WEBINAR SERIES

APHASIA

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Bancroft NeuroRehab
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APHASIA

- Aphasia is an impairment of language, affecting the production or comprehension of speech and the ability to read and write.
- It does not interrupt the integrity of thought/it does not affect one's intelligence
- Aphasia does not discriminate (age, race, sex)
- Aphasia is always due to injury to the brain-most commonly from a stroke.. But brain injuries resulting in aphasia may also arise from head trauma, brain tumors, or infections.
  - *The ability to communicate using language is affected. Language includes:*
- *Speaking*
- *Understanding the speech of others*
- *Reading*
- *Writing*
- *Gesturing*
- *Using numbers*

https://www.aphasia.org/aphasia-resources/the-aphasia-quiz/

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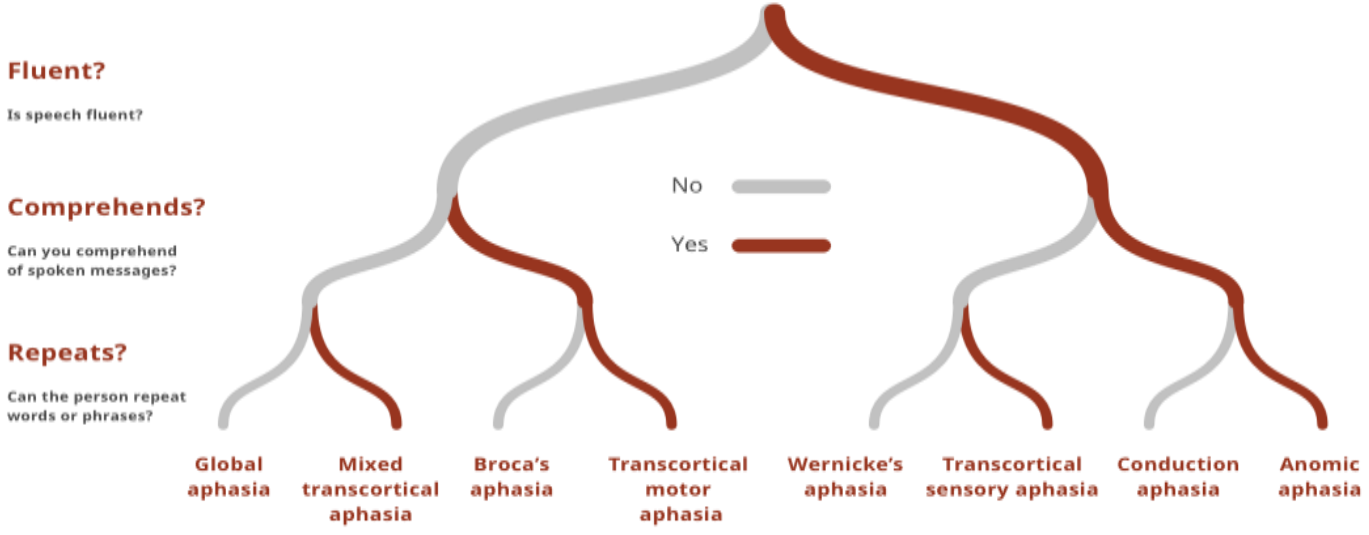
According to the National Aphasia Association: INCIDENCE OF APHASIA

More people have aphasia than have many other common conditions, including cerebral palsy, multiple sclerosis, Parkinson's disease, or muscular dystrophy.

- *About 1 third (225,000) of strokes result in aphasia.*
- *There are at least 2,000,000 people in the USA with aphasia.*
    - ***APHASIA STATISTICS*** *Pulled from a 2016 national survey on aphasia awareness.*
- *84.5% of people have never heard the term "Aphasia."*
- *8.8% of people have heard of aphasia and can identify it as a language disorder.*
- *34.7% of people that are "aphasia aware" either have aphasia or know someone that does.*
- *31% of people agree or give a neutral response to the statement: "If a person has difficulties with speech, they also have intellectual deficiencies."*
- *84.1% of people make a connection between stroke and brain injury and difficulties with communication.*
- *15.3% of people recall first hearing about aphasia from newspapers, magazines or online publications.*

