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Low Tech AAC/High Impact Results Research

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For the past 10 years, my colleague and I have supervised graduate student clinicians at a local community agency that serves adults with developmental disabilities. The mission statement for the Lowndes Advocacy Resource Center (LARC) is as follows: "providing people with disabilities opportunities for working and living in the community." This agency provides opportunities for adults to participate in leisure activities of shopping, entertainment, and dining within the community as well as contract work for various businesses. It is accredited by Council for Accreditation of Rehabilitation Facilities (CARF) and has a memorandum of understanding with the university to serve as a clinical site for Communication Sciences and Disorders (CSD) majors.

While learning to address functional daily living skills in regards to communication goals, the students also get real world experience with diverse populations and are able to interact with adults with multiple disabilities. This is also a wonderful learning experience where students learn that not all individuals will qualify for AAC devices and not all families can financially afford AAC devices. In some cases, AAC devices were purchased and never used by the families or

the staff due to the complexity of the equipment, some were not approved by insurance, some cases the adults refused to use it, and the list of reasons to not use AAC devices goes on and on. This is a situation where the creativity and resourcefulness of the speech-language pathologist become very important. Many times the speech-language pathologist is called upon to find resources for funding in the community to assist the needs of the clients and the speech-language pathologist will be required to be very creative with adapting materials and/or equipment for communication purposes.

One case involves a 35 year old female diagnosed with Down Syndrome, Moderate Intellectual Impairment and Selective Mutism beginning at age 12 due to a traumatic experience. This individual transferred to LARC from the public school system at age 23 with minimal communication skills using simple signs and gestures. For many years we worked with sign language and communication boards with very basic core vocabulary. A company that specializes in AAC devices evaluated her for a device and the family purchased one that was not appropriate for her and resulted in non-use by the client, her family, and the staff. Through efforts with the speech-language pathologist and the local community, we were able to locate an Easter Seals group in a nearby county that donated several "old" devices that we were able to put to great use. These old, Zygo Macaw devices were revised and updated specifically for the client and a local Battery Source repaired them for minimal cost. Utilizing sign language, communication boards, the AAC device and offering consistent care, she now is using her voice again and speaks in short phrases. We continue to have her AAC device available as well as her familiar communication books and boards, however, she rarely uses them. In addition, we have used the Ipad apps from Mayers-Johnson Picture Communication Symbols for intervention techniques as well as motivational games in therapy activities with the adults in the BINGO game and Memory game formats.

As adults age, some adults experience diminished hearing along with their vision. While glasses and contacts are paid by insurance, assistive hearing devices such as hearing aids are not covered. Hearing aids are very expensive and many people cannot afford to purchase one aid much less two. Many adults have great difficulty adjusting to the hearing aids and won't wear them consistently. Two of our clients were diagnosed as hard of hearing. Since they could not hear well, they were constantly getting in trouble for "not" following directions with staff. They often started fights since they misunderstood what was being said by others as negative and/or upsetting remarks. Therapy was not beneficial to the client nor the clinicians, one because the clients were missing the information and two because we were demonstrating vocal abuse with all of the loud talking. We had to find something to use with these clients that would help them both inside and outside of therapy.

We found that personal amplification devices were the best option for these clients and were the best value for the money. Going on-line we were able to find multiple brands with the prices ranging from $20.00 to $80.00. Each device came with the amplifier that the speaker talked into and a set of headsets. Headphones or ear buds could be used in the system that we purchased. We found that the clients preferred the headphones with the foam cushions

on the ears rather than earbuds. One client took to the device immediately and wanted to wear it all day that first day it was introduced. The second client we had to slowly increase the amount of time he wore it secondary to his sensitivity to items on his head. After wearing these devices for a couple of months, there has been a huge change in behavior for both clients. Neither are getting into fights, they have completed all work required of them, and they are now more outgoing with staff and other individuals at the facility. Their difficult days are now due to the device needing a new battery. Even if these devices are misplaced or broken it is inexpensive and most people can easily afford to replace them. In addition, these individuals used minimal sign language, and were introduced to the ipad apps for intervention purposes as well as motivational activities.

As speech-language pathologists, we must also learn to adapt to the ever changing technology. For years, we used a braille labeler with a client who contracted Rubella as a child which left her deaf and blind. That particular braille labeler used the standard 3/8" and ½" wide sticky tape that was found in common label devices. However with the change in technology, the standard labelers (manually turn the dial to each letter and punch) were becoming obsolete and being replaced with new electronic versions. Thus it was making it hard and expensive to buy and find tape for our labeler. After some research, we felt that using a braille stylus and slate would be the most practical device. Multiple types of paper can be used in the slate and then the speech-language pathologists can manually make the dots thus eliminating the need to purchase expensive material or the concern of the device breaking. This has allowed the speech-language pathologist and the staff to make multiple books and therapy materials for her as well as items in her work environment without limits due to the inexpensive material.

In summary, we feel that it is important when training graduate students as future speech-language pathologists, that they need to have the knowledge of the current AAC devices available on the market. The speech-language pathologist will need to be creative and resourceful in adapting to the situation in their environment. Each case will need to be considered individually as what has worked in one case may not be appropriate for another. Most important is the reality that the most expensive device is not necessarily the best for the clients and their families. In our experience, we have found that the low tech AAC solutions have produced high impact results for the clients, their staff, and their caregivers!