Using Evidence Based Aphasia Naming Therapies in Clinical Practice

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What is Evidence Based Practice?

ASHA's Evidence Based Practice Map

Frame Your Clinical Question

Population: What are the characteristics and/or condition of the group?

Intervention: What is the screening, assessment, treatment, or service delivery model that you are considering?

Comparison: What is the main alternative to the intervention, assessment, or screening approach (e.g., placebo, different technique, different amount of treatment)?

Outcome: What do you want to accomplish, measure, or improve?

ASHA's Evidence Based Practice Map

Population	Intervention	Comparison	Outcome
Aphasia	Picture Naming Treatment	Other Treatments or N/A	Improved spoken communication Improved picture naming abilities

PICO Example

What is the effect of naming treatment approaches on daily communication or on naming abilities in persons with aphasia (PwA)?

ASHA's Evidence Based Practice Map

Gather Evidence

What evidence have you collected?

- Clinical observations of your client while using a particular intervention approach
- Objective performance data collected over time
- Literature findings (e.g., statistical analyses)

ASHA's Evidence Based Practice Map

Assess the External Evidence

Does this study investigate a population similar to my client?

Does the study review an intervention that I could use to advance my client's goals?

Are the study's outcomes related to my question?

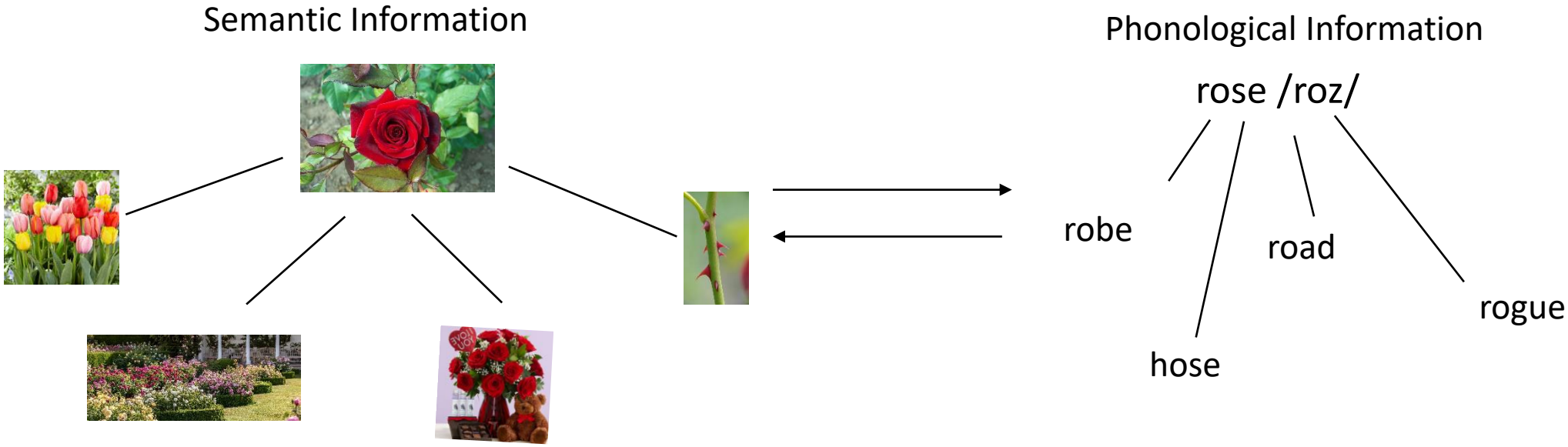
ASHA's Evidence Based Practice Map

Make Your Clinical Decision

Naming Treatment Approaches

Stages of Picture Naming

Picture naming is a two-stage process that requires activating semantic (meaning) information and phonological (word form) properties associated with the targeted picture.

