Treatment Approaches to Support Improved Outcomes for Chronic Aphasia

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KSHA Convention 2019
Disclosure Statement

- I receive a salary from Genesis Rehab Services in my role as Regional Clinical Director
- I have no non-financial relationships to disclose
Objectives

1. Identify evidence-based treatment approaches to support improved outcomes for individuals with chronic aphasia
2. Explore the functional impact of including intervention for reading and writing for individuals with chronic aphasia
3. Discuss the importance of comprehensive assessment and treatment of cognitive-communication disorders including chronic aphasia with regard to the evolving role of the speech-language pathologist in post-acute care settings
Aphasia

/noun/

- Impairment of language, affecting the production or comprehension of speech and the ability to read or write.
What is Aphasia?

- “Aphasia is a language problem that masks a person’s inherent competence, and most dramatically affects conversational interaction (talking and understanding), as well as the ability to read and write.”
  

- “Aphasia is not a disease, but a symptom of brain damage”

https://www.medicinenet.com/aphasia/article.htm#what_is_aphasia
Common Medical Diagnoses Associated with Aphasia

- Stroke
- Traumatic Brain Injury
- Brain Surgery
- Brain Tumor
- Brain Infections
- Progressive Neurological diseases (e.g., dementia)

[Incidence: 180,000 new cases of aphasia per year in the U.S.]
[Prevalence: 1 million people in U.S. today are living with aphasia (1 in 250)]

(National Institute on Deafness and Other Communication Disorders (NIDCD), 2015)

Does Aphasia affect intelligence?

https://www.aphasia.org/aphasia-faqs/

NO. A person with aphasia may have difficulty retrieving words and names, but the person’s intelligence is basically intact. Aphasia is not like Alzheimer’s disease; for people with aphasia it is the ability to access ideas and thoughts through language—not the ideas and thoughts themselves—that is disrupted. But because people with aphasia have difficulty communicating, others often mistakenly assume they are mentally ill or have mental retardation.

National Aphasia Association Aphasia Awareness Poster

Aphasia affects a person’s ability to communicate, not their intellect. People with aphasia—and countless others—face barriers to communication on a daily basis.
But…can Aphasia occur in combination with cognitive-communication impairments?
Post-Stroke Cognitive Disorders: Key Statistics
Evidence-Based Review of Stroke Rehabilitation, Chapter 12

- Up to 2/3 of people who have a stroke experience cognitive impairment or decline
- 30% of all stroke survivors progress to a dementia syndrome
- Risk for developing dementia may be as much as 10 times greater for those who have had a stroke
- 10% of people who have a stroke may have existing dementia
- An additional 10% may develop dementia after their first stroke
- More than 33% may develop dementia after multiple strokes
Post-Stroke Cognitive Disorders: Definitions

- **Vascular Cognitive Impairment (VCI):** cognitive deficits due to the impact of cerebrovascular disease, including stroke
- Three types of VCI:

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vascular Cognitive Impairment (VCI)</td>
<td>VCI without dementia, and mild VCI</td>
</tr>
<tr>
<td>Vascular Dementia</td>
<td>Deficits of executive control resulting in loss of function for instrumental activities of daily living</td>
</tr>
<tr>
<td>Mixed Dementia</td>
<td>Alzheimer’s worsened by stroke; equivalent to pre-stroke dementia</td>
</tr>
</tbody>
</table>

*Adapted from Roman et al. (2004)*
Post-Stroke Cognitive Disorders: Clinical Presentation
Evidence-Based Review of Stroke Rehabilitation, Chapter 12

Impairments of:

- Executive Function
- Processing speed
- Initiation
- Planning
- Organizing
- Sequencing
- Attention
- Goal Formulation
- Abstraction
Successful and Sustainable Outcomes

- Comprehensive Assessment
- Evidence-Based Treatment Approaches
- Interprofessional Practice
- Person-Centered Care
- Principles of Neuroplasticity
- Modes of Therapy
Comprehensive Aphasia Assessment: General Principles (ASHA)

