

# **SPEECH-LANGUAGE PATHOLOGY INTERVENTIONS FOR OLDER RURAL VETERANS AN INTERDISCIPLINARY CASE PRESENTATION**

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GERIATRIC RESEARCH EDUCATION AND CLINICAL CENTER

**VA**

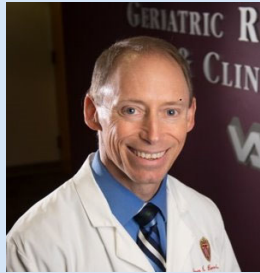


**U.S. Department of Veterans Affairs**

Veterans Health Administration  
*Geriatric Research, Education, and Clinical Centers*



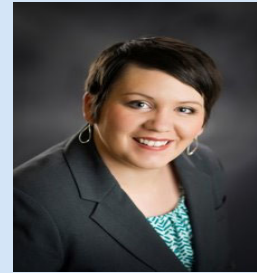
# Interdisciplinary Team



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Geriatrician



Rebecca Radue, MD  
Geriatric Psychiatrist



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Neuropsychologist



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Social Worker



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Speech Language  
Pathologist



Ruth Roller  
Program Manager



Kari Linley  
Nurse Care Manager



# Outline

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- Brief Overview of Madison VA Virtual Geriatrics Clinic
- Brief Overview of Speech-Language Pathology Services
- Case Presentation
  - Case Finding: Virtual Geriatrics Triage and Team Visit
  - SLP Interventions
  - Review of Post-Treatment Outcomes
- Discussion/Questions

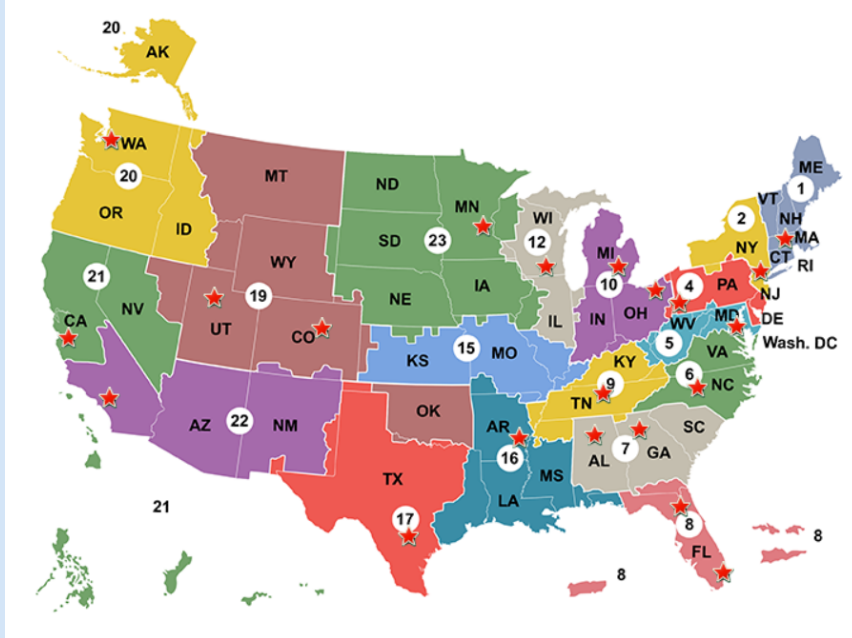


# Brief Overview of Madison VA Virtual Geriatrics Clinic

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# What is a Geriatric Research, Education, and Clinic Center (GRECC)?

Where are the GRECCs?



- VA's center of excellence focused on aging
  - 20 nationwide, all connected to major universities
  - All with unique specialty and focus
- Shared Goals:
  1. To build new knowledge in geriatric care through research
  2. To improve health care for older Veterans through the development of innovative clinical models of care
  3. To provide training and education on best practices in caring for older adults for students in healthcare disciplines and VA staff



## WHY IS THERE A NEED FOR GERIATRICS TELEMEDICINE?

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Geriatrics experts cluster in urban areas whereas 56% of WI Veterans live in rural areas

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Travel to urban centers is especially a burden for older Veterans.