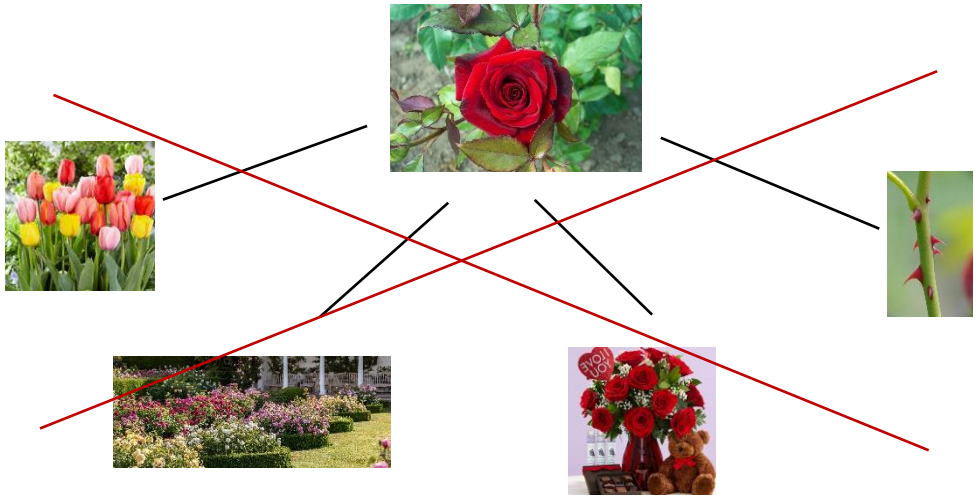


Stages of Picture Naming

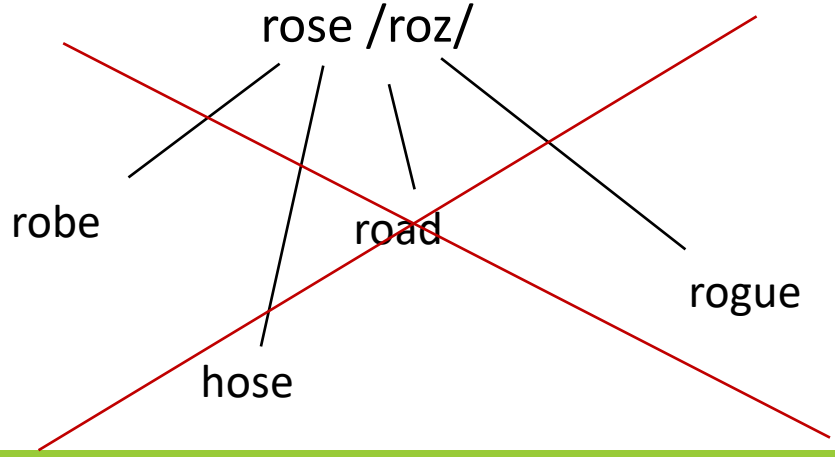
Naming difficulties (anomia) are very common across all types of aphasia.

These difficulties occur due to a breakdown at either the semantic processing level, phonological processing level, or both.

