Augmentative Communication News

September, 1995
Vol. 8, Number 4

INSIDE THIS ISSUE . . .

UPFRONT

Delivering effective augmentative and alternative communication (AAC) services and prescribing the most useful AAC and assistive technology (AT) devices is, even at its best, an inexact process, often conducted in the face of a host of barriers and complications. Resources are scarce; many players are involved; team members come and go; too many things need to be done; and, of course, technology makes some people want to run the other way.

To enable people with severe communication impairments to communicate and participate, we need ways to overcome these barriers and deal with the complications. This issue focuses on the ways effective AAC teams (1) can work cooperatively to solve the range of problems they must face and (2) can take steps that lead to successful outcomes. The strategies described are far from exhaustive. Many of them are based on my own experiences over the past 20 years. They include concrete, practical approaches that can help AAC teams function over time. Selected references and resources are on page 8.

I've changed the section titles for this issue. The first section, **AAC Teams**, *(cont. on pg. 2)*

AAC Teams
2, 4, 6, 8, How do we collaborate?

It should be clear that no one or two individuals can possibly meet all the needs of people with severe handicaps.[1]

To enable persons with severe communication impairments to achieve functional communication and become (or remain) active participants in their families and communities requires a range of knowledge and skills. Professionals have some (but not all) of the expertise required. Family members have some (but not all) of the information and skills that are needed. Manufacturers, government agencies and funding sources also are crucial contributors. Inherent to providing effective AAC devices and services is a confluence of influences. This demands a team approach.

The Challenges

Teams who support and serve the communication and assistive technology needs of individuals with severe communication impairments (SCI) face multiple challenges.

1. **Many team members are involved at the same time.** Because individuals with SCI tend to have multiple disabilities, several professionals often work concurrently with them. For example, Gregg, a 7-year-old child, has a team that includes hearing impairment and vision specialists, an occupational therapist, physical therapist, speech-language pathologist, technology consultant, regular education teacher, inclusion support teacher, instructional assistant and family members.

(cont. on pg. 2)

UPFRONT *(cont.inued from page 1)*
reviews some challenges teams commonly face and gives a brief synopsis of team models. The sections that follow give examples of how to implement processes that allow AAC teams to reach desired outcomes. **Building Consensus** describes ways to identify and prioritize communication needs, skills and goals. **Action Planning** and **Participation Planning** show how to build in team accountability and coordination. Finally, **Time to Specify** summarizes a decision-making process for device selection. Please let me know what team processes you've found effective. The ACN hotline number is 408-649-3050. My e-mail address is sarahblack@aol.com.

Careful readers will note that this is the September, 1995 issue. In past years, I strived to ensure that this issue came out simultaneously with the passage of the U.S. Federal budget. As you can see, I made no exception this year. Be assured that you will quickly receive the remaining 1995 issues. Part of the reason for the delay is I've become a grandmother. Dylan Anthony Hoffman weighed 7 lbs. 9 ounces at birth and is absolutely wonderful. It is a thrill having this new little person in our lives. I'll look at your pictures if you'll look at mine.

Alliance '96 Outcomes Measurement: Next Steps in Augmentative Communication and Assistive Technology is scheduled February 16-19, 1996 at the Asilomar Conference Center in the Monterey Bay area of California. Registrants will work to develop a portfolio of useful outcomes measurement products. We plan to focus on measuring six areas: (1) outcomes with children who use AAC and AT in educational settings; (2) outcomes with adults with acquired disabilities; (3) outcomes with adolescents and adults with severe-profound disabilities; (4) functional communication; (5) consumer satisfaction; and (6) costs and benefits of AAC and assistive technology services and devices. Registration is limited. If you are hoping to come, please let us know immediately. Speakers will include David Beukelman, Frank DeRuyter, Mats Granlund, and more.

Sarah W. Blackstone, Ph.D., Author

AAC Teams *(cont. from page 1)*

With so many people involved, AAC teams need processes that insure coordination and collaboration and enable everyone to work together.

2. **Team members come and go over the client's lifetime.** Because communication impairments are often permanent conditions, a changing parade of professionals is likely to dot the landscape. While each may bring a fresh outlook, few will have much of a historical perspective. Only the client and, in most cases, the family, remain consistently involved.

