

Augmentative Communication News

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For Consumers



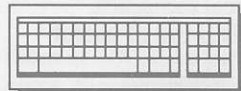
AAC . . . A viable approach to prevention?

Clinical News



How the experts see it.
Goals, strategies, and guidelines
for early AAC intervention.

Equipment



Tools of the trade:
It's all in the application.

University and Research



Early intervention
in the 1990s: AAC
research & development.

Governmental



Australia's AAC community:
The state of Victoria.

UPFRONT

HAPPY NEW YEAR! ACN staff welcomes in the new decade and its 3rd year of publishing. **Thanks for your support!** This issue focuses on the application of AAC with infants, toddlers, and preschool children. The issue really poses a challenge. Can AAC intervention prevent the development of maladaptive behaviors that lead to dependence and communication failures? If the answer is yes (*and I believe it is*), then AAC professionals and families will be changing how we do things in the 1990s. New doors will open to children and their families . . . doors that lead to independence, communicative competence, life in the

mainstream, and feelings of self worth.

In preparing this issue I spoke with 22 experts. Thanks to each for your creative approaches and thoughtful responses to my questions. In **For Consumers**, a family-centered intervention model is described. This approach is well-suited to AAC. **Clinical News** contains guidelines, goals and strategies considered important by master clinicians and researchers working with young children. The **Equipment** section highlights some hardware currently being used. More importantly, resources are listed. Staying in touch with people who know technology and understand children saves time and prevents mistakes. (cont. page 2)

For Consumers



Early Prevention of
Severe Communication
Disorders

Why are so few augmentative communication (AAC) referrals made prior to 2 1/2 - 3 years of age?

Why do very few augmentative specialists work with families of infants and toddlers at significant risk for developing functional speech?

Is it necessary for caregivers and children with motor, sensory, and cognitive handicaps to fail in their attempts to communicate before AAC techniques are introduced?

What are we waiting for?

AAC is now widely accepted as a viable treatment approach. Augmentative communication aids, symbols, techniques and strategies have been shown to supplement and facilitate the development (or return) of speech, language, and communication skills, even for children previously not considered to have communication potential.

Major technological advances in neonatal intensive care units have increased the survival rates of infants with very low birth weight, postnatal trauma, substance abuse syndromes, and infection. Follow-up studies suggest that from 10% to 25% of these babies have neuro-motor and developmental sequelae.¹ Included are those at risk for communication problems. Professionals interviewed report the children they see for AAC have diagnoses that include:

Cerebral palsy, Down syndrome, genetic anomalies, Williams syndrome, acquired disorders (e.g., traumatic brain injury, drowning), degenerative conditions (e.g. muscular dystrophy, adrenoleukodystrophy), unspecified developmental disability, seizures, developmental dyspraxia, substance abuse, autism, bronchopulmonary (cont. on page 2)



Upfront (from page 1)

You'll enjoy reading the expert's Wish Lists in the **University/Research** section. This is a departure from how I typically handle that section. Let me know what you think. Finally, in **Governmental** readers get a glimpse of AAC in Australia. Our sympathy to subscribers down under. We know how it feels when the earth moves!

Remember the Hotline is (408) 649-3050.

Note: We are on Pacific Standard Time and the office opens at 9:00 A.M. Thanks. I look forward to hearing from you!

Prevention (from page 1)

dysplasia, subglottic stenosis, aglossia, hyperalimentation syndrome, and tracheostomy.

Preventing maladaptive communication patterns

Communication patterns begin developing early in life.

The infant's capacity to acquire communicative competence... (is dependent) in part, upon temporal patterning, synchronization, reciprocity, and joint regulation between the behavior of communicative partners. These characteristics... are in turn influenced by broader-based ecological determinants that impinge upon the child and his/her family.²

When the *interaction dance* gets off to a bad start (either because an infant's signals are not being sent or not being received), the probability of the infant acquiring contingency awareness is very low. This set of circumstances is known to lead to "learned helplessness" "behavior problems," and "passivity,"³ which constitute major barriers and handicap people well beyond their level of impairment.

Can the early application of AAC approaches prevent the establishment of maladaptive communication patterns? If a framework for communication were laid own "right" from the beginning, would competent communicators (who happen to use a variety of communication aids and techni-

ques) become the rule rather than the exception?

Intervention Models

AAC professionals and families are familiar with medical and educational models of intervention.⁴ However, these models do not take into account the *ecological realities of the family unit, its members, resources, and support*.

In the **medical model** the health professional is viewed as the expert. Intervention is child-centered, i.e., therapists' goals focus on bringing about changes in the child. Caregivers are not expected to take an active role. The model is criticized because it fosters a dependency on professionals. This, in turn, puts families of very young children at risk for developing a sense of helplessness about their caregiving ability.⁵ **Note:** AAC teams discarded this model years ago recognizing the importance of caregiver involvement. Even in medical settings, AAC teams/professionals generally operate from an educational model as described below.