Semantic Information



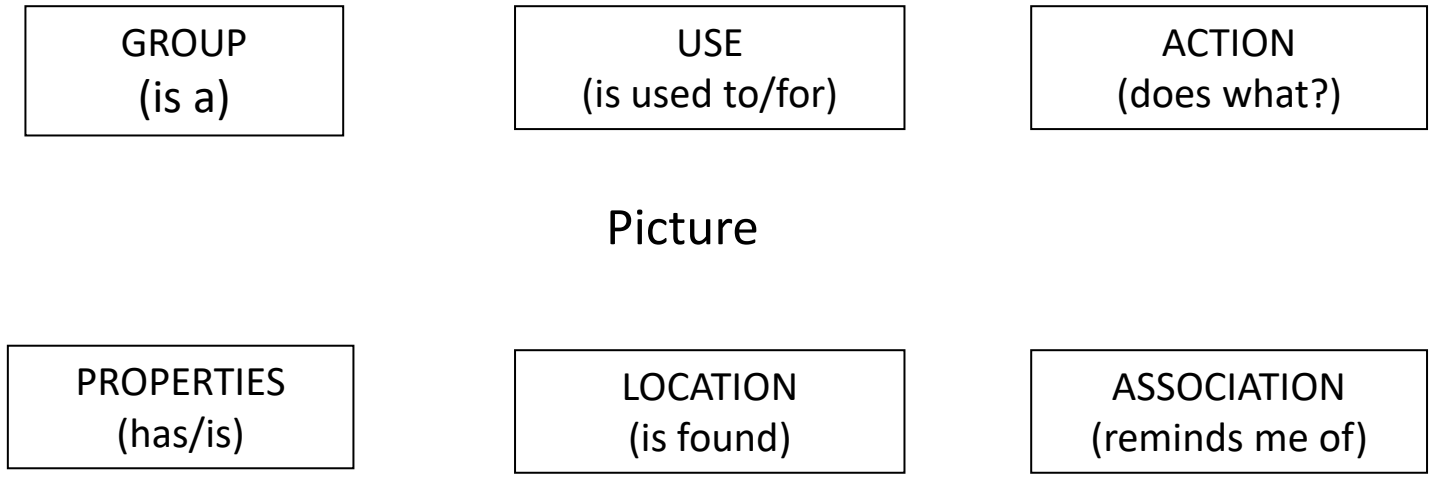
Phonological Information



Semantic Feature Analysis Approach

Description of Treatment Protocol

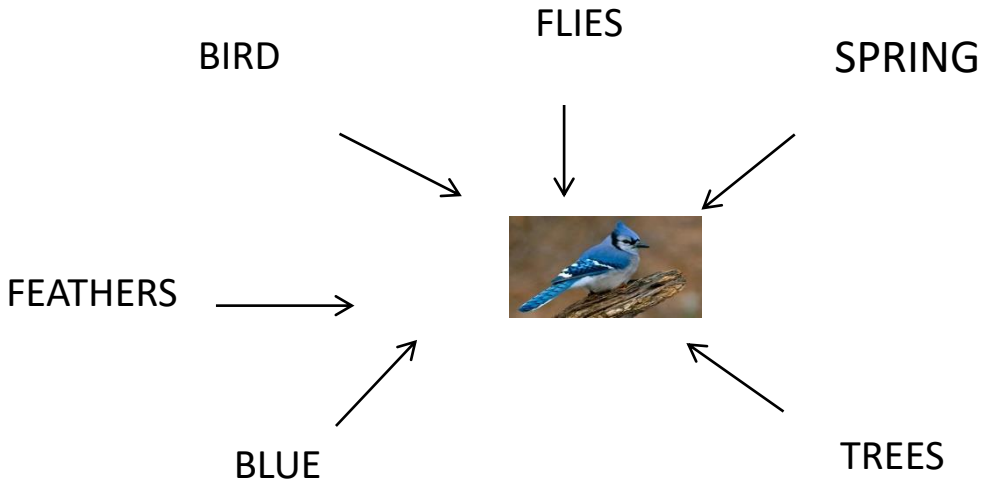
- Treatment focuses on semantic features associated with a target picture to treat naming deficits in PwA.
- Use of a “semantic feature analysis chart”.
- Individuals provide one or more verbal responses for each feature for a targeted picture, but variations exist (e.g., written or verbal responses; self-generated features or clinician generated features; recognition or production format).