Types of Aphasia



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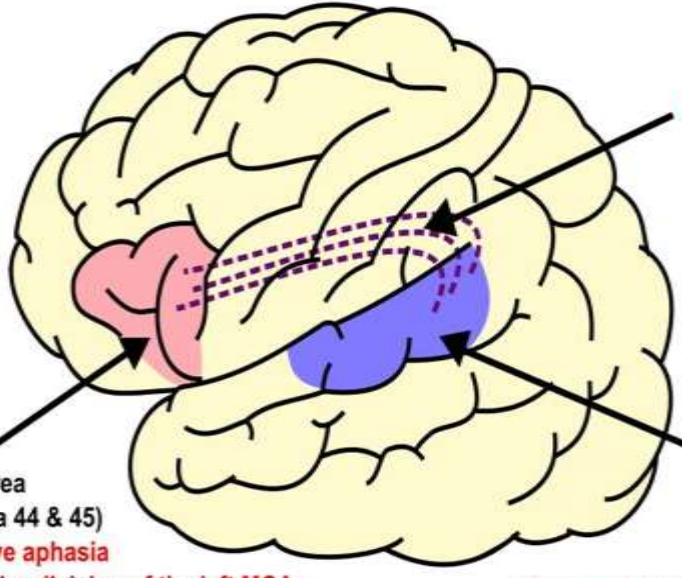
Anatomy of Language

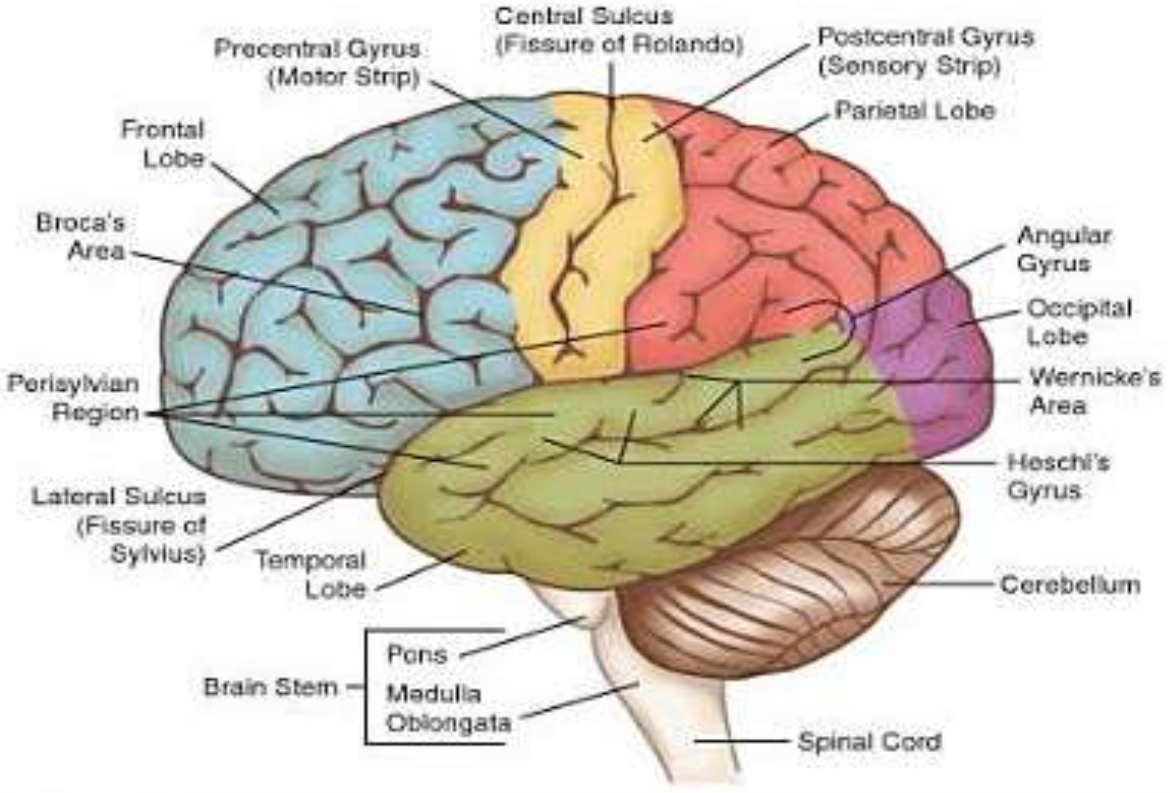


Arcuate fasciculus
Lesion: Conduction aphasia

Broca's area
(Brodmann's area 44 & 45)
Lesion: Expressive aphasia
Common etiology: Infarct of superior division of the left MCA

Wernicke's area
(Brodmann's area 22)
Lesion: Receptive aphasia
Common etiology: Infarct of the inferior division of the left MCA