The **educational model** was developed for school-age children. Intervention is child-centered, and success often is measured by whether discipline specific goals are met. Caregivers are expected to be part of the decision-making and training process. Thus, parent training and the development of home programs are inherent to this model. A major criticism is caregiver training connotes a one-way interaction (i.e., therapist teaches the parent). Thus, compliance becomes an issue. It is not uncommon to hear AAC professionals complain because families do not use symbols or a device at home. This is perceived as a barrier to a child's progress. Caregivers, on the other hand, may feel resentful, frustrated, and/or guilty about the difficulty they have "fitting" therapeutic activities into family life. **Note:** When judgments are made on caregiver follow-through, it reflects a belief system that therapists/teams "know best" and should control what occurs at home.⁴ Ouch!

Intervention with very young children requires a new approach, a **family-oriented model**. This represents a philosophical shift away from child-centered intervention. It seeks to: a) *empower and enable the family as a system*, b) *promote independence, not dependence*, and c) *support and strengthen the family's competence in negotiating its own course of development*. In addition to its philosophical appeal for use

with young children, the model makes good pragmatic sense:

- * Many parents (e.g., 50-60% in the U.S.) work full time, leaving limited time and energy to balance and fulfill their multiple roles and responsibilities (e.g., wife and lover, mother, daughter, friend, professional, housekeeper)
- * Intervention that fails to account for reality is not likely to succeed. Survival issues take precedence over quality of life issues. Mothers and/or fathers of handicapped children often have limited financial, emotional, social resources. Some are impoverished, teens, single-parents, substance abusers.
- * Children with severe communication problems often require services over a lifetime. Families and individuals with disabilities need to know how to negotiate health, social welfare, and educational systems so they can tap resources when needed.

Dunst (and others) at the Western Carolina Center Family, Infant and Preschool Program in Morganton, North Carolina describe a family-systems intervention approach in *Enabling and Empowering Families: Principles and Guidelines for Practice*.⁶ This book offers an excellent theoretical discussion and practical examples. Also, the Appendix is full of useful assessment tools.

Note: Family-centered models ultimately may be better suited to other groups involved with AAC interventions. Take a look even if you don't work with children.

Current Practices

Professionals I interviewed report delivering services to infants and toddlers in centers (i.e., medical clinics, day care programs, resource centers) and home-based programs. Some do both, citing the following advantages:

Home-based programs allow professionals and families to a) identify daily routines b) try out and modify procedures c) identify and tap family support networks and d) engineer the home environment to enhance communication opportunities.

Center-based programs a) get parents out of the house b) get parents in touch with resources c) expose families to others in similar situations d) make it easier for parents to concentrate and learn if the home environment is distracting and e) give professionals and families ready access to equipment and materials.

For preschool children, most professionals prefer delivering services in a school-based program. Those who provide services in centers try to include community-based consultations. Table I (on page 3) lists characteristics of exemplary preschool programs.

Those interviewed said the following practices are not effective:

Table I. Characteristics of Exemplary Preschool Programs

- * Concentrated time periods (i.e., 1 - 2 hours per week is not enough)
- * Integration experiences (mainstream classrooms; reverse mainstreaming)
- * Functional communication goals
- * Classroom engineered for communication and control, e.g., modified play areas, symbol displays everywhere
- * Specialists working in the classroom. Discipline-specific goals integrated into existing activities
- * Access to a range of technology and provision of support needed to allow participation
- * Parent information and support groups

- 1) Doing therapy with infants when caregivers are not participating.
- 2) Doing therapy in isolated settings
- 3) Failing to infuse goals as part of normally occurring activities
- 4) Using an attendant model in a preschool program because it facilitates dependence
- 5) Focusing on high technology instead of a concurrent emphasis on the development of speech, language, socialization, peer interaction, etc. using a multi-component approach.

Example

Goossens' describes how the team at U.C.P. in Birmingham uses some characteristics of a family-centered model. AAC intervention occurs during natural activities representing a shift from a previous focus on the use of play contexts. Caregivers (e.g., parent, day-care teacher) select activities, and goals are subsequently embedded. Professionals operate in a transdisciplinary manner, as illustrated below:

Activity #1 - Home, Bathing activity. An occupational therapist begins by helping the mother position her child in a bathing chair. With hands now free, mom feels more secure knowing the child is safe. Toys can be introduced to make bathing fun and to promote movement, reaching, and grasping. A few weeks later, communication goals can be overlaid. The emphasis is on engineering the environment for aided language stimulation and choice making. The mother and consultant make pertinent decisions about symbols and attach them to the wall around the bathtub. The consultant shows mom how to point to symbols as she talks and demonstrates how her child can look at a symbol to choose a toy or tell her what to do.

Activity #2 - Day care setting, Arrival time. The AAC consultant comes 1x per week for a 3 hour block of time. In weeks 1 & 2, the consultant may develop materials (symbols for aided language stimulation), place indoor/outdoor carpet in the doorway and cloak room, attach velcro to symbols and symbols to the wall, take photographs of each child, and prepare loop tapes for all children to use to greet each other. In weeks 3 & 4, the consultant models strategies and techniques with children as they arrive.



