The AT Messenger

....bringing technology to you

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The CAMA Train Is Stopping Here—All Aboard!!

Want to learn about the latest in augmentative communication technology directly from the product manufacturers themselves? If so, plan to attend the CAMA (Communication Aid Manufacturers Association) Workshop to be held in Newark on Thursday, May 16. For a preregistration fee of $25, you will have the opportunity to learn about all the latest innovations in AAC technology from the leading manufacturers. The full-day program offers a continental breakfast, a packet of materials, lunch, and up to six 45-minute sessions offered by manufacturers. The sessions have been developed specifically for consumers and their families, speech-language pathologists, occuptional therapists, rehabilitation specialists, special education teachers, and others interested in AAC.

A sampling of what's in store for attendees:

- Ablenet will offer sessions on the BIGMack, SpeakEasy, Cordless Control Systems, and appliance and toy control.
- Adaptivation will highlight Taction Pads, the VoicePal and VoicePal Plus, and the Freeswitch remote control ECU.
- Communication Devices will feature the Holly Com.
- Innocomp will discuss various means of access to its Say-It-All, Say-It-Simply Plus, and Scan-It-All as well as its vocabulary systems.
- Intellitools will provide overviews of IntelliKeys and software products Overlay Maker, IntelliTalk, IntelliPics, and ClickIt!.
- Mayer-Johnson will present Boardmaker and Speaking Dynamically software.
- Prentke-Romich will review the AlphaTalker, WalkerTalker, DeltaTalker, and Liberator as well as application programs and therapy materials.
- Sentient Systems Technology will present the Dynavox 2 and 2c and the DigiVox.
- Toby Churchill will feature the Light WRITER family of products.
- Words + will demonstrate the new Pegasus, the MessageMate family of products, and EZ Keys for Windows.
- Zygo Industries presentations will feature the MACAW family of products.

This event will be held at Clayton Hall on the University of Delaware campus in Newark. ASHA's Continuing Education Board has approved this program for .4 CEUs. For more information or to receive a registration form, contact CAMA at 1-800-441-CAMA (2262) or e-mail them at aac cama@aol.com.

HEARING TECHNOLOGY

Maureen Schweitzer, M. A., CCC/SLP
Coordinator, DATI/Easter Seals ATRC

Professionals and members of the general public tend to have limited awareness and understanding of assistive listening devices. This article focuses on some basic amplification and alerting devices available. It is not intended to be all-inclusive but a basic introduction to the field of assistive listening.

Assistive Listening Devices (ALDs) are devices used by people of all age groups with normal to profound hearing losses. Assistive listening devices enhance the sound that one is trying to hear (usually speech) against background noise (other people talking, computers, TV). The louder the auditory signal is compared to the background noise, the easier it is for that signal to be received by the listener. Devices that enhance the signal-to-noise ratio are a type of ALDs referred to as amplification devices. The most commonly used amplification system is the hearing aid. Hearing aids are used by individuals of all age ranges with minimal to profound hearing losses. For successful use of a hearing aid, individuals should receive a proper assessment by an audiologist or licensed hearing aid dealer. Hearing aids are fitted and customized according to a person's hearing loss. Hearing aid technology has improved dramatically over the last decade so that the signal-to-noise ratio is very good.

Other types of amplification systems available are:

- Personal FM Systems consisting of a small transmitter with microphone and a receiver, and a choice of headphones or induction loop. These systems are effective in one-on-one communication or in a classroom or lecture situation.
- Large area amplification systems, an FM System consisting of a base unit with a microphone and any number of receivers. This system can be set up to work with a facility's existing public address system.
- Induction loop systems (such as Oval Window Audio) require a room to be equipped with a hard wire. Anyone using a hearing aid with a telecoil receives an amplified signal of the speaker.

Amplification systems for the phone include portable amplifiers that snap on to the telephone receiver and are compatible with most phones. There are several different types of phone amplifiers for consideration. The successful use of any amplifier depends on the type and severity of the hearing loss. There are also telephone receivers with built-in

volume controls that amplify the incoming sound.

The Walker Clarity Telephone and the William Sound Teletalker are telephones that have been designed to enhance and amplify the incoming sound as well as the telephone ring. They also have large keypads for easy reading and dialing.

An amplification system available for the TV is the audio link infrared system. This system has a transmitter which plugs into the output jacks of the TV, VCR, or stereo. The listener wears a lightweight headset and must have an unobstructed line to the transmitter in order to pick up the signal. This system is used in many theaters because the infrared transmission is free from background noise and interference.

Amplification systems may not be effective for individuals with severe hearing loss because they are unable to hear the sound regardless of its volume. Alerting systems

which flash light or send vibrations provide alternative signals. They alert the individual that the doorbell has been activated, the phone or alarm clock is ringing, the baby is crying, or the smoke detector is going off. Various phone flashers are available, as are flashing alarm clocks and pillow and bed vibrators. Systems such as the Alert Plus and Vibracall alert an individual to environmental sounds such as a door knock, the phone, fire alarm, wake up alarm, and smoke detector. These systems are important safety devices for individuals with severe or profound hearing losses.

