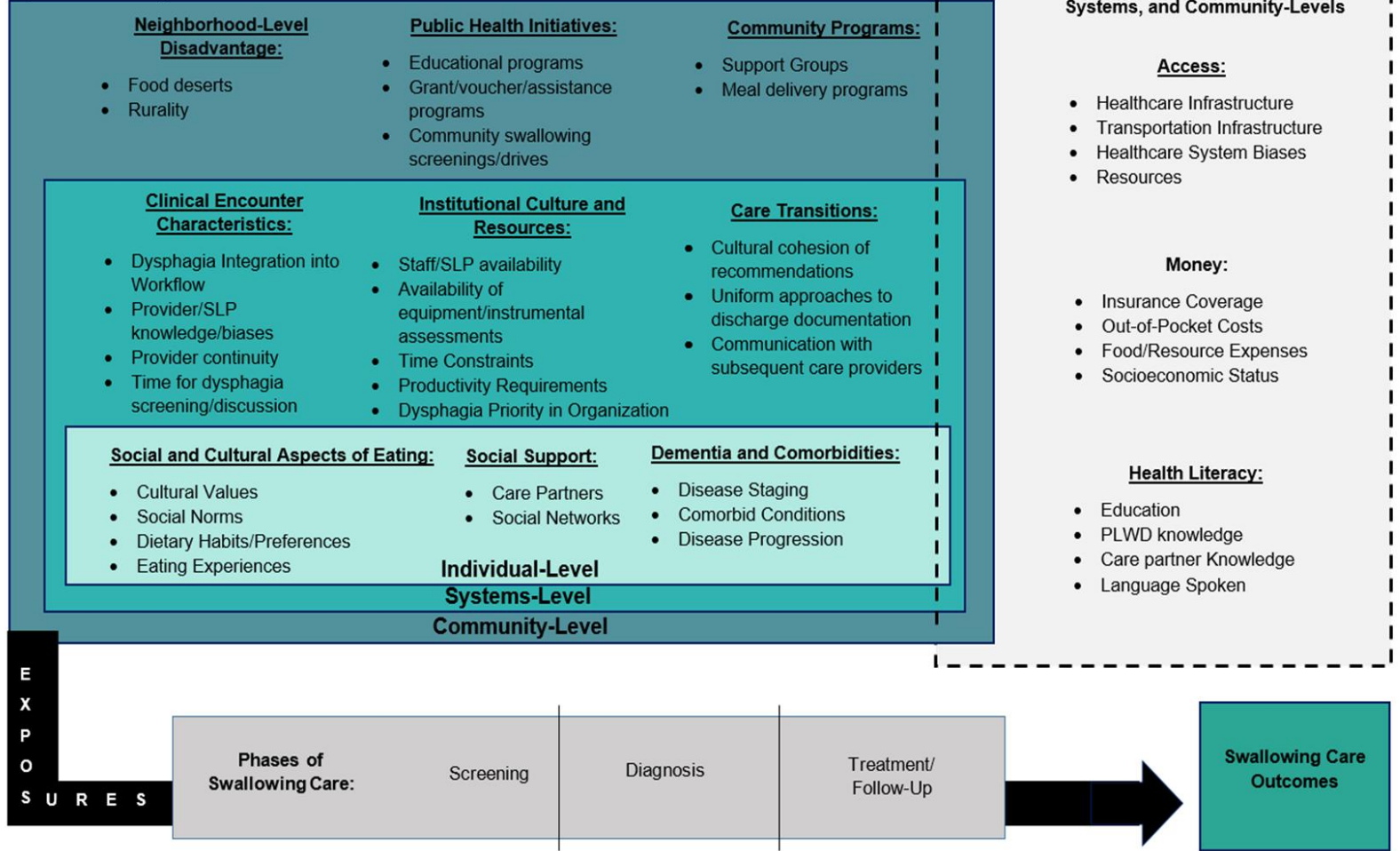
**WHY WOULD SOMEONE WANT TO ENROLL IN THE REGISTRY?**

- TO HELP OTHERS
- TO RECEIVE HELP
- TO GET INVOLVED

Please reach out to our team with questions!

