

Functional Outcomes of an Intensive Aphasia Treatment Program

Linda Carey¹, Ellina Kostopoulos¹, Steve Belanger²

¹Halifax, Nova Scotia CANADA ²New England Rehab Hospital, Portland, Maine USA

BACKGROUND

Intensive aphasia treatment

- Research in aphasia therapy indicates that treatment offered intensively over a short duration results in clinically significant outcomes (Bhogal et al 2003).
- However, investigations of this nature typically use impairment-level outcome measures (e.g., Western Aphasia Battery) and use group data to analyze treatment efficacy. This study reports individual outcomes across three functional communication measures for 21 participants who completed an intensive, short-term residential therapy program.

InteRACT Program (Intensive Residential Aphasia Communication Therapy)

- 4-week summer residential program providing therapy five days a week, with a focus on: Speech and language skills, functional communication strategies, community re-integration and partner training

- Participants reside at the facility where intervention takes place

- Program is offered through Dalhousie University School of Human Communication Disorders in Nova Scotia, Canada

- 9 programs completed since August 2002

- Participants from: Canada, USA, Europe

InteRACT Candidacy

Adults with all types of aphasia, at all levels of impairment. Participants should be:

- medically stable
- cognitively and physically able to endure the intensity of the program
- able to identify specific and realistic communication goals
- accompanied by a designated communication partner

Research Questions

What percentage of participants make clinically significant gains on:

- A standardized test of functional communication (CADL-2)?
- Ratings by their communication partners (CETI) ?
- Self rating (SACS) ?

METHOD

Subjects

Participants were 6 months or more post onset and stroke was the primary etiology of aphasia

Participant	Gender	Age	MPO	Aphasia type
1	F	57	54	Global
2	F	60	31	Global
3	M	58	33	Wernicke's
4	M	55	21	Anomic
5	M	50	10	Mixed
6	F	58	48	Broca's
7	F	24	22	Mixed
8	F	54	44	Broca's
9	F	54	76	Mixed
10	F	46	6	Anomic
11	F	36	70	Mixed
12	M	59	36	Wernicke's
13	M	60	21	Global
14	F	37	18	Broca's
15	M	48	37	Anomic
16	M	52	11	Broca's
17	M	31	10	Anomic
18	M	63	18	Broca's
19	M	55	103	Anomic
20	M	44	6	Broca's
21	M	45	24	Mixed

Treatment

100 hours of Speech-Language Therapy (5 hours daily):

- 1 hour Individual:** Language production and comprehension skills (e.g., Cueing Verb Treatments, Visual Action Therapy) & Motor Speech (e.g., Rosenbek's Eight-Step Continuum)
- 1 hour Individual:** Reading and writing (e.g., Parallel Oral Reading)
- 1 hour Individual:** Functional communication (e.g., PACE, phone use, Communication ADL)
- 1 hour Individual:** Computer skills (e.g., e-mail, Internet)
- 1 hour Group:** conversation based activities (e.g., weekly newspaper, constraint 'go fish' game)

Weekly Group Community Reintegration:

Individual goals targeted through group outings such as; shopping, going to the library, awareness project

Weekly Physiotherapy:

Group exercises classes

Weekly Recreation Therapy:

Individual sessions: focus on leisure exploration, barriers, goal setting and planning as well as community activity trials (e.g., golf lesson, pottery class, bike riding, swimming, gardening, cooking)

Group sessions: to facilitate socialization & participation (e.g., art therapy, museum visits, bus tour, game night)

Communication Partner Participation:

Family member or friend who attends and participates in individual therapy sessions, communication training, aphasia simulations and partner group sessions (i.e., caregiver burnout, stress, coping)

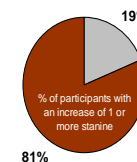
Outcome Measures

- Communicative Effectiveness Index* (CETI; Lomas, Pickard, Bester et al., 1989)
- Self-Assessment of Communication Skills* (SACS; Lear & Sperry, 1997)
- Communication Activities of Daily Living-2* (CADL-2; Holland, Frattali, & Fromm, 1999)

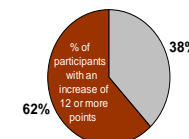
RESULTS

Participant	CADL						CETI		SACS	
	Raw		%		Stanine		Pre	Post	Pre	Post
1	82	92	77	93	6	8	55	75	4.2	5.8
2	39	68	8	35	2	4	45	64	3.4	4.1
3	55	72	20	43	3	5	41	55	2.4	3.7
4	91	96	90	97	8	9	56	61	2.4	4.6
5	59	79	22	57	3	5	31	43	1.2	3.8
6	79	86	57	78	5	7	45	60	4.2	5.2
7	74	85	47	77	5	6	76	89	2.7	4.2
8	76	91	51	90	5	8	50	58	3.1	5.3
9	74	91	47	90	5	8	45	66	2.9	4.1
10	99	100	99	99	9	9	76	92	3.4	5.2
11	92	95	93	96	8	8	58	72	4.9	5.3
12	60	70	23	40	3	4	58	73	3.9	4.2
13	28	50	2	16	1	3	28	35	1.3	1.8
14	84	86	72	78	6	7	53	80	4.1	5.6
15	96	96	97	97	9	9	66	68	4.9	5.9
16	55	72	20	43	3	5	80	90	2.5	4.0
17	94	98	95	99	8	9	59	68	3.8	5.8
18	82	92	65	96	6	8	59	67	4.7	5.7
19	90	98	89	99	7	9	77	86	4.4	5.2
20	92	95	93	96	8	8	32	59	2.9	5.2
21	84	98	72	99	6	9	48	80	2.9	4.1

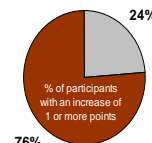
CADL-2



CETI



SACS



- Seventeen of 21 individuals (81%) demonstrated clinically significant changes on 2 of 3 outcome measures

- 89% showed clinically significant changes on the CADL-2 as well as one other measure

DISCUSSION

- All participants who have completed the program to date have demonstrated significant improvements in at least one measure of functional communication.

- 2 of the 4 individuals who did not demonstrate significant changes on the CADL-2 demonstrated stanine scores of 9 at pre testing.

- Of the individuals who could possibly make significant changes on the CADL-2, 17 of 19 (89%) did so.

- Follow-up phone calls revealed that gains are being maintained upon returning home. Several individuals reported a return to functional activities ranging from independence at home (cooking, shopping) to greater involvement in community activities (volunteer work). Two individuals have returned to employment and one is currently involved in job re-entry.

CONCLUSION

- The InteRACT program has resulted in clinically significant changes in the functional communication activities and participation of the participants.

- These preliminary data provide further justification for intensive aphasia treatment.

- Further research should examine long term maintenance and development of functional skills.