Telephone devices for the deaf (TDDs) and the phone relay system are telecommunication options for the people who have difficulty using the phone. There are a variety of desk top and portable TDDs available. TDDs are typewriter-like machines that allow persons with speech and hearing impairments to communicate by typing conversations back and forth over telephone lines. The Delaware Telecommunications Relay service, provided by the phone company, allows an individual who is unable to hear on the phone to communicate (using a TDD) to an operator (referred to as a communication assistant) who then relays the message (using voice or TDD) to the caller. The person receiving the call simply listens to the relay operator and responds as though talking directly to the caller. If that person is using a TDD, he/she simply responds by typing his/her message.

Assistive listening devices are manufactured by many companies. Visit your local ATRC to become familiar with different devices. As with other assistive technology, assistive listening devices should be recommended by a qualified professional. Consultation with a local audiologist for information about your hearing and need for amplification may be very beneficial. For more information about any of the assistive listening devices discussed in this article, contact the ATRC in your county.

To Make a Relay Call From a Voice Telephone

1. Call the Telecommunications Relay Center at 1-800-232-5470.
2. When the operator answers the call, provide the telephone number of the person you are trying to reach. When calling a business or organization, providing the operator with the name and/or department you are trying to reach will speed connection of your call.
3. Once your call is connected, speak a little more slowly than normal.
4. Speak as if you are talking directly to the person you are calling.
5. On a relay call only one person can speak at a time. When you hear “Go Ahead” you will know it is your turn to speak. When you are finished speaking, say “Go Ahead” so the other person will know it is his/her turn to speak.

Receiving A Relay Call

When someone is making a relay call to you, the operator will announce the call as follows:

“This is the Relay Center. There is a person on the line who cannot use a telephone to call you directly. Have you ever spoken through this center before?”

During the call follow the guidelines numbered 3, 4, and 5 above.

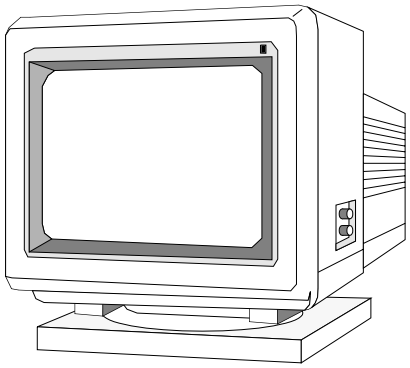
To Make a Relay Call From a Text Telephone

1. Call the Telecommunications Relay Center at 1-800-232-5460.
2. When the operator answers the call, provide the telephone number of the person you are trying to reach. When calling a business or organization, providing the operator with the name and/or department you are trying to reach will speed connection of your call.
3. Once your call is connected, type your part of the conversation.Communicate as if you are talking directly to the person you are calling.
4. Type “GA” when you are finished with each statement so the hearing person will know it is his/her turn to speak. The operator will type “GA” to let you know when it is your turn again.

Everyone Can Access a Computer

Ed Salisbury, DATI/Easter Seal ATRC AT Specialist

With the help of assistive technology, anyone—regardless of severity of physical limitations— can access a computer. All that is needed is knowledge and the desire to be more productive and independent. The computer can provide people with a means of communication, controlling their environment, recreation, and employment. In this article, I plan to answer many of the questions that are asked by people with disabilities on how to access the computer.



Q: If a person has tremors or spastic movements, how can he or she use a keyboard and mouse?

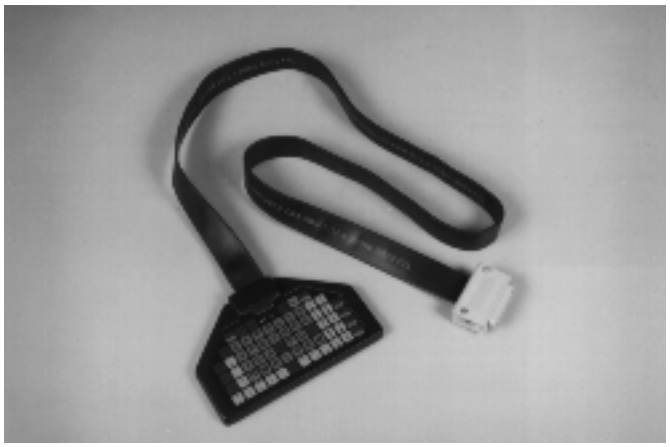
A: This may entail a very simple and low cost modification. Some computer operating systems allow a person to change the response time of the keyboard. In other words, it is possible to control the amount of time a key must be depressed before the keypress is registered by the computer. This forces the user to maintain pressure on a key for a certain amount of time. Any extraneous or repeated keypresses are ignored by the computer. For mouse movement, it is possible to use the numeric keypad on the keyboard as a mouse. These features are included with the Macintosh operating system (System 7 or higher) and Windows 95 for those with IBM and compatible computers. For computers using DOS there is a free program from the Trace Resource Center called AccessDOS with similar features. For users of Windows 3.1, Microsoft will send out the Access Pack for Windows. This package is similar to AccessDOS.