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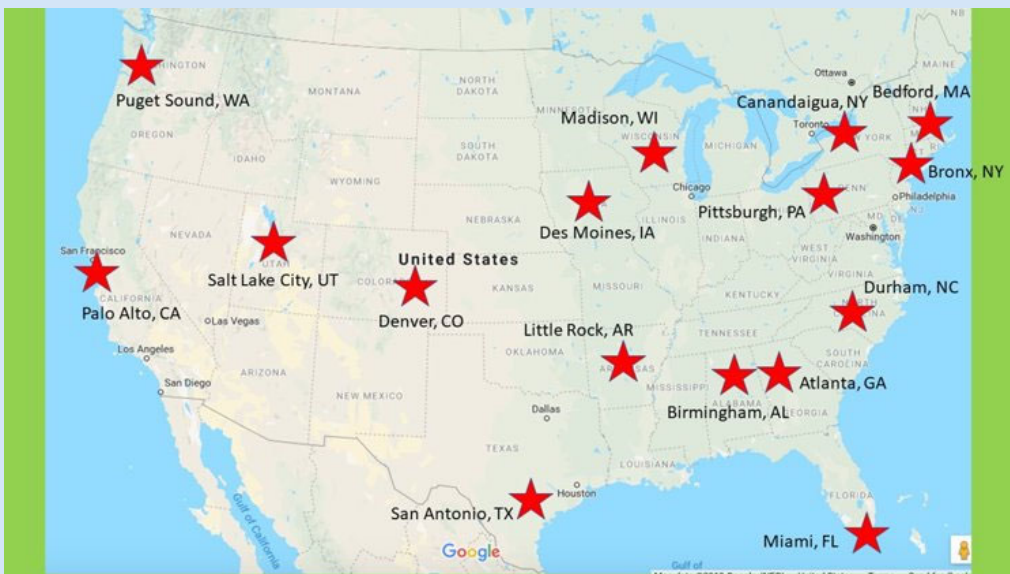
Geriatric specialty care improves outcomes for older adults, who often suffer from multiple chronic diseases, geriatric syndromes, or have functional limitations.

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Rural providers and staff often lack opportunities for education on managing older adults and may struggle to address more medically and psychosocially complex cases that are best managed with real-time input of an interdisciplinary geriatric team.



# What is Virtual Geriatrics?



A **VA program** supported through GRECCs, funded by the VA Office of Rural Health.

**Improve access to geriatric consultation** through telemedicine means

**Collaborate with rural clinics** in caring for frail older Veterans who are less able to travel to the main VA facility

**Provide education on geriatric topics** to rural health care teams

# Typical Services

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- Assessment and management of common age-related conditions
  - Dementia, falls, polypharmacy, immobility, incontinence, sleep, mood disorders, cognitive-communication, dysphagia
- Evaluation and management of behavioral and psychological symptoms of dementia
  - Agitation, wandering, hallucinations, and sleep disturbance
- Neuropsychological (memory) testing
- Capacity assessments
- Support, resources and recommendations for caregivers





# Disciplines Represented

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Geriatric  
Medicine

Geriatric  
Psychiatry

Neuropsychology

Geriatric  
Pharmacy

Speech Language  
Pathology

Nursing

Social Work



# Virtual Geriatrics Clinic Workflow

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Consult Review and  
Triage

Team or  
Neuropsychological  
Visit  
(as appropriate)

Team or  
Neuropsychological  
Visit  
(as appropriate)

Recommendations  
to Provider Team  
(*SLP, PT, OT  
Consults, etc.*)

