The Clinician's Turn: Speech Pathology

AUGMENTATIVE COMMUNICATION SYSTEMS

What are some of the positive and negative aspects of teaching non-vocal communication? What implications does your program have for the patient's/client's family, peers and the community at large?

In response to inquiries about and suggestions for including the topic of augmentative communication systems in the "Clinician's Turn", two of our fellow professionals, Pat Carey, and Kathryn Wishart, offer a description of the system with which they have had success. Susan Glazer gives us insight into how the speech-language pathologist's role has become multi-dimensional - facilitating, implementing, teaching and evaluating the most effective system for the communicative needs of this population.

Questions about specific issues should be addressed to the authors. Comments on this or previous topics, suggestions for future topics should be sent to the co-ordinator:

Angela M. Murphy
34 Weir Crescent
Saskatoon, Sask., S7H 3A9

Considerations for the Implementation of Non-Vocal Communication Systems

From: Susan Glazer
Speech-Language Pathologist
Child Development Service
Children's Hospital of Eastern Ontario
401 Smyth Road
Ottawa, Ontario, K1H 8L1

In the past decade, research has supported the introduction of non-vocal communication systems to people who cannot speak. Non-vocal systems are either augmentative (used to facilitate spoken language) or alternatives to the spoken word. Discussion has delineated rationales for using non-vocal communication, personal prerequisites for success with non-vocal systems, the nature of the systems and techniques for their implementation. Little attention has been directed, however, to the problems of introducing and monitoring non-vocal systems.

As Speech-Language Pathologists, our role in working with non-vocal clients is expanded. Not only do we carry the knowledge of the various alternative systems, but we usually coordinate the implementation of these systems. Compared to traditional speech and language therapy, implementation of any non-vocal program is more intensive in terms of time, budget and the collaboration of others involved with the client.

Time

Extra time is necessary to locate, acquire, prepare and teach the selected non-vocal system. To locate the Phonic Ear, VOIS 140, for example (assuming that you do not have an extra one handy) may require several calls to the dealer, your local dealership representative, other schools or clinics. You must then beg, borrow, rent or purchase the device.

Once the system has been obtained, it must then be made functional for the client. Skills like learning a code, locating and selecting symbols, numbers or words become the focus of individual treatment sesssions. We

must also teach the client's family, peers, teachers and significant others how to send and receive messages efficiently. Extra time is needed for both individual therapy and in-service training in the home, school or workplace.

Budget

Non-vocal systems are usually expensive. Costs range from several hundred to several thousand dollars for initial purchase, rental and adaptations to appropriate non-vocal devices. These costs will likely exceed the usual operating budgets set for traditional therapy. Furthermore, ongoing maintenance costs must be considered in future operating budgets. This is an issue in which support of our administrators is essential.

Collaboration

It is usually the Speech-Language Pathologist's responsibility to analyze information obtained from the client, his family and other professionals involved in the case. From our client and his family, we get an idea of his special interests, recreational and leisure activities which will influence the choice of vocabulary to be included in the system. The psychologist provides an evaluation of current cognitive functioning and reasoning abilities, which effects our choice of system complexity (direct selection, scanning or encoding). Information regarding visual-perceptual skills, fine and gross motor abilities is available from the occupational therapist. The teacher can give us an idea of our client's learning habits. The Speech-Language Pathologist's final choice of the system and its content is highly dependent on the completeness and accuracy of this information.

Following the selection of the non-vocal system our role often shifts to advocating for our client with parents, teachers and administrators. We must convince them that the selected system is both valid and necessary in terms of increasing potential for communication. We must engage their active participation in using the non-vocal system, in teaching others about the system and in relaying back information regarding our client's changing needs. A non-vocal system is ongoing and dynamic.

In summary, the specialist in non-vocal communication requires more time, more money and more cooperation to adequately meet the client's more complex needs. Optimally, centres which specialize in non-vocal communication systems should be established to support community based Speech-Language Pathologists in selecting and obtaining appropriate non-vocal communication systems.

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An Approach to Using Blissymbols for Severely Handicapped Preschool Children

From: Kathryn Wishart
Speech-Language Pathologist
Vancouver Neurological Centre
1195 West 8th Avenue
Vancouver, B.C., V6H 1C5

The Vancouver Neurological Centre provides multidisciplinary intervention to children with cerebral palsy and epilepsy. Early intervention, community based programming, parent involvement and the team approach are all important aspects of our service. The caseload is diverse in terms of the age of the child, the developmental level and degree of neuromuscular involvement. A small percentage are non-verbal and require communication systems as an alternative or adjunct to limited speech.