Q: I type with one hand only. Is there a keyboard that will make typing easier?

A: If you want to use the standard keyboard, layouts can be purchased to rearrange the keys in either the left- or right-handed Dvorak style. Other keyboards like the BAT, by Infogrip, consist of only seven keys. By pressing a combination of keys simultaneously, all characters and functions of the standard keyboard can be entered. Chordic keyboards like the BAT are excellent for one-handed typists as well as people with limited range of motion or visual impairments. If you like the concept of the BAT but do not want to purchase additional hardware, the Minimal Motion Keyboard software assigns keys on the standard keyboard to be used for chordic input.

Q: I use a mouthstick to type. Are smaller keyboards available that would require less head movement?

A: The Mini Keyboard from TASH contains keys that measure only 0.5” square and are close together. Keys are arranged in the Chubon style for people with limited range of motion. This style places the most commonly used keys around the space bar in the center of the keyboard. The less commonly used keys are placed around the perimeter. The Mini Keyboard was designed for people using a headstick or mouthstick to type. This keyboard can be purchased to connect directly to the keyboard port on the Macintosh or IBM compatible computer; another model connects to a keyboard interface like Ke:nx or the Adaptive Firmware Card. Other mini keyboards are available from the EKEG company as well.

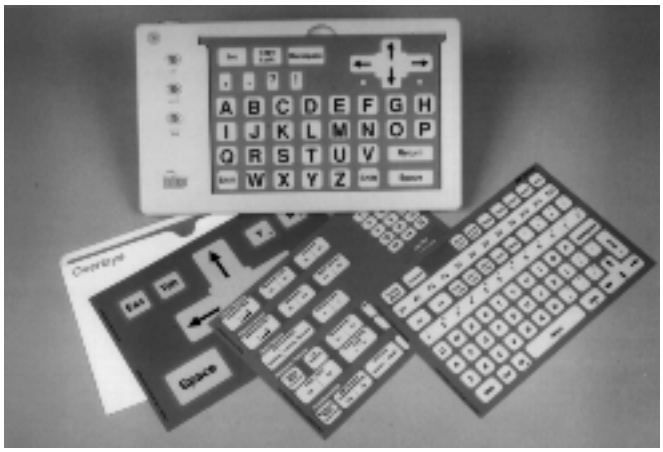


Mini Keyboard from TASH

Q: What keyboards are available for people who do not have fine motor control?

A: The King Keyboard from TASH resembles the Mini Keyboard in layout and design, yet the keys measure 1.25” in diameter and are slightly recessed for tactile reference. The Intellikeys keyboard from Intellitools is a versatile enlarged keyboard that works with Macintosh, IBM compatible, and Apple II computers with only the change of a cable. Overlays for numbers, mouse movement, and alphabetical and QWERTY key layouts can be slid into the Intellikeys for instant use. Customized overlays can also be created and printed with the Overlay Maker Program. Many children’s software programs now include ready-to-use custom Intellikeys overlays. Other enlarged keyboards

are available from the Don Johnston and EKEG companies.



Intellikeys by Intellitools

Q: I have heard there is a computer system available that a person can talk to. Is there such a system? If there is, isn't it too expensive for home use?

A: Several companies market voice recognition hardware/software packages. Articulate Systems markets the Voice Navigator and PowerTalk. PowerTalk is included with Audio Visual Macintoshes. These programs are inexpensive and have limited voice recognition capabilities. Articulate Systems also markets the Power Secretary dictation system. This system allows complete hands-free access to Macintosh applications as well as text input at speeds equal to and beyond most touch typists. For IBM and compatible computers, several hands-free dictation programs are available. Dragon Systems, the originator of affordable voice recognition technology, produces the Dragon Dictate line of products as well as the IBM VoiceType products. A Dragon Dictate hardware/software package can now be purchased for DOS or Windows for less than $1000. Xerox also produces a similar product called Kurzweil Voice for Windows that boasts a high "straight from the box" accuracy for a low cost. These systems are excellent for people with physical impairments or learning disabilities, as well as for people with—or in danger of developing—repetitive stress injury from constant typing.