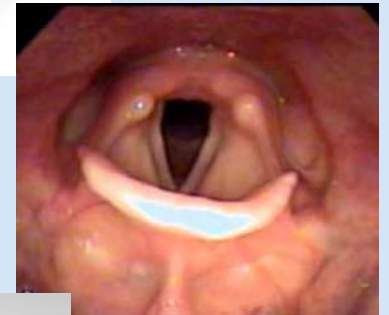
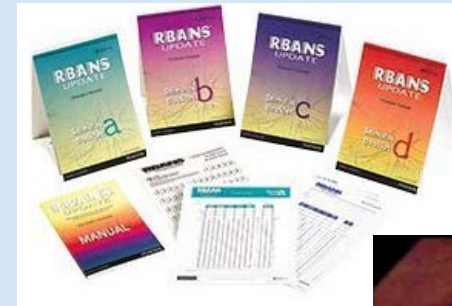


# Brief Overview of Speech Pathology Services

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# Outline of SLP Services

- **Cognitive-Communication Evaluations**
  - TBI, PTSD
- **Augmentative Alternative Communication**
- **Fluency**
- **Language**
  - Expressive and/or receptive aphasia
- **Speech/Articulation**
  - Dysarthria
  - Partial or total glossectomy
- **Voice**
  - Laryngoscopy
  - Stroboscopy
  - Voice Therapy
- **Swallowing**
  - Videofluoroscopic Swallow Studies
  - Endoscopic Swallow Evaluations
  - Clinical Swallow Evaluations
  - Swallow Therapy
- **Head and neck cancer**
  - Prophylactic exercises during (chemo)radiation
- **Total Laryngectomy**
  - Voice restoration
  - Dysphagia management
  - Pulmonary rehabilitation

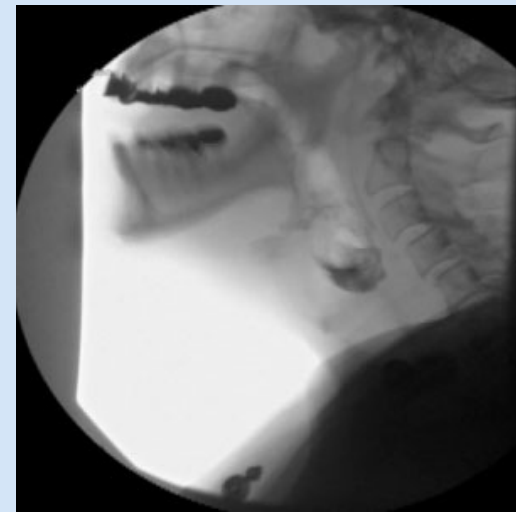
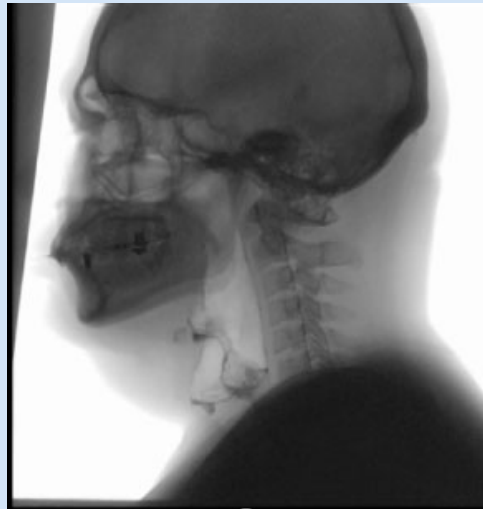
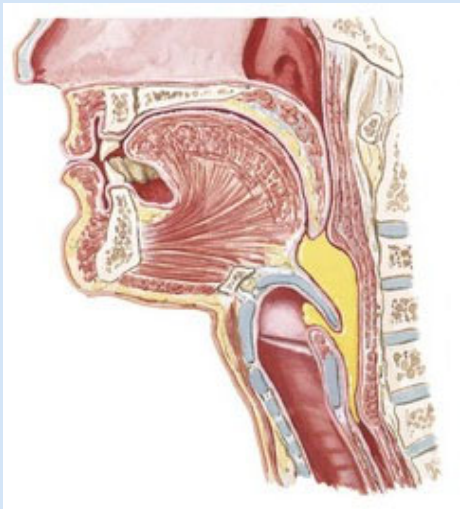


