



Lesson 1: Introduction to electronic communication aids

What are electronic communication aids and who uses them?

Electronic communication aids perform the same purpose as communication books and boards. They assist people to express themselves when speech is difficult.

An electronic communication aid uses speech output. This means it speaks what the person selects or types. Electronic speech is not available in every language.

Advantages of electronic communication aids	Disadvantages of electronic communication aids
• Provide quick access to large vocabularies of pictures, words and phrases • Have built-in speakers that enable the person to speak and shout for attention • Do not rely on the communication partner understanding symbols or text • Can be motivating to use, particularly for children and people with learning disabilities.	• May not support a person's preferred language • Is at risk of breaking if dropped or thrown • May stop working if exposed to heavy rain or dropped in water • Requires an electricity supply.

Many people use communication books or boards because they better meet their needs and preferences, or while waiting for apps in their language or for their service to be supplied with electronic communication aids.

Electronic communication aids included on TAP

On TAP you can learn how to provide a communication app running on a smartphone or tablet. Communication apps include alphabet and symbol vocabularies.

Features of smartphones/tablets include:

Important features	Other features
• Easy to move to different locations (portability) • Clear screen that is readable in bright settings • Touchscreen that reacts to heavy or light touches • Speaker with volume control • Protective case.	• Carry handle to assist when carrying to different locations • Adjustable touch settings to make it easier for a person to make accurate selections • Suggesting words or phrases based on what the person has started typing (prediction) • Fixing spelling mistakes automatically (autocorrection).

Communication apps are the software used on tablets and phones that make it possible to use them as communication aids.

Tip: There are several free and open access communication apps that can be downloaded from app stores. Check Global Symbols for a list of known apps.

Features of communication apps include:

Important features	Other features
Communication apps should allow words and phrases to be increased or changed to suit individual needs, such as: • Alphabet in their preferred language • Symbols that represent their culture and everyday life • Symbol labels in their preferred language.	Usually, there is a: • Home button to go to the home page • Back button to go to the previous page • Message bar. This allows the person to see their message building up before they tap the speak button.

Vocabularies

Electronic communication aids include alphabet and symbol vocabularies.

Alphabet vocabularies

Alphabet vocabularies include an alphabet, numbers, words and/or very common phrases. They may have more than one page, to provide more phrases.

The person taps on letters on an alphabet display to create a sentence. Once they have made their sentence, they tap on a speak button to speak the message out loud.

Symbol vocabularies

Symbol vocabularies on electronic communication aids may have a wide range of symbols to choose from.

The person uses the symbol menu on the first page (the home page) to go to other pages. Once the person has made their sentence, they can tap on the message bar or speak button to speak the message out loud.

On TAP, electronic communication aids include two different symbol vocabularies:

- **Foundation vocabulary:** A limited set of pages designed to meet the person's needs. Suitable for people who have lost or are losing language. The symbols are usually used on their own and are not often combined to form new sentences.
- **Core vocabulary:** A set of pages including core words. These symbols can be combined to create new sentences and support language development.

Vocabulary layout

Alphabet and symbol vocabularies are arranged in a grid layout. The number of letters, words, phrases, or symbols on each page depends on the density of the vocabulary chosen:

- Alphabet and Foundation vocabularies are available in **one** density
- Core vocabulary is available in **high, medium** and **low** density.

Some people can use higher density vocabularies in paper communication books and boards than on electronic communication aids.

Tip: If a person has difficulty tapping accurately using an electronic communication aid, try a communication book/board.

Electronic communication aids not included on TAP

Purpose built electronic communication aids are not included on TAP. Purpose built electronic communication aids have extra features such as:

- Mounting brackets that attach them securely to stands, tables or wheelchairs
- Partner displays to show messages to communication partners without speaking aloud
- Technologies to make it possible for people with limited movement to select words and symbols.

Examples of technologies include:

Eye gaze system	Head tracking	Switches
		
Uses special cameras to track eye movements. These detect where a person is pointing their eyes on a screen.	Uses the front-facing camera on the tablet to detect head movements that control a pointer on the screen.	Switches can be used by the person to scan through an alphabet or symbol vocabulary and select what they want to say.

Lesson 2: Step one: Select

The first step in providing an electronic communication aid is to assess the person's needs and abilities to select the best vocabulary with them.

