The Use of Tel-Communicology With The Aphasic Patient

Sara B. Sanders

Veterans Administration Hospital
Memphis, Tennessee

Last year, at the Clinical Aphasiology Conference, Darley (1976) reviewed research concerned with maximizing the benefit of therapy with the aphasic patient. He synthesized various therapeutic issues, such as characteristics of stimuli, presentation schedules, time variations, and other factors pertaining to what we actually do in treatment. As I read his review, I thought that it is not enough to select a treatment plan individualized for a particular patient with aphasia, only to find that the patient is unable to benefit from these plans due to accessibility difficulties. How often have we evaluated a patient and determined what type of treatment he needs, only to find that he is unable to come to the clinic for therapy? Not only do we need an eclectic approach to types of treatment, but also an eclectic approach to modes of health-care delivery services.

Vaughn (1976), in a final report on a three-year project under her coordination on Tel-communicology, addressed herself to this problem. She stated, "prior to this project, services in the area of speech disorders were neither available nor accessible to many patients who resided in remote areas or who were served by treatment facilities without personnel specialized in communicative disorders". Thus, we must find a means of expanding our health-care delivery services. Tel-communicology, a simple mode of communication treatment employing the use of the telephone system, is just one answer to the problem. Mowrer (1976) reported using the telephone successfully with articulation disorders in a population of school children. This project was sponsored by Arizona State University. Mowrer estimates that the savings in travel and time costs would be astronomical on a nation-wide basis. He stated that he had plans to publish his results in the near future, but as yet we have no data. We must have more information of the actual success of treatment delivered in this manner. We share the responsibility, therefore, to formulate some accountability measures to assess our treatment program if we are to justify our choice of treatment and if we are going to sell it to others.

Our service enacted the Tel-communicology program initially with one laryngectomee, one dysarthric patient, and one aphasic patient. The latter will, of course, be the basis for this presentation.

Case Selection

Our first concern was to select a patient who was unable to commute to the hospital for treatment. As we did not have the elaborate equipment that is available at Dr. Vaughn's clinic in Birmingham, we had to limit our efforts to improvement in the verbal modality only. We looked for a patient who had sufficient auditory comprehension skills to handle telephone usage, and we wanted a patient who was beyond the spontaneous recovery period.

The case selected was a 54 year old male, five and one-half years post-CVA. He presented with spastic hemiplegia in both right extremities; and was fairly non-fluent with enough dyspraxic-like behavior to cause delays and distortions. Sentence production was ungrammatical and incomplete.

This patient, on periodic evaluations using the Porch Index of Communicative Ability (Porch, 1967), revealed fluctuating performance levels over a two-year period. (He had never been able to attend treatment sessions, but was involved in sporadic, uncontrolled, home programs). Overall performance scores ranged from 60% to 73%, but in a random pattern. Verbal performance scores ranged from 51% to 74% with comparable fluctuations.

Data Collection

Our second concern was the collection of data to provide us with progress information as to determine the benefits of this method of treatment. As PICA testing was done periodically, it was decided that the individual verbal subtest means on Subtests I and IV, the verbal modality scores, and the overall scores would be good indicators of what was occurring over time.

Treatment Planning

The third concern was actual treatment planning. Treatment was centered around the telephone and an attached Dictaphone Recorder. The recorder was used for reliability in daily scoring. It was necessary to have a "beeper box" installed to conform to federal privacy regulations.

The task selection was determined by specific goals established for this patient. These goals were to increase accuracy in naming and describing functions of objects, increase completeness of verbal responses, and reduce response latency within the two verbal Subtests, I and IV.

The patient was issued a notebook containing pictures of objects and action pictures, both simple and complex. During the treatment sessions, the patient named or described the pictures from a specified page in the notebook, with the clinician having a duplicate set of stimulus materials for scoring purposes. Other tasks were more environmentally oriented, such as descriptions of social activities in which the patient participated, menu planning, giving directions, and planning trips. The patient was aware of goals of each session and was reinforced accordingly. At the end of each session, the patient's performance was discussed, including the areas of difficulty and the number of well-formed, complete sentences.

At the beginning of the Tel-communicology program, the patient was contacted three times weekly. This was later reduced to twice weekly and then to once a week.

