AAC & LAMP FAQs

If my child uses an augmentative communication device, will it limit his progress towards verbal speech?

This is a common concern of parents with non-verbal children. However, research shows that use of augmentative communication typically leads to increased verbalizations. There is no evidence that the use of AAC impedes a child's development of speech (Blischak, Lombardino, and Dyson, 2003) (Miler, Light, & Schlosser, 2006).

What are the prerequisites for using a high-tech voice output device?

There are no prerequisites for learning to use an AAC device other than the ability to produce a purposeful movement. The myth that a child needs to have cognitive prerequisites or move through a hierarchy of steps prior to using high-tech systems has been discredited repeatedly (Adamson, L B, Romski, M A Deffebach, K and Sevcik, R A1992), (Stuart, S and Ritthaler, C 2008), (Beukelman, D R and Mirenda, P, 2005), (http://www.asha.org/NJC/eligibility.htm).

Some will say that first a child needs to understand the use of symbols by using real objects, then pictures of real objects, then abstract representations of those objects to communicate. This would mean changing a person's communication system over and over. Others would say that a child needs to demonstrate the cognitive ability to use low-tech devices first. However, when low-tech devices do not incorporate consistent motor patterns to access words, the child has to learn the meanings of lots of different symbols. Sometimes those symbols are difficult to discriminate from one another.

In normal development, a baby learns the meanings of his first words by playing with the sounds he can make with his mouth and seeing the reaction others give him. That's the easiest way to learn to communicate. A consistent motor movement results in consistent auditory output which, when integrated with the social response, provides meaning to the word.

A high-tech device with consistent motor patterns and voice output allows the non-verbal child to learn language in this same manner. A high tech device that allows for transition from learning first words to complex communication without changing communication systems, symbols, and access methods over the course of language development would be the easiest way for a non-verbal child to learn language and be able to communicate.

I don't understand those symbols, how will my child?

The language on many communication devices is represented by symbols rather than words. This is because many children with developmental disabilities are able to communicate before they are able to read. Also, as vocabulary increases, combining symbols for words allows for more vocabulary with fewer keystrokes. For literate adults, the abstract nature of the symbols can look confusing. We don't understand why a certain picture was chosen to represent a certain word and we become overly focused on the associated meaning. But what would you draw for words like **more**, **go**, **I**, and **get**? Only nouns are easy to depict with concrete pictures, and we don't communicate merely with nouns.

Children learn to use symbols more easily than adults do because they don't question the associations, analogies, and metaphors represented by the pictures. Most importantly, the child can learn words based on the response they get when using a consistent motor movement. They don't have to learn why they are using certain pictures but can use them as a visual cue. If you think about it, you have learned to use symbols throughout your life without much difficulty. Why does the letter sequence **b-l-u-e** represent the colour **blue**? Why does a red octagon mean **stop**? After a day with a new mobile phone, aren't you able to find the icons you need to make calls, check email, and play your favourite game?

My child has motor planning issues; does that preclude him from trying LAMP?

No. Approximately 40% of children aged two to six with autism may have some motor planning issues (Ming, Brimacombe and Wagner, 2007). This probably plays some role in their inability to communicate verbally. Read this sentence out loud and think about how specifically you have to move your lips, tongue, and jaw while controlling your breath support to articulate correctly. Sign language, while an excellent form of augmentative communication, also requires detailed fine motor movements of the hands.

To make tasks easier for those with motor planning issues, you would give them a simple motor task with little sequencing. Pressing a button to say a word is a simple motor task with no sequencing. As a child's language skill progresses, device access can progress to sequencing several icons to say words and thoughts; but the motor task remains simple.

While LAMP is an acronym for Language Acquisition Through Motor Planning, it does not require intact motor planning skills. The title refers to accessing vocabulary through consistent motor patterns so that automaticity can develop. There is always some motor planning involved in learning a new skill; the more difficult the skill, the more difficult the motor planning. Once the brain has developed a motor plan for a movement through repetition, the skill can be executed without having to consciously think about it. AAC systems that do not maintain consistent motor patterns to access vocabulary require more attention and motor planning to navigate the system.

My child does not interpret symbols; can we still try LAMP?

As stated above, the most important aspect of LAMP is that the meanings of words are taught by giving a response to a consistent motor movement. The child says **go** and is pushed on the swing, the child says **off** and you turn the light off. The symbols do not have to be understood by the child but the motor pattern to say a word should not change once it is learned. As a child is learning this motor pattern, he may use the symbols as a visual cue or guide to find the exact location of an icon. Once automaticity has developed, there will be little visual attention to the symbols.

My child has significant behavioural issues; other people have said he's not ready for a device, so how is this different?

Not being able to communicate one's wants and needs is often the cause of behavioural issues. Children can become agitated and frustrated when not understood or they could be using disruptive behaviour as a communication strategy. Giving the child a way to communicate should coincide with addressing challenging behaviour, it should not be dependent on getting behaviours under control first.