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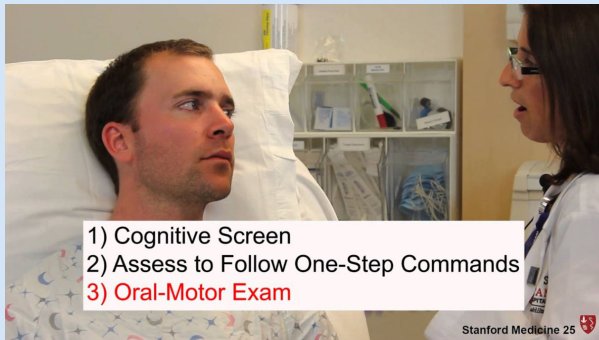
# Swallowing

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Swallowing = Safety + Efficiency

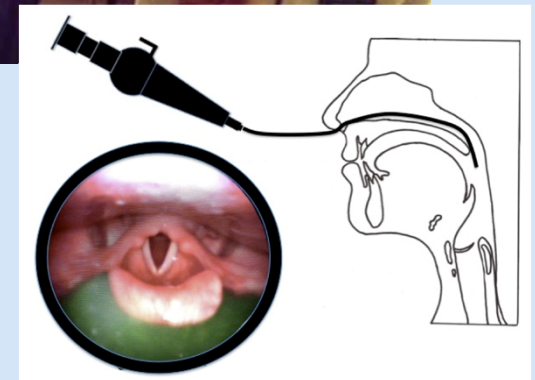
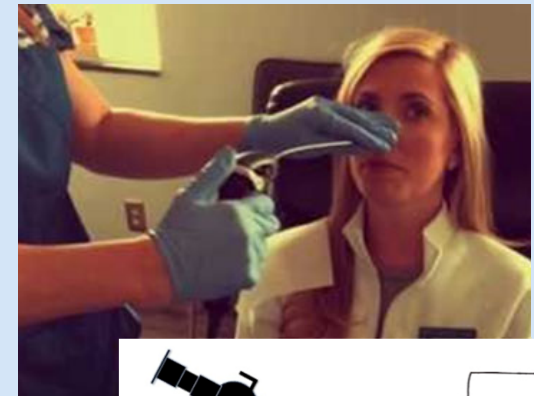
# Dysphagia - Evaluations



Clinical Swallow Evaluation



Videofluoroscopy



Endoscopy

# Swallowing Therapy

## Proactive

- ALS
- Head and Neck Cancer
- Dementia

## Reactive

- Stroke
- Traumatic Brain Injury
- Frailty

- Education
- Exercises
  - Strength
  - Range of Motion
  - Timing
  - Intensive Dysphagia Treatment
- Strategies and Postures



