Intensive Comprehensive Approaches to Aphasia

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Disclosure

Allison Tapko M.S. CCC-SLP, CBIS and Lauren VanDyke M.S. CCC-SLP, CBIS are the sole presenters of this presentation. They have no financial or non-financial interest relevant to the topic of this presentation.
Learning Objectives

1. Principles of Neuroplasticity
2. Review the Traditional Approaches to Aphasia
3. Discuss Intensive Comprehensive Aphasia Program (ICAP)
4. Review home programming and Community Resources
Neuroplasticity: It's time for a change.
Neuroplasticity

The brain's ability to reorganize itself by forming new neural connections throughout life. Neuroplasticity allows the neurons (nerve cells) in the brain to compensate for injury and disease and to adjust their activities in response to new situations or to changes in their environment.
Principles of Neuroplasticity

1. Use it or lose it
2. Use it and improve it
3. Specificity
4. Salience
5. Age
6. Transference
7. Interference
8. Time
9. Repetition
10. Intensity
What is Aphasia?

Aphasia is a disorder that results from damage to the parts of the brain that contain language.

Aphasia causes problems with any or all of the following: speaking, listening, reading, and writing.

Damage to the left side of the brain causes aphasia for most right-handers and about half of left-handers.

-American Speech and Hearing Association
Impact of Aphasia

Communication is fundamental to daily living, therefore deficits in receptive and expressive language skills will most likely result in changes in the following:

➢ Relationships
➢ Social life
➢ Occupation
➢ Recreation
➢ Even Activities of Daily living (ADLs)
Incidence and Prevalence

● More than 800,000 people/year have a CVA in the United States.

● 21-38% will acquire aphasia as a result of a CVA.

● Over 2 million people in the United States are currently affected by aphasia.

● Approximately 180,000 Americans acquire the disorder each year.
Incidence and Prevalence

- 15% under the age of 65
- 43% over the age of 85
Rehab Continuum

Acute  Inpt Rehab  Home Health  Outpt
Multidisciplinary Approach

- Nurses
- Doctors
- Family
- Neuropsychologist
- Physical Therapist
- Occupational Therapist
- Speech Pathologist
- Social Worker

Everyone can play a role in language rehabilitation
Traditional Approaches to Aphasia Therapy

• 1 hour of therapy 2-5x week over a period of months
• Constraint Induced Language Therapy (CILT)
• Semantic Feature Analysis (SFA)
• Verb Network Strengthening Treatment (V-nest)
• Melodic Intonation Therapy (MIT)
• Script Training
Aphasia Treatment

1. Individualized to address needs of patient and family

2. Address impaired communication areas

3. Strengthens the intact language modalities and behavior that support communication

4. Geared towards developing compensatory strategies for language impairments by teaching strategies and incorporating augmentative/alternative methods of communication

5. Trains family/caregivers to effectively communicate with persons with Aphasia by using communication supports and strategies

6. Facilitates generalizations of skills and strategies in all communication context

7. Educates persons with aphasia, their families, caregivers, and other significant persons about the nature of their impairment and the course of treatment/recovery
Therapy Outcomes

Age
Lesion Location
Lesion Size
Months Post
Education
Severity of Impairment
Amount of Therapy
Type of Therapy
The Change is Coming...

- Research
- Insurance
- Technology
- Standards
- Politics/Government
- Socially Network
How will change impact principles of neuroplasticity?

1. Use it or lose it
2. Use it and improve it
3. Specificity
4. Salience
5. Age
6. Transference
7. Interference
8. Time
9. Repetition
10. Intensity
Now What?

“...patients may require training beyond the acquisition of a complex behavior, such as a language, for those changes to be long lasting and induce neuroplastic changes... treatment may need to continue beyond the period it would in traditional speech-language pathology service delivery models, or in the worst case scenario, our clients may lose the gains they made during therapy.”

E.Dubas, Constant Therapy Togher(2010)
Adding to the Continuum

Acute  Inpt Rehab  Home Health  Outpt

ICAP  Community reintegration  HOME PROGRAMMING
10 Successful Rules for Again

(Arvich & McDonnell, 2005)

1. Take care of the heart
2. Exercise the body
3. Activate the brain “neurons that fire together, wire together”
4. Feed the brain and the body
5. Promote behavioral health
6. Avoid tobacco, alcohol and drug abuse
7. Prevent social isolation
8. Protect the brain-prevent future injury
9. Form advocacy and professional partnership
10. Look for greatness in each person
Acute vs. Chronic Aphasia

**Acute**
- recently post injury/post stroke

**Chronic**
- Persist beyond acute stage
- Traditional Therapy has stopped
- Patient has returned home to “normal” daily activity
- 6 months post CVA
Intensive Comprehensive Aphasia Program (ICAP)

What is an ICAP?