Perhaps the reason others want to wait to get the behaviour under control first is that they are concerned that the money spent on a device will be wasted when it gets thrown to the floor during a tantrum. The key here is to make communication with the device rewarding; something that makes life easier for the non-verbal child. Don't make the device a negative in the child's life by using it for drill or compliance-based activities. Don't sabotage enjoyable activities just to get more communication attempts on the device. Also, get a durable device or protect the one you have!

Can my child use a device to request favourite foods?

Definitely. Most AAC devices are set up to allow for requests of favourite foods. If the device has the core words **I** and **want** pre-programmed and easily accessible, then other areas on the device can be customized so that particular interests or favourite foods (such as **chips** or **cheese**) can be added.

The child needs a system that gives easy access to the most frequently occurring words in speech as well as customization of the items that are important to the individual. The child can then say **I like chips**, **Do you have chips?**, **We need to get chips**, and **Like a rat on chips**.

Also, children surprise us sometimes and want to talk about things that we haven't programmed into their device. With access to frequently occurring words, they can usually get their point across. One child who didn't have the word **Pringles** programmed on his device asked for **drum chips** (chips in a drum). If a child wanted a **Coke** but that word was not available, he might ask for **brown bubble drink**. Children with autism also have demonstrated the ability to use the words on their device phonetically to talk about things that they don't have a programmed word for. Some examples are **not + Joe** for

nachos, **feather** for **Heather**, **black** + **bees** for **Saxby's**, etc. This provides an opportunity for the speaker to express himself, and lets the therapist, teacher, or parent know what words need to be programmed. This is also a great example of strategic competence developing.

I want my child to do more than request things, does this do that?

Being able to request wanted items is an important function of communication but it is not the only function. We communicate for a lot of other reasons, like expressing thoughts, feelings, humour and love, as well as communicating to gain information, to comment, to greet, and direct others.

Learning to communicate fully using AAC depends on access to a large enough vocabulary to express anything the individual would want to say and the ability to access it quickly to join in the conversation. The vocabulary would have to include more than just nouns because to fully communicate, we need all the parts of speech. Then through activities in natural settings, we need to teach the child to communicate for various reasons; not to just request items.

My child uses PECS, how is this different?

PECS has made a difference in the lives of a lot of non-verbal children and is a good communication strategy. However if PECS has not worked for your child or you want to add another strategy, an AAC device with voice output utilizing LAMP strategies offers several additional benefits.

Obviously, it offers voice output. This additional sensory feedback can enhance the child's ability to learn language. A lot of autistic children develop their verbal skills by repeating what is said using their AAC device. Synthetic speech may help the child who has auditory processing issues with auditory recognition and segmenting of words (Romski M A and Sevcik R A, 1996), (Parsons C L and La Sorte, 1993). Also, the voice output allows the child with better receptive language skills the opportunity to do some independent learning of the locations of words on their device.

Secondly, an AAC device with consistent motor patterns to say words allows for the development of automaticity in communication. Consistently searching for the location of desired symbols and the placement of those individual symbols on a strip requires more motor planning and cognitive attention to the communication process.

Another difference is in the vocabulary presented and the manner in which it is taught. When using PECS, initially the child is taught to request items using pictures. As the focus is on giving the child the opportunity to request things he wants, it tends to be heavy on nouns. When a child is taught to use a voice output device using the LAMP method, the focus is on teaching the location and meaning of words which is reinforced by the response the child receives from the communication partner. This includes, but is not limited to, requesting. The child is also taught to use words to direct the action of others, initiate activities, ask for help, etc. The words taught are a mixture of verbs, pronouns, adjectives, nouns, etc.

My child likes to play computer games and listen to music, will the device used to implement LAMP let him do that?

It is amazing how fast technology is developing. The amount of processing power in a Furby is more than in the first lunar module to land on the moon. When the first AAC devices were developed, they utilized basic switches and light bulbs. Now they can play MP3s, import pictures, connect you to the internet, play games, play DVDs, operate environmental controls, and double as your cell phone. Even though all these features are impressive and flashy, sometimes we get caught up in the new technology and forget that the device's intended purpose is actually ..... ***communication!***

While most companies have products containing these features, when it comes to individuals with autism, these features can be a distraction. Often, the child would rather play the computer game or scroll through song options, and this makes it difficult to focus on the communication aspects of the device. So when deciding on what device is right for your child, don't let all the technology dazzle you. Focus on the language system and how your child will communicate on it. If you decide that the added technology is important for your child, make sure he still has the language available to talk about it while he is playing.

How do I get a voice output communication device for my child?

The first step is to talk to your child's speech language pathologist. Funding options may be available that will partially or even fully cover the cost of a device if one has been recommended by an AAC specialist.

Be an informed consumer; learn about your options. Some companies will allow you to try a device for a short period. Look for other device users who use the system that you're thinking about using. How well do they communicate? Can they say whatever they want to say in any environment? Does the device incorporate strategies for language learning from simple to complex?

See **Important Device Features for Individuals with Autism and Language Development**

Information taken from http://www.aacandautism.com/faq