Clinical News

Early Communication Training Approaches

Communication is "any overt conventional or nonconventional behavior, whether used intentionally or not, that has the effect of arousing in an onlooker a belief that a child is attempting to convey a message, make a demand, request, etc."⁷ As discussed by Kan-gas and Lloyd, "there are compelling reasons to begin communication intervention at a young age."⁸ Communication neither begins (nor ends) with language. From birth, signals (eye gaze, smiles, changes in posture, head nods) sent and received remain powerful and efficient ways to express meaning. AAC intervention always means using standard techniques (head nod, facial expression, pantomime, eye gaze) and often means using special techniques (graphic symbols, aids, computers, signs, switches, software, etc.).

In describing the "two most important" augmentative communication goals to pursue with 1) infants/toddlers and 2) preschoolers, master clinicians mentioned more than 50. You'll note in Table II (page 4) that goals are for caregivers, clinicians, teachers, as well as children. Rather than "editorialize" I have listed them "as is" under some general categories along with my general observations:

- * Experts obviously see AAC techniques as a means to an end, not an end in itself. Augmentative communication aids, techniques, strategies, and symbol sets are seen as tools providing opportunities for communication, learning language, exploration, participation, control, self realization and achievement.
 - * Other tools not typically considered are mobility aids and devices that assist children to control and manipulate their environment. These warrant attention from AAC teams! Independent mobility may be one of our most effective intervention strategies.
 - * The development of speech was mentioned by only 2 respondents as a major goal. This is of concern because 1) It is most families major concern! 2) Speech is our most efficient and effective communication tool. 3) Opportunities to develop speech should never be missed, particularly during early childhood. Many children eventually develop some speech. Unless we systematically respond to vocalizations as though they convey meaning, infants and children will not learn to use their voices in meaningful ways.
- Much is known (and can be done) to facilitate the development of speech.

Oral and speech motor programs are important components of early augmentative communication intervention and should never be taken for granted.

- * Goals for infant/toddlers and preschool children were often said to be "the same." However, independence, mainstream experiences, and technology use were more of a focus in preschool.
- * The emphasis on expression probably reflects AAC practices with populations where expression is the only or major concern. However, infants, toddlers, and preschool children are developing language and learning about communication. Comprehension is critical and deserves a major emphasis in our programs.

Strategies: A Pot Pourri

How are we to achieve the goals?

Below are some of the creative ideas shared by those interviewed.

Caregiver Strategies

1. Look at positioning, movement, and mobility to support interaction. Give parents tasks, e. g., see if you can find 3 ways to hold him so you can see each other's face. See if he smiles more when you are animated or when you are talking to him quietly in a room. Does he do anything when you stop feeding or rocking him? Does she do something to get a cookie? What is it? Can you get him/her to do it again?
2. Teach caregivers to treat everything child does as meaningful language and respond accordingly. For example, "Look what he says with eyes. He's talking with his feet."
3. Help identify ways a child can indicate messages. Don't pick reflexive movements or movements a child has to work hard to do. Effort increases tone.
4. Mealtime contexts provide rich opportunities for children to learn to control and guide their environment.^{10,11}
5. Teach caregivers to establish an exchange by stopping and waiting for the child to take a turn. Dunst suggests waiting 3 seconds/2-3 months; 15 seconds/12 months; 30-40 seconds/older children.
6. Introduce families to a proactive approach to communication intervention, i.e., developing multiple ways to communicate effectively. Terms "total communication" and "augmentative communication" may hold negative connotations for parents, i.e., "professionals are betting against speech."
7. Use guided observations and video training packets. Many families have VCRs.
8. Encourage families of children who use AAC techniques to share their experiences with parents who have concerns.

Training Staff

Blescoe, a preschool teacher on the Augmentative Communication Team (ACT) in Berkeley, CA has 2 strategies to raise staff awareness of how their behaviors affect the communication process:

- Activity #1 - approx. 45 minute session:
(continued on page 4)



Table II. Priority Communication Goals for Early Intervention

SOCIALIZATION

- * Facilitate family bonding process
- * Insure families have time and energy to interact with children effectively
- * Teach parents to read infant and attribute meaning to behaviors
- * Establish an exchange (turn taking, stop and wait)
- * Expand social communication beyond family to peers, familiar/unfamiliar listeners

COMPREHENSION

- * Provide receptive training using traditional approaches and aided language stimulation
- * Lay groundwork for skills related to communication, i.e., opportunities to discover cause/effect, parent as agent, object as agent
- * Facilitate the infant/child's perception, comprehension and use of symbols
- * Immerse children in multiple communication options (similar to foreign language training)
- * Train parents to reinforce and treat everything child does as language.

EXPRESSION

- * Facilitate speech
- * Provide ways to respond and follow simple instructions
- * Provide mechanisms for mobility, manipulation, and expression
- * indicate
- * make choices
- * initiate
- * express wants and needs
- * control the behavior of other people
- * Expand range of communication capabilities, i.e., increase access to vocabulary and variety of forms of expression child uses (be sure child does not rely on a single modality)
- * Provide opportunities to make choices
- * Use effective communication strategies, as interactive and developmentally appropriate as possible
- * Demonstrate conversational skills
- * Provide opportunities so kids learn to shift modes (greeting, protesting, demanding)

INTERACTION WITH ENVIRONMENT

- * Give kids control and sense of power
- * Provide way to interact with toys, things
- * Set up environment so children need to communicate

INDEPENDENCE

- * Provide opportunities to move that stimulate curiosity and interest in world
- * Provide child with opportunities to interact using communication aids.
- * Increase use of tools
- * Develop child's responsibility for success/failure of communication
- * Provide opportunities that are similar to those of normal children.