○ An intensive and comprehensive aphasia program providing over 60 hours of individual and group therapies to individuals with mild to severe aphasia to improve and increase participation in meaningful life activities.
Intensive Comprehensive Aphasia Program (ICAP)

• Intensive aphasia therapy as compared to traditional speech and language therapy may be more effective for individuals experiencing chronic aphasia.
Existing ICAPs
### Overview of Existing Intensive Comprehensive Aphasia Programs (ICAPs)

<table>
<thead>
<tr>
<th>Program</th>
<th>Location</th>
<th>Therapy Dosage</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraint-Induced Aphasia Therapy Clinic</td>
<td>Denver, CO</td>
<td>3 hrs/day</td>
<td>10 days</td>
</tr>
<tr>
<td>Yones Speech Therapy</td>
<td>St. Petersburg, FL</td>
<td>2-5 hrs/day</td>
<td>Varies</td>
</tr>
<tr>
<td>Aphasia House</td>
<td>Orlando, FL</td>
<td>4hrs/day, 4 days/wk</td>
<td>6 wks</td>
</tr>
<tr>
<td>Steps Forward Aphasia Program</td>
<td>St. Petersburg, FL</td>
<td>100-200 hrs/wk</td>
<td>4-8 wks</td>
</tr>
<tr>
<td>Rehab Institute of Chicago Intensive Aphasia Tx Program</td>
<td>Chicago, IL</td>
<td>30hrs/wk</td>
<td>4 wks</td>
</tr>
<tr>
<td>Intensive Aphasia Program</td>
<td>Evanston, IL</td>
<td>4hrs/day, 60hrs/wk</td>
<td>4 wks</td>
</tr>
<tr>
<td>University of Michigan Aphasia Program</td>
<td>Ann Arbor, MI</td>
<td>28hrs/wk</td>
<td>4-5 wks</td>
</tr>
<tr>
<td>Big Sky Aphasia Program</td>
<td>Missoula, MT</td>
<td>9-12hrs/wk</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Aphasia Center of Innovative Tx</td>
<td>Pittsburg, PA</td>
<td>Customized</td>
<td>4 wks</td>
</tr>
<tr>
<td>PIRATE</td>
<td>Pittsburg, PA</td>
<td>6hrs/day</td>
<td>4-6 wks</td>
</tr>
<tr>
<td>Woodrow Wilson Residential Aphasia Program</td>
<td>Fishersville, VA</td>
<td>Varies</td>
<td>3 wks</td>
</tr>
<tr>
<td>Intensive Aphasia Program Marquette</td>
<td>Milwaukee, WI</td>
<td>3hrs/day</td>
<td>4 wks</td>
</tr>
<tr>
<td>University Speech and Hearing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Memorial’s Intensive Aphasia Program</td>
<td>Minneapolis, MN</td>
<td>3.5hrs/day</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Tx = treatment, hrs = hours, wk = week.*
What makes an ICAP Comprehensive?

A wide range of goals incorporating multiple approaches to aphasia treatment are addressed including the following:

- Group and individual treatment
- Evidence based therapy approaches
- Computer access and assistive technology
- Education
- Community integration
# Themes of existing ICAPs

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Social Interaction</th>
<th>Additional therapy</th>
<th>Caregiver/Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range in length from 4-6 weeks</td>
<td>Promotes re-engagement in life, and utilize learned skills in the community</td>
<td>Include music, art, occupational, and physical therapy</td>
<td>Encourages or requires a caregiver to accompany the patient</td>
</tr>
<tr>
<td>2-6 hours of therapy per day, either 4-5 days per week.</td>
<td>Game nights, themed dinners, and outings to local attractions</td>
<td>Art, music, and horticulture therapy are utilized in congruence with speech and language services</td>
<td>Offer daily or weekly educational and support sessions for caregivers</td>
</tr>
<tr>
<td>Offered specific times of the year</td>
<td></td>
<td></td>
<td>Allow and encourage caregivers to participate in therapy session</td>
</tr>
</tbody>
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ICAP at ABILITY™

CELEBRATE ABILITY
Intensive Comprehensive Aphasia Program (ICAP)

What is ICAP?
Ability KC offers intensive and comprehensive aphasia program providing over 60 hours of individual and group therapies to individuals with mild to severe aphasia to improve and increase participation in meaningful life activities.

Why is ICAP considered intensive?
The ICAP at Ability KC includes an individualized evaluation, established personal goals and four weeks of evidence based treatment. Therapy is conducted one on one by a supervised graduate clinician and certified Speech Language Pathologist.

