Intensive Comprehensive Aphasia Program (ICAP): Three Years Later, Lessons Learned

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BACKGROUND

Recent research in aphasia rehabilitation has examined the potential benefits of intensity in aphasia programming with regard to both frequency and duration of treatment, as well as the nature of the rehabilitation protocol itself[2]. Principles of neuroplasticity indicate that high-intensity intervention yields more immediate improvements to functional outcomes than low-intensity service delivery models following brain injury, specifically regarding motor speech and intelligibility[6]. Parallels have been drawn to aphasia treatment[2][7]. Based on these principles, a service delivery model for Intensive, Comprehensive Aphasia Programming (ICAP) was developed[8]. An ICAP is defined as a program that:

1) **Program Duration and Participant Selection:** is time-bound with a clearly defined start and end date, with a single cohort of participants per program
2) **Intervention Dosage:** provides a minimum of three hours of therapy per day for at least two weeks to a group of participants beginning and ending the program at the same time
3) **Methods and Service Delivery:** incorporates a variety of treatment methods and delivery models (i.e., individual and group treatment), including both impairment-based and activity/participation-focused intervention per WHO ICF guidelines[9]
4) **Care Partner Involvement:** incorporates family/care partner education and training

Research into the extent and nature of benefits of ICAPs has been limited secondary to the paucity of available programs, as only twelve ICAPs have been documented worldwide[5]. Further, methods and treatment protocols vary across programs, as well as populations served[10]. Each ICAP boasts a focus on development of functional communication, with individualized treatment protocols addressing oral and written language rehabilitation; however, in few programs are these methods specified or standardized[10]. More research is needed to determine optimal population, dosage, and treatment protocol[12].

PURPOSE

We sought to explore aphasia treatment programming options in a university clinical setting by developing an ICAP with a specific focus on the development of functional reading and written language skills through the discourse level. In developing such a program, we hope to encourage replication and expansion of similar programming in CSD programs nation-wide.

GRADUATE CLINICIAN TRAINING

Graduate students participated in an intensive training seminar across two dates for 2-3 hours per session, reviewing assessment and treatment protocols. Hands-on practice, modeling, and individual supervision were provided as-needed prior to and during the intensive program. Weekly supervision groups were held to review protocols, reinforce therapy techniques, and develop individualized treatment modifications.

DEMOGRAPHICS

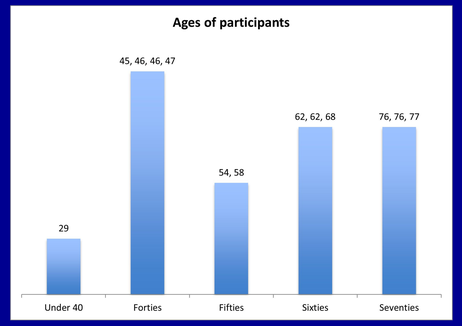


Figure 1

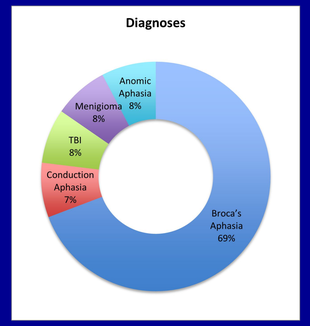
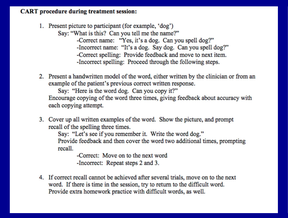


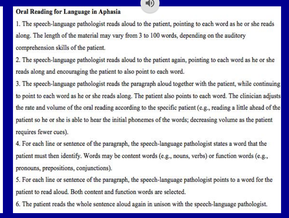
Figure 2

INDIVIDUAL TREATMENT PROTOCOLS

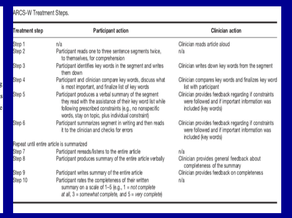
Anagram, Copy, and Recall Treatment [14]