Moises Dominguez


Central Sulcus
(Fissure of Rolando)
Precentral Gyrus
(Motor Strip)
Postcentral Gyrus
(Sensory Strip)
Parietal Lobe
Frontal
Lobe
Broca's
Area
Angular
Gyrus
Occipital
Lobe
Perisylvian
Region
Wernicke's
Area
Heschl's
Gyrus
Lateral Sulcus
(Fissure of
Sylvius)
Temporal
Lobe
Cerebellum
Pons
Brain Stem
Medulla
Oblongata
Spinal Cord

GLOBAL APHASIA

This is the most severe form of aphasia and is applied to patients who can produce few recognizable words and understand little or no spoken language. Persons with Global Aphasia can neither read nor write. Like in other milder forms of aphasia, individuals can have fully preserved intellectual and cognitive capabilities unrelated to language and speech.

Global Aphasia is caused by injuries to multiple language-processing areas of the brain, including those known as Wernicke's and Broca's areas. These brain areas are particularly important for understanding spoken language, accessing vocabulary, using grammar, and producing words and sentences.

Global aphasia may often be seen immediately after the patient has suffered a stroke or a brain trauma. Symptoms may rapidly improve in the first few months after stroke if the damage has not been too extensive. However, with greater brain damage, severe and lasting disability may result.

LESION-Encompasses Broca's and Wernicke's areas, arcuate fasciculus, angular gyrus, and areas surrounding Broca's and Wernicke's area, and large portion of the perisylvian cortex.

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BROCA'S APHASIA(non-fluent aphasia)

Individuals with Broca's aphasia have trouble speaking fluently but their comprehension can be relatively preserved. This type of aphasia is also known as non-fluent or expressive aphasia. Patients have difficulty producing grammatical sentences and their speech is limited mainly to short utterances of less than four words.

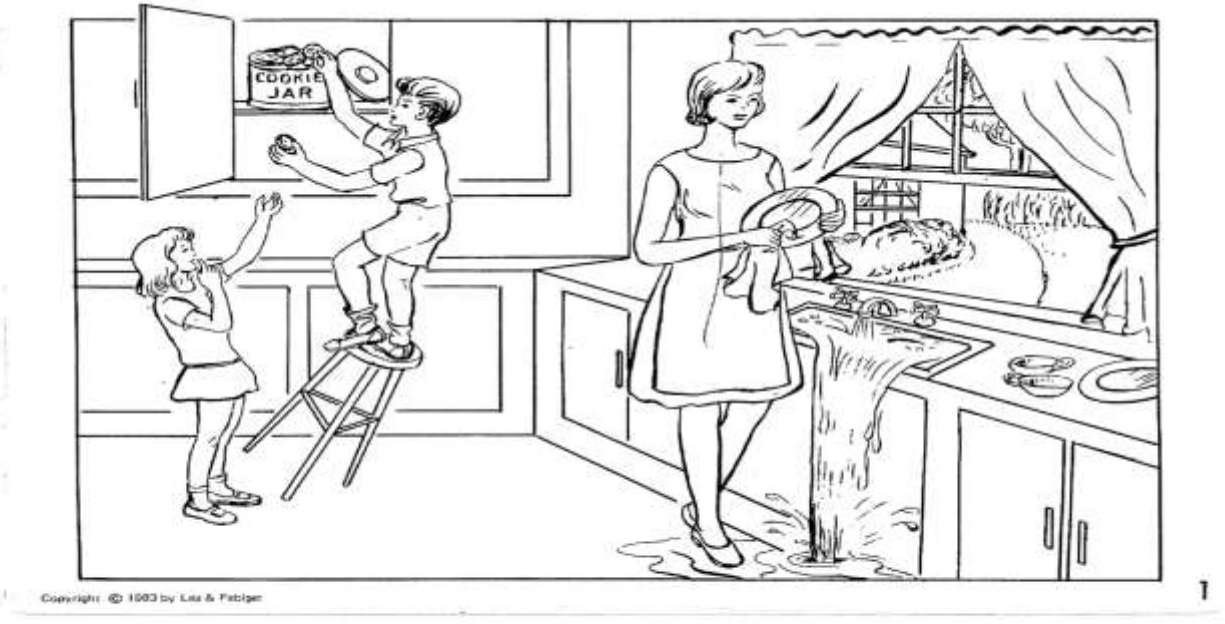
Producing the right sounds or finding the right words is often a laborious process. Some persons have more difficulty using verbs than using nouns.