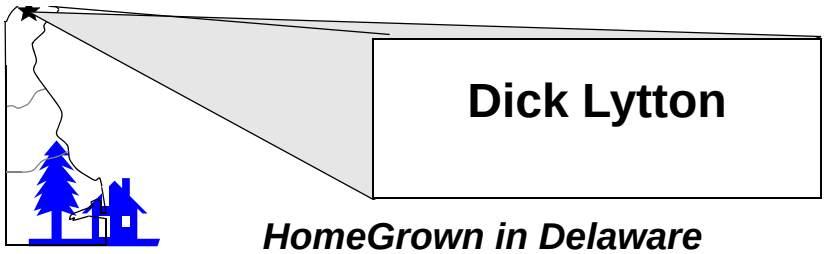
Q: I know someone who has no use of his hands and cannot talk. How can he access the computer?

A: Several computer access options are available for people who have no use their hands. Keyboard emulators like the Ke:nx for Macintosh, the DADA Entry for IBM and compatibles, and the DARCI for both Mac and IBM have Morse Code and scanning

capabilities. To access a Morse Code or scanning system, one or two switches need to be mounted at the person's head, elbows, feet, or any place he or she has a reliable movement. These switches would then plug into the emulator box. Software installed on the computer translates the switch hits into text or computer commands. Other options for people who do not have use of their hands include eye tracking technology and tongue control. Eye tracking systems like the Eye Gaze System from LC Technologies, and the VisionKey from H.K. Eyecan, use a camera to track eye movement for keyboard and mouse emulation. The UCS 1000 with Tongue Touch Keypad is a complete computer access and environmental control package accessed through a wireless keypad worn in the mouth.

There are many alternatives to the standard mouse and keypad not listed here. The ATRCs in each county have a wide range of computer technology available for demonstration and loan.

Be sure not to miss the Computer Access Workshop May 16 in Sussex County, June 12 in Kent County, and July 24 in New Castle County. Many of the devices mentioned above will be demonstrated at the workshop, and time will be given for hands-on experience with each.



HomeGrown in Delaware

This column spotlights the AT movers and shakers we have right in our own backyard. Dick Lytton, the Coordinator of the Augmentative Communication and Technology Program at A.I. duPont Institute in Wilmington, is movin' and shakin' with the best of them these days. Dick came to Delaware from New England, where he worked in a multi-focused Easter Seal Society program. His experience included work in an out-patient program for children and youth with multiple disabilities, a supported employment program, and an adult day activity center. He also worked as a private clinician and in a for-profit company devoted to augmentative communication and technology. His position at AIDI gave him an opportunity to use this experience to create a new clinical service and to help tie together the clinical work of the hospital and the research work of the Applied Science and Engineering Labs.

The transdisciplinary Augmentative Communication and Technology Program at AIDI, which is housed in the Division of Rehabilitation Medicine, provides evaluations and outpatient therapy—including consultation with community-based service providers—to support the team process. When it comes to teamwork, Dick practices what many others simply preach: meaningful accomplishments occur when people work together. His definition of an AT team includes professionals, family members, the AT user, and manufacturers and/or vendors.

Dick focuses the team members on the goal of functional communication at home, in the community, at school and, ultimately, at work. He finds that this requires organization of the child's communication *techniques* into a communication *system*, which may include speech, gesture, natural writing, and high- and low-tech spoken and written communication systems. Given the emphasis on functional communication in everyday settings, Dick is finding that he is called upon more and more often to provide formal consultation and inservice training to the individuals that work with the children on a day-to-day basis. His involvement with communication system construction, programming, and maintenance helps to alleviate the time demands on school personnel. His service is also committed to having the most current technologies available for trial and exploration, something many schools are not in a financial position to accomplish.

Upon his arrival in Delaware, Dick was pleasantly surprised at the high level of AAC awareness among parents and families; at the same time, he was disappointed in the AAC knowledge among professionals. He finds that the greatest barriers he faces, how-

ever, are system issues. Most of the Institute's services are funded by private and public health insurance, and Dick has found that assistive technology devices and services are not always recognized as a component of comprehensive health care. Also problematic are policies that stifle educational and health care professionals in giving their honest recommendations for devices and services.

So is there room for optimism? Dick believes there is, because he has seen the process work well when the child's parent is also a strong advocate for the child's needs. This doesn't mean taking a combative stance from the outset, but instead proactively making various systems work cooperatively for the benefit of the child. And he encourages all members of the team to approach "assistive technology" with the emphasis on *assistive* rather than on the technology.

Just listening to Dick talk, either about his family or his work at the Institute, you get a sense of his fondness and respect for children. He says that "as parents and professionals, we learn best from kids." You also get a sense of his commitment to the field of augmentative communication. Dick's recent assumption of the presidency of the United States Society for Augmentative and Alternative Communication (USSAAC) follows many years of devoted volunteer service to the field. During his tenure as President, Dick hopes that each constituent group within AAC will benefit from the others, with the collective goal being benefits to individuals who use AAC.

We are indeed fortunate to have Dick in our midst. To find out more about his services, or to become involved in USSAAC activities, you can reach him at the Institute at (302) 651-5621.