EDUCATION

- * Provide curriculum that is flexible and insures participation of nonspeaking child.
- * Early pre-academic skill development
- * Integrate AAC components into classroom setting
- * Get ready for mainstream setting

* Staff interacts with children as usual. However, they are not allowed to speak. They are encouraged to tune in to natural gestures and cues, and to become aware of how they use other modalities to communicate (point to pictures, facial gestures, gestures) etc.

Activity #2 - 45 minute session:

* Staff is not allowed to initiate anything. If kids interact with staff, they may get involved using whatever modes are available, including speech. The room is set up so toys and activities are accessible. *Here's a great anecdote. One girl showed adults pictures and queried "what's this?" If the adult was correct, she reinforced saying "Alriiiiiight" (using just the right intonation!)*

Facilitating Comprehension

1. Engineer the environment** so child is immersed in language. Make environment a communication board. Use indoor-outdoor carpets on the back of cabinets, on bulletin boards, hallways. Attach communication symbols with velcro. Set up classroom so toys that imitate life are in play areas. Fisher Price toys are catalyst for communication (e.g., Fun with food. McDonalds.) Place communication symbols throughout the school building. For example, each classroom, bathroom, entrance and the cafeteria, office, art room could be represented by a symbol.

2. Make and use communication boards for aided language stimulation.**

3. "Symbolize" students by shape/color. Burkhardt reports her preschoolers learned to associate color with classmates before they could match colors in a structured task.

Facilitating Expression

1. Do things (e.g., plan surprises everyday) so there is something to talk about.

** Strategies by C. Goossens' strategies Engineering the Environment and Aided Language Stimulation. For copies send a self-addressed, stamped envelope and \$1.00 to me, 1 Surf Way, #215, Monterey, CA 93940.

2. Use "remnant books." Put leftover bits of school/home activities in photo albums with peel back plastic pages. These can be used to establish topics and encourage information exchange between home and school.

3. Provide lots of ways to make choices.

4. Don't use static boards. Teach someone to draw symbols.

5. Use objects as symbols (calendar boxes, tangible symbols).

6. Use routinized choral speaking and songs as part of activities (e.g., I want more, more, I want more of *that!*)

6. Use generic, rather than specific vocabulary (some, this, that, here, there, mine.).

7. Use music, imagination, fantasy, imagery.

8. Work technology into routines (e.g., use battery operated car to deliver cracker; loop tape to say "good morning," "go go go" or to sing a song; Mini-card readers, Loquitur, communication aid, etc. to speak messages.

Control and Independence

1. Develop metacommunication and problem solving skills. We learn from our mistakes. Give kids honest feedback. Let them discover what works and what does not. Gradually build their awareness of what modes to use, when, with whom. Keep track of what children do. Help them practice metacommunication skills. Role playing followed by "real experiences" is useful.

2. Pursue ways of providing independent mobility. 18 month old children learn to use electric wheelchairs.

3. Make sure children have contact with normal preschool peers. Note: Some districts buy tuition slots in regular preschools.

Symbols: Some preliminary thoughts

Mineo points out normal language development milestones are to some extent dependent on mode. For example, normal and auditorily impaired children exposed to sign language use signs to make requests and comment months before verbal symbols are used. We still know little about how graphic symbols are acquired.

Professionals report using signs, objects, clear/uncluttered photographs, pictures from boxes of toys, etc., and drawings as symbols. Commercially available symbol sets mentioned were: Picture Communication Symbols;¹² Picsyms;¹³ and Blissymbols.¹⁴ Several expressed concerns about how little thought goes into symbol selection. Others were concerned because children are not systematically exposed to symbols being taught or shown how they are used for communication. An upcoming issue of ACN will address issues related to the perception, comprehension, & use of visual symbols.

Picture Exchange Communication

The Delaware Autistic Program introduces symbols by first establishing their use in a communicative exchange, i.e., you give something

to get something. The focus of the picture exchange strategy is to promote success at interacting. . . a difficult problem for children with autism.

- * Identify desired objects (i.e., things child reaches for) and take a picture of it. Note: children are not expected to identify (or even attend to) the picture.
- * While child is reaching for the object, put picture in hand.
- * Assist youngster to give picture to an adult. Adult responds as if child were talking, i.e., making a request. Then, child gets the object. The goal is for the child to pick up the picture and put it in adult's open hand, i.e., communicate.

Note: pointing to pictures is not taught because it does not demand a focus on interactive exchanges.

- * The adult gradually moves farther away from child. Children eventually learn to pick up a picture, look for an adult, and give it to him/her. Adults treat each exchange as linguistic communication.

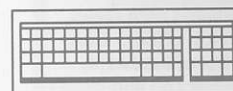
Data on 24 children under the age of 5, revealed that in less than 1 month, all were using a picture to make a request. The next steps were to add choices, teach discrimination and expand symbol use:

- * First, an easy 2-way discrimination is introduced.
- * After approximately 10 photos/symbols are used, each is placed (using velcro) on a miniboard. Youngsters have a personal board and access to activity-based classroom boards.