   AAC teams must take into account the need for continuity. Without continuity, wheels will be constantly reinvented and hard-learned lessons forgotten.

3. **Team members vary in their level of knowledge and skills.** Ideally, everybody knows everything. In reality, however, some professionals, consumer/users and family members are highly skilled, and others have little experience. In addition, some adults are far more invested in learning than others. For example, the comment, "I'm retiring soon," may be a way of saying "I'm not going to learn about that device." Time can be wasted training people who are not receptive.

   AAC teams need to implement processes that encourage new learning and the acquisition of skills. At the same time, they need to recognize that not everyone will contribute equally. It is crucial that procedures be in place that systematize the transfer of knowledge and skills to the consumer/user and family.

4. **Team members have different philosophies.** Consumer and family preferences, opinions and decisions must be respected and, in most cases, should prevail. Open, honest discussions and debates are healthy; however, discord quickly creates confusion for everyone, especially families. For example, one professional may be a strong supporter of inclusionary educational practices; another may feel children are more successful in special programs that focus on assistive technology. Unless and until team members resolve conflicts and reach consensus, the individual's program stagnates.

   AAC teams need ways to build consensus. They also need ways to empower users, families and other team members to express preferences and reach informed decisions.

5. **AAC and AT teams need proof of effectiveness.** Funders, administrators, consumers and professionals are interested in the outcomes of AAC and AT services and devices. This means teams should measure their impact on functional communication and on *quality of life*.[2]

   Teams need to establish meaningful goals and be accountable for reaching them or knowing why they were not reached or were abandoned.

Table I summarizes characteristics of teams that meet these challenges.

Team models: The past

Working as a speech-language pathologist for 20 years, I've served on many different kinds of teams, including the typical multidisciplinary, interdisciplinary and transdisciplinary team models:

AUGMENTATIVE COMMUNICATION NEWS (ISSN #0897-9278) is published bi-monthly.

Author: Sarah W. Blackstone Technical Editor: Carole Krezman
One Year Subscriptions: By personal check U.S.& Canada=$48 U.S.; Overseas=$60 U.S.
Institutions, libraries, schools, hospitals, etc.: U.S. & Canada=$72 U.S.; Overseas =$85 U.S.
Single issues $13. Special rates for consumers and full-time students.
Second Class Postage rate paid at Monterey, CA. POSTMASTER send address changes to
AUGMENTATIVE COMMUNICATION INC., 1 Surf Way, #237, Monterey, CA 93940
Telephone: (408) 649-3050. FAX: (408) 646-5428. e-mail: sarahblack@aol.com

Table I. AAC Teams: Eight desirable characteristics

1. Continuity
2. Coordination and collaboration
3. Supporting learning and the acquisition of new skills
4. Transferring information to consumers and their families
5. Open, honest discussions
6. Consensus building
7. Respect for the consumer's and family's preferences and decisions
8. Accountability for reaching desired outcomes

- *Multidisciplinary model.* Professionals are aware of other profession's goals, but carry out their own programs. For example, the speech-language pathologist (SLP) works on communication, the occupational therapist (OT) on upper extremity function, the job coach on punctuality.
- *Interdisciplinary model.* Professionals try to incorporate other disciplines' goals in their therapy activities. For example, the OT uses relevant literacy materials for upper extremity function tasks and encourages the use of speech and signs.
- *Transdisciplinary model.* A few professionals (or family members) carry out other professionals' goals. For example, the teacher incorporates OT, SLP, and PT goals throughout the day.

These models reflect, to some extent, an evolution in the efforts of medical, rehabilitation and education agencies to coordinate services for adults and children requiring treatment from more than one discipline. Each model is effective under certain circumstances. For example, if you needed surgery, you'd select a multidisciplinary team model and insist the surgeon do the operation. Or, if you are the parent of an 18-month-old infant with cerebral palsy, you might prefer having just one professional come to your home to work on fine motor, gross motor and communication goals.

If not, then what?

Do these models meet the desirable characteristics listed in Table I for AAC teams? I think not (although the transdisciplinary model comes closest). The *disciplinary* part of the multi–, inter– and trans— models creates a "top-down," professional-oriented overtone. The implication is that professionals should make decisions; and consumers, parents and family members are supposed to go along with the program.