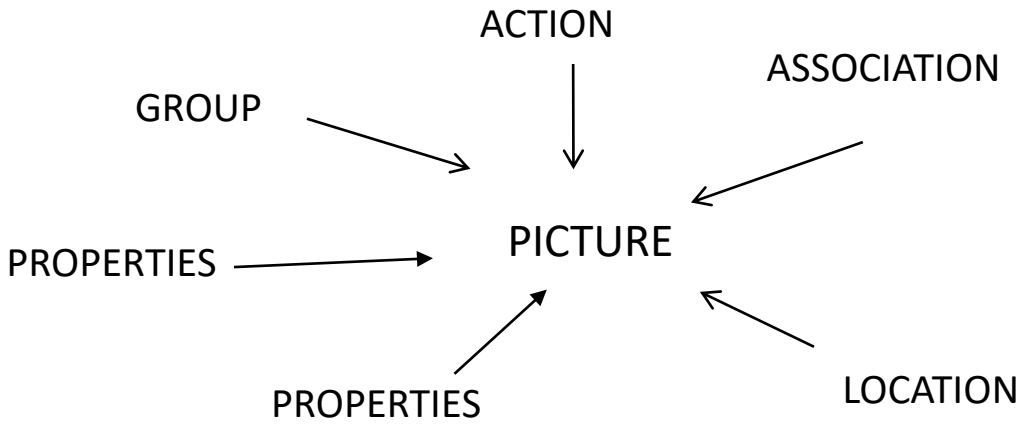


Semantic Feature Analysis Approach

Rationale

- Approach is based on the concept of spreading activation within the semantic system.
- The presentation of semantic features closely related to the target will result in a spreading of activation to other closely related targeted concepts.
- Targeted concept receives a higher level of activation than other similar concepts because there is a convergence on it, facilitating the ease in naming it.





Semantic Feature Analysis Approach

Evidence

- A recent systematic review (Efstratiadou, Papathanasiou, Holland, Archonti, & Hilari, 2018) covered 21 studies (55 PwA).
  - Improvement in naming of trained items was reported for 81.82% of PwA.
  - Maintenance of the trained items post-therapy was reported for 58.18% of PwA.
  - However, most participants, 62.22%, demonstrated a small or less-than-small treatment effect.
  - Generalization to untrained items and connected speech was reported for 40% of PwA.

Semantic Feature Analysis Approach

QUESTIONS?

Semantic Feature Analysis

Clinical Feasibility/Adaptation

- Clients with mild anomic aphasia are the most appropriate
- Clients who are able to use the technique independently to self-cue during times when word finding difficulties occur
- Clients with more severe aphasia may also be able to use this approach
- Clients who have milder severity can be trained to use most of the features; PwA who are more severe should be trained on 2-3 features
- Use the SFA template during other goals if word finding difficulties arise, is particularly useful with high level clients with anomia.
- At the EMU clinic all clients working on SFA are provided a template to use at home

In general, this technique is worth a try with all clients who have aphasia

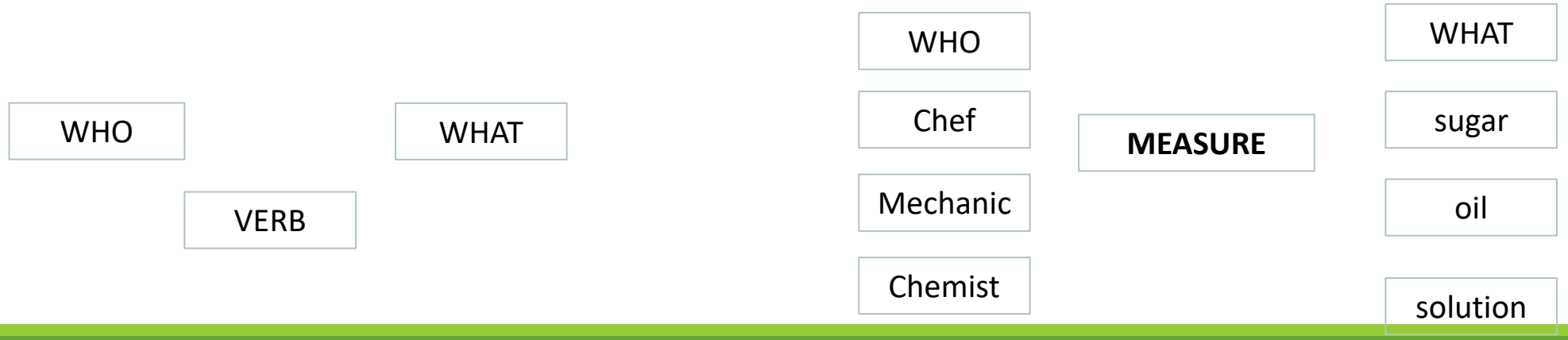
Semantic Feature Analysis Approach

QUESTIONS?