- * To introduce picture sequencing, a separate brightly colored card is attached with velcro to the personal/activity boards. By putting selected pictures (want + cookie) on this board, messages are constructed. Then, the child pulls the brightly colored card off (containing selected symbol sequences) and gives it to an adult.

- * Final steps include work on labelling (and other communicative functions). Using the same picture sets, the child is asked "what is this?" Note: some kids make a quick transition from requesting to labelling; others don't.

During the first year of the program, no demands were made on producing speech despite the fact that some children were echoing words. After 1 1/2 years of implementing this strategy, however, 14 of the 24 children are "independent speakers." Most are enrolled in mainstream classrooms. Of the 10 remaining, 5 are judged to be transitional speakers (not completely intelligible in all situations with all partners) and 5 are still not talking well. All are interacting however! Andrew Bondi, Program Director, feels this strategy (which focuses on teaching the use of symbols) can be used with other populations. I agree! ➡



Equipment

Helping AAC Professionals Apply Technology

If equipment is to become a tool, it should allow children to do something more or better. Toys, on the other hand, are for fun. Can technology become a tool for very young children? Lahm's¹⁵ research shows it can.

- * Normal infants of 6 months learn the relationship between their action on a switch & an environmental consequence.
- * By 8 months infants can indicate preferences and have the requisite cognitive & visual abilities to begin using computers.
- * At 10 months, infants are able to survey options available in contexts & make decisions.
- * 12 month old babies demonstrate multiple schemes to achieve goals.
- * At 15 months, infants can be directed toward using the computer as a functional tool.
- * 18 month old children perform abstract tasks and complex imitation skills (use language, build vocabulary).

Her findings argue against getting "stuck" on teaching cause/effect with a switch and a toy. They argue for providing young children multiple opportunities to use equipment to interact, solve problems, make choices, etc.

It is not easy to decide what equipment (hardware and software) is best for a particular child or situation. You must know what exists, how to apply it creatively and have the resources to "do it." It is extremely difficult to "keep up," particularly with computers, peripherals, and software. Here's my suggestion: Make direct contact with experts who know the technology and how to apply it. Pick up the phone and call (if you can) or write:

National Special Education Alliance Foundation. 1307 Solano Avenue, Albany, CA 94706 (415) 528-0747. Jackie Brandt is director. This network of 35 Resource centers has a strong consumer orientation. It is supported in part by Apple Computers. There may be a center near you; check it out! Note: I am lucky enough to have access to the Disabled Children's Computer Group in Berkeley California (where the NSEA began). What a talented, committed group!

IBM National Support Center for Persons with Disabilities. P.O. Box 2150, Atlanta, GA 30055 (800) 426-2133. A clearinghouse of resource information for IBM computers. Information dissemination is individualized.

(continued on page 6)

Table III. Do's and Don'ts for Using Augmentative Techniques with Young Children.

The Do's

- * Analyze interaction that occurs in family and intervene with minimal disruption
- * Infuse communication and language training into activities that happen anyway.
- * Help identify and utilize routines as contexts for the development of communicative competence.
- * Support family interaction and communicative competence with and without technology.
- * Put child in control of situations.
- * Teach caregivers to be sensitive to child's signalling behaviors.
- * Learn to pause, watch, and wait for behaviors to occur.
- * Rather than "eliciting" responses, create opportunities.
- * Achieve a balance between developing communication skills and skills in AAC aids & techniques.
- * Make equipment available to families.
- * Assist families to lay down building blocks for speech, language, interaction, literacy, etc.
- * Keep in mind normal language development and support it.
- * Work on natural speech (respiratory control, duration of exhalation & force, voicing, articulation).
- * Keep pace with child's need to apply language to world around them. Don't hesitate to be "quick and dirty" and provide symbols on the spot, as needed.
- * Provide formats for expression across multiple modes.
- * Use different modes concurrently (including pictures), watch for preferences and follow them.
- * Naturalize interaction while augmenting.
- * Be flexible. Build sense of partnership with family and child.

The Don'ts

- * Don't decide where child is going...the sky is a realistic limit for young children.
- * Don't allow youngsters to perceive of selves as "nonvocal" or as a communication "device user" rather than a "competent communicator."
- * Don't develop mind set in child that communication is hard work.
- * Don't wait to try something. Show fairly sophisticated devices to babies and young children. A child's response (or no response) will teach you something about the child.
- * Don't track kids in the direction of a particular AAC device or focus AAC training around a device or symbol system.
- * Don't lose natural interaction patterns.
- * Don't put kids with battery operated toys to teach cause/effect. Build in interaction & purpose.
- * Don't move to visual scanning before children develop good eye gaze.
- * Don't "over" technologize young children.



UCLA Intervention Program - 1000

Veteran Avenue, 23-10 Rehab, Los Angeles, CA 90024. Kit Kehr, Director, offers a Comprehensive Resource (\$3) list of hardware, software, etc. (18 months - 5 years) and Software programs (\$25 each) for Apple IIs (Power Pad, single switch, Touch Window).