“Fresh From the Kitchen at Hardees...”

Assistive Technology at Work

Tracy A. Bombara, M.S., CCC/SLP

If you stop by the Hardees restaurant in the Greentree Shopping Center on Route 8 in Dover, don’t be surprised to hear Nihal Kibria use a synthesized voice to request a fish sandwich, a small 7-Up, or even more disinfectant to clean the tables in the lobby! You see, Nihal is the newest dining room “host” at the restaurant, managed by Ed Mentor. And because Nihal has cerebral palsy, various pieces of assistive technology are being employed, along with Nihal.

Because he has the ability to verbalize only short, single words, Nihal has often experienced difficulty communicating with unfamiliar listeners. He is, however, able to ambulate independently and has an excellent ability to learn and carry out tasks requiring several steps. He has participated in the Community Services Program at the Kent County Easter Seal Rehabilitation Center since his graduation from Caesar Rodney High School in 1993. Competitive, supported employment was identified as an achievable goal for Nihal by the team that developed his Individual Rehabilitation Program; however, increasing his communication skills was also identified as a major need.

An augmentative communication system (on loan from the Kent County ATRC) was introduced to Nihal in March of 1995, and has greatly expanded Nihal’s ability to communicate with others. He began with two overlays containing 36 symbol locations and, at last count, had increased to four overlays with just under 400 symbols. Nihal creates sentences to communicate with others by combining different picture symbols and words on the different overlays. Trial periods with more advanced communication systems continue as part of his speech therapy program, in an effort to determine the best system for Nihal based on his language, motor coordination, strength, and communicative needs.

Nihal became gainfully employed for the first time in February, thanks to the assistance of his family, a dedicated team of individuals, and the help of several types of assistive technology. At his initial interview with Mentor, Nihal effectively used the VOIS 136 communication system to answer questions about his abilities to perform tasks such as wiping tables and trays, cleaning windows, and emptying the trash. By combining different symbols, Nihal was able to tell Mentor about his previous volunteer experience setting up lunch trays at a local nursing home and also about his participation in several Special Olympics programs. He even asked Mentor if a microwave would be available for him to warm up his lunch if he brought it from home!

Mentor, obviously impressed with Nihal's interest in employment and his ability to communicate with an augmentative communication device, decided to give him a try as a dining room host. Next came the challenge of making sure that Nihal could do his jobs effectively, given limitations in the use of his left arm and hand. Donna Kane, Supervisor of Adult Programs, was instrumental in adapting the apron of Nihal's Hardees uniform so that he could carry all of his cleaning supplies right in front of him. Nihal's Job Coach worked diligently with him to adapt the tasks that most people do with two hands so that Nihal could do them effectively with one. A special belt buckle was even made by Jill Moynahan, OTR, so that Nihal could fasten the belt to his uniform independently. And after a month of employment, the unanimous opinion is that Nihal and the dining room host job are an excellent match!

Mentor stated that he feels Nihal is "doing really well" and he has seen a definite difference in him since he first began. According to Mr. Mentor, Nihal seemed a little uncomfortable at first, but has now learned his routine and is usually "busier than any of the other employees." Mentor also stated that it is apparent that Nihal is very glad to have the job and that he is dedicated to proving himself capable of doing it well.

With regard to the use of his augmentative communication system, Mentor felt that it was a very effective tool for Nihal. Said Mentor, "He lets us know what he needs help with or if he needs more supplies. He will even tell us how many rolls of toilet paper he needs, and for which bathroom." Debbie Hurd, Crew Leader, echoed Mentor's thoughts. Said Hurd, "The communication system is really neat. It gets the job done and the information across." Mentor went on to say that at times, most of the employees could figure out what Nihal needed before he asked, but the staff is committed to letting Nihal ask himself. "It may be someone else, someone new, here, and he would have to be able to tell them, too", said Mentor. Co-workers Mary Mansfield and Ruth Foxx agreed that Nihal is a good worker, and that the communication system has really helped. Said Foxx, "He is very polite when he uses it to talk" with fellow employees.

Mentor indicated that he has hired employees with disabilities in the past at another restaurant in Philadelphia and had some difficulties. This experience, however, has been much more positive and successful. He credited the job coaching as a factor in that success, as well as Nihal's friendly personality. Mentor stated that Nihal's employment has not affected his managerial routine at all, and that Nihal's work has "freed up other employees to do other things." Nihal is definitely meeting a need in Mentor's restaurant.

When asked about his job, Nihal regularly uses words like "fun" and "happy." He stated that his favorite jobs are cleaning the tables and wiping the windows. He indicated that he likes earning money for the work that he does, and he even requested that a verbal message for "May I have my paycheck?" be added to his communication system. He has become proficient at ordering his own lunch every day at Hardees, and can decide

if he wants ice in his drink or ketchup with his french fries, getting his food just the way he likes it. By the end of his shift, Nihal has definitely worked up an appetite. To Nihal, being able to eat his lunch is almost as important as getting his paycheck!