- Based on the World Health Organization’s (WHO) *International Classification of Functioning, Disability and Health* (ICF) framework
- Person-Centered (e.g., Life Participation Approach to Aphasia, or LPAA)
- Static (CLOF) or dynamic (ongoing therapeutic assessment)
- Standardized and non-standardized tools and data sources
Comprehensive Aphasia Assessment: Evaluation Components (ASHA)

- Case History
- Self-Report
- Oral-Motor Examination
- Language
  - May include assessment for apraxia

*Note the absence of cognitive-communication assessment

(ASHA message: Aphasia ⇔ Cognitive-Communication Impairment)
Comprehensive Assessment: Documentation

- ICD-10
- CPT
- PLOF
- CLOF

Coding

Goals

Measures

Reason & History

- Standardized
- Objective
- Paint the picture

Reason & History
SNF Settings: Data Snapshot

- Random sampling of 10 SLP evaluations (92523) at 10 centers
- Open charts as of 9/11/19
- 100% of charts assessed cognitive-communication
- 50% indicated “adequate” or “DNT” Receptive / Expressive language
- Of the 5 charts where language was assessed, 2/5 did not include language goals
### Cog-Comm and Language assessed, 3/5 included language goals

<table>
<thead>
<tr>
<th>Medical diagnosis</th>
<th>Treatment diagnosis</th>
<th>Standardized Assessment</th>
<th>Receptive/Expressive Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parkinson’s</td>
<td>R13.12, R41.841</td>
<td>BCAT 25 – 33 (“mild dementia” range)</td>
<td>Receptive: mild-mod, Expressive: adequate. No language goals</td>
</tr>
<tr>
<td>Alzheimer’s</td>
<td>R41.841</td>
<td>Portions of RIPA-G, GDS Stage 6</td>
<td>Receptive: Severe, Expressive: Severe. No language goals</td>
</tr>
</tbody>
</table>
# Language not assessed, no goals on POC

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<th>Receptive/Expressive Language</th>
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</thead>
<tbody>
<tr>
<td>Hypoglycemia, DM</td>
<td>R41.841</td>
<td>BCAT 27/50 (“mild dementia”), VPJ 6/20</td>
<td>“adequate”</td>
</tr>
<tr>
<td>UTI, Previous L Thalamic CVA</td>
<td>R48.8</td>
<td>Cog-comm “severe,” unable to finish BCAT</td>
<td>“adequate”</td>
</tr>
<tr>
<td>Hypothyroidism, repeated falls</td>
<td>R48.8</td>
<td>BCAT 40/50 (“MCI”), SLUMS 19/30 (“dementia”)</td>
<td>“adequate”</td>
</tr>
<tr>
<td>Acute respiratory failure, AMS, previous CVA</td>
<td>R13.11, R13.13, R41.844, R48.8</td>
<td>Cog-comm = “severe,” unable to tolerate formal eval</td>
<td>DNT</td>
</tr>
<tr>
<td>Unspecified dementia</td>
<td>R41.841</td>
<td>Cog-Comm = severe GDS Stage 5</td>
<td>Adequate</td>
</tr>
</tbody>
</table>
Coding Observations

- 0/10 charts included R47.01 “Aphasia” diagnosis code
  - Assessment in 5/10 charts supported this code
  - 4/4 LCDs include R47.01 in the category of “ICD-10 Codes that Support Medical Necessity”
    - Not all Medicare Administrative Contractors (MACs) have a speech-specific LCD (e.g., WPS)
- 3/10 charts specified recent CVA or previous history of CVA
  - 1/3 charts included I69.391 “Dysphagia after cerebral infarction” but 0/3 charts included I69 aphasia code
  - *I69 codes are important for capturing accurate diagnoses that relate to reimbursement for Med A with PDPM (10/1/19)*
Aphasia and Long-Term Care Choices: Competency and Capacity