Certainly, different professions bring distinct training backgrounds, theoretical approaches, experiences and specialized skills to solving communication problems. However, simply "sharing or transferring information and skills across traditional disciplinary boundaries" falls short of the characteristics AAC teams need to be successful.[3] A team model leading to successful outcomes in AAC must (a) support a consumer/user-driven team approach to the delivery of assistive technology services and devices; (b) insure interdependence and collaboration among family members, clinicians, teachers, manufacturer's representatives, administrators and payers; (c) implement team processes that build consensus; and (d) utilize procedures that help teams "remember" the history.

The true success of an AAC team depends on the willingness of the adults involved to work together.

Collaborative teaming

A collaborative model is the best match. Collaborative teaming is defined as an "interactive process that enables team members, with diverse expertise, to generate creative solutions to mutually defined problems. Outcomes are enhanced, altered and produce solutions that are different from those individual team members would produce independently."[4] Collaborative teaming requires that teams use strategies enabling them to reach consensus. According to Beukelman and Mirenda, AAC teams that practice consensus building should be able to answer "yes" to all the questions raised in Table II.[5]

In summary, the true success of an AAC (or AT) team will depend on the willingness of the adults involved to work together. Successful teams use processes—brainstorming, storyboarding, action plans, participation plans and device specifications—that lead to consensus. These strategies increase the likelihood that the outcomes of AAC services will be outcomes that the team both expects and desires.

Table II. Ten Indications Teams Practice Consensus Building
(adapted from Beukelman and Mirenda, 1992)

1. Do families refer to communication strategies/techniques as something "we do?"	6. Do administrators attend team meetings? Do they participate in the formulation of plans?
2. Are people that AAC users interact with on a daily basis familiar with the AAC devices, strategies and techniques they use?	7. Do teams expect each member to contribute his/her opinions and preferences?
3. Are parents/families/caregivers included in the assessment or decision-making processes before being asked to sign plans that delineate AAC intervention goals?	8. Do representatives from AAC teams meet with staff who manage an AAC user's residence, employment site, after-school program?
4. Are AAC users asked for input during planning?	9. Are families invited to express opinions even when they differ from professionals?
5. Are all people invited to attend team meetings?	10. Do professionals take notes when family members speak?

Building consensus

Brainstorming & Storyboarding

This section describes consensus building processes that help teams get information and opinions quickly from all team members, establish priorities and make decisions. Brainstorming and storyboarding take very little time and can be used to identify and prioritize communication needs, generate a list of current skills and abilities and/or set goals that enhance communication.

Table III. Robin's Met/Unmet Communication Needs

STILL UNMET (prioritized on 11/16/94)	*MET as of 4/16/93* *=Top priorities
*Expand interaction w/adults & children	*Attract attention
*Make choices using symbols	*Make choices across contexts
*Decrease dependence on adults	Greet
*Increase use of signs/signals	Express wants/ needs (in/out chair)
Increase functional use of objects/play repertoire	Indicate affective states
Increase turn taking	Develop gestures
Express feelings/emotions using language	Use voice output
Increase vocalizations	Make requests
Increase independent access to communication	Explore environment
Participate in peer group activities	

Communication Needs. Listing unmet communication needs is important because it (a) gives teams information about how members view the individual's needs, (b) helps teams set goals, and (c) can be used to measure outcomes over time, if repeated regularly. To identify communication needs, team members should first consider:[6]

- the types of messages a person needs to produce (*e.g.*, get attention, signal emergencies, public speaking)
- the modalities a person wants/ needs to use (*e.g.*, print, face-to-face spoken, phone, e-mail)
- characteristics of a person's communication partners (*e.g.*, can not read, has poor vision, limited time/patience.)

Team members can ***Brainstorm*** communication needs by following six steps. After a few times, they can skip the warm-ups.

Step 1. Review Seven Rules for Brainstorming: (1) Keep to a brief time limit. (2) Encourage full participation. (3) Encourage far out ideas. (4) Work for quantity. (5) Record all ideas. (6) No negative responses to others' ideas. (7) Piggy back on the ideas of others.

Step 2. Assign roles. The team needs a facilitator, timekeeper, and 1 or 2 recorders. Ask for volunteers.