608-256-1901 x1125 | <https://ssbl.wisc.edu> | [swallowlab@medicine.wisc.edu](mailto:swallowlab@medicine.wisc.edu)

Figure 1. A novel conceptual model of the social exposome and swallowing care in persons living with dementia.



> [Alzheimers Dement. 2025 Feb;21\(2\):e70028. doi: 10.1002/alz.70028.](https://doi.org/10.1002/alz.70028)

## Eating and swallowing care disparities in persons with dementia: A conceptual framework

Raele Donetha Loy<sup>1,2</sup>, Nicole Rogus-Pulia<sup>1,2,3</sup>, Fred Ketchum<sup>2,4</sup>, Michelle Troche<sup>5</sup>, Anais Rameau<sup>6</sup>, Harrison N Jones<sup>7</sup>, Luis Riquelme<sup>8,9,10</sup>, Andrea Gilmore-Bykovskiy<sup>11</sup>, Manish N Shah<sup>11</sup>, Amy Kind<sup>1,2</sup>



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# Pre-hospitalization dysphagia and feeding tube placement in nursing home residents with advanced dementia

Raele Donetha Robison <sup>1 2</sup>, Sweta Patel <sup>3</sup>, Jennifer Bunker <sup>3</sup>, James L Rudolph <sup>4 5 6 7</sup>,  
Joan M Teno <sup>3</sup>, Nicole Rogus-Pulia <sup>1 2 7</sup>



**Dysphagia + feeding tubes during hospitalization associated with higher mortality.**

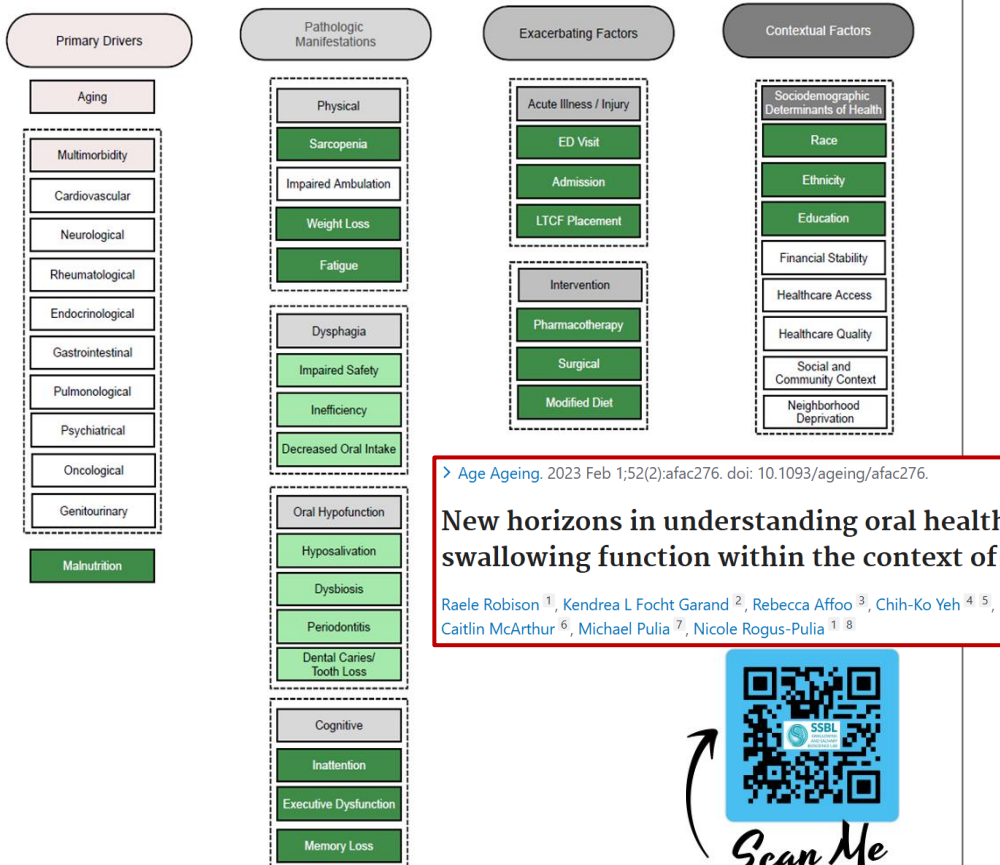
# Frailty Status and Dysphagia Trajectory Among Hospitalized Nursing Home Residents With Advanced Dementia

