

## What's the Evidence?

# Makaton Sign & Symbol for children with neurodisability

### Key findings

- Makaton Sign & Symbol is one form of Augmentative and Alternative Communication (AAC) system. It uses both gestures and pictures to support conversation.
- The evidence for Makaton is moderate rather than strong.
- This does not mean that Makaton or other AAC systems and strategies are not effective, just that the research carried out so far has not been robust.

**PLEASE NOTE:** This summary was produced more than 4 years ago. Information provided may be out of date. If you think it would be helpful to update this summary please contact us at [pencru@exeter.ac.uk](mailto:pencru@exeter.ac.uk)

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#### **What were we asked?**

We were asked to what extent the use of Makaton Sign & Symbol can support the communication of children who have neurological conditions.

communication depends on the sender and receiver to engage, the complexity of the message, and the familiarity of those communicating.

#### **What did we find?**

Communication is an essential life skill which is central to independence, interaction and vital for development. It is estimated that 0.5% (529/100,000) of the UK population may have little or no speech or verbal language<sup>1</sup> and might benefit from an Augmentative and Alternative Communication System (AAC).

Children with neurological conditions (or neurodisability) may have specific speech and language impairments or learning difficulties that affect communication. However, effective

Makaton Sign & Symbol is a form of AAC which evolved from two studies and clinical experience of the developer, Margaret Walker, in the early 1970s. It uses both gestures (from British Sign Language) and pictures to support conversation. Unlike British Sign Language, speech is encouraged wherever possible while signing. Other AAC systems include PECS (Picture Exchange Communication System), the Derbyshire Language Scheme and WidgitHealth.

Research has mainly compared AAC systems in general, rather than specifically looking at individual systems. In a review of AAC, the Scottish Government found nine systematic reviews relevant to children

with disabilities.<sup>2</sup> The overall conclusion from these reviews is that there is insufficient evidence of the effectiveness of communication interventions due to the weak study designs and small sample sizes.

This too was found in a review of services for children and young people with speech, language and communication needs<sup>3</sup> and led to the establishment of the Better Communication Research Programme (BCRP) to improve the evidence base.<sup>4</sup> This research describes the level of evidence for fifty-seven communication interventions used in England, including Makaton.

They report Makaton has a moderate level of evidence which means that some single randomised controlled trials or quasi-experimental studies have been carried out and that there are examples of positive outcomes for children with severe speech difficulties.<sup>5</sup>

The lack of strong evidence is no surprise given the complex group of conditions and various types of communication difficulties. There are few standard 'outcome measures' to measure communication using AAC systems. For example, for one child a good outcome may be increased interaction or making more requests, while for another, it could be progression to discard signing and symbols as their speech increases.

This reflects the importance of an individualised approach when selecting an AAC system for a particular child. For example, some children may find learning hand-signing difficult.<sup>6</sup> In practice, many people use a combination of communication systems and/or develop their own ways to communicate to suit their needs, different contexts, and support available.

## What do we think?

Although the evidence is moderate rather than strong, this does not mean that Makaton or other AAC systems and strategies are not effective, just that the research carried out so far has not been robust. Research is needed to establish which children benefit most from using specific AAC systems.

Research also needs to keep up with advances in technology, for example evaluating tablet computers and other technologies. Case studies are being collected by some organisations (such as [Ace Centre](#)). However, large randomised trials would be required to demonstrate whether such interventions are truly effective. This would be challenging and require careful planning to define the interventions and what they would be compared with, and how the outcomes would be determined and measured.

It is important to obtain expert advice to select and use AAC systems and support is available to help with these decisions.

## Signposts to other information

The Better Communication Research has been developed into a database holding level of evidence information for communication interventions. It is available to anyone who registers with the Communication Trust and you can search by intervention and/or add feedback about an intervention. It can be accessed here: <http://www.thecommunicationtrust.org.uk/projects/what-works/>

Communication Matters have also set up a database for AAC research. It is accessible to the public and holds plain English

summaries of research articles, case studies and factsheets. It is available here: <http://www.aacknowledge.org.uk/>

For support with Augmentative and Alternative Communication systems:

- Communication Matters (UK Charity) <http://www.communicationmatters.org.uk/>
- International Society for Augmentative and Alternative Communication <https://www.isaac-online.org/english/home/>

For children's speech and language, support and resources are available from:

- Children's Communication Charity <http://www.ican.org.uk/> who also have further resources on another website: <http://www.talkingpoint.org.uk/>
- Royal College of Speech & Language Therapists <http://www.rcslt.org/>
- The Association of Speech and Language Therapists also have a resources page which provides links to a number of organisations who support communication <http://www.helpwithtalking.com/resources>

We would like to hear your feedback on this summary – please email us at [pencru@exeter.ac.uk](mailto:pencru@exeter.ac.uk) if you have any comments or questions.

## References

- 1 Communication Matters (2013) Shining a Light on Augmentative and Alternative Communication. [Online] Available at: <http://www.communicationmatters.org.uk/shining-a-light-on-aac>
- 2 Scottish Government (Healthier Scotland) (2012). A Right to Speak: Supporting Individuals who use Augmentative and Alternative Communication. [Online] Available at: <http://www.scotland.gov.uk/Resource/0039/00394629.pdf>
- 3 The Bercow Report (2008). [Online] Available at: <http://webarchive.nationalarchives.gov.uk/20130401151715/https://www.education.gov.uk/publications/eOrderingDownload/Bercow-Summary.pdf>
- 4 Department for Education. Collection: Better Communication Research Programme. [Online] Available at: <https://www.gov.uk/government/collections/better-communication-research-programme>
- 5 Law, J., et al. (2010). What Works: Interventions for Children and Young People with Speech, Language and Communication Needs – Technical Annex. Department of Education Research Report: DFE-RR247-BCRP10a. [Online] Available at: <https://www.gov.uk/government/publications/what-works-interventions-for-children-and-young-people-with-speech-language-and-communication-needs>
- 6 Ganz, JB, et al. (2012). A Meta-Analysis of Single Case Research Studies on Aided Augmentative and Alternative Communications Systems with Individuals with Autism Spectrum Disorders. *J Autism Dev Disord* 42: 60 – 74.

Note: the views expressed here are those of the Peninsula Cerebra Research Unit (PenCRU) at the University of Exeter Medical School and do not represent the views of the Cerebra charity, or any other parties mentioned. We strongly recommend seeking medical advice before undertaking any treatments/therapies not prescribed within the NHS