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

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Outline

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

- 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?

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

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

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

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

• 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

- Geriatric Medicine
- Geriatric Psychiatry
- Neuropsychology
- Geriatric Pharmacy
- Speech Language Pathology
- Nursing
- Social Work
Virtual Geriatrics Clinic Workflow

- 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
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
Swallowing = Safety + Efficiency
Dysphagia - Evaluations

Clinical Swallow Evaluation

Videofluoroscopy

Endoscopy

1) Cognitive Screen
2) Assess to Follow One-Step Commands
3) Oral-Motor Exam
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

• 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

- Sarcopenia
- Hearing and Vision
- Dentition
- Medications
- Social Supports
- Technology
- Mobility and Access
Virtual Geriatrics Integration

- 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
History – Mr. N

- 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

- 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

Mid-January 2022
- Video Swallow Study

Mid-January 2022
- Clinical Swallow Evaluation

February 2022
- IDT Program Enrollment, Outpatient Cognitive Session

March – May 2022
- Medication Management Visit
- Follow-up Team Visit

March 2022
- IDT Program Completion

December 2021
- Team Huddle

December 2021
- Virtual Geriatrics Team Visit
Virtual Geriatrics Neuropsychology Visit

• 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
  ◦ Immediate Memory
  ◦ Delayed Memory
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Medication Management Visit Follow-up Team Visit
Virtual Geriatrics Team Visit

• 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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**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

[Image: Normal Swallow and Abnormal Swallow comparison]

- Normal Swallow: Food enters the esophagus correctly.
- Abnormal Swallow: Food enters the trachea instead of the esophagus.
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 sensate to material in airway
- Poor insight into deficits/issue (even after visualization)
Education + Veteran-Driven Goals

**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

Diet and Strategy Education
- Thin liquids + hard swallow
  **versus**
- Thickened liquids

Oral Hygiene
- Increase frequency
  - Soak dentures prior to bed at least 3 times per week
  - Brush gums

Rehabilitation
- Expiratory Muscle Strength Training
  **versus**
- Traditional Swallowing Exercises

Communication + Memory
- In-home memory strategies, partner training

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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

• 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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Team Huddle
Post-Treatment Outcomes

• 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**

**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

• 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

• 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

Diagram showing the integration of various disciplines:
- Speech-Language Pathology
- Geriatric Medicine
- Geriatric Psychiatry
- Geriatric Pharmacy
- Neuro-psychology
- Social Work
- Nursing
- Veteran
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
- Jodi Hernandez
- Nicole Rogus-Pulia
- Jill Zielinski
- Kathleen Wengel
- Kailey Jo Williams
- Sara Gustafson
- Ryan Burdick
- Amelia Barczi
- Nicole Schaen-Heacock
Thank you for your attention!
Any questions?

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