Results

The patient was administered the PICA on six occasions after treatment was begun. The Aphasia Recovery Curve (Porch, 1967) (Fig. 1) shows overall and verbal scores compiled throughout our involvement with this patient. You'll notice that the graph is broken at the point at which Tel-C was initiated,

Porch Index of Communicative Ability

APHASIA RECOVERY CURVE

(Percentiles)

Name F. C. Case No. _____

Birthdate _____ Race _____ Onset _____

DX. Type _____ Site _____

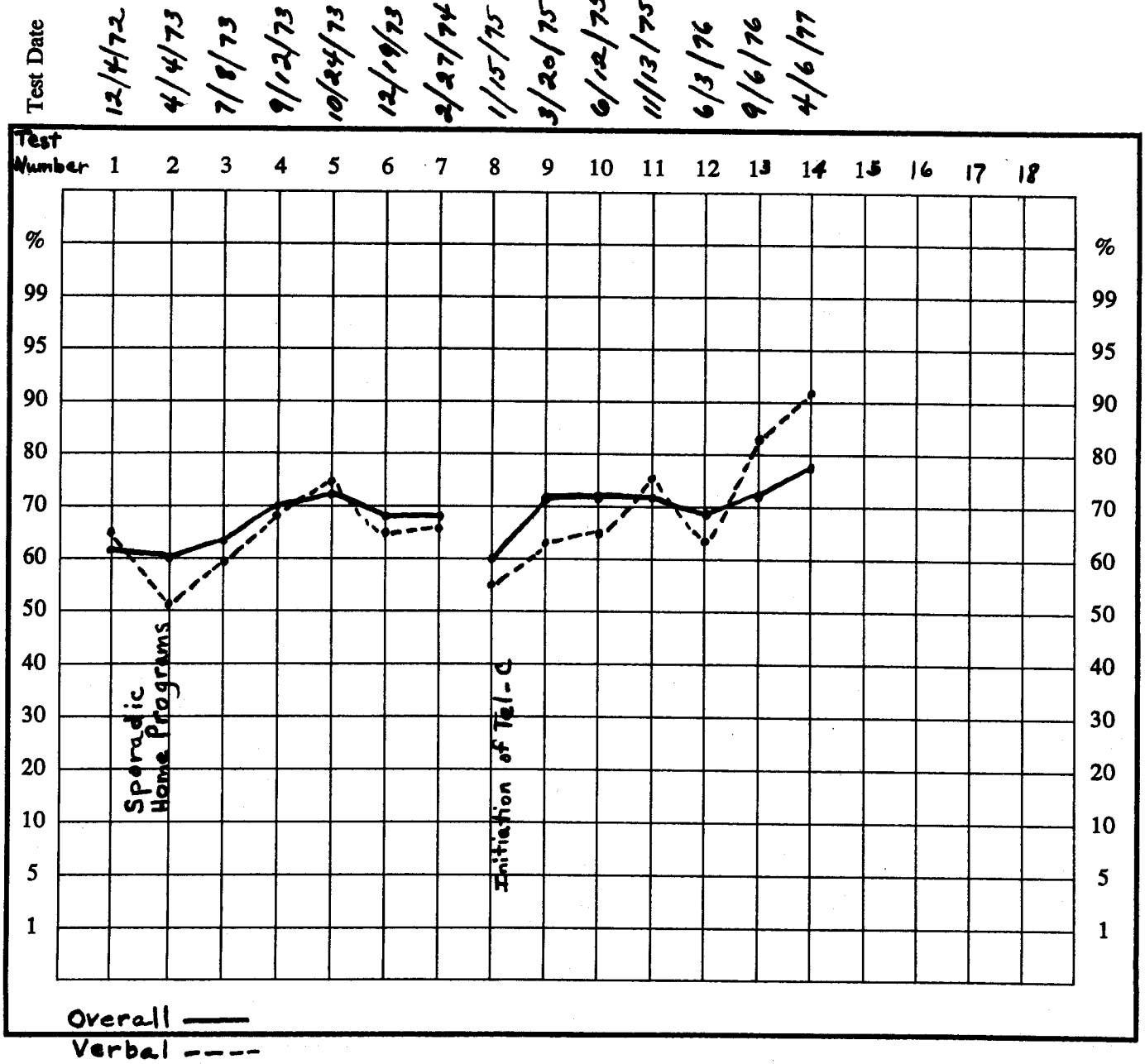

Figure 1. Recovery curve for patient in tel-communicology program.

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in order to emphasize the two treatment periods. You can see the fluctuation indicating a difficulty in maintaining skills previously acquired. If the graph line was continuous, you would note an additional dip (or decrease in functioning) at the point of initiation of Tel-C. PICA scores immediately preceding treatment (the first point after the break in the graph) showed the patient to be functioning at the 60th percentile level. This was the lowest performance level during our contact with the patient, and you will note that his performance had been at much higher levels than this. Once treatment began, the performance levels remained above the 70th percentile with the exception of one evaluation for which we simply could not account, as all scores on this test were lower than on other testing dates. The most recent PICA revealed an overall score of 77%.

Verbal modality scores began at 55% and have increased to 91%. With the exception of the one evaluation I have already mentioned, there has been a steady upward swing in verbal performance.

Looking at individual subtest means, we see the same pattern. Prior to the initiation of Tel-C, the patient's mean scores "see-sawed" up and down. Table I shows mean scores for Subtests I and IV prior to treatment. Table II shows mean scores for the same subtests following initiation of Tel-communicology. Increments are all positive with the exception of the previously mentioned evaluation.