# Cognition and Communication

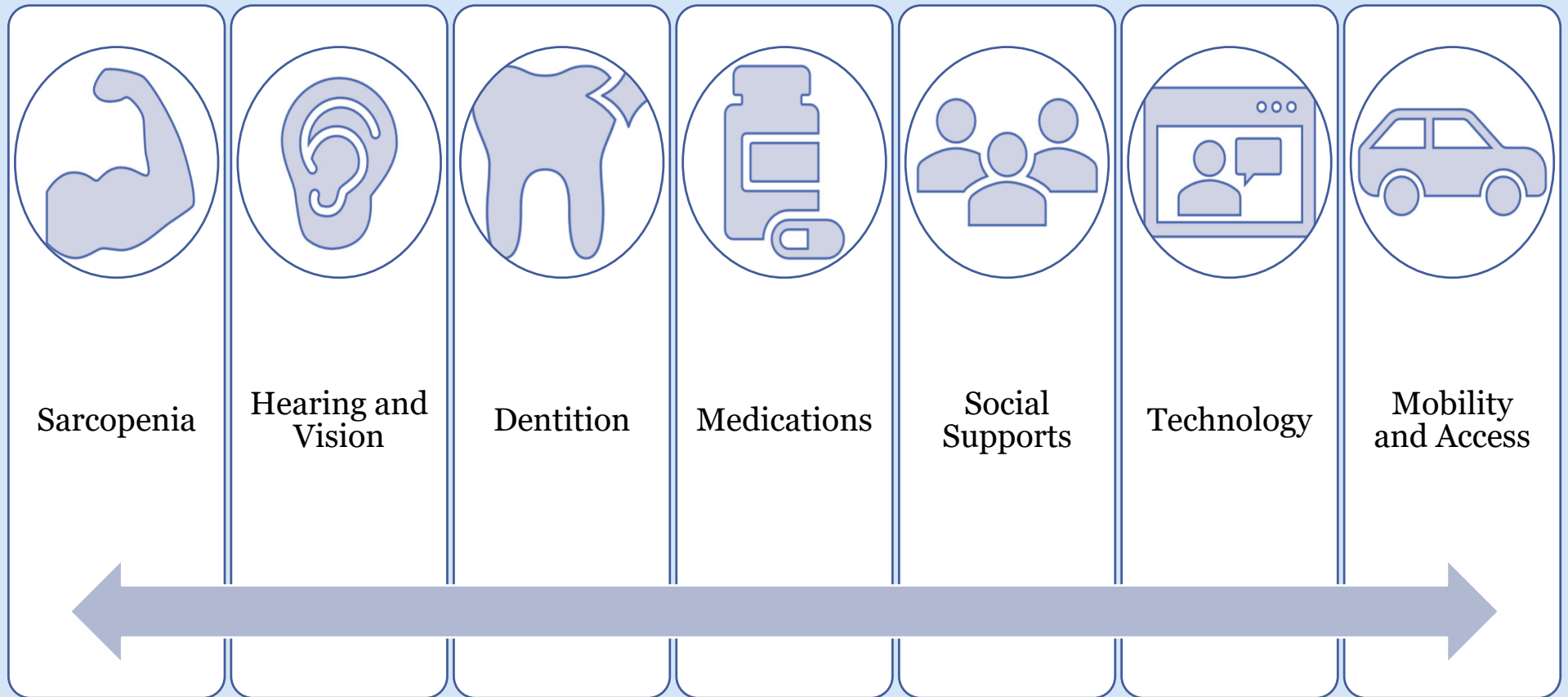
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- Compensatory strategies
  - External memory aids (calendars, reminders, etc.)
- Behavior modifications
  - Attention process training
- Patient-Caregiver Dyad Training and Education
- Aural Rehabilitation
  - Communication techniques for Veterans with hearing aids





# Geriatric-Specific Considerations



# Virtual Geriatrics Integration

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- Review findings during weekly Virtual Geriatrics meeting
- Identify areas of relative strength/deficit based on exam results
- Contact patient and/or caregiver to determine:
  - Motivation for participation in therapy
  - Strategies for coordinating SLP visit



# Case Presentation

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# History – Mr. N

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- 85-year-old Veteran
  - Air Force mechanic
  - High school education
  - Dairy farmer (retired at 65)
- Referred by PCP at CBOC (~40 miles from Madison)
  - Cognitive Screening: 17 out 30 on St. Louis Mental Status Exam
  - “Wife reports veteran is becoming more forgetful”
- Relevant History
  - Vascular risk factors – diabetes mellitus, hypertension, hyperlipidemia
  - Hearing loss (bilateral) – wears hearing aids
  - Prostate cancer



# History – Mr. N

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- Veteran/Family Concerns
  - “Wife reports Veteran is becoming forgetful”
  - Veteran is noted to repeat himself
  - No concerns of delirium, agitation
  - Challenging to participate in visits at Madison VA due to mobility and driving
  - Relied on daughters for transportation