Special Friends and Computers Project -

UCPA of Western New York, Inc. 4635 Union Road, Cheektowaga, NY 14225 (716) 633-4440. Susan Mistreet (preschool) and Kathleen Grade (infants). Disseminates printed material (software and hardware suggestions and strategies), videotapes, overlays for Unicorn Board (e.g., Stickybear). and their expertise.

Colorado Easter Seals' Center for Adapted

Technology, 5755 W. Alameda Avenue, Lakewood, Co 80226. (303) 233-1666. Dave Schmitt, directs the program and edits *The Communicator* (\$10), published 4-5 times per year. He has a wealth of information and distributes Public Domain Software (\$5). Note: This group can help with IBMs.

Technology for Language and Learning,

P.O. Box 327 East Rockaway, NY 11518-0327 (516) 625-4550. The well-informed director, Joan Tanenhaus, distributes Public Domain Software and shares ideas.

I have always liked Vanderheiden's definition of a computer "a software player." It is good software and good applications that make a computer "sing." Yet, computers are not just tools, they are contexts that motivate children and facilitate interaction. Children need to be directly involved. Here's some accessories for Apple II computers that insure children access:

Muppet Learning Keyboard (\$129) Sunburst, 39 Washington Avenue, Peasantsville, NY 10570-2898. (800) 628-8897. Additional programs about \$65

***Power Pad** - Dunamis, 3620 Highway 317, Suwanee, GA 30174. (800) 828-2443. Ask about the TouchComm (\$149.95) and Talking Power Pad (Public Domain \$5) so you can add speech. The Tool Kit (\$49.95) gives you speech output, graphics, text, and you can do screen dump. The Power Key (\$100, available early spring) works with adaptive firmware card and gives you 10 programmable levels. Note: Works with U.C.L.A. software. To make it accessible to children on the floor, buy a 12 foot long cable for the Power Pad & extender jack for Echo from Radio Shack.

***Touch Window**, Edmark, P.O. 3903, Bellevue, WA 98009 (800) 426-0856. For Apple 2e,gs \$249.95. For IBM RS232 \$309.95. Ask about the Talking Touch Window (\$79.95). It's an authoring system)

***Adaptive Firmware Card Apple IIe** (\$400) IIGs (\$480); ***Unicorn II Expanded Keyboard** (\$325 plus cable); ***Multiple Switch Box** (\$50).

*Products with asterisk are available from Don Johnston Developmental Equipment, Inc. P.O. Box 639, 1000 N. Rand Rd, Bldg. 115, Wauconda, ILL 60084 (800) 999-4666. The catalog has materials and equipment galore. Laureate Learning Systems, Inc. Software, Peal Software, and a rich variety of other programs are available. Their staff is competent and always willing to help.



University & Research

Forecasts & Wish Lists for the 90's

Looking ahead 5 years, some are predicting good times. We shall, no doubt, face new challenges and revisit old ones. Included are 2 Wish Lists for AAC researchers and developers!

The Sublime View

All predict technological advances will continue. Technologies will be more refined, versatile, smaller, and usable across contexts. Some are optimistic clinical practices will also advance. Optimists say there will be more interest in the use of AAC. Children will be identified earlier and have access to devices designed more for them. Some say we will "bite the bullet" and take a long, hard look at service delivery systems that create dependent people.

The Not So Sublime View

Several predict we will be seeing more children with severe handicaps. Although services to infants and toddlers will increase, many are concerned about the quality. They predict there will be "early childhood technology specialists" who may know technology and may not know about applications. Some predict decisions about technology will be dependent on marketing rather than on careful consideration of available options, i.e., service delivery will be controlled by manufacturers rather than by clinicians.

All agree we need to "get off the dime" and get the training and/or provide others with training so programs are developed that are meaningful to families and position children to participate in the mainstream.

Table IV. Research Wish List

- * Do AAC methods interfere with language growth? What effect do rate enhancement strategies have on construction and use of language. How do various technologies affect language and communication development? How do children whose primary language symbols are visual/graphic develop language?
- * How do infants exposed to speech output devices that babble, make raspberries, sing, request, etc. relate to technology at age one, three, six?
- * What effect do VOCAs have on vocal output?
- * How can we encourage children to generate novel language? How can we assist children to construct sentences? Should we use low tech aids, speech output aids with single words, aids with conversational strategies?
- * Does exposure to symbols with printed words affect sight reading ability? How?
- * What is the efficacy of using aided language stimulation?
- * What do longitudinal studies tell us?
- * How do kids with disabilities attempt to initiate and assert their roles in interaction?
- * What interaction strategies work best?
- * What are characteristics of "good vs. poor" communication partners?
- * What processes facilitate interaction, learning and empower children and families?
- * Why do certain contexts (mealtimes) make good learning environments?
- * Why do "computers" offer a context that facilitates socialization?
- * What are most effective ways to teach single switch use, scanning, light pointing, etc.?
- * What do normal kids do with switches?
- * What is the efficacy of using scanning software to teach scanning for use with a communication aid?
- * What scanning techniques are effective at different developmental levels?