A person with Broca's aphasia may understand speech relatively well, particularly when the grammatical structure of the spoken language is simple. However they may have harder times understanding sentences with more complex grammatical construct. For example the sentence "Mary gave John balloons" may be easy to understand but "The balloons were given to John by Mary" may pose a challenge when interpreting the meaning of who gave the balloons to whom.Individuals with this type of aphasia may be able to read but be limited in writing.

Such damage is often a result of stroke but may also occur due to brain trauma. Like in other types of aphasia, intellectual and cognitive capabilities not related to speech and language may be fully preserved.Broca's aphasia is named after the French scientist, Paul Broca, who first related a set of deficits associated with this type of aphasia to localized brain damage. He did this in 1861, after caring for a patient who could only say the word "tan".

LESION- Primarily posterior aspects of the left third frontal convolution and adjacent inferior aspects of precentral gyrus.

COOKIE THEFT (Boston Diagnostic Aphasia Examination)



TRANSCORTICAL MOTOR APHASIA

Disturbance of spontaneous speech similar to Broca's aphasia with relatively preserved repetition.**LESION-**white matter tract deep to Broca's area, anterior and superior to Broca's.

MIXED NON-FLUENT APHASIA

Mixed non-fluent aphasia applies to persons who have sparse and effortful speech, resembling severe Broca's aphasia. However, unlike individuals with Broca's aphasia, mixed non-fluent aphasia patients remain limited in their comprehension of speech, similar to people with Wernicke's aphasia. Individuals with mixed non-fluent aphasia do not read or write beyond an elementary level.

WERNICKE'S APHASIA (fluent aphasia)

In this form of aphasia the ability to grasp the meaning of spoken words and sentences is impaired, while the ease of producing connected speech is not very affected. Therefore Wernicke's aphasia is also referred to as 'fluent aphasia' or 'receptive aphasia'.

Reading and writing are often severely impaired. As in other forms of aphasia, individuals can have completely preserved intellectual and cognitive capabilities unrelated to speech and language.Persons with Wernicke's aphasia can produce many words and they often speak using grammatically correct sentences with normal rate and prosody. However, often what they say doesn't make a lot of sense or their sentences are comprised of non-existent or irrelevant words(neologisms). They may fail to realize that they are using the wrong words or using a non-existent word and often they are not fully aware that what they say doesn't make sense.Patients with this type of aphasia usually have profound language comprehension deficits, even for single words or simple sentences. This is because in Wernicke's aphasia individuals have damage in brain areas that are important for processing the meaning of words and spoken language. Such damage includes left posterior temporal regions of the brain, which are part of what is known as Wernicke's area, hence the name of the aphasia.Wernicke's aphasia and Wernicke's area are named after the German neurologist Carl Wernicke who first related this specific type of speech deficit to a damage in the left posterior temporal area of the brain.

LESION-Posterior half of the first temporal gyrus and possibly adjacent cortex, left temporal.

COOKIE THEFT

TRANSCORTICAL SENSORY APHASIA and ANOMIC APHASIA

TRANSCORTICAL SENSORY APHASIA
Disturbance in single word comprehension with relatively intact repetition.

LESION-white matter tracts connecting parietal lobe to temporal lobe or in portions of inferior parietal lobe, area posterior to Wernicke's.

ANOMIC APHASIA Anomic aphasia is one of the milder forms of aphasia. The term is applied to persons who are left with a persistent inability to supply the words for the very things they want to talk about, particularly the significant nouns and verbs. Their speech is fluent and grammatically correct but it is full of vague words (such as 'thing') and circumlocutions (attempts to describe the word they are trying to find). The feeling is often that of having the word on the tip of one's tongue, which results in their speech having lots of expressions of frustration. People with anomic aphasia understand speech well and they can repeat words and sentences. In most cases they can read adequately. Difficulty finding words is as evident in writing as it is in speech.

LESION-Inferior parietal lobe or connections between parietal and temporal lobe, angular gyrus.

CONDUCTION APHASIA

Disturbances of repetition and spontaneous speech (literal and phonemic paraphasias) A paraphasia is the production of unintended syllables , words or phrases during speaking.

A literal or phonemic paraphasia may be producing “hike or pike” for “pipe”. A verbal or semantic paraphasia is when one word is substituted for another related word. For example, “my mother” for “my wife”. Neologism is not a recognizable word from a patient’s language.An example may be for “comb” they may produce “ferbish or planker”.

LESION-arcuate fasciculus (connects Broca’s and Wernicke’s) and/or cortical connections between temporal and frontal lobes.