Verb Network Strengthening Treatment (VNeST)

Description of Treatment Protocol

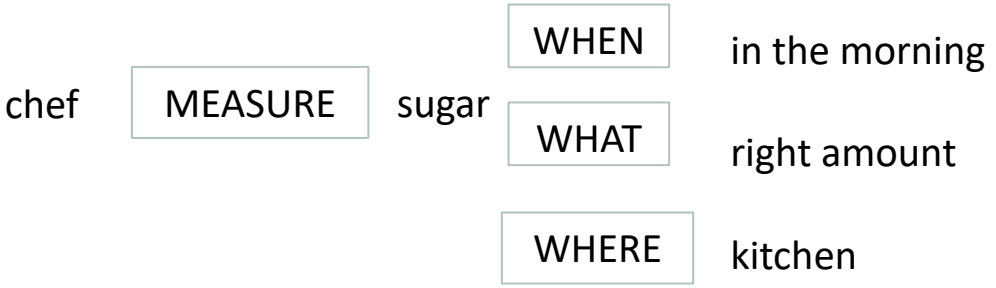
- Treatment focuses on activating verb networks to improve sentence and discourse production.
- Verbs that can take on a variety of agents and patients are used.
  - An agent is the entity that intentionally carries out the action of the verb (e.g., **The mechanic** measured the oil).
  - A patient is the entity that directly receives the action of the verb (e.g., The mechanic measured the **oil**).
- Individuals verbally provide agents and patients for a given verb.



Verb Network Strengthening Treatment (VNeST)

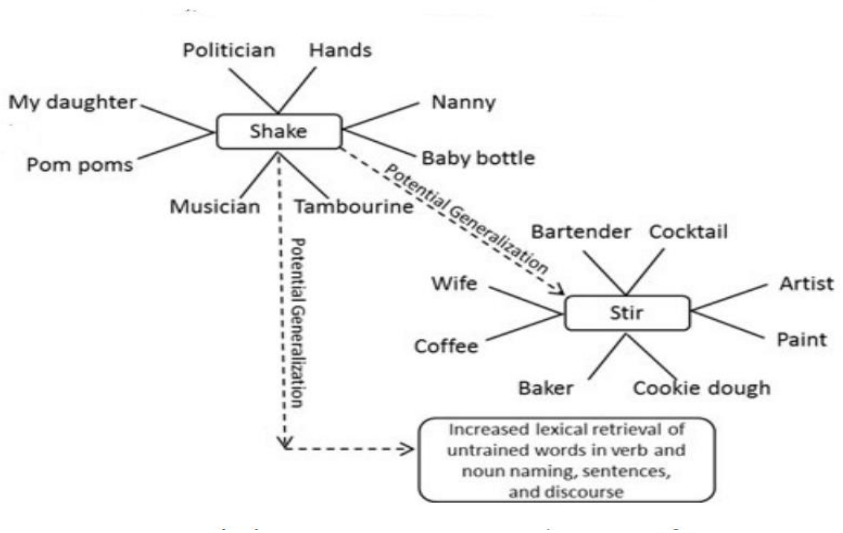
Description of Treatment Protocol

- Certain verbs can be discussed in more depth.



Rationale

- Using verbs will promote increased activation of the verb network, and the concepts that comprise that verb network (i.e., content words, verbs).
- The retrieval of words needed to produce complete and accurate sentences will occur over time.
- Potential generalization to other similar verbs may also occur.



VNeST

Evidence

- A recent systematic review (Edmonds, 2016) covered 5 studies (19 PwA).
  - Improvements in sentence production were found in 75% of PwA.
  - Improvements in sentence production in discourse were found in 59% of PwA.
  - Communication partners also reported improvements in functional communication skills.
  - Generalization to single noun and verb naming was reported.

*NOTE: Review was conducted by the creator of VNeST.

V-Nest Approach

QUESTIONS?