Table V. Equipment Wish List

- * Easy ways to start and stop video recorders
- * Interactive video-disc which presents a series of visual images, close ups, and includes a biofeedback feature (e.g., if child's body stiffens, computer provides soft music, pleasing visual images).
- * Technology to optically scan photos
- * 500 photo disc that could be used in same way as Mayer-Johnson's Board Makers
- * Realistic representations on computer displays (photographic quality and movement)
- * Thin devices that fold (8 1/2 x 11")
- * On-the-body communication aids
- * Scanning aids that work for conversation.
- * Portable, dedicated auditory scanning device that combines visual & auditory scanning
- * Dynamic displays
- * Tailor-made synthetic voices
- * Portable devices with Touch screens
- * 3-sided horseshoe overlay frame with voice output activated by a light pointer
- * Light sensor/beam with a red photo sensor in center and white light around it.
- * More memory for digitized speech
- * Lower cost devices
- * Toys that provide various modes of manipulation, i.e., voice activated toys, stick on switches.
- * Devices that allow increased sensory experiences (i.e., wobble seats).
- * Mechanisms allowing kids to shift outputs.
- * New ways for infants to affect experiences, i.e., get elbows underneath themselves.
- * Independent mobility aids for very young children that allow them to change position both vertically and horizontally, go outside, and can be integrated with communication and environmental control systems.

Governmental



AAC in Australia: A Glimpse

Australia is a large country, rich with mammals and fauna not found anywhere else in the world. Original European settlers were English convicts sent in the late 1700s to pioneer this land. Aussie's today are mighty proud of their ancestors! In 1901, Australia formed a Federation of 6 states and two territories. Today it attracts immigrants from around the world and is a wonderful vacationland. Its socialistic government assures citizens of basic health care and a public education.

There was a pilot's strike in Australia last September...Sigh! ACN staff, Dr. Gary Poock and myself, were unable to travel to most of the country. Nevertheless we did visit 2 coastal cities: Beautiful Sidney (on the east coast), where we stayed long enough to ride a ferry, eat at Doyles on the Bay, and see the opera house. And, Melbourne (southeastern coast), where we met with a very dedicated and forward-looking group of "AAC Aussies" from the state of Victoria. Other aspects of Melbourne that impressed us were: 1. the Australian game of football 2. street signs instructing motorists to turn right from the left hand lane. But...that's another story. We hope someday to return to visit more of this wonderful country.

The collaboration among professionals in Victoria was exemplary. They have established a network with minimal interference from "turf issues." Louise Dunn, Chief Speech Pathologist at the Spastic Society, was kind enough to arrange for us to meet with individuals from these agencies:

Spastic Society of Victoria provides services to people with physical, severe and multiple disabilities. They run early intervention programs, special school-based programs, training centres, day training programs for adults, and supported employment programs. Currently, the Spastic Society focuses on serving adults with congenital disabilities. They also operate the **Rehabilitation Equipment Centre**, which provides a wheelchair repair unit with a mobile van; sells and repairs electronic equipment; researches and develops products not commercially available in Australia; customizes, designs, constructs, and maintains adaptive equipment and

seating systems.

Yooralla Society of Victoria (Gloria Staios) provides services to children with physical and/or severe and multiple disabilities in early intervention programs and school-based programs at special schools. The Yooralla Society also runs Australia's **Microcomputer Applications Centre (M.A.C.)**, a resource center which we enjoyed touring. M.A.C.'s mission is to assist people with disabilities to enhance their independence and quality of life through the use of microcomputer-based technology. M.A.C. provides information, training, and has a lending library with a large supply of equipment (loaned by suppliers). Aussies have access to technology and materials from Australia, Canada, U.S.A., Britain and Sweden, much of which we never see in the U.S. The M.A.C. staff (Jann Kirkland, Julie Martin, Marce Mekeafe, Caterina Pisau, Tracey Bode) carry out detailed assessments for communication aids, microcomputers, switching, interfacing devices, software, environmental control units. The M.A.C. is the "only one of its kind in Australia" and offers services nationally.

Severe Communication Impairment Outreach Project offers inservice and consultant services for staff, caregivers, parents, and clients (under 18 years of age) throughout Victoria. Karen Bloomberg and Hilary Johnson provide AAC services on-site to early intervention programs (including home-based); preschools; special education facilities, mainstream schools, and residential settings. The program is orientated to "no" and "light" technology. Consultation sessions focus on setting up programs for individual children. Inservice topics include mealtime assistance, saliva control, early communication skills, as well as how to develop the use of sign and gestures, pictographs, the Makaton vocabulary, and implement augmentative communication programs into the daily classroom timetables.

Several professionals we met are also involved in the **Computer Pictographs for Communication (COMPIC) Development Association** and are devoted to standardizing an international set of pictographs for use with adults and children with severe communication impairment. COMPIC offers self-adhesive symbols, customized boards and/or the software for use with IBM-compatible computers and Paint Jet Printer. They are updating their computer-based symbol set and publishing system.

We also met Jan Ashford from the **Communication Aid Users Society**, a self-support group directed by individuals with severe expressive impairments.

These individuals have developed several products related to AAC, including: **Eating management with the severely and multiply impaired dysphagic client**. A comprehensive manual compiled by members of the videofluoroscopy study group.

For more information, contact us at ACN so we can put you in touch with these folks!