- Concepts of “Capacity” and Competency
  - Capacity: a person’s ability to make a specific decision at a specific point in time
  - Competency (a legal term): ruling made by a judge that a person is not able to make decisions (long-term and permanent)

- To determine capacity:
  - Pt must understand information relevant to the decision,
  - Must communicate with caregivers about the decision,
  - & reason about alternatives and consequences based on goals and values (Boyle, 1997)
Communication Aid to Capacity Evaluation - CACE

- “A Communicatively Accessible Capacity Evaluation to Make Admissions Decisions”
- Specifically developed for capacity evaluators (not necessarily SLP) who are determining if patients/clients living with communication barriers have the capacity to make an admission decision to long-term care

Offered by: The Aphasia Institute
CACE Supported Communication

1. Able to understand care needs
   Do you have any health problems?
   Do you have any of these health problems?

   Stroke
   Head Injury
   Heart
   Diabetes
   Cancer
   Breathing

Do you need help with . . . ?

- Getting in and out of bed
- Walking or getting around
- Getting dressed
- Going to the bathroom
- Having a shower or bath
Comprehensive Assessment: *Interpretation*

- SLPs in SNF and AL environments are assessing and treating cognitive-communication skills a majority of the time, but do not always assess or treat *language*.

- Following a stroke resulting in aphasia, treating clinicians should be aware and should continue to educate the person with aphasia, caregivers, and the public that aphasia does not affect intellect.

- Although aphasia can make it more challenging to adequately and accurately assess cognitive-communication skills, SLPs also need to be aware of the statistics surrounding post-stroke cognitive disorders and *implications for risk of rehospitalization*.
Successful and Sustainable Outcomes

- Comprehensive Assessment
- Evidence-Based Treatment Approaches
- Interprofessional Practice
- Person-Centered Care
- Principles of Neuroplasticity
- Modes of Therapy
Finding the Evidence

- [ASHA Practice Portal](Clinical Topic: Aphasia)
- [ASHA Aphasia Evidence Map](linked from Practice Portal)
- [Evidence-Based Review of Stroke Rehabilitation]
- [ASHA Convention archives]
ASHA Convention Archives & Articles: Treatment

- Treatments that Work for Both Dementia and Aphasia
  - Hinckley, Bourgeois & Hickey, ASHA Convention 2011
  - Brush, Bourgeois, Hickey, Hinckley, Hopper, & Podolsky ASHA Convention 2009
    - Both contain really nice descriptions of evidence-based treatments for aphasia
- Grand Rounds: Addressing Swallowing and Communication in Persons with Dementia Across the Continuum of Care
- ASHA Leader: Not Cured…But Improved (Hopper, 2016)
Reading Comprehension Treatment in Aphasia: A Systematic Review

Purdy, M., Coppens, P., et al. (2019). 
Aphasiology, 33(6), 629-651.

Description
This is a systematic review of peer-reviewed literature examining the research quality and outcomes of reading comprehension treatments for individuals with aphasia following stroke.

Conclusions from This Review

**External Scientific Evidence**

While each of the four examined approaches (oral reading treatments, strategy-based treatments, cognitive treatments and hierarchical treatment) had some success in improving reading comprehension, results were inconsistent.

The Oral Reading for Language in Aphasia program appeared to garner the most improvement in individuals with severe aphasia while the other approaches showed more success in those individuals with mild to moderate reading deficits.

“...it is clear ... that substantive differences in participants, treatment protocols, and experimental rigor preclude drawing general conclusions about the effectiveness of a particular treatment for each person with aphasia” (p. 20). Additional research in this area is warranted.

Read ASHA's Article Summary | Go to Article
Retraining Writing for Functional Purposes: A Review of the Writing Therapy Literature


Description
This is a systematic review of the literature regarding writing interventions for adults with acquired dysgraphia following brain injury.