Tracy Bombara is a SLP who works with Nihal. She also is a frequent visitor to our Kent County ATRC. She submitted this article at the request of Kent County ATRC staff, who are delighted by the outcomes resulting from partnerships like those mentioned in this account of Nihal's success.

FINANCING ASSISTIVE TECHNOLOGY

A Case Study: Not Just A Matter of Who Pays

Ron Sibert, DATI Funding Specialist

Although various agencies and programs will pay for/provide assistive technology (AT) devices and services to qualified individuals, it is not always clear who qualifies for what and under what circumstances a given agency will pay. This is especially true when there is more than one possible payer. In so many instances though, the issue of how to get equipment and services paid for is just one of several issues to be resolved in the process of achieving the desired outcome. Many of the inquiries we get from both consumers and service providers involve much more than the question of who pays. AT funding can seldom even be discussed apart from the underlying agency policies and the responsibilities of various parties (including the consumer). Results often depend on how well these factors mesh or interact. Sometimes the issues get to be somewhat complex. The following account of a recent inquiry is an excellent case in point. Even then, however, the solution almost always involves returning to the basics, careful attention to detail, and focus on outcomes.

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Parent's Story: I'm pretty new to the disability arena, and the more I learn, the more concerned I am about the prospect of getting an appropriate education for my teenage son, Frank (not his real name). A short time ago, Frank sustained a serious head injury in an auto accident. Although the accident left him with some significant limitations, he's still a clever, capable kid. I'm sure he could benefit educationally if I could just get the school to provide more challenging educational materials for him, and to work with me on getting his other needs properly addressed. After he was released from the hospital, Frank was placed in a school for kids with disabilities, and his teachers now report that he's become increasingly difficult to manage over time, and unresponsive to school staff. Even without his behavioral problems, I know that Frank's situation is already quite challenging. His speech and, I'm told, his learning have been affected by the accident; and since he also can no longer walk, he has to use a wheelchair to get around. In addition, Frank is tube-fed, so he may need assistance with feeding and sometimes toileting as well. Occasionally, he pulls his tube out of his stoma, and if it is not replaced promptly, there can be significant complications. I've discussed our options with the administrators at Frank's school, and they say that there is no way for the school to safely accommodate Frank's needs without having a nurse at his immediate disposal while he's at school. Although we have fairly comprehensive medical coverage with our private medical insurance and Frank's Medicaid, none of the insurers will cover continuous nursing care/supervision because they say Frank's medical condition does not warrant that level of care. We certainly don't have the money to pay for a nurse. I was at wits end before I

recently learned from another parent that the law requires the school to provide whatever services my son needs to help him benefit from his education. When I asked the school administrators about this, I learned that while they were willing to work with me, they only have two nurses, and both have very full caseloads. It is also not feasible for either of them to provide the level of supervision that Frank requires. In addition, they told me there is no money in the budget to hire another full time nurse, and their regular staff are not qualified to replace Frank's tube in an emergency. Reinserting Frank's g-tube, by the way, isn't rocket science; I've done it on several occasions myself.

Frank's feeding is only one of several major concerns. Before his release from the hospital after the accident, a speech therapist recommended a simple electronic communication device with a big red switch. Frankie refuses to use it—I think because it looks like a child's toy and it embarrasses him. Similarly, the educational materials made available to Frank at school, while computerized, are not very age appropriate. It seems Frank's teachers don't believe that he can learn from more advanced materials. I happen to know that my Frank is a lot more capable of learning than his teachers believe he is. If he were given more time on a computer with age-appropriate tasks and software, I'm sure he'd surprise them with what he can do.

***School Administrator**: This school and its staff are making every effort to provide an appropriate education for Frank. However, he has an array of problems that we simply are not equipped to address. Many of Frank's needs are medical, and we are willing to help when those needs are barriers to his education. Beyond that, however, our limited staffing and financial resources cannot accommodate him without significant external support. For example, if Frank's g-tube gets dislodged, our regular staff are not qualified to handle the problem, and State Code prohibits anyone except an RN from administering medications/treatments, etc. We have about fifty students who require nursing intervention, and only two staff nurses to attend to their needs. Neither of them would be able to provide the level of supervision that Frank requires, and Medicaid coverage for a one-to-one nurse for him is not an option because ongoing nursing supervision is not covered for Frank's condition. Even if Medicaid reimbursable service were possible, the school would still have to cover 50% of the expense on an ongoing basis.*

This situation has also been quite challenging from an educational perspective. Frank had an attention deficit disorder even before his accident, and his medical and behavioral concerns only serve to compound the problem. His parents have objected to the elementary approaches we've taken with him, and are considering moving him to a regular school in his resident district. We do not believe that Frank can benefit from more advanced educational materials until he can increase the duration of his on-task behav-

ior. Moving him now to a less restrictive setting before he has been adequately prepared would do more harm than good. In spite of the formidable challenges we face in attempting to meet Frank's needs in his current placement, we believe he has a better chance of having his needs properly met right where he is.