Step 3. Do a one minute warm-up. Practice brainstorming. Choose something fun—*The best way to screw up an intimate relationship is . . . or The worst thing about parenting a teenager is. . .*" When the timekeeper says "Go," the facilitator encourages everyone to generate ideas. Repeating each idea helps the recorder(s) who must write ideas legibly. If there are two recorders, they can record every other idea on two flip charts, or one can start at the bottom and the other at the top of one chart.

Step 4. Do a three minute warm-up. Practice again, this time using a more relevant topic—*"The communication needs of administrators are . . ." or "Characteristics of good communicators are . . ."*

Step 5. Now the group is ready to **generate a list of the client's communication needs.** The facilitator sets a 5 minute time limit and gives the team a sentence to complete (*e.g.*, *"Robin's unmet communication needs are . . ."*)

Step 6. Review the list. The facilitator asks the group to combine needs and discuss the list. When satisfied, the group is ready to prioritize the list of needs. (See **Prioritizing.**)

Another way to generate a list is to pass out a stack of 5" x 7" (or larger) cards and black markers to team members. In ***Storyboarding***, team members write one communication need on each card. This is helpful for team members who have difficulty speaking out. After 5 minutes, collect the cards and display them on a cork board (or tape them to a wall or chalkboard). The team then spends another 5 - 10 minutes discarding duplicate cards and can consider grouping needs under categories (*e.g.*, home, school, community).

Deciding what communication needs are mandatory, desirable and so on often means prioritizing a long list.[6] For example, a student may need to do homework, write notes, talk in class, use e-mail and keep a diary. Likewise, an adult in intensive care may need a way to signal his nurse in an emergency, question his doctor and converse with family members.

Prioritizing. To prioritize any list, team members indicate their top priority, next priority and so on. One way is to vote—simply using a show of hands. Another way is to give each member three or four sticky dots. Then, ask them to come forward and put a dot next to the three or four communication needs they consider most important. Quickly, the group's top priorities emerge. Table III gives an example of one child's needs:

> Four years ago, Robin's team generated a list of communication needs. At that time, he was an only child and attended a "special" preschool. Today, he is eight years old, has two younger sisters and is enrolled in a second grade class. His understanding of language approximates a two-year-old child, and his use of symbols remains limited. Team members are using high and low tech devices and AAC strategies to support his active participation in school. Note that as a result of AAC services and devices, several communication needs have already been met. Today's goals reflect today's unmet communication needs, *i.e.*, to expand interaction, make choices using symbols and increase use of gestures/signs.

Identifying skills. Another use of brainstorming and storyboarding strategies is to develop a list of a client's skills and abilities. This creates a "can do" rather

than a deficit-focused approach to intervention. Just follow the steps described earlier. A key sentence could be *"Currently, Robin has the following skills and abilities..."*

Setting goals/desired outcomes. After teams reach consensus about what is important, where to start and where to go next, they are ready to write goals and objectives. Goals are the team's desired outcomes. In the U.S., for example, AAC users who are working with a team, either have an IEP (individualized educational plan), IFSP (individual family service plan), IPP (individualized personal plan), or some other "plan" with communication goals. AAC goals and objectives should be oriented toward functional communication, not devices. For example, "Megan will learn the codes for the names of ten people" is device-oriented, whereas "Megan will use her device to tell her teacher who is picking her up after school" is an objective that reflects a functional communication goal.[7]

In summary, AAC and AT teams need processes that allow them to identify communication needs, delineate a client's skills and abilities and establish functional communication goals.

Action Planning

Who does what, when?

Action Plans are consensus building tools. Unlike the client's IEP, IFSP and IPP, the action plan specifies what team members will do. Action plans have at least three major components:

- What will be done (objective)
- Who will do it (person(s) responsible)
- By when (date objective will be accomplished)

Action plans also can include comments (*e.g.*, updates, progress or problems), completion dates, a list of team members, summaries, goals and more. See Table IV.