Oral Reading for Language in Aphasia [15]



Attentive Reading and Constrained Summarization-Written [13]



GROUP TREATMENT

Structure	Outcomes
• **Dosage**: 1-2 hours weekly • **Purpose**: Promote social communication between group members, fostering a positive communicative environment • **Methods**: homework review, conversation practice, creation of group project, presentation, community outreach	• Flexibility to adapt format to meet client needs • Casual, convivial environment promoting positive social communication • Client empowerment

What are our participants saying?

I'm feeling great. I can really see changes; this one feels really good.

Everything [I do is] for the kids. Before I can't write to my son. Today I wrote a letter to him. I can't ever do that before. I'm so happy.

What are our care partners saying?

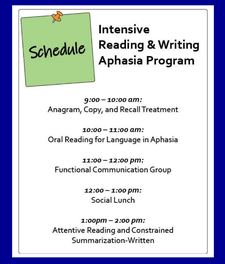
The homework really reinforced the skills in each therapy session. She's reading and writing so much more independently and this is what we hoped for from this program

What helped my husband the most was the redundancy. He performed better seeing the same material daily. I think he got better at finding his errors. The group component made him use his skills in a different way.

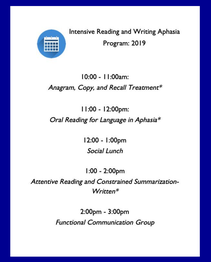
My husband's confidence in his reading increased so much. This program has done wonders for him. We can't wait to come back next summer!

DAILY SCHEDULE

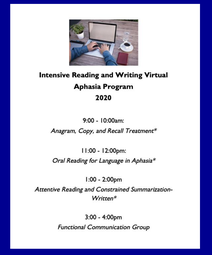
2018



2019



2020



METHODS

	2018	2019	2020: Teletherapy
Program Duration and Participant Selection	• 4 Weeks Intervention + 2 Weeks Pre/Post Assessment • N = 9 participants	• 4 Weeks Intervention + 2 Weeks Pre/Post Assessment • N = 10 participants	• 4 + 2 Weeks • N = 8 participants
Intervention Dosage	• 5 consecutive hours/day on site, 2 days/week • 2 hours/day home program	• 5 consecutive hours/day on site, 2 days/week • 1 hour/day home program	• 3-4 hours/day teletherapy with 1-hr breaks, 2 days/week • 1 hour/day home program
Methods and Service Delivery	• 3 hours Pre/Post Treatment Assessment (WAB-R, RCBA-2, CETI, CIU Analysis) • 3 hours impairment-based individual treatment (ACRT, ORLA, ARCS-w) • 2 hours LPAA group (1 hour social lunch, 1 hour group)		• 1.5 hours pre/post assessment (CETI, AIQ, CIU Analysis, Reading sample) • 3 hours impairment-based individual treatment • 1 hour group/week
Care Partner Involvement	• Observe sessions • Support group 2 hours/week	• Observe sessions • Support group 1 hour/week	• Observe/participate in sessions

SUCCESSES AND CHALLENGES

	2018	2019	2020: Teletherapy
SUCCESSES	• Improvement across clients • Reported generalization of skill • Regular attendance	• Better compliance with home program • More consistent participant selection criteria	• Good participation and fatigue management • Adaptation to change in modality • Home program compliance • Group satisfaction
CHALLENGES	• Home program burden, poor fidelity • Client fatigue • Participant selection criteria	• Group treatment satisfaction and participation • LPAA, client/care partner goal negotiation	• Care partner involvement • Social connections • Learning curve

We'd like to acknowledge and provide a sincere "thank you" to our clients; the Edward D. Mysak Clinic; our colleagues Felix Matias, Lindsay Milgram, and Elise Wagner; and the CSD Program at Teachers College, Columbia University.

Snapper’s Story

MY MOTHER’S CAT