What are admission requirements?
- Diagnosis of Aphasia
- Medically/neurologically stable
- Adequate stamina and endurance
- Independent with self care or has caregiver support
- Available transportation
- Available for 2 hour evaluation prior to program start date

Why is ICAP considered comprehensive?
A wide range of goals incorporating multiple approaches to aphasia treatment are addressed including the following:
- Group and individual treatment
- Evidence based therapy approaches
- Computer access and assistive technology
- Education
- Community integration

Date: Evaluation to be scheduled: October 1st - 4th
Program runs October 15th - November 8th.

Time: 10:00AM - 2:00PM

Cost: Insurance benefits will be used for therapy services

Dottie
Medical Rehabilitation
Ability KC ICAP Eligibility

- Dx of Aphasia
- Received traditional speech therapy services
- Medically Stable and Semi-Independent
- Available Transportation to get to and from AKC
- Caregiver support
- Referral from multidisciplinary team at AKC or local therapist
Ability KC ICAP
Application Process

• Application collects basic biographical information, medical information, communication abilities, and caregiver information
• Referral for possible OT/PT services

** Reasons an applicant may be rejected would be capacity limitations, medical instability, and lack of caregiver support
ICAP Preparation and Implementation

- 3-4 Rockhurst CSD Graduate Students and 2 supervising SLPs from AKC
- Students Required to complete EBP research re: treatment of aphasia
- Students complete and score 2-hour assessment
- Students and participant/family establish functional, specific goals
- 1 week planning period
<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:30A</td>
<td>Structured Group</td>
<td>Structured Group</td>
<td>Structured Group</td>
<td>Structured Group</td>
</tr>
<tr>
<td>10:30-12:30P</td>
<td>Individual Session</td>
<td>Individual Session</td>
<td>Individual Session</td>
<td>Individual Session</td>
</tr>
<tr>
<td>12:30-1:15P</td>
<td>Chat and Chew Unstructured</td>
<td>Chat and Chew Unstructured</td>
<td>Chat and Chew Unstructured</td>
<td>Chat and Chew Unstructured</td>
</tr>
<tr>
<td>1:15-2:00</td>
<td>Structured Group OT</td>
<td>Structured Group PT</td>
<td>Structured Group Rec</td>
<td>Structured Group Education (families invited weeks 1 and 3)</td>
</tr>
</tbody>
</table>
Structure Group Examples

- Topic Driven (i.e. Travel, Football, Hobbies, etc.)
- Supported Communication provided in conversation by student therapist
Individual/Concurrent Sessions

- 2 hour sessions
- Goal and EBP driven
Structured Interdisciplinary Group

- OT: ADL’s, craft, cooking
- PT: Chair Yoga, exercise
- Recreational: community resources, game, outing
- Education Series: 2 family/2 pt to include various topics
Documentation

- Evaluation
- Daily Individual Note and Group Note
- 2-week Progress Note
- Discharge Note
- Feedback form provided to pt/pt family

Documentation is completed by students and then reviewed by observing SLP
Community ReIntegration

American Stroke Foundation
Vocational Rehab
BIAA
Support Groups
Volunteer
Adult Day Programs
Church Community

Live and Learn through life Experiences
Home Program

Therapy activities that are self-planned, self-structured, and self-scheduled by the individual with assistance from their caregiver

- Drives patient autonomy
- Promotes Independence
- Fosters ongoing growth and development in unstructured language
- Guided to stay structured with a daily plan
- Apps that can be monitored
HOME PROGRAMMING

Cognitive-Communication Home Program

Name: 
Date: 

The following activities are designed to improve your cognitive-communication skills (cognition, reasoning, processing speed, memory). Hopefully some of the things listed will not seem like work at all. If you have any questions, please feel free to call me at 816-731-7993.

Attention:
1) Set a timer for activities. Look at the worksheet and think about how long the task “should take you”. Then set the timer and begin working, trying to maintain attention and concentration.
2) I have attached several visual scanning and visual divided attention worksheets, continue to complete.

Cognition:
1) There are attached worksheets that are deduction puzzles that are a different ways of thinking. It’s good practice for mental flexibility and using “clues” to figure out a solution.
2) Watching football, it’s a good cognitive activity to keep statistics and write down some of your favorite “highlights of the game.” Put music on in the background as a divided attention activity. Come with basketball games.

Memory Activities and Strategies

Grocery Shopping: When it is time to make the grocery list, sit down and plan what it is you need. Then, give someone else the list. You are to be responsible for at least 5 items on the grocery list. Before you check out, make sure that you have remembered to pick up those items.