The most recent evaluation showed the patient to be functioning at the highest performance level yet—overall, in the verbal modality, and on both subtests. Truthfully, this was somewhat unexpected as we had only hoped to aid the patient in maintaining the skills he already had, to help him in coping with bouts of depression, and possibly to increase verbal scores slightly. The benefit this patient experienced through Tel-communicology far exceeded our expectations.

Summary

Many speech-handicapped people reside outside urban areas where most speech treatment facilities are located, or they simply have no one to transport them to the hospital or clinic. Yet they have the same right to receive care as those in close proximity to hospitals or clinics or who have means of transportation.

Whether you see the case presented here as maintenance treatment or as therapy designed to help the patient acquire new skills, services can be offered effectively using the telephone as a means of transmitting instruction. The Birmingham VA Hospital has very sophisticated equipment which enables the clinician to focus on the gestural and graphic modalities as well as the verbal modality. There are far-reaching possibilities for research and for clinical management and we must be prepared to tap any resources available if we are going to have a truly client-centered approach to treatment.

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Table 1. (Before Tel-C)

Date	Means of Subtest I	Means of Subtest II
12/4/72	11.0	13.1
4/4/72	10.0 (-1.0)	12.8 (-0.3
7/18/73	11.5 (+1.5)	11.4 (-1.4)
9/12/73	12.7 (+1.2)	12.9 (+1.5)
10/24/73	12.0 (-0.7)	13.9 (+0.4)
12/19/73	11.8 (-0.2)	13.5 (-0.4)
2/27/74	12.4 (+0.6)	12.4 (-1.1)
1/15/75	10.8 (-1.6)	12.9 (+0.5)

Table 2 (During Tel-C)

Date	Means of Subtest I	Means of Subtest II
*1/15/75	10.8	12.9
3/20/75	11.3 (+0.5)	13.1 (+0.2)
6/12/75	11.8 (+0.3)	13.4 (+0.3)
11/13/75	11.9 (+0.1)	14.8 (+1.7)
6/3/76	11.0 (-0.9)	12.7 (-2.1)
9/6/76	12.5 (+1.5)	14.6 (+1.9)
4/6/77	13.7 (+1.2)	14.8 (+0.2)

*Testing done before Tel-C begun.

Discussion

Q. How frequent are the sessions? How much time is spent on the phone?
A. For approximately six months, we called the patient three times a week at a scheduled time. After that, we reduced it to twice a week, and then to once a week. The patient is now being contacted once weekly. The sessions last thirty minutes each.

Q. Was the thirty minutes set to your scheduling or to the patient's availability or whatever?
A. A combination, I think.

Q. Is the patient still on Tel-C? If you take him off the Tel-C, will he go back down? If so, is it worth two years of time?
A. Yes, he is presently on Tel-C. I would suspect from seeing what happened prior to the initiation of Tel-C that he will go back down. In fact, I would expect him to go down but the question is how far back will he go? He is at the highest level that he has ever been -- 91%. If he drops to the 85th percentile level, that is still better than the level he was functioning at before therapy began.

Additional Comment: Certainly one way to look at this is in reference to his expenditure of time and effort in going to and from the clinic. He did progress in therapy. I have to answer this question from the particular situation that I am in -- a VA Hospital with a service-connected patient. He is a motivated patient who wants to improve his speech so would probably be enrolled in therapy anyway. Therefore, the advantages are with the time and inconvenience of coming to the clinic.

Q. Is he now doing things that he wasn't doing before?
A. Socially, I believe that he is. He has a wife who has always taken him out and tried to get him involved in social activities. He takes an active part in social activities now. Even if he is not actually going out more quantitatively, he converses more once he's out. In talking with his wife and finding out what he's actually doing in the church group and birthday party get-togethers, he's actually more communicative with other people.

Q. I would like to go back to Jon's point. I think there are ways to look at the patient as his own control. I think that you ought to take him off Tel-C for a while. We need to find out if therapy is effective or not.
A. Yes, this could be done.

Q. The beeper that is required, was that distracting to the patient?
A. Yes, it was and even more distracting to the clinician in that is occasionally masked out what the patient was saying and he would have to repeat himself.

Q. Based on what you've seen here with this patient and with the laryngectomee, will you expand this program? Also, what was the reaction from the front office?

A. Let me answer the last question first with reference to the front office. We had minimal difficulty there because Gwenyth Vaughn came before us in the VA System so we had some precedent established with Central Office within our own Station. We had to go back to the front office two or three times for clarification. These sessions are handled as outpatient visits and counted on the AMIS Report. As far as expansion is concerned, I would like to see some expansion but I want to see first how many patients we would actually put on this type of program to justify the cost of some of the equipment. The touch-tone pad used by Gwenyth Vaughn is not expensive. However, if you go into something more elaborate in equipment, I don't know that we would justify the number of patients with which we would use this equipment. The important idea is that we evaluate the patient and determine if he is one who is unable to come for regularly scheduled treatment programs and then to determine if he would benefit from Tel-C.