Publisher Notes

1. ASHA CEUs are offered for each calendar year. For those who have already signed up, a few words of advice. Keep your issues **together** in a binder (or file). Some subscribers had difficulty "retrieving back issues" from colleagues (that's another advantage of multiple copy rates, see below). As a result of our reader survey, we are petitioning ASHA for an increase in CEUs from .6 to 1.2 or more. For those who have not yet signed up, here are the rules: You must subscribe for the 1990 calendar year. A \$10 additional charge covers ASHA and ACN administrative costs. Institutions can designate one person for CEUs.

2. We encourage you to share ACN with your colleagues. However, please respect our right to be creative and produce Augmentative Communication News. It is copyrighted material. It is illegal to make copies without our written permission. Please don't copy ACN.

3. In light of the above, we are grateful to our many subscribers who order several subscriptions for their organizations. Our multiple copy rates are still the same...no price increase for the 3rd straight year. \$57 for the first subscription and \$37 for each after that, all mailed in one package to the same address.

4. Your expiration date is shown on your label. If you are signed up for 1990 CEUs, the label will also read "90 CEU."

5. Finally, our heartfelt thanks to all for your kind and generous remarks regarding our newsletter. We strive for quality and excellence and will continue to do so in the future. Any questions, give me a call or write to: 1 Surf Way, #215, Monterey, CA 93940.

Gary K. Poock, Publisher

Hints

Those interviewed report using communication aids as instructional tools, group communication devices and personal aids with preschoolers. They prefer VOCAs:

- * Those with digitized speech: Intro-Talker (Prentke Romich), Parrot and Macaw (Zygo, Industries), All Talk (Adaptive Communication Systems)
- * Those that are inexpensive - with larger vocabularies: SuperWolf (Adamlab)
- * Those with application software: TouchTalker with Power and Play and I.E.P. software (Prentke Romich)

They also use tape recorders with loop tapes, Mini-card readers (Crestwood Company) and the Logitutor (Don Johnston Developmental Equipment) to help kids control interaction, get attention, call, make choices, participate.



Resources and References

Patrick Bartholomew, Family Infant & Preschool Program, 300 Enola Road, Morganton, NC 28655 (704) 433-2671

Rick Blescoe, Berkeley School District, 2134 Martin Luther King Jr. Way, Berkeley, CA 94707-1180 (415) 540-7527

Andrew Bondi, Delaware Autistic Program, Wilmington, DE (302) 454-2202

Charlene Butler, Children's Hospital and Medical Center, Seattle, WA 98105 (202) 634-0577

Karen Casey, Lenox-Baker Children's Hospital, 3000 Erwin Road, Durham, NC 37705, (919) 684-6669

Faith Carlson, Rt. 1, Box 2315, Unity, ME 04988 (207) 437-2746

Cindy Cassett-James, Kennedy Institute for Handicapped Children, 700 Broadway, Baltimore, MD 21205 (301) 338-0959

John Costello, Communication Enhancement Clinic, Children's Hospital, 300 Longwood Ave., Boston, MA 02115 (617) 735-8392.

Carl Dundst, Family Infant & Preschool Program, 300 Enola Road, Morganton, NC 28655 (704) 433-2671

Kathleen Gradel, Special Friends & Computers Project, UCPA of Western NY, Cheektowago, NY (716) 886-0562

Carol Goossens, AC Service, U.C.P. of Greater Birmingham, AL (205) 251-0165.

Kim Jolie, New Hampshire Educational Services for the Sensory Impaired, (508) 682-7188

Linda Hanrahan, New Hampshire Educational Services for the Sensory Impaired, (603) 267-6878

Kit Kehr, U.C.L.A. Intervention Project, 100 Veteran Avenue, Room 23-10, Los Angeles, CA 90024 (215) 825-4821

Helen Miller, DCCG, 2095 Rose Street, 1st Floor East, Berkeley, CA 94709.

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Patricia Mirenda, Douglas College, P.O. Box 2503, New Westminster, BC, Canada V31 5B2 (604) 527-5400

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Suzanne Evans Morris, New Visions, Rt. 1, Box 175-S, Faber, VA 22938, (804) 361-2285

David Schmitt, Easter Seal Society, 5755 W. Alameda, Lakewood, CO 80226 (303) 233-1666

Howard Shane, Communication Enhancement Clinic, Children's Hospital, 300 Longwood Ave., Boston, MA, 02115 (617) 735-6466

Joan Tanenhaus, 5 Tameling Road, East Rockaway, NY 11518 (516) 887-2814

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14 Available from Easter Seals Communication Institute, 250 Ferrand Drive, #200, Don Mills, Ontario, Canada M3C 3P2

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Other invaluable books are

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Burkhart, L. (1980,82,87). Three wonderful books and the use of homemade devices and computers with speech synthesis. Order from Linda Burkhart, 8303 Rhode Island Avenue, College Park, MD 29740

Musselwhite C. (1986) Adaptive play for special needs children: Strategies to enhance communication and learning. College-Hill Press, 200 West Street, Waltham MA 02254

Musselwhite C. (1985) Songbook: Signs and symbols for children. Don Johnston (see Equipment sections)