# Timeline

**December  
2021**  
Virtual  
Geriatrics  
Neuropsych  
Evaluation

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Team Visit

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May 2022**  
Medication  
Management  
Visit  
Follow-up  
Team Visit



# Virtual Geriatrics Neuropsychology Visit

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- Global Measure of Cognition
  - 28 out of 30 on Mini-Mental State Exam
- Repeatable Battery of Neuropsychological Status

## ^ *Relative Strengths*

- Attention
- Executive Functioning
- Visuospatial
- Language

## *Relative Deficits* v

- Immediate Memory
- Delayed Memory



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# Virtual Geriatrics Team Visit

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- Activities of Daily Living
  - Medication management
  - Communication/orientation to daily tasks
- Dysphagia Screening
  - Sensation of food sticking with solids more than liquids
  - Occasional aspiration



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# Clinical Swallow Evaluation

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## **VETERAN**

- No issues swallowing
- “Food sometimes sticks in my throat”, maybe 1x per day at maximum
- No change in appetite
- “I never cough when I eat”

## **WIFE/FAMILY**

- Often has problems swallowing
- Food frequently sticks in his throat, more than 1x/day
- “He doesn’t eat as much as he used to”
- “He has to leave the table because he is coughing so much”

# Clinical Swallow Evaluation



## **Patient History**

Unintentional weight loss

Self-directed food restriction

History of pneumonia

Dentition/most recent oral hygiene examination



## **Patient-Reported Measures**

Eating Assessment Tool (EAT-10)



## **Objective Measures**

Cough flow

Respiratory pressure

Tongue pressure



## **Food and Liquid Screens**

Cup drinking task

Mastication test

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# Video Swallow Study

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# Video Swallow Study Findings

## Physiology

Reduced superior and anterior movement of hyolaryngeal complex

Reduced duration and degree of laryngeal vestibular closure

## Results

Airway invasion of 90% of liquid boluses, regardless of viscosity

*Improvement with compensatory swallow strategies with maximal cueing*

No airway invasion for solid boluses

## Patient Response

Not sensitive to material in airway

Poor insight into deficits/issues (even after visualization)