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Obviously, this situation is not just a case of who pays for what and when. Resolving the problem will require some give and take on both sides, but, as usual, there are feasible options.

Many of Frank's educational limitations related to his medical condition can be addressed at school. Schools routinely provide related services such as nursing and therapies when required as part of a student's special education program. In this case, however, there is not only a question of how much and who pays, but a question of HOW such services can be provided. First, it should be noted that the school has the right to require the parents to use their insurance to cover medical services if the necessary services are covered and filing a claim would not cause the family any "hardship."[1] The school may also elect to pay the deductible or co-payment on the family's behalf in such instances. Clearly, the supervision that Frank needs is medical in nature (as required for insurance reimbursement), but the severity of his condition does not qualify him for ongoing nursing supervision. Also, while the school must provide whatever services Frank needs in order to benefit from his special education program, it must also operate under certain legal and financial constraints. So the search is on for options...

Depending on one's background or exposure, several practical solutions to the g-tube problem may come to mind. For instance, a rehabilitation engineer or occupational therapist might consider designing a barrier to Frank's tube and stoma that keeps them out of reach. A psychologist might suggest instituting a behavior modification program to reduce the frequency of the problem's occurrence. Several solutions my be possible, but in <u>all</u> cases, the underlying policies should be carefully examined. In this case, doing so would have made quite a difference. It turns out that there maybe some "give" in the State restriction that permits only RNs to administer to Frank's parenteral feeding situation. Further investigation revealed that private nursing firms in the State routinely train parents and others to intervene in situations similar to Frank's with a doctor's authorization. Having regular school personnel trained to properly reinsert or replace Frank's tube in an emergency is therefore a feasible, low cost option.

Solutions to other problems presented here may also have been a matter of correct application of policy or even generally accepted professional practices. For example,

1. Hardships, in this context, include insurance copayments, deductibles, premium increases, and possible discontinuation of coverage.

Frank's refusal to use a recommended communication device may have been an indication of need for a speech therapy reassessment. A proper assessment would include an exploration of perhaps several options (with the user's preferences being given ample consideration) so that an appropriate device could be selected. Note that such determinations typically require more than just one or two evaluative sessions. Needs, functioning level, and preferences generally change with time...particularly for children and youth with disabilities. Frank's situation was somewhat unique in that his initial speech evaluation was done during a tenuous recovery period following trauma—after which significant changes in his condition and his abilities might have been expected to occur. Even so, follow-up in the form of periodic assessment is still always advisable.

Finally, the issue of age-appropriate materials and the need to address basic skills and behavioral issues are viewed in the case as being unrelated (even conflicting) concerns, when that is not necessarily the case. For instance, parents and school personnel working together might identify reinforcing, age appropriate materials and activities. The team could then incorporate these into a curriculum that addresses basic skill development. Properly structured, such activities could help reduce maladaptive behaviors while increasing on-task performance and, to some extent, skill acquisition. However, this approach assumes that some member(s) of the team possess the skills/training to formulate and properly implement such a plan. Therefore, an important part of the team's task after identifying the problems would be to assess the team's ability to address those problems, and to correct possible information/skill-related deficiencies before the planning process begins.

Several general lessons/conclusions also may be drawn from this case. One is the need to gather and maintain accurate information from all relevant sources, and to use that information (and/or involve the sources themselves) in formulating the solution. Close attention to detail and "doing it right the first time" is also quite helpful, and will usually result in the most economic and effective solution. Next, acquiring and/or providing services is usually done collaboratively. Mutual respect and willingness of all parties to work as a team toward a common goal are therefore important parts of the process. Employing these general strategies greatly increases the likelihood of success in choosing, acquiring or funding assistive technology devices and services—regardless of the funding agency or the nature of the needs being addressed.

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Delaware Recycles AT

If you'd like more information, or have equipment or an equipment need, call the DATI office at 800-870-DATI or (302) 651-6790 or 651-6794 TDD. All items are in good condition and prices are negotiable unless otherwise stated.