Raele Donetha Loy <sup>1</sup>, Rebecca Howe <sup>2</sup>, Sweta Patel <sup>3</sup>, Nicole Rogus-Pulia <sup>4</sup>, James L Rudolph <sup>5</sup>



**Frailty is associated with increased dysphagia risk in nursing home residents with dementia.**

## FRAILITY



# New horizons in understanding oral health and swallowing function within the context of frailty

Raele Robison <sup>1</sup>, Kendrea L Focht Garand <sup>2</sup>, Rebecca Affoo <sup>3</sup>, Chih-Ko Yeh <sup>4 5</sup>, Nathaniel Chin <sup>1</sup>, Caitlin McArthur <sup>6</sup>, Michael Pulia <sup>7</sup>, Nicole Rogus-Pulia <sup>1 8</sup>



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# Thick Liquids and Clinical Outcomes in Hospitalized Patients With Alzheimer Disease and Related Dementias and Dysphagia

Alexander Makhnevich <sup>1 2 3</sup>, Alexandra Perrin <sup>1 3</sup>, Dristi Talukder <sup>1 3</sup>, Yan Liu <sup>1 3</sup>,  
Stephanie Izard <sup>1 3</sup>, Codruta Chiuhan <sup>1 3</sup>, Stefani D'Angelo <sup>1 3</sup>, Rebecca Affoo <sup>4</sup>,  
Nicole Rogus-Pulia <sup>5 6</sup>, Liron Sinvani <sup>1 2 3</sup>



**Thick liquids associated with lower risk of intubation but higher risk of respiratory complications.**



# Next Steps...

Compensatory approaches  
AFTER dysphagia identified



> Am J Speech Lang Pathol. 2020 Jul 10;29(25):1094-1109. doi: 10.1044/2020\_AJSLP-19-00136. Epub 2020 Jul 10.

Shifting Tides Toward a Proactive Patient-Centered Approach in Dysphagia Management of Neurodegenerative Disease

Nicole M Rogus-Pulia<sup>1 2 3</sup>, Emily K Plowman<sup>4 5 6</sup>

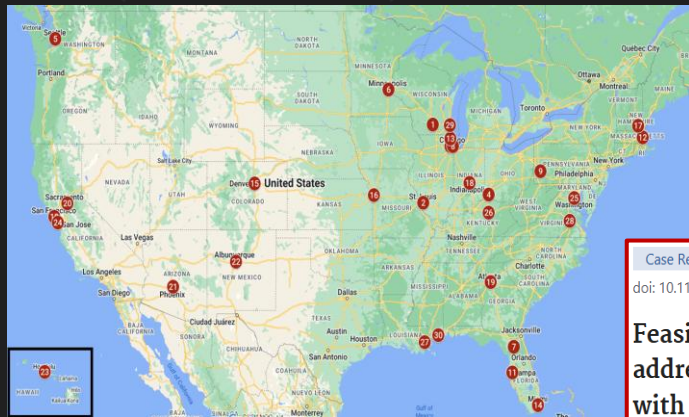
Target underlying physiologic  
function early, BEFORE  
development of dysphagia



Trajectories and  
Predictors in  
Dysphagia  
Ease (SPHERE)



Veterans Swallowing Health  
And Clinical Practice Excellent  
(Vet-SHAPE)- 33 sites



