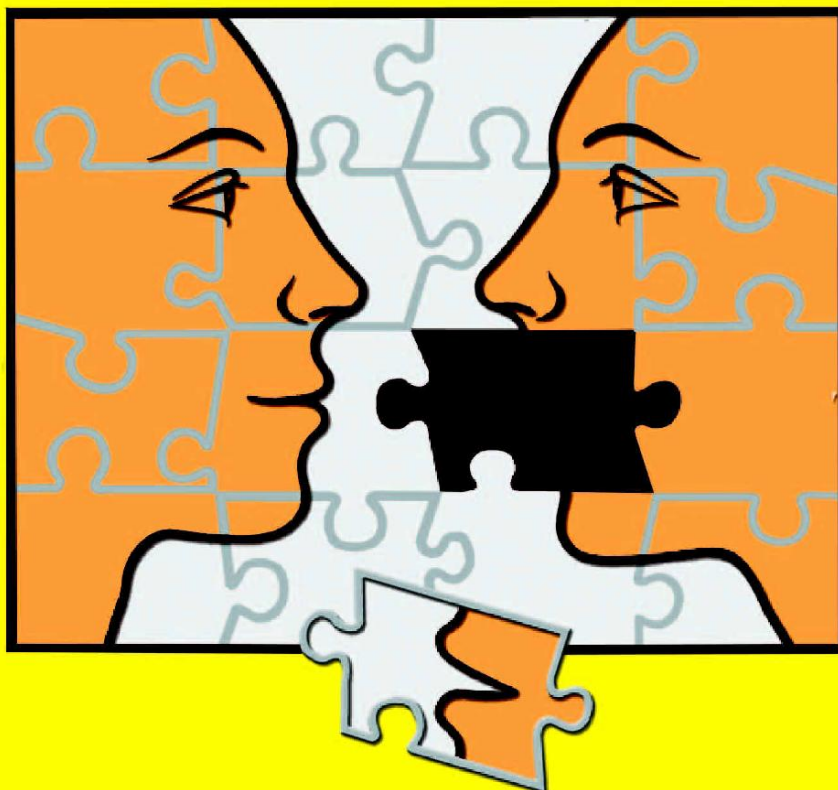


Focus on...

Accessing Communication Aids and Computers



COMMUNICATION MATTERS

Introduction

Some people who are not able to speak use augmentative and alternative communication (AAC) equipment to help them communicate – this could be a symbol book, a computer or an electronic communication aid. The leaflet *Focus on...What is AAC?* provides useful background information on AAC.

There are different ways of using AAC equipment; we need to find the best access method for each person. Depending on their physical abilities and needs it is possible for a person to control a computer or a communication aid using a slight movement of their foot, an eye blink or a movement of their head. This leaflet describes some common access methods.

Direct Access

We are all familiar with this method of access: pointing at a picture, or touching the keyboard to type out a message or to dial a telephone number. Some people who need to use an AAC system to communicate may have enough physical ability to use this direct form of access. Others may be able to point or type using a different part of their bodies such as a fist or toes instead of a finger, or maybe use a technique called eye pointing.

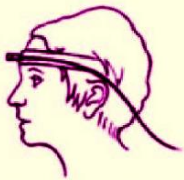
We all use eye pointing from time to time – looking hard at a person or an object – it can be a more subtle way of pointing than actually pointing with a finger. For people with very little control over their bodies, eye pointing can be a very quick and efficient method of communicating. Looking at a cup of coffee on the table might mean that the person would like to have their drink – now! Some people are able to use eye pointing at a very advanced level to look at special symbols, words or letters printed out on a card or other display.

Pointing Devices



Trackerball

For computers and some high-tech communication aids there are also a range of different 'pointing devices' which some people can use. With computers becoming more commonplace, people are familiar with using a mouse to point at icons and text on a computer screen. Some people with physical difficulties find a standard mouse difficult to use. **A trackerball** (sometimes called a **rollerball**) may be helpful if the person cannot grasp a mouse or move it over the surface of a table.