Table IV. Action Plan Format

Client's goals: Summary of progress:			Team list
Plan	**Who**	**When**	**Comment**

Developing an action plan

Teams develop action plans at meetings, which typically last from 30 - 60 minutes and occur at 1 - 3 month intervals. All team members are invited. Before developing an action plan, participants agree to:

- come prepared to participate
- encourage others to participate, particularly the family/AAC user
- express opinions and concerns honestly
- listen carefully to others
- be supportive and nonjudgmental
- carry out the team's plan, not a separate agenda.

Members take on various roles and responsibilities at team meetings:

- Facilitator. Confirms agenda for the meeting. Encourages members to stay focused. Keeps storytelling to a minimum. Encourages active listening, honest discussion and debate. Restates discussion points so achievable objectives can be written. Makes sure objectives reflect consensus.
- Timekeeper. Asks group how much time members want to spend on each agenda item. Reminds team of time remaining and when time is up.
- Recorder. Takes notes. Updates old objectives. Records new objectives, persons responsible and dates of expected (and actual) completion. Completes action plan after the meeting and disseminates to team members, including those who do not attend.
  Note: Some teams simply photocopy the hand-written plan and distribute it at each meeting; others use computers to quickly update plans for later distribution.
- All others. Give opinions, share information and participate in developing the plan.

It is far better to rotate team roles because permanent leadership is perceived as authoritative and results in less investment by other team members. Also, when team members share roles and responsibilities, they are more likely to develop leadership skills. Table V on page 6 is an example of an action plan. Generated at the second team meeting of the school year, the plan reflects decisions made to change Robin's second grade class because the bathroom was not accessible and the teacher was "overwhelmed." Action steps included training the new teacher to use the computer to increase Robin's participation during literature time and training the family to use a communication board to make choices at home. Team members volunteer to complete these tasks by dates they specify.

Feedback has been very positive from over 20 AAC teams who have used the action planning process during team meetings for one to five years (some in California and others in Michigan). In Berkeley, for example, I just completed a team satisfaction questionnaire. Responses from questions about action plans suggest that parents, teachers, clinicians, nonprofessional staff and administrators "strongly agree" (66%) or "agree" (26%) that action plans are useful. Eight percent (8%) were "neutral" and no one "disagreed." Team members also have said they are far more likely to carry out the team's plan and far less likely to go off in new directions without group consensus.They also like the built-in accountability inherent to the action planning process.[8] (cont. on pg. 6)

Table V. ROBIN'S Action Plan - 9/25/95 Meeting

Client Goals I. INCREASE INTERACTION WITH PEERS; II. INCREASE ACTIVE PARTICIPATION IN CURRICULUM; III. INCREASE INDEPENDENT ACCESS TO LANGUAGE AND COMMUNICATION

Summary of progress: (1) Team members' questions are guiding the OT assessment. OT gave a brief status report. (2) His class placement was changed as recommended. His new teacher's active participation in the meeting was very helpful. (3) The family is not ready to have a computer at home, so we removed the objective. (4) New wheelchair insert and head rest will be evaluated. Also, we will write specifications for a slant board at the next meeting. (5) He is doing much better with the switch. (6) Dad will come in for symbol training so they can offer choices at home.

Name	Role	Phone #
Judy	P.T.	441-4444
Helen	AT spec	333-3373
Joe	SLP	222-2222
Robert	Dad	555-5555
Sally	OT	666-6666
Jane	VI spec	777-7777
Jean	Reg ed tchr	888-8888
Harry	InclSpec	999-9999
Margret	Inst Asst (IA)	999-5555

PLAN	WHO	WHEN	COMMENTS
1. Revise participation plan.	Helen, Harry	11/30	Jean's schedule is well laid out.
2. Train Jean to use books on computer with IntelliPics to increase participation during literature time.	Helen, Joe	11/30	
3. Facilitate interaction with classmates.	Margret, Harry, Joe	ongoing	Doing well. Will do some training.
4. Use walker in classroom.	Harry, Margret, Judy	asap	Discussed classroom pathways.
5. Train family to use communication board.	Joe, Robert	9/30	Mary said Lee can come in any Wednesday. He said he would.
6. Support use of natural gestures a) waving (hello & bye) b) tap kids on shoulder (attention) c) raising hand (attention) d) *Cool* (as in 2nd grade).	All w/ Joe	ongoing	Needs physical prompt to wave. Taps to get attention. Raises hand if prompted. Jean will come up with *COOL* signal.
7. Complete OT eval with emphasis on increasing functional use of hands/access to communication.	Sally consult with Judy, Margret, family, Joe, Helen	11/30	Passed out list of areas she plans to address.
8. Evaluate switch use.	Sally, Helen, Joe	11/8	Do with and without head rest. He's doing well with switch, waiting turn.
9. Evaluate chair insert relating to access to curriculum a) cart/table; b) software; c) environment.	Judy, Helen, Sally, Margret w/ all	1/4	
10. Determine when headrest is/is not being used and what is useful.	Margret, Joe, Helen, Jane	1/4	
11. Determine specifications for slant board (see sample specs under comments).	Judy, Helen, Sally, Joe, Margret, Jane	1/4	(a) Dry erase board/clear/magnetic surfaces, (b) sliding lip (c) angle - secured (d) not "diddleable."