Conclusions from This Review

External Scientific Evidence
There is substantial evidence on the use of impairment-based therapies (lexical and phonological) for improving the writing of treated sentences and words, and some evidence to support improvement in spelling untreated words. Limited evidence suggests impairment-based therapies might improve spontaneous writing without a transfer phase. Both impairment-based therapies and assistive technologies (e.g., predictive writing software, voice recognition), when they encourage transfer to functional writing, can improve functional writing activities like letter writing or note-taking. Most of the studies included were either single or multiple case studies, and high-quality research is needed in the area of rehabilitation for acquired dysgraphia.

Read ASHA's Article Summary | Go to Article
**Example of ORLA and LPAA**

**Oral Reading for Language in Aphasia**

“A treatment for individuals with aphasia that involves repeated practice reading sentences aloud with the clinician in an effort to improve reading comprehension via phonological and semantic reading routes. The use of connected discourse (sentences) rather than single words allows the individual to practice natural rhythm and intonation (Cherney, 1995; Cherney, Merbitz, & Grip, 1986).”

“Voice My Choice”™
Bourgeois & Camp, 2013
Bourgeois, Camp, Antenucci & Fox, 2016

- Goal: utilizing visual materials to improve Nursing Assistants (NA) understanding of preferences of LTC residents with dementia
- Picture card sorting activity
- Categories included food, activities, daily living, socializing & communication, and pain
- Result: greater agreement between the individuals and NA’s on preferences compared to control condition

“Over and over again I am surprised by how people with advanced Dementia can read cards and answer the questions” Professor Michelle Bourgeois, November 2015.
Voice my Choice™

Visual Cuing System

www.daughterlycare.com.au
Utilizing Reading and Writing to Enhance Outcomes for Cognitive-Communication Impairments and Aphasia

- ASHA Leader: *Not Cured…But Improved* (Hopper, 2016)

Written and graphic cues can make such information more permanent and accessible to people with dementia. These formats work because they recruit spared functions, such as reading and recognition memory. Written and graphic cues can take many forms, including memory wallets (and their larger counterparts, memory books), which University of South Florida SLP and dementia researcher Michelle Bourgeois pioneered for use with people with dementia in the early 1990s.

Memory aids can be tailored to each person’s needs and interests and can be modified as their cognition and language abilities decline.
Memory Books and/or Wallets

- Download a free memory book template [here](#):
*Index Cards, Reminders, & Memo Boards
Bourgeois, 2007

- Deliver a clear message
  - Large print
  - Keep it short, simple and positive
- Personalize the message
  - Use personal pronouns (I, my, we)
- Read the message out loud
  - If errors occur, modify the message

*Additional examples posted 9/23/19 under handouts section in KSHA
Sitting to stand from chair, using a walker:

1. Seated in Chair
2. Push up from chair
3. Place hands on walker

Photo credit: Stacie Delezene, M.S., CCC-SLP
Omaha, NE
Functional Impact: Case Study

- Medical Diagnoses: Multiple CVA, COPD, Vascular dementia, DM
- Had been admitted to behavioral health unit with alleged physical and verbal altercation in his home environment, dx with CVA
- Precautions: fall risk, right neglect, h/o aggressive behaviors, anxiety
- Significant frustration expressed across all disciplines during tx, with potential to limit progress
- Also often frustrated with staff and his wife
- Frequent perseverations on objects of frustration (e.g., broken partial dentures)
## Case Study: SLP interventions