Primary Progressive Aphasia

What is Primary Progressive Aphasia (PPA)?

https://youtu.be/J0_30h1tKXU

OTHER TYPES OF APHASIA

There are many other possible combinations of deficits that do not exactly fit into these categories.Some of the components of a complex aphasia syndrome may also occur in isolation. This may be the case for disorders of reading (alexia) or disorders affecting both reading and writing (alexia and agraphia), following a stroke. Severe impairments of calculation often accompany aphasia, yet in some instances patients retain excellent calculation in spite of the loss of language.

IMPACT OF APHASIA

- Aphasia Has Greater Negative Impact on a Person's Quality of Life than Cancer or Alzheimer's Disease.

- Researchers studied health-related factors affecting quality of life for hospital residents in Ontario, Canada.
- They examined the impact of 60 different diseases and 15 conditions on quality of life of 66,193 people.
- Results showed aphasia has the largest negative impact on quality of life, more than cancer and Alzheimer's disease.
- The negative effects of aphasia on an individual's quality of life includes their inability to communicate with and engage their family, friends, doctors and their wider community.
- Health care providers should act so as to improve services for people with aphasia as people with aphasia frequently cannot express their wants and needs unassisted.
- The next stage is to ensure that those who have the power to influence the provision of services from health and social systems are fully aware of the impact that aphasia has and the impact that services for aphasic people and their relatives can have when readily provided.

Aphasia Bill of Rights

NATIONAL APHASIA ASSOCIATION

APHASIA BILL OF RIGHTS*

WHEREAS:

Aphasia is a condition, usually acquired as a result of stroke or other brain injury, which impairs the ability to use or comprehend words, but does not affect intelligence, and as a result of their difficulty communicating, people with aphasia may experience great isolation and frustration in their daily lives, which is often made worse by the lack of information that they receive about their condition, and many people are never even told that their difficulty communicating has a name – "aphasia" – and the majority leave the health care system without referrals to resources in their own communities, and people with aphasia must be accorded the same rights as other patients to full and adequate medical treatment, insurance coverage, and research regarding their condition, and people with aphasia have the same fundamental rights as other members of society, including the right to the pursuit of happiness and a full and positive quality of life,

NOW, THEREFORE on September 26, 2000 the Executive Board of the National Aphasia Association (NAA) votes unanimously to approve the following Bill of Rights:

People with aphasia have the right to:

1. Be told, as soon as it is determined, preferably by a qualified speech-language pathologist (SLP), both orally and in writing, that they have "aphasia" and given an explanation of the meaning of aphasia.

2. Be provided, upon release from the hospital, with written documentation that "aphasia" is part of their diagnosis.

3. Be told, both orally and in writing, that there are local resources available to them, including Aphasia Community Groups in their areas, as well as national organizations such as the National Aphasia Association (NAA).

4. Have access to outpatient therapy to the extent deemed appropriate by a qualified speech-language pathologist (SLP).

5. Give their informed consent in any research project in which they are participating.

6. Demand that accrediting health care agencies and health-care facilities establish requirements for and competency in caring for people with aphasia.

7. Have access to information in their most functional language through a qualified professional, or through an interpreter and/or printed material, and access to culturally sensitive services when the person with aphasia speaks a language different from English and/or is from an ethnically/culturally diverse background.

* The NAA wishes to recognize the prior work of Dennis Swaney, who in 1986 developed the "Aphasic Person's Bill of Rights" within the context of the patient/speech-language pathologist relationship.

Example of an unsuccessful communication

Partner:Would you like some lunch?

PWA: Yes

Partner: What would you like?

PWA: I….I…….Long pause….

Partner: Well…???

PWA: I want….I…..

Partner: Can you please decide? I have to go run my errands, pick up the kids and go to work…..

PWA: Nothing

Partner: Ok maybe later you will know what you want….

COMMUNICATION STRATEGIES

Communication Strategies: Some Dos and Don'ts The impact of aphasia on relationships may be profound, or only slight. No two people with aphasia are alike with respect to severity, former speech and language skills, or personality. But in all cases it is essential for the person to communicate as successfully as possible from the very beginning of the recovery process. Here are some suggestions to help communicate with a person with aphasia: Above all treat them as the adult they are! Do not use baby talk or shout.

1. Make sure you have the person's attention before you start.
2. Minimize or eliminate background noise (TV, radio, other people).
3. Keep your own voice at a normal level, unless the person has indicated otherwise.
4. Keep communication simple, but adult. Simplify your own sentence structure and reduce your rate of speech. Emphasize key words. Don't "talk down" to the person with aphasia.
5. Give them time to speak. Resist the urge to finish sentences or offer words.