An example is K., a three year old girl with spastic quadraplegia and mental retardation who lives at home with her parents and infant sister. She attends a local preschool on a daily basis but receives occupational therapy, physiotherapy, speech therapy and family counselling from this agency. K.'s hearing and vision have been assessed and are within

normal limits. A bilateral alternating squint and poor hand function limit her indexing ability. Her communication repertoire, when introduced to augmentative communication, was limited: a smile and alerting response when a key word was heard; undifferentiated cry behaviours to signal a need; neutral vocalization in new situations and some pleasure vocalizations. Her frustration level was high during interaction, since twenty questions, with a negative or positive reaction, was the mode of communication.

We have known for a long time how a normal child develops language. With an early communicator, the adult's language input is in the here-and-now. The adult focuses on the child's behaviour, labels actions, comments on people and objects during interaction as they move, appear and disappear. The problem facing this therapist was how to normalize the language learning situation for K. and allow her to respond actively. After much discussion, it was decided to use Blissymbols. Although visually more complex than many other visual symbol systems, they can be used dynamically to interact with her and allow her to respond. Language can be continually modelled as the symbols can be produced any time and in any place with pen and paper. They can be written in isolation or in phrases or sentences by a variety of adults. The adult can write the symbol in conjunction with the spoken input just as signing and speech are successfully combined in many preschools or homes. The selection of Blissymbols over pictographs was less a question of iconicity but rather of pragmaticity.

It was decided to teach Blissymbols in situations in which K. was already involved. The physiotherapy session, for example, provided a wealth of topics for communication. When K. appeared to want to stop an activity by crying, the therapist would acknowledge - "It sounds like you are telling me something, maybe you want to stop" - meanwhile drawing the symbol for 'stop' and presenting it to K. Initially K. responded by looking but soon her hand would come forward to point. The power of communication was soon learned. The later extension of this was, "Maybe you are telling me you want more, or maybe you want me to stop", thus allowing a choice between the symbols. Very rarely was she presented with symbols in a what-do-you-want type of situation since adult's questions and interrogatives have the same effect on a young non-speaking child as their verbal counterparts. The initial vocabulary of Blissymbols used were related to the people and actions involved in activities. For example, 'toes up', 'K. on ball', 'bus go down', etc. This approach has been used now for nine months with K. at home by her parents and therapists and in preschool.

The positive aspects are, that despite both limited speech and body language, K. is now actively participating in a language learning situation. By focusing on K.'s own communication signals and conventionalizing these, the frustrations of parents, therapists and child were lessened. Modelling language using simultaneous visual and auditory input made interactions more positive. Therapists and parents have noticed an increase in her vocalizations and a strong desire to use the symbols which allow her to control her environment. To date, the Blissymbols have not yet been grouped onto a formal display but this step is now being considered, especially at mealtimes. Some negative aspects still have to be resolved.

Two people are often necessary to allow K. to experience activities rather than merely observe these, since it is difficult for one therapist to facilitate movement or play and simultaneously label experiences with such a severely involved child.

Her mother, or Speech-Language Pathologist, make a natural adjunct to her physiotherapy sessions in

order to achieve this.

Suggested Readings

McDonald, E.T. Teaching and Using Blissymbolics, Blissymbolics Communication Institute Toronto 1980

Schiefelbusch, R.L. Non-speech Language and Communication, Analysis and Intervention. University Park Press Baltimore 1980

Silverman, F.H. Communication for the Speechless Prentice Hall Inc. Englewood Cliff, N.J. 1980

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The Amer-Ind Gestural Code and Its Application in a Preschool Setting

From: Patricia Carey
91 Houston Road
Regina, Saskatchewan

Implementation of Amer-Ind with both infants and preschoolers attending Alvin Buckwold Centre programs was given serious consideration because of the lack of success with seemingly appropriate recommendations for language stimulation. Too often the suggestions fell short of their intended goal despite the patient, consistent efforts of motivated parents and staff.

Many of the children attending Alvin Buckwold Centre had problems with comprehension, attending, poor eye-to-eye or face-to-face contact and spoken words alone often did not seem to capture the child's attention. Frequently the child's concept of communication and his awareness of the need to communicate effectively was questioned. Complicating factors also included oral motor dysfunction, intermittent hearing problems and too much pressure by parents and other care givers to "help" the child to talk.

Many of the children, however, did have some strengths which suggested to us that they might be candidates for an Amer-Ind program.

1. It was noted that gesture and facial expressions often attracted the attention of some of the children thereby increasing the face-to-face communication.

2. Some of the children were particularly adept at motor imitation.

3. Several parents were effectively using a lot of gesture, facial expression and non-vocal sounds (eg. clapping hands, and whistles) to captivate the child's attention or reinforce the verbal structure. For the most part this was done without much forethought.