Participation Planning

Hour by hour, day by day

The ***Participation Plan*** is the team's map of daily activities. Unlike an action plan, the participation plan focuses on what everybody must do to allow the client to participate in daily activities. Participation plans specify:

- **team's expectations** - the level of an individual's participation
- **tools** - what equipment and strategies are required
- **support strategies** - who is responsible for what

The Communication Participation Model is described by Beukelman and Mirenda.[9] Their chapters on Educational Integration, Principles of Assessment are "must reads" for AAC teams.

Developing the plan

One person (*e.g.*, special educator/inclusion specialist) generally drafts the participation plan and others review and modify it. For example:

Step 1. The first step is to identify the individual's daily and weekly schedule of activities. In schools the teacher does this. In other situations, the client, family, staff, employer does it. See Table VI below.

Table VI. Schedule of Activities

Mon	Tues	Wed	Thur	Fri

Step 2. The second step is to develop a plan for each activity. For example, Arkwright writes:

We identify each segment of activity and then ask ourselves, "Ok, how is this person going to be part of this activity? What is the class doing? What level of participation do we expect? What low tech methods are we going to employ? What high tech methods are we going to use? What strategies will the individual use to be successful during this activity? What will the support person do? What can peers do?[10]

There are many variations in the categories teams use in participation plans. Most include information about the: (a) activity, (b) expectations of others participating, (c) level of participation expected from child/adult who uses AAC, (d) equipment needed (both low and high tech), (e) strategies facilitators use and (f) peer strategies. Experience suggests that each activity may require a different strategy. This means multiple modes of communication will be needed throughout the day. Table VII is a partial participation plan for a child with Down syndrome enrolled in a third grade class.

Table VII. Participation Plan for Tim (excerpted)
Level= Active; Classroom= Third grade regular education class

Activity	IEP Goals	Typical student expectations	Expectations of Tim	Assistive Tech Low	Assistive Tech High	Strategies/Supports Peer	Strategies/Supports Instructional Asst.	Strategies/Supports Tchr
Opening activities M - F 8:30- 9:00	Follow third grade schedule	Lunch count; attendance; review schedule for day; story; general announcements.	Put on waistpack & insert glasses case and blue pocket communication book. Assemble personal schedule (small book with cards) with peer partner for day (See partner calendar). Take lunch count to office with partner and interact with Yvette.	Waistpack; glasses; communication book; personal schedule; partner calendar	Digitized speech device	Help put schedule together. Tell what activity is next while he searches for picture symbol for schedule board. Go with him to office with lunch count.	Locate and help; clean glasses; Help put on waistpack and appropriate items in it.; Help him check partner calendar; Prompt to use communication book.	Gives lunch count and roll count to Tim to take to office.
Journal writing M - F 9:00- 9:30	Use computer and symbols to write	Large group & individual work related to literature the class is reading.	Use communication book to generate topics. Copy writing using computer.	Communication book	Computer & talking word processer	Write joint sentences in large capital letters so he can copy. Ask questions.	Set up computer and make sure communication book is available.	Comments on his work.
Language M - F 9:30-9:45		Students are supposed to correct worksheet or sentences on board.	Complete journal entry on computer, finish assembling schedules, etc.	Communication book	Com puter	Keep working, taking turns. Peers can name and point to letters to type.	Assists other students with worksheets at their desks.	
Science M - TH 9:45-10:30	Use questions to get information	Prepare for field trip to Berkeley Marina. Do unit on "shores."	Participate in small group activities with peers. Ask questions.	Topic picture displays	Digitized speech device for ?'s	Help him follow lesons in book. Record speech.	Assists him to have meaningful role in activity. Program device.	Includes him in groups.
Reading M - F varies	Learn 20 functional sight wds. Listen to peer read story/story on tape.	Whole group has readers. Read out loud. Or partner reading in lieu of silent individual reading.	Listen while peer partner reads OR to story on tape. When class read out loud, use device. Look at books/do sight words or letter activities.	Books, Topic boards, if prepared.	Digitized speech device; computer	Read out loud and ask Tim questions.	Give peer questions to ask; set up activity; help others in class as well as support Tim and peer.	Calls on Tim from time to time.
Classroom jobs varies	Perform classroom or school job daily.	Rotates weekly. Announced on Mondays.	Two jobs: lunch count to office; Assemble classroom schedule. Others from time to time with peers (pass out papers).	Communication book; Schedule for room.	Digitized speech device	See Opening Activities.	See Opening Acitivies.	Comment on job performance.