<table>
<thead>
<tr>
<th>Treatment Technique</th>
<th>Pt Response to Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaced-Retrieval training, “What should you do after you get done with breakfast?” Initial trained response: “Brush my teeth.” (Other targets trained during tx as well)</td>
<td>Added, “and shave” to response. Able to carry over correct response to next day. SLP added graphic cueing system to further reduce frustration with am adls.</td>
</tr>
<tr>
<td>Graphic cues: OT/ST collaboration for SLP to set up cue card for staff to use during morning adl's.</td>
<td>Pt required 2-3 verbal cues in addition to written cues, but completed am adls with significantly less frustration; staff happy too!</td>
</tr>
<tr>
<td>Graphic cues: SLP set up Visitor’s Log &amp; daily calendar system for pt’s wife, other visitors, and staff to utilize to minimize frustration throughout the day</td>
<td>Pt’s wife able to communicate when she had been there and staff able to reference to reduce pt anxiety/frustration, Activities staff able to facilitate increased socialization</td>
</tr>
<tr>
<td>Graphic cues: PT/ST collaboration to design cue cards with one-step instructions for PT and/or RNA to use during functional transfers and ambulation in parallel bars</td>
<td>Reduced physical cueing for transfers from max to min. Enabled pt to achieve max progress with ambulation with PT, RNA able to continue program to maintain mobility</td>
</tr>
</tbody>
</table>
Case Study: Documentation example(s)

- “…given 2 verbal cues from SLP to look at cue card to complete morning grooming adl’s, pt completed task with 100% acc’y given fewer cues from SLP indicating success of errorless learning tech to encourage use of cueing card for morning adl’s.”

- “During a functional transfer with PT, pt now needing min cues to transition through familiar steps of a sequence, as opposed to max cueing at times before SLP implemented written instructions and began working on improved acc’y for 2-step directions.”

- “Pt expressed that he is interested in working on writing, but SLP needs OT to address positioning and adaptive equipment needs to improve the mechanics before function can be addressed therapeutically.”
Successful and Sustainable Outcomes

- Interprofessional Practice
- Person-Centered Care
- Evidence-Based Treatment Approaches
- Principles of Neuroplasticity
- Comprehensive Assessment
- Modes of Therapy
Interprofessional Practice

Learning

Each other

https://hsc.unm.edu/ipe/resources/ipec-2016-core-competencies.pdf
ASHA Interprofessional Practice
Life Participation Approach to Aphasia (LPAA)

Five Key Elements:
1. Goal = enhance life participation
2. All with aphasia are entitled to services
3. Outcome measures include documented life enhancement
4. Intervention targets include both personal and environmental factors
5. Availability of services at all stages of aphasia is emphasized
LPAA in Action

- Discover *competencies vs. impairments* of the Person with Aphasia (PWA)
- Identify the positive impact of support
- Include treatment focus on life goals
- Create and support an “aphasia-friendly” environment
ICF Framework applied to Aphasia

**Assessment Data**
- Body Structures & Function
  - WAB-R
  - Objective measures
- Activities & Participation
  - ALA-2
  - Interview
- Environmental & Personal Factors
  - CCRSA
  - Interview

**Clinical Reasoning**
- What strengths can be utilized?
- Which impairments most impact function and QOL?
- Which activities are most important?
- How do personal or environmental factors help or hinder?

**Goals**

*WAB-R: Western Aphasia Battery—Revised (Kertesz, 2006)*
*ALA-2: Assessment for Living with Aphasia - 2nd edition (Kagan et al., 2007)*
*CCRSA: Communication Confidence Rating Scale for Aphasia (Babbitt, Heinemann, Semik, & Cherney, 2011)*
Successful and Sustainable Outcomes

Comprehensive Assessment
Evidence-Based Treatment Approaches
Interprofessional Practice
Person-Centered Care
Modes of Therapy
Principles of Neuroplasticity
Use it or lose it
Use it and improve it
Specificity
Repetition Matters
Intensity Matters
Time Matters
Salience matters
Age matters
Transference
Interference
Attention
Stimulation
Simultaneity
Sleep
Emotion
Reward
Successful and Sustainable Outcomes

- Interprofessional Practice
- Person-Centered Care
- Evidence-Based Treatment Approaches
- Principles of Neuroplasticity
- Comprehensive Assessment

Modes of Therapy
Modes of Therapy and Neuroplasticity

- The modes of group and concurrent treatment help foster some of the specific principles such as intensity, transference, and interference.
  - Kleim & Jones, 2008
“In addition to individual treatment for aphasia, group treatment is often used as a format to apply learned strategies in a more natural conversational context.”
Conclusions Regarding Group Language Therapy

There is level 1a evidence that group treatment may improve communicative ability but not conversational ability, non-verbal reasoning, verbal expression, auditory comprehension or fluency as compared to individual treatment.