4. Some children were expressing a great desire to communicate but the conventional methods of home programming were ineffective.

Many of the children at ABC are educably mentally retarded and as such will be placed in an environment which is primarily verbal. The children must learn to understand spoken language and speak if possible. For that reason, Amer-Ind is not appropriate. An Adapted Amer-Ind Program (AAP), however, was considered to have merit and be more practical. The adaptations were (1) that after the signal had been presented the suitable word would be spoken; (2) affirmative and negative would be the more customary head signals for yes and no, and (3) bathroom would be a tap on the behind. No other changes were made because Amer-Ind signals were expressive, recognizable highly supportive of a basic vocabulary, repetitive and easily learned by parents and teachers. They are consistent and simple, two crucial elements in learning for mentally retarded children. Furthermore, the system relies heavily on using the environment to teach, so concrete, visible cues are ever present.

Our intentions in implementing AAP were three-fold. Firstly, to "standardize" the gestures used

between infants and parents attending our early intervention programs. Our goal was to determine whether the children learned the signals or showed improved communicative abilities. Secondly, to provide the preschool children who had receptive problems with a supportive mode, and finally to take off the pressure to talk. Our goals for the latter two were to improve communicative abilities and increase communication awareness.

In all instances AAP offered a low pressure, low cost program. Signals identifying concrete common objects, and simple, repetitive activities of daily living provided natural and ideal stimulation.

Both children and their parents were considered as candidates for the AAP. The prerequisite in all cases for parents was a sincere interest and enthusiasm in the program. The prerequisite for children was need and the motoric ability.

In the infant program the parents of 14 children were provided with a list of words commonly used with babies six months of age or more. Individually the families were requested to select three words, which they used at home when interacting with the baby.

The appropriate signals were taught to the parent(s) and they were asked to use them naturally and spontaneously BEFORE saying the corresponding word. We met monthly in groups, generally to discuss progress, problems and exchange ideas on parent/child communication at the AAP. New signals were added as the parents and therapists felt that the child was ready. Some parents thought the effects of the AAP were positive, others were easily discouraged, had difficulty using the signals, were inconsistent or had unrealistic expectations. Those children who received consistent, spontaneous and appropriate signals showed encouraging communication behavior. Few are using signals (they were not taught them) but they appear to be more attentive, demonstrative, vocal/verbal and have the concept of communication. They will need encouragement and continued stimulation.

Implementation of the AAP in the preschool presented different challenges. It was decided to initiate the program with two children specifically, but provide both the signals and appropriate words to all the children in group activities.

With all of the children during preschool time, the signal was made first, then the word provided. The activity or event of the moment was used as the stimulus, and immediate reaction or response was noted by the signaller to determine whether a message had been received. If it was not understood either through signal or word it was repeated. If there was still no response, the child was shown or given hand-over-hand guidance.

Often the situation was structured to allow an opportunity to use a signal but it was never set-up out of context. These suggestions were encouraged at home too.

The program in the preschool was born shortly before I left the ABC. The results at that time were encouraging. Both children were using a few signals appropriately and were pleased to have given a message. Two other children who were non-verbal and reluctant to talk were imitating the signals spontaneously and appropriately. There appeared to be an element of learning among the children who were exposed to the signals.

My conclusions and recommendations about an AAP for very young children who are at risk for severe language delays or are non-vocal/verbal are:

1. It takes considerable time to determine how to expose the child most effectively to the signal system. Signals cannot be selected at random and used inconsistently.

2. The therapist must have a thorough working knowledge of parent-child interactions with each specific family, must understand the development of language, and must realize the child's strengths and weaknesses.

3. There must be a dedicated commitment to the system by all actively involved with the child.

4. The enormities of language, both receptive and expressive are better appreciated by parents and teachers when they have to decide for themselves how to present the concepts to their child. It is so easy for many of us to say the word but to break it down into its most basic elements takes time and consideration.

5. Proper implementation of this signal system reduces the amount, the rate, and the complexity of spoken language.

6. It encourages increased and improved face-to-face contact.

7. Feedback and reinforcement are immediate if a message is received.

8. It offers children an opportunity to develop a simpler, easily recognized method of communicating.

Readers may wonder whether this alternative system will supercede speech. In reply there are several research studies which suggest that if the child has the capacity to speak, he will. Signals, or gestures are dropped with preference for the more efficient, effective method. It should also be noted that normally children learning language have been observed to resort to gesture if the desired word is not immediately available.

From our observations at ABC, it would appear that a signal system has a lot to offer the very young and preschool child.

(The above is an edited version of an article which appeared in VOX, The Saskatchewan Speech and Hearing Newsletter.)

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