# Education + Veteran-Driven Goals

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## PROVIDER EDUCATION

### Limit risk for pneumonia development and improve QoL

- Reduce airway invasion events
- Optimize oral hygiene

### Promote independence in ADLs

- Compensatory strategies

### Communication

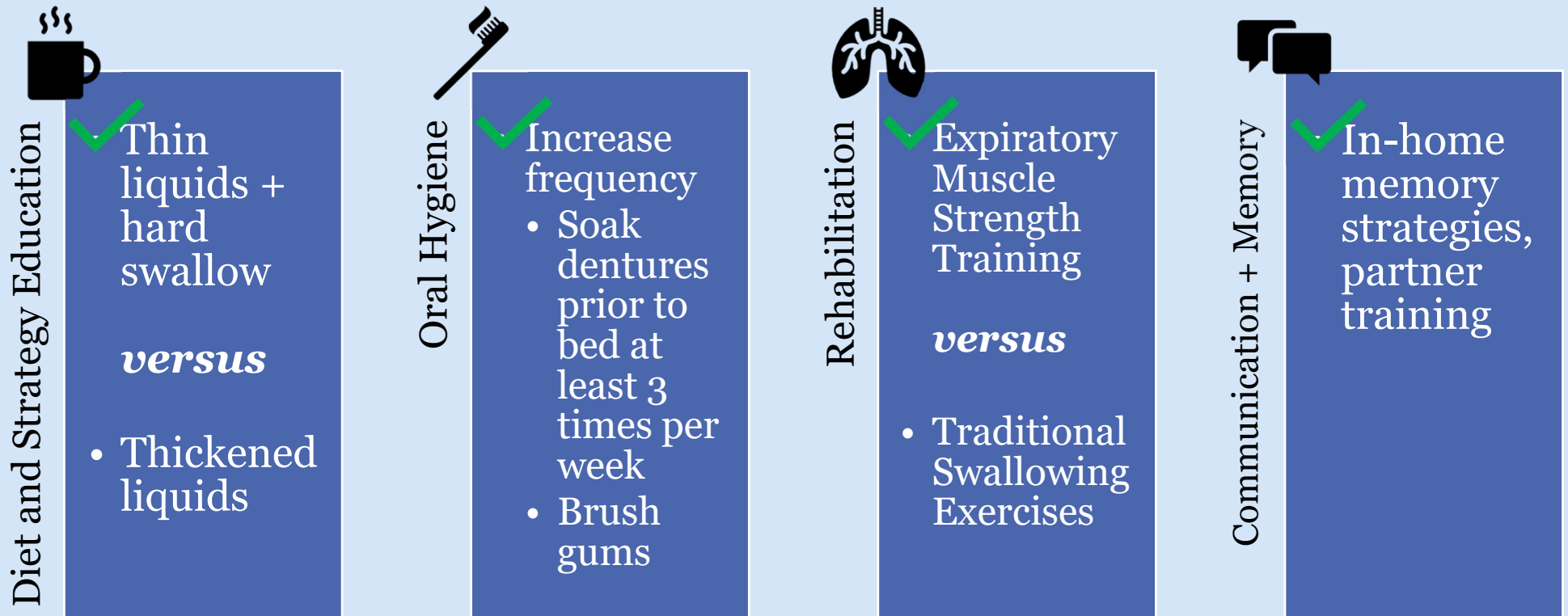
- Promote communication strategies

## PATIENT GOALS

- Reduce coughing incidents
- Uncomfortable not wearing dentures – not willing to sleep without them overnight
- Help with remembering to take medications
- Help with remembering appointments and day-to-day tasks
- Reduce repetitive questions



# Treatment Discussion – Veteran-Centered



Cichero et al, 2013; Langmore et al, 1998; Khadka et al, 2021; Mancopes et al, 2020; Nativ-Zeltzer et al, 2020; Ortega-Fernandez and Clave, 2013



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# Treatment Plan



- Weekly by VA Video Connect
- Dysphagia
  - Maximum expiratory pressure
  - Treatment targets
- Compensatory Cognitive Strategies
  - Calendar
  - Medication management
    - Alexa, visual aid for AM/PM boxes
- Patient-Caregiver Dyad Training
  - Communication

# Treatment Plan

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- Patient Home Program
  - Dysphagia
    - Daily in-home exercises
    - Support from wife and/or family
  - Compensatory Cognitive Strategies
    - Calendar: Bring to appointments
    - Medication management: Assistance from children to set up Alexa
  - Patient-Caregiver Dyad Training
    - Communication