Lightpointer

Lightpointers and **infra-red pointing devices** can be used with some communication aids and computers. These are worn on the head and transmit a beam of light to the equipment being controlled. The computer or communication aid responds to the light beam as if the keyboard has been touched. These are especially useful when an individual has good head control but finds other types of movement difficult.

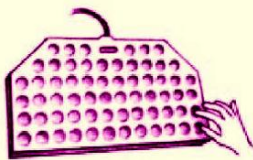
Adapting the keyboard

Sometimes all that is needed to give a person with a physical disability direct access to their computer or communication aid is to adjust the settings for the keyboard, to place a keyguard over the keys, or to substitute a special keyboard for the standard one.



Keyguard

Most computers and many communication aids allow you to adjust the **keyboard response time** to make it easier for the person using it to be accurate. A **keyguard**, usually a sheet of perspex or metal with holes drilled in it corresponding to the keys and fixed over the keyboard, might allow an individual to use a standard keyboard without accidentally hitting the wrong keys.



Expanded keyboard

Different types of keyboards are available. **Expanded keyboards** have larger, more widely spaced keys. **Miniaturised keyboards** can be suitable for people with a very reduced range of movement but with good fine motor control. There are also **ergonomically designed keyboards** which are easier to use for people using only one hand or a head pointer.

Indirect Access

Scanning



Scanning with a single switch

Indirect access methods such as scanning with a switch may be the best option for some people with severe physical limitations as well as a communication difficulty. The user needs to be able to activate either a **single switch** or a **number of switches** connected to the communication aid or computer. The device or the computer program must be able to accept switch input, maybe via a special **interface box**. The switch should be placed near any part of the body that the person can control without too much effort, such as the head, foot, knee or hand. The



Head switch

person selects what they want to say by activating the switch to control a moving cursor on the screen.

Scanning is a difficult skill to learn and most people are not able to use their communication aid or computer immediately without having a period of training and practise. The switch user has to learn when to press the switch, when to release it, what to do if they make a wrong selection, and so on.

Switches for scanning



Foot switch

There are many different types of switches. Some switches are better for controlling scanning devices than others, and some are more useful for a particular individual than others.

There are switches that provide the user with **feedback** that they have been activated (perhaps a click or a beep). Having some sort of feedback is usually helpful to the person using the switch, even if only while they are learning to use it.



Button switch
with 'click'
feedback

Some switches require only the lightest of touch to activate them (useful for people with weak or very restricted movement), while others require quite a lot of pressure before they work (better for someone with a lot of uncontrolled, strong movements).

The Importance of Getting it Right

It is very important to assess the person's needs for special access techniques or technology, and to review their needs on a regular basis.

A person's method of access may change over time as their physical abilities alter or new options are developed. The position they are in (for example, lying in bed as compared with sitting up in a chair), the type of seating (an arm chair compared with a special supportive seat or a stool) can also affect the success of an access method.

The assessment should ideally be done by a multi-disciplinary team including the person themselves, an occupational therapist and/or physiotherapist, a teacher/educationalist, and a speech and language therapist.

Augmentative and Alternative Communication (AAC) is the term used to describe methods of communication which can be used to supplement the more usual methods of speech and writing when these are impaired.

AAC may include unaided systems such as signing and gesture, as well as aided techniques ranging from picture charts to the most sophisticated computer technology currently available. AAC can be a way to help someone understand, as well as a means of expression.

Useful Resources

- **Contacts**

A local occupational therapist or physiotherapist is a good person to talk to about methods of access. There are also a number of regional and national centres providing information, advice and assessment services for people with accessing and communication difficulties. Please contact *Communication Matters* for further information.

- **Special Access Technology**

This book is a good overview of different methods of access and provides useful pointers to help determine the best access method for particular individuals.

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Further Information

Please contact *Communication Matters* for more information on this topic or to obtain other leaflets in the *Focus on...* series.

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Other topics in the 'Focus on...' series

First Steps

What is AAC?

What can I say?

Let your Hands do the Talking

Using Symbols for Communication

Speaking with Someone who uses AAC

Communicating with Patients who have Speech/Language Difficulties

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