There is level 1b evidence that group treatment, individual treatment and combined group and individual treatment may not produce different results in terms of word retrieval.

There is limited level 2 evidence that immediate group therapy may improve language impairment when compared to deferred group therapy; however, evidence for the effect on communicative ability is conflicting.

Participation in group therapy may result in communicative and linguistic improvements.
**TOPIC: Food**

**SUPPORTED LEVEL**

For severe aphasia, activities encourage multi-modal communication and are designed to have a slower pace to allow more time for auditory processing and response formulation.

**OUTCOMES:**

Use multi-modal communication to express ideas related to food. Practice ordering from a menu with use of strategies.

**WARM-UP:**

Group members will complete food pairs read aloud by the group leader (e.g. bacon and..., salt and...).

**LANGUAGE ACTIVITY:**

Using the phrases, “Yes, I do...” or “No, I don’t...”, or gestures, group members will communicate answers to food related questions (e.g. Do you eat sushi?).

Group members will practice using the phrase “I had a stroke. Just a minute.” and associated gestures. *Gesture model should be provided by the group leader, such as holding up their pointer finger.*

Group members will use menus to practice ordering food.

**CARRYOVER:**

Group members will communicate or demonstrate what strategies they use when requesting food at home and when dining out.

How has dining out changed since your stroke?

Do you eat in restaurants more or less than before your stroke?
A Book Club for Aphasia Treatment

A university clinic revamps its approach to encourage attendance and participation in its aphasia treatment group.

BY NANCY NAPERALA

You may also want to try a book-club approach with aphasia patients if any of the following characteristics apply to your current large treatment group:

- There’s more yawning than communicating during the group sessions.
- Turnout doesn’t meet an acceptable concept of a “group.”
- Your client population has diverse cognitive, speech and receptive/expressive goals.
- The time and effort spent designing an engaging treatment plan outweighs its actual value.
- Stimulating discussion topics based on current events are too polarizing.
- You want to improve mutually beneficial relationships and client-focused treatment.

The ASHA Leader, 1 May 2019

• Could this be modified for small group vs. large group??

• SNF/AL setting vs. community setting?

• Regular activity offered through activities department?
Group or Concurrent Treatment Potential?

Possible Goals of Group Participants

- AAC use
- Sequencing
- Naming and word-finding
- Picture or action description
- Attention to task
- Problem-solving
Summary

- Treatment strategies for cognitive-communication impairment related to progressive neurological disease are different from treatment strategies for aphasia related to a stroke.
- BUT there are similarities and overlap, lending support to the importance of comprehensive assessment.
- Treatment that incorporates a variety of evidence-based techniques based on etiology and accurate diagnosis, and takes into account interprofessional practice, person-centered care, principles of neuroplasticity and effective use of any/all modes of therapy will provide the best chance of sustainable outcomes.
Successful and Sustainable Outcomes

Comprehensive Assessment

Evidence-Based Treatment Approaches

Interprofessional Practice

Person-Centered Care

Principles of Neuroplasticity

Modes of Therapy
- Full copy of today’s presentation will be posted in the handouts section at ksha.org and will be available for approximately 1 month
- Feel free to contact me at: Jeanne.Copeland@genesishcc.com

thank you!
Aphasia. (n.d.). Retrieved May 1, 2019, from https://www.asha.org/Practice-Portal/Clinical-Topics/Aphasia/