VNeST

Clinical Feasibility/Adaptation

- Appropriate for a range of aphasia types and severity levels (provided that the client has adequate comprehension to understand the protocol steps).
- Appropriate for those with concomitant AoS when written responses, rather than verbal responses, are allowed AND/OR if lengthening utterances is the goal.
- Appropriate for clients with mild aphasia who need to work on grammatical structures (e.g. Increase their morphological diversity: Saying, “The birds are singing” vs “The bird sing”)
- The literature reports that a minimum of 10 verbs need to be used in therapy to ensure maximally positive outcomes.
- The literature also reports that 35 total hours of therapy resulted in improvements across outcome measures.
- A good approach to supplement with a home program.

V-Nest Approach

QUESTIONS?

Phonological Component Analysis

Description of Treatment Protocol

- Treatment focuses on phonological-based features to treat naming deficits in PwA.
- Use of a “phonological feature analysis chart”.
- Individuals provide verbal responses for each feature for a targeted picture.

RHYME (it rhymes with)	FIRST SOUND (it starts with the sound)	FIRST SOUND ASSOCIATE (other words start with ____)
FINAL SOUND (it ends with the sound)	Picture	SYLLABLES (how many beats)

Phonological Component Analysis

Rationale

- Typical phonological-based treatments (e.g., repetition of words; first sound cue) has not resulted in maintenance of treatment gains.
- Use of an approach that provides an in-depth focus on phonological word form properties, along with an element of choice, may lead to better long-term outcomes.
- SFA structure is used because of its success in treating naming deficits in PwA.

Phonological Component Analysis

Evidence

Two separate studies (18 PwA) have provided emerging data.

- Improvement in naming of trained items was found in 78% of PwA.
- Maintenance of treatment gains was reported for 93% of PwA.
- A range of small to large treatment effects was found (50% small effect size; 21% medium effect size; 29% large effect size).
- Generalization to other test measures (Boston Naming Test; Philadelphia Naming Test) and connected speech was reported for 29% of PwA.

Phonological Component Analysis Approach

QUESTIONS?

Phonological Component Analysis

Clinical Feasibility/Adaptability

- Clients with Broca's aphasia with a range of severities.
- Clients with apraxia of speech (AoS).
- Clients who are able to benefit from learning about the phonological properties of the target words (e.g., learning about first sound, last sound).
- Clients who are able to use the technique independently to self-cue during times when word finding difficulties occur.

Phonological Component Analysis Approach

QUESTIONS?

Key Takeaways

-Success and practice for all techniques is dependent on comprehension skills, family support and compliance with their home program

-Teaching the client to self-cue using the features/items is important so that they can use the techniques independently.

-Motivation and interest in the approach is also important, using items that are personal and relevant to the client is key.

-SFA and VNest and PCA and VNest can be used simultaneously, typically SFA and PCA are not used simultaneously.

Upcoming & Ongoing Studies

A CALL FOR PARTICIPANTS!

Working Memory-Naming Approach

Description of Treatment Protocol

- Treatment focuses on using a combined linguistic-cognitive naming approach to treat naming deficits in PwA.
- Emphasis is placed on using working memory and naming tasks to help with naming targeted pictures.

Participants – Eligibility Criteria

- Mild – Moderate-Severe Aphasia.
- Mild – Moderate Severe AoS.
- Treatment via Zoom, university research lab, or person's home.

Repetition – Written Naming Study

Description of Treatment Protocol

- Treatment compares a written naming & repetition approach to a repetition only approach in the same group of PwA to see which approach results in better improved naming accuracy.
- Previous study (Hashimoto, 2020) did not find any differences in the approaches.
- Follow-up study will examine both approaches in a different group (PwA with more significant aphasia/AoS) to see if aphasia severity plays a role in response to these approaches.

Participants – Eligibility Criteria

- Moderate – Severe Aphasia severity.
- Moderate – Severe AoS.
- Adequate motor abilities to write (with either hand).
- Treatment via Zoom, university research lab, or person's home.

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