

Review Group Membership

MaHTAS Reviewer:

Dr Junainah Sabirin
Miss Loong Ah Moi
Datin Dr Rugayah Bakri

External Reviewers:

Madam Rena Nasreen Ramli
Dr Yusniza Mohd. Yusof
Dr Khoo Teik Beng

Disclaimer:

Technology review is a brief report, prepared on an urgent basis, which draws on restricted reviews from analysis of pertinent literature, on expert opinion and / or regulatory status where appropriate. It is subjected to an external review process. While effort has been made to do so, this document may not fully reflect all scientific research available. Additionally, other relevant scientific findings may have been reported since completion of this review.

For further information please contact:

Health Technology Assessment
Section (MaHTAS)
Medical Development Division
Ministry of Health Malaysia
Level 4, Block E1, Precinct 1
Government Office Complex
62590 Putrajaya.

Tel: 603 8883 1246

Fax: 603 8883 1230

Available at the following website:
<http://www.moh.gov.my>

Introduction

Augmentative and alternative communication (AAC) is an umbrella term that encompasses the communication methods used to supplement or replace speech or writing for those with impairments in the production or comprehension of spoken or written language. AAC is used by those with a wide range of speech and language impairments such as those with congenital disabilities and adults with acquired neurological conditions. AAC systems are diverse: unaided AAC systems are those that do not require an external tool which includes signing and body language, while aided AAC systems use external tools which ranges from pictures and communication boards (low-technology AAC) to speech generating devices (high-technology AAC). This technology review was conducted following a request from a Senior Principal Assistant Director, Medical Development Division, Ministry of Health (MOH) following a proposal from a company to introduce high-technology AAC system in government hospitals.

Objective/Aim

The objective of this systematic review was to assess the safety, efficacy / effectiveness, cost-effectiveness and organizational issues relating to the use of AAC systems to enhance communication among people with speech and language impairments in MOH hospitals.

Results and Conclusions

The search strategies yielded 18 articles related to AAC intervention for people with speech and language impairments.

Safety

None of the studies retrieved reported on safety issues with regards to AAC intervention to enhance communication among people with speech and language impairments.

Efficacy / effectiveness

Communication skills

- There was fair to good level of evidence to suggest that AAC intervention was associated with improvement in communication skills for individuals with developmental disabilities such as autism spectrum disorder, Down syndrome, cerebral palsy, mental retardation and patients with acquired neurological condition such as amyotrophic lateral sclerosis, traumatic brain injury, locked-in syndrome and aphasia.
- There was limited retrievable low level of evidence to suggest that AAC intervention has the potential to improve symptom communication for patients in the intensive care unit.

Speech production

There was limited retrievable but good level of evidence to suggest that AAC intervention do not impede speech production; instead studies reported an increase in speech production.

Acceptance of AAC intervention

- There was limited retrievable fair level of evidence to suggest that a high percentage of individuals with amyotrophic lateral sclerosis and traumatic brain injury accepted the AAC intervention as recommended by their speech language pathologist.

Preferences of AAC options

- There was limited retrievable fair level of evidence to suggest that individuals with speech and language disabilities have their own preference for the different AAC types.
- The type of AAC systems appropriate for an individual depends on several factors such as individual's motor, visual, cognitive, and language abilities which may be either unaided, low-technology or high-technology AAC systems.

Training

- There was limited retrievable evidence to suggest that pre-service programs / training (basic professional training) for speech language pathologist / speech therapist on AAC may not be adequate for them to provide comprehensive AAC services after graduation.

Cost/Cost-effectiveness

There was no retrievable evidence on the cost-effectiveness of AAC systems.

Methods

Electronic databases were searched through Ovid interface: Ovid MEDLINE, EBM Reviews-Cochrane Central Register of Controlled Trials, EBM Reviews - Cochrane database of systematic reviews, EBM Reviews - HTA, EBM Reviews - Database of Abstracts of Reviews, EBM Reviews- NHS Economic Evaluation database. Searches were also run in PubMed, Horizon Scanning databases, FDA website for published reports. There was no limit in the search. Relevant articles were critically appraised using Critical Appraisal Skills Programme (CASP) and graded according to US/Canadian preventive services task force.