Reading Newspaper: Read the newspaper on a daily basis in the morning. Think of evening discussion articles you read with both of the dinner table to work on memory skills. If you have to TAKE NOTE!

Repetition: remember the saying “practice makes perfect”. Well if you repeat things to yourself several times, you will be more likely to remember them later.

Writing/Using a Planner or Notebook: if you have something to remember it is often helpful to write things down. You may decide to keep a planner with important appointments, phone numbers, dates, events, etc. that you want to remember. Keep your planner with you at all times and make sure to keep entries brief and to the point. Remember to check your planner periodically during the day. It may even help to have an alarm on your planner that beeps to remind you to look at it every couple of hours. Also, a small memo notepad (pocket-size) is good to write down important or little easy to keep handy.

Activity Ideas: 1) Several board games can be fun and a good way to work on your cognition (thinking, reasoning, and problem-solving strategies)
- Game Links
- Think It Through
- Outburst
- Taboo
- Checkers/Chess
- Card Games
- Connect Four
- Pictionary
- Catch Phrase

Other Activities to Keep Mentally Active:
1) Complete puzzles (crossword, word searches, jigsaw).
2) Computer Games that are timed (Solitaire, Free Cell)
3) Any board game that limits your response time.
4) Computer or video games like Solitaire, Hearts, Free Cell, etc.
5) Games that make him scan the left, sequence, bridge, solitaire.
6) Win the Big Brain Academy

WEBSITES:
- www.brainygames.com (memory, processing speed, concentration, divided attention, cognition)
- www.brainzymmer.com (cognition and memory)
- http://games.yahoo.com/
- www.mindblowbiz.com
- www.bigbragames.com
- www.craniummunchies.com

APPS:
- Rush Hour, Count 25, Pull Ninja, Pull Catcher, Word Search +, ABC Mysteria, Visual Scan

I suggest creating a schedule together. One that represents DAILY activity that involves exercising, OT vision activities, and ANY speech activities listed above. Turn, stay mentally and physically active. Stay busy and you will continue to improve.

Please keep in contact with me via e-mail. I am more than happy to assist with home program ideas.

Sincerely,
Lauryn Mandel, MA, CCC-SLP, CSH
Speech-Language Pathologist
Lauryn.Mandel@SBSKc.us
(816)511.3002
Good News.... there’s an app for that!
Using Technology for Ongoing Recovery and Home Programming

Computer Based Multi-program applications
- Constant Therapy
- Tactus Therapy
- Lingraphica TalkPaths
Lingraphica TalkPath

Listening
- Word ID
- Complete the Phrase
- Answering Questions
- Following Directions

Speaking
- Functional Word Repetition
- Functional Phrase Repetition
- Naming with Cuing
- Flashcard Naming
- Naming Object Features - Nouns
- Naming Object Features - Verbs

Reading
- Matching
- Word Kit
- Describe the Picture
- Sentence Completion

Touch the picture that completes the spoken phrase.

awake or ______
Tactus Therapy

- Comprehension Therapy
- Naming Therapy
- Reading Therapy
- Writing Therapy
Constant Therapy

![Constant Therapy Dashboard](image-url)

- **Language**: Baseline: -, Current: 58%
- **Auditory**: Baseline: -, Current: 47%
- **Naming**: Baseline: -, Current: 52%
- **Writing**: Baseline: -, Current: 70%
- **Reading**: Baseline: -, Current: 54%
- **Letter to Sound Matching**: Baseline: 10%, Current: 19%
- **Sound to Letter Matching**: Baseline: 76%, Current: 75%
- **Written Word Comprehension**: Baseline: -, Current: -

**Homework Assignment**
- **Picture Ordering**: Level 1, 5 items
- **Syllable Identification**: Level 1, 15 items
- **Word Identification**: Level 1, 15 items
- **Reading Passage**: Level 1, 15 items

**Summary**

**Tasks**

**Performance**

[abilityKC logo]
Avoid the feeling of “Plateau”

1.) Set A New Functional Goal
2.) Try a New Therapist
3.) Join a Support Group
4.) Learn a New Hobby or Skill
5.) Volunteer
6.) Take a BREAK
7.) Don’t Get Discouraged
8.) Be Innovative!
Food for Thought

“Stroke recovery isn’t easy, and it isn’t fast, but you can always make progress.”
Contact Information

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Intensive Comprehensive Aphasia Program (ICAP)

- An excellent overview of these ICAP models are provided in the article “Intensive Comprehensive Aphasia Programs: An International Survey of Practice” (Rose et al., 2013).