COMMUNICATION STRATEGIES (CON'T)

1. Communicate with drawings, gestures, writing and facial expressions in addition to speech. Offer them paper and pen. Writing down key words or the topic of conversation can be helpful.
2. Confirm that you are communicating successfully with "yes" and "no" questions.
3. Praise all attempts to speak and downplay any errors. Avoid insisting that that each word be produced perfectly. Engage in normal activities whenever possible. Do not shield people with aphasia from family or ignore them in a group conversation. Rather, try to involve them in family decision-making as much as possible. Keep them informed of events but avoid burdening them with day to day details.
4. Encourage independence and avoid being overprotective. Empower them.

ID CARD

Many people with aphasia find it helpful to carry identification cards and other materials that can help explain the person's condition to others. ID cards are available from the the National Aphasia Association website. Some communication-assistive devices may also be helpful. Non-verbal techniques for communicating, such as gesturing and pointing to pictures, may help people with aphasia.

http://aphasiaid.com/

5/30/2019

APHASIA ID

jack
kay

Person with aphasia

Date issued:
5/30/2019

Aphasia is an impairment of language, not of intellect. Aphasia can affect a person's speech and their ability to read or write and is usually the result of a stroke or another brain injury. People with aphasia have trouble communicating.

The following tips help:

- Please be patient with me.
- Please speak slowly and in a normal voice. No need to shout!
- Try to avoid loud places or places with a lot of background noise.

Thank you very much for your patience and understanding.

Visit aphasia.org for more information and aphasia-friendly resources.

Made at www.aphasiaID.com

EVALUATION

Speech-Language Pathologists will evaluate and treat persons with aphasia. Evaluation of all communication areas is conducted and based on identified strengths and weaknesses, goals will be addressed based on a person centered approach. A typical evaluation is usually 60 minutes and then further evaluation may be completed over several sessions. Evaluation of the following language areas is common:

Verbal Expression-evaluates naming skills (nouns and verbs) show pictures or objects and have them name them, responsive naming, “what do we tell time with”, fluency can look at agility (ability to produce repetitive syllables, multi-syllabic words and sustain production over time, conversational level speech, automatic speech name days of week, months, counting, spontaneous verbal output, picture description.

EVALUATION CON'T

Auditory comprehension-evaluates ability to following varying length of directions, answer questions (open-ended/yes/no), word discrimination, sentence level discrimination, understand varying levels of material presented in different lengths...sentences, paragraphs. Ask more grammatically complex info. "Do 2 lbs of flour weigh more than 1" vs. "Is 1 lb of flour heavier than 2". Can they recite "Jack and Jill…"I pledge allegiance.." a prayer?, sing a familiar tune Happy Birthday, is rhythm impaired (tapping it out)?

Oral reading skills...vary length read words aloud, phrases, sentences, paragraphs

Repetition skills-vary length same as above

Reading Comprehension-evaluate level and ability, word-picture matching lowest to more complex.

EVALUATION CON'T

Writing skills-evaluate level and ability Name, info, abc's, simple spelling to dictation, sentence dictation, copying, written confrontation naming, picture description, narrative generation, emails, texts.

Cognitive-linguistic abilities as indicated from language evaluation results...can adapt instead of verbal recall assess visual recall, for orientation use calendar to point, non-verbal problem solving or sequencing…..

THERAPY

Individualized treatment planning is pertinent to engaging the client in therapy and addressing areas for improvement. There are different treatment approaches that clinicians will use.

Impairment-based, focusing on improving the impaired language areas, communication-based focusing on overall functional communication, strategy based which will explore compensatory strategies which may include forms of augmentative communication: high and low tech devices, Life Participation Approach, Melodic Intonation Therapy, PACE Promoting Aphasics' Communication Effectiveness, Verb Network Strengthening Treatment VNeST, Semantic-Feature Analysis.

VIDEO CLIP

Functional Communication

- Being able to call 911
- Being able to communicate needs and illness/discomfort
- Being able to order from a menu

TECHNOLOGY

- Computerized Augmentative Device...Lingraphica
- Lingraphica Apps
- Constant Therapy
- Text to Speech apps
- Computer games
- Lumosity
- Brain HQ

Simulator

http://aphasiacorner.com/aphasia-simulations

https://www.aphasia.org/aphasia-resources/the-aphasia-quiz/

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Lingraphica

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