Assessment overview

Information from the assessment will help you to plan:

- How the person will use their communication aid
- What to teach the person
- If referral to any other service is needed.

If the person already has an electronic communication aid and is returning to the service, check whether the communication aid is meeting their needs. The assessment will help to make decisions about adjusting, repairing or replacing their electronic communication aid.

To carry out an assessment for an electronic communication aid you will need:

- A fully charged electronic communication aid
- Communication apps for alphabet and symbol vocabularies with the person's preferred language.

The symbol app should include:

- **Two vocabularies:** Foundation and Core
- **TAP assessment pages:** Foundation and Core.

Before the assessment, explain to the family member/caregiver that at least one person who knows the person well and communicates with them regularly should attend.

Find a quiet, private space to sit with the person and their communication partner/s and explain the assessment.

Assessment interview

If the person has difficulty answering questions during the assessment, or you have difficulty understanding what the person is saying, ask their communication partner to assist.

Communication priorities: discuss and decide with the person and their communication partner what their communication priorities are.

Spelling and language: based on the answers to the interview questions about spelling and language, select either Alphabet, Core or Foundation vocabularies to assess a person's vision and movement abilities.

Ability to use electronic communication aids

Check the person's ability to use the vocabulary selected in the assessment interview. If the person has near vision spectacles, ask them to wear them.

Alphabet vocabulary

The alphabet vocabulary does not have a separate assessment page. If a smartphone and tablet are available, check on both.

1. **Vision:** open the alphabet on the electronic communication aid and place it within reach of the person.
2. Record whether the person can see the letters on the smartphone and the tablet.
3. If yes, continue to check their movement. If no, skip to Core assessment pages.
4. **Movement:** keep the vocabulary display open within the person's reach. Record whether the person is able to tap 5 letters (one in each corner and one in the centre) without other letters being accidentally spoken by the communication aid.
5. If yes to one electronic communication aid only, skip to Plan. If yes on both electronic communication aids, ask if they would prefer to use a smartphone or tablet. If no to both, skip to Core assessment pages.

Core vocabulary

The Core vocabulary has three assessment pages.

1. **Vision:** open the high density Core assessment page on the electronic communication aid. Place within the person's reach. If they cannot see the symbols clearly, try a lower density assessment page.
2. Record the highest density page the person can see.

3. If yes to any, check their movement with the highest density page they are able to see. If no to all, Ⓣ stop assessment and 📞 refer to communication service. If person has difficulty seeing the low density page, discuss 📞 referral to eye health professional.
4. **Movement:** keep the identified assessment page open and within the person's reach. Record whether the person is able to tap on all the animal symbols without tapping on a boat symbol.
5. If yes to any, skip to Plan. If no to all, try checking their abilities for a communication book. If this is not possible 📞 refer to communication service. If person does not participate in checking their abilities, skip to Provide without checking ability.

Foundation vocabulary

The Foundation vocabulary has one assessment page.

1. **Vision:** open the Foundation assessment page on the electronic communication aid. Place within the person's reach.
2. If they can see the symbols on the assessment page, continue. If they cannot see the symbols, Ⓣ stop assessment and 📞 refer to communication service. Discuss 📞 referral to eye health professional.
3. **Movement:** keep the identified assessment page open and place within the person's reach. Record whether the person is able to tap on all the animal symbols without tapping on a boat symbol.
4. If yes, skip to Plan. If no, Ⓣ stop assessment. 📞 refer to communication service. If person does not participate in checking their abilities, skip to Provide without checking ability.

Tip: The person may also have difficulty pointing if they cannot sit without support. If the person has difficulty sitting without support 📞 refer to a rehabilitation service.

Provide without checking ability

Some people may not take part in checking their abilities or they might point to just one or two letters or symbols and then stop. Instead, work with their communication partner to select the vocabulary page with the smallest size symbols or letters that the person can see and touch accurately.

Plan

Use the information gathered during assessment to make a plan with the person and their communication partner.

Decide together if the person may benefit from:

- A new electronic communication aid
- Using their current electronic communication aid with any adjustments or repairs needed
- Being taught to use their electronic communication aid
- A referral to other services
- A follow up appointment.

Lesson 3: Step two: Fit

The second step in providing an electronic communication aid is to fit the product to match the person's needs.