Devices Available:

Ambulation/Mobility

Boston Scoliosis Brace, size X-8F-0o, Free
Canes, variety, Free
Lawall Prosthetic Leg Brace for the left leg, Free!
Upper Body Brace, Free!
Walkers, Free!
Walker-Works Fine, $20
Walkers, Rollator-Swedish, attached seat, New, $300
Walker, Rollator-Swedish, attached seat, $265

Augmentative Communication

Apple IIGs System & Monitor & PRC Light Talker w/peripherals to connect to Apple IIGs, includes many extras, $1,000
IntroTalker, asking $500
MultiVoice speech synthesizer, $550
Scanning Lightwriter (SL8), $1,025

Computers/Electronic Equip

B.O.S.S. 8000-Casio Organizer, $100
HandiKEY Deluxe, adapted access, speech output, $100
HandiCODE, adapted access, speech output, $100
Scan Man w/catchword PRO OCR for Windows, $210
Unmouse, $60

Hearing

Sonic Alert Baby Cry Signaler, $20
Telecaption Caption Decode, $85
Telecaption II Decoder, $35

Personal Care/Home Management

Bath Support Seat, Child (2), $140
Bathtub Bench, $100
Bathtub Transfer Bench, $90
Bean Pillow with liner & cover, $55

Commode Chairs, Free!
Commode (2), $40 each
Compression Pump for leg or arm, paid $5,000 new
EPS SXL Tens Unit reduces pain through shock, $300
Feeding Machine, Windsor, $700
Geriatric Chair-Brand New, $600
Geriatric Chair, mobile, $150
High Back Toilet Support/Child, $170
Hospital Bed, Electric-Excellent Condition, $700
Hospital Bed with Trapeze, Electric, $650
Hospital Bed Frames, Free
Hospital Tables, Portable, $10 each, or take all 9 at $5 each
Hoyer Lift, Free
Hydraulic Lift, Patient, Invacare, $300
Lift Chair, Electric, 2 years old, $600
Raised Toilet Seat w/rails, $45
Raised Toilet Seat, adjustable, $25
Shampoo Rinse Tray, $20
Shampoo Tray, Portable, $20
Shower/Commode Chair, Quad, Activeaid $790
Shower Hose, Portable & Hand-held, $5
Stair Glide, 14' long, Free!
Stair Glide, 14 step, $2,000
Toilet Seat Extender, extra wide, w/bars, adj. height, $50
Tubby II Chair, Activeaid, $140

Three-Wheeled Power Mobility

Electric Rascal Mobility Cart with Electric Hoist, $2,000
Scooter and Recharger, Adult, $750
Three-wheeled Scooter, Amigo, Adult, $300

Vehicles/Accessories

Driving Controls, Hand-Operated, $125
Maxi Van, '88 Dodge, 50,000 miles, includes lift, water, toilet storage, electric, cap tie downs, full-size bed, $20,000 or less to qualified person
Wheelchair Lift, Pal Swing-Away, $1,200

Wheelchairs

Electric, Child's (3), Free!
Electric, Child's, Barbie E & J, $5,000
Electric, Highback, needs minor repair, $200
Electric, Tempest, Adult, price negotiable, please ask

Manual, Quickie, Small Adult (2), Free!
Manual, Roff Invacare, $300
Manual, Teladyne, Lightweight, 3-wheeled, $50

Devices Needed:

Accessible home w/wheelchair ramps & lowered cabinets
Bath Seat for 3 year old with severe CP
Flotation Mattress or Pillow/Jelly Pad
Footrest, right, from a Fortress Commuter Wheelchair
Ke:nx, a full access system for the Mac
Leg Braces
Lift for Rascal Scooter
Lift for Van
Lift Chairs
Lightwriter (SL35)
Mac 500 Series Laptop
Personal Computers
Print Enlarger
Reclining Geriatric Chair
Rolling Shower Chair, Adult, to fit through 20" opening
Shower Chair with Back
Stair Glides
Talk:About, conversation software for the Mac
Three-wheeled Powered Scooters
Walker, Child's, Posterior
Wheelchairs-Electric, Manual, Travel
Wheelchair Ramp (portable)

People are so creative! The days when a computer was used as just a typewriter or videogame are over! Today's programs have made it possible to achieve educational, fine/gross motor, and speech-language goals in the classroom in an innovative and interactive way. One team of therapists and teachers used Intellipics, Overlay Maker, and Intellikeys to create dinosaurs that jump, slide, and change size and color. Once the preschoolers chose a dinosaur with features of their choice, they mimicked the dinosaur's movements as part of their gross motor activity. Incorporating computer use in the school curriculum smoothly transitioned the children from a visual, somewhat passive activity (such as watching the screen) to a mobile and fun experience!

For more information on Intellipics, Overlay Maker, and Intellikeys, contact your local Assistive Technology Resource Center (1-800-870-DATI).

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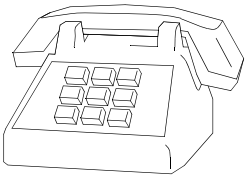
To contact DATI's Central Site office or the ATRC closest to you...

Call 1-800-870-DATI

Press #1 for English
or
Press #2 for Spanish



then press...

#3 for the Central Site office or

#4 for the New Castle County ATRC or

#5 for the Kent County ATRC or

#6 for the Sussex County ATRC

TDD callers—If you do not press #1 or 2 your call will be answered on a TDD line by someone at the Central Site office.