Time to Specify

Selecting AAC devices

Just as teams must collaborate in the planning of action plans and participation plans, so must they participate and reach consensus about the AAC devices, computer equipment and other assistive technology they recommend. An important strategy to use in approaching decisions about equipment is to develop specifications. ***Specifications*** are lists of "particulars" that relate to (a) function, (b) size, (c) physical, cognitive, linguistic characteristics of the individual, (d) need for training, (e) costs and so on. According to Quist and Blischak, "manufacturers, researchers, clinicians/ educators and consumers need to collect, develop and report specifications to aid in the device selection process."[11]

Table VIII. Sample Specifications

- Must be acceptable to the individual and family.
- Must provide an efficient way to engage in conversational exchanges.
- Must be portable.
- Must allow privacy.
- Must allow him to create, store and retrieve messages, produce written work and access computers.
- Must have intelligible speech output.
- Must permit him to access keyboard using index finger on left hand.
- Must allow for elbow to be supported and movement excursion of 5 inches.
- Must be elevated 2 inches on his tray and mounted at approximately a 30 degree angle.
- Must cost less than $3000.
- Must have symbol configuration that permits easy access to frequently used phrases.
- Training must be available to learn mechanics of device.
- Training must be available in community for at least 2 months.

Clinicians can access several lists of device features to help them think about device specifications.[12-14] Too often AAC devices are selected, and even purchased, without first considering how well a client's specifications match available device features. This leads to device abandonment.

(cont. on page 8)

Time to Specify *(cont. from page 7)*

As noted in Table VIII, specifications begin with the word "must" and reflect the knowledge and skills of all team members. Brainstorming and storyboarding can be used.

Table VIII gives an example of device specifications that David's team generated. David is a young man who was severely injured in an automobile accident. He has a tracheostomy, a gastrostomy, is quadriplegic, severely dysarthric and has cognitive sequelae typical of closed head injury. He can spell (with lots of errors) and generate language. Despite his injuries, he is active in his own recovery and has begun to make future plans. These include moving to a group home and attending a local community college. After looking at the list of specifications, his team could recommend several AAC devices that would be appropriate for him to try. The next step is to rent the ones he feels are most desirable.

It is difficult to "keep up" with the features of AAC devices. A very helpful tool, soon to be available, is the *Chart of Augmentative Communication Devices* that is currently being developed by the Applied Science and Engineering Laboratory(ASEL) in Wilmington, Delaware. The chart lists devices according to features, making it easy for them to be compared. Features include physical interface (scanning, direct selection, selection area), language features (vocabulary, access, storage), output (auditory, written, other), physical characteristics (size, weight, power) and purchasing information (manufacturer, rental policy).

For more information contact, ASEL, A.I. DuPont Institute, P.O. Box 269, University of Delaware, Wilmington, DE 19899, 302-651-6830.

Alternatively Speaking

ATTENTION:: Clinicians, teachers, and others who work with families and/or adult consumers. You often need ways to help the people you work with understand AAC issues from a consumer perspective. That's where Alternatively Speaking (AS) comes in, the only independent, consumer-authored publication in the field.

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