Fit electronic communication aid

Before fitting an electronic communication aid for a person, check it is in good working order:

- Screen is free from cracks
- Protective shell of the smartphone/tablet is intact and does not expose any electronics inside
- Charging cable and plugs have no cracks
- It turns on, off and restarts as expected
- Speaker works when volume is increased/decreased.

To set up an electronic communication aid ask the person to choose an electronic voice. Make sure the vocabulary selected is running when the communication app opens.

Tip: On TAP the Alphabet, Core and Foundation vocabularies are accessed online through the TAP page on the Global Symbols website:

Trial electronic communication aid

To trial an electronic communication aid, start by checking the person's ability to find symbols or phrases and use them. Place the communication aid where the person can see and reach it. Check the person's ability to point accurately at letters or symbols.

Alphabet vocabulary: suggest things for the person to spell. Choose something which links to their communication priorities.

Symbol vocabulary: Show the person how to find the topics which include their priorities for communication. Choose a preferred communication topic or activity and try to start a conversation with the person.

Lesson 4: Step three: Use

The third step in providing an electronic communication aid is to teach the person how to use and take care of the product.

How to use an electronic communication aid

Support the person and their communication partner to identify parts of smartphone/tablet, turn it on/off, find and open the communication app and adjust the volume.

How to have a conversation with an electronic communication aid

Alphabet vocabulary

Ask the person and/or communication partner to open the Alphabet vocabulary on the communication app and practice:

- Finding phrases
- Going to more phrases.

Core/Foundation vocabulary modelling

Ask the communication partner to select a meaningful topic for the person and start modelling a conversation. Share the following tips:

- Model real conversations
- Take your time and talk while you model
- Model without expecting the person to respond
- Focus on understanding the message the person wants to share, not correcting

You can also include other ways to communicate to support and speed up communication. When saying your shirt (is) blue you could model "shirt blue" on the communication aid and gesture towards the person.

Warning: Remember that the communication aid is a person's voice.

- Never hold the person's hand when they are communicating
- Do not instruct them on what to say.

Repairing conversations

A communication breakdown happens when a message is not understood. To repair a conversation:

- Always let the person know if you do not understand
- Repeat what you did understand "I heard you say..." - this can assist the person to know what to fix or add
- Ask simple yes/no questions
- Select the Conversation support topic. This includes messages which may assist such as "ask me yes/no questions" or "you have misunderstood".

How to look after an electronic communication aid

Taking care of a tablet or smartphone includes:

- **Protecting** by adding a shock absorbent case and screen protector.
- **Cleaning** regularly with a soft cloth that does not leave fluff after wiping. Use alcohol wipes or a damp (not wet) cloth for sticky or dirty marks

- **Charging** the battery and checking the charging symbol.
- **Storing** in a cool, dry place out of direct sunlight. Avoiding humid environments such as bathrooms.
- **Checking** battery levels daily, no sign of damage to screen or case before use, no cracks or damage to cable or plug when charging.

Advise to contact the health worker for advice if they see any sign of damage.

Lesson 5: Step four: Follow up

The fourth step in providing an electronic communication aid is to make sure that the product still meets the person's needs and is in good working order.

Follow up should be done for all people who are provided with a communication aid.

- Follow up after two weeks and two months is advised to support a person and their communication partner to adjust to using their electronic communication aid. Further follow up is recommended each year.
- Follow up might be done more regularly if the person's communication needs are changing quickly.

If the person is not using their communication aid or has problems using it, it is important to find out why. You can try to find a solution together. Observe the person and their communication partner having a conversation.

Tip: If a person using an electronic communication aid finds it too tiring or slow to use they may benefit from a different type of communication aid not included on TAP. With their permission  refer to a communication service.

Common maintenance problems

The most common problems are:

- **Screen smashed/cracked:** if the crack has come through the top layer, send for repair. If it has not come through the top layer, monitor.
- **Not turning on/charging:** check the charging port cable and plug are intact. If the charging port is blocked with dirt or objects, remove gently.
- **Vocabulary has changed:** restore to the original vocabulary.
- **Communication app is missing:** reload the app.

Follow up actions

At the end of the follow up, plan follow up actions. Use the information collected to check with the person if:

- A different product is needed. If yes, can the product be provided locally or is referral needed?
- The current product needs repairs or replacement
- Adjustment of the product is needed
- Further teaching is needed
- Referral to other services is needed.