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# Post-Treatment Outcomes

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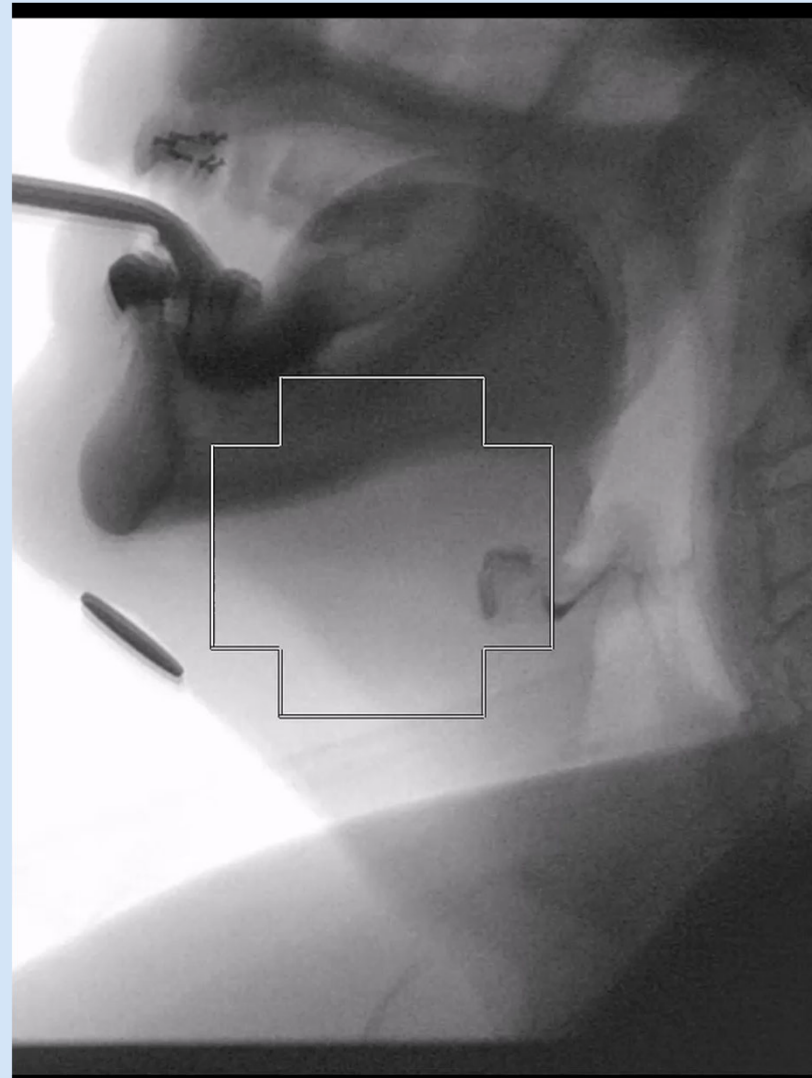
- 6 weeks of weekly follow-up
- Dysphagia
  - Less frequent coughing during meals
- Compensatory Strategies
  - Medication Management: Alexa beneficial in reminding patient about regular insulin dose
  - Calendar: Bringing with as a consistent reminder
- Communication
  - Continuing to be challenging but improving



# Video Swallow Study

## Post-Treatment

- Improved hyolaryngeal excursion and laryngeal vestibular closure
- Airway invasion 90% → 12%
- Reduced amount of aspirated material



# Education + Patient-Driven Goals

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## PROVIDER EDUCATION

Limit risk for pneumonia development and improve QoL

- Reduce airway invasion events
- Optimize oral hygiene

Promote independence in ADLs

- Compensatory strategies

Communication

- Promote communication strategies

## PATIENT GOALS



- Reduce coughing incidents
- Uncomfortable not wearing dentures – not willing to sleep without them overnight



- Help with remembering to take medications
- Help with remembering appointments and day-to-day tasks



- Reduce repetitive questions



# Follow-up Plan

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- Ready to discontinue weekly therapy
- Satisfied with progress made during program
- ~6 months post-treatment RTC as per dysphagia program



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# Post-Treatment Outcomes

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- Medication Management Visit
  - Spouse: “Great report from medication follow-up”
  - “BP and LDL well-controlled, no medication changes needed”
  - “A1C within patient specific goal”
- Follow-up Team Visit
  - Communication
    - Spouse continues to wish he would be less repetitive with questions about recent events/conversations



## Summary

- Integrative whole-team approach focused on optimizing patient care
  - Cognitive Communication
  - Dysphagia



# Acknowledgements

*Thank you to...*

VA Office of Rural Health

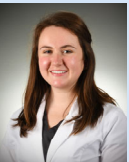
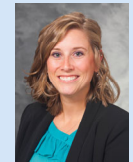
VA Geriatrics and Extended Care

Madison VA Geriatric Research  
Education and Clinical Center

Madison VA Telehealth Group

## Madison VA Speech-Language Pathology Group

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- Nicole Rogus-Pulia
- Jill Zielinski
- Kathleen Wengel
- Kailey Jo Williams
- Sara Gustafson
- Ryan Burdick
- Amelia Barczy
- Nicole Schaen-Heacock



**Thank you for your attention!**  
**Any questions?**

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