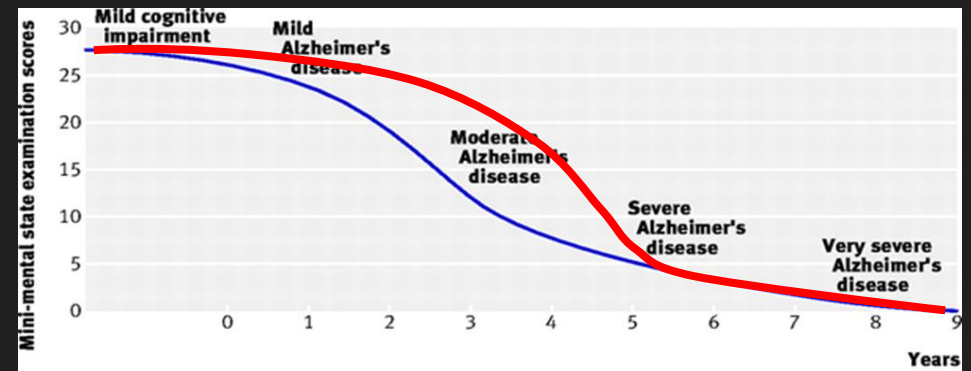
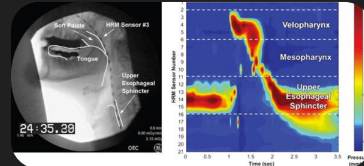
Case Reports > J Alzheimers Dis Rep. 2025 Aug 28;9:25424823251361032.

doi: 10.1177/25424823251361032. eCollection 2025 Jan-Dec.

Feasibility of expiratory muscle strength training to address oropharyngeal dysphagia in a patient living with mixed dementia: A case report

Joanne Yee<sup>1 2 3 4</sup>, Sara Gustafson<sup>1 2 4</sup>, Raele Donetha Loy<sup>2 4</sup>, Nicole Rogus-Pulia<sup>1 2 4 5</sup>

- Subclinical dysphagia
- Risk factors
- Trajectories of swallowing change



# Acknowledgments

NIH National Institute on Aging

Home Team



**Dr. Nadine Connor**  
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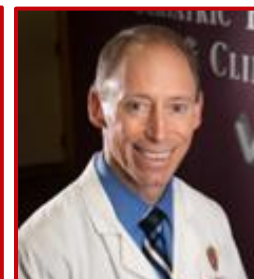
VA U.S. Department of Veterans Affairs



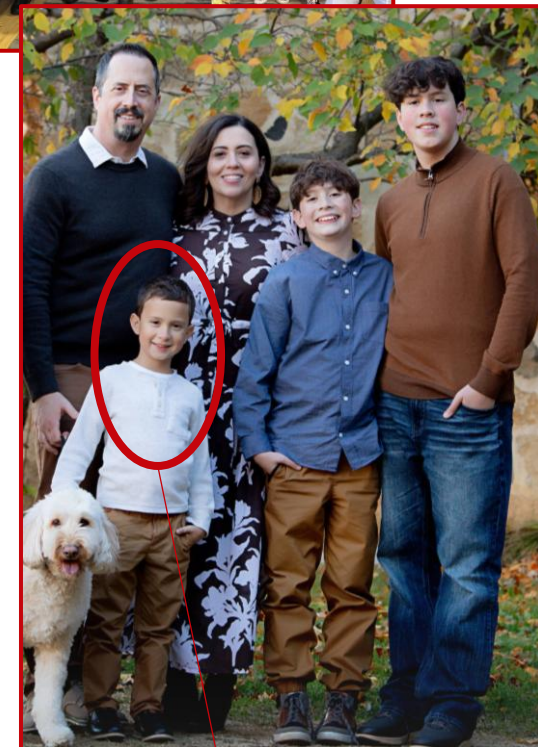
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Department Chair



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Division Head & GRECC Director



**Beeson Baby!**

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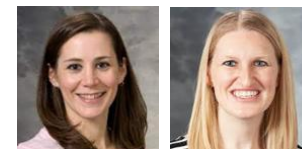
### Undergraduate Students

Eva Moffett

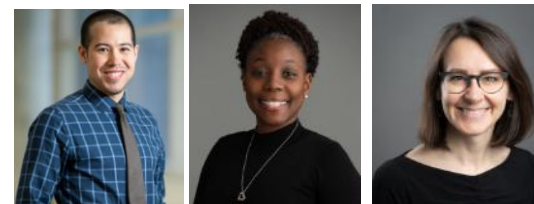
Sophia Tannehill

Alison Chapnick

## UW and VA Clinical SLP Services



### Geriatrician Collaborators



**Thank you for your time and attention!**



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