Low-tech Augmentative and Alternative Communication for adults

Compass Assistive Technology Service

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Who Are We?

• Compass is the specialised AAC service for adults in West London

• We work in the community and with inpatients at RHN

• Visit our website for information on our referral criteria and to make a referral
Key learning points

- To gain an awareness of the range of low tech AAC systems and strategies available
- To consider the factors involved in creating a low-tech AAC system
- To be able to create a low-tech AAC system independently
Agenda

1) Introduction to low-tech AAC
2) Systems for pointing
3) Systems for alternative access
4) Using symbol vocabulary
5) Tips and tricks
**What is AAC?**

**AAC**= Augmentative and Alternative Communication, is made up of:

**Augmentative**= supports/adds to speech

**Alternative**= instead of speech

**Communication**= in AAC this means using words or symbols to get the message across.
Types of AAC

**Unaided**: no equipment required e.g. facial expression, body language, gesture, signing

**Aided**: some equipment/tool is used

**Low tech**: paper based, not electronic (e.g. books and charts)

**Mid tech**: electronic, batteries required, voice output (e.g. Big Mack, Go Talk)

**High-tech**: most complex, mains charging required, voice output (e.g. Grid Pad)
Why are low-tech aids important?

When high tech AAC is not accessible:

- in the bath
- acute hospital admission
- respite stay
- travelling on transport

- It can be quicker and more easily accessible than a person's high tech system

- Some people prefer using low-tech
Considerations for low-tech AAC

• Functional use
• Access
• Language skills – text, symbols or both?
Functional use

• Why do they want to use it?

• Who will they use it with?

• Where will they use it?
Access

• Can they point to a chart with their fingers?
• Can they use another part of their body/gesture?
• How do they indicate ‘yes’?
• Do they have any hearing or visual difficulties?
Language skills

• Can they spell?
• Can they identify whole words?
• Do they need symbols?
• How many symbols can they manage on a page?
AAC systems for pointing/direct access
AAC systems for pointing/direct access

• There are many systems you can choose from
• You may need to create a hybrid that works for your client
• Remember to consider functional use, access and language
Text-based AAC

KEY QUESTIONS:

- Are uppercase or lowercase letters more familiar?
- Has a keyboard been used before? Is QWERTY or ABC preferred?
- Which colour combination is easier to read?
- How much movement is required to point to the letters? Which size is easier to see and reach?
- Where should the chart be positioned?
- Font size?
Text-based AAC

ABCD

QWERTY
Phrases

- **Emergency phrases** ▫ Such as “I’m going to have a seizure” or “I’m in pain”
- **Partner Instructions** ▫ Such as “I need a minute” or “It’s not on my device”
- **Discourse Functions** ▫ Such as “See you later” or “Excuse me”
- **Questions** ▫ Such as “Why is that happening?” or “Can we hang out again?”
- **Predictable Routines** ‘Medicine time’
Adding phrases to charts
<table>
<thead>
<tr>
<th>People</th>
<th>Places</th>
<th>Thing</th>
<th>Time</th>
<th>Question</th>
<th>Describe</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>Home</td>
<td>Food</td>
<td>Now</td>
<td>Who?</td>
<td>Looks like</td>
<td>Need or Want</td>
</tr>
<tr>
<td>Friends</td>
<td>School</td>
<td>TV</td>
<td>Before/Past</td>
<td>What?</td>
<td>Used for</td>
<td>Help</td>
</tr>
<tr>
<td>Classmate</td>
<td>Work</td>
<td>Radio/Music</td>
<td>Later/Future</td>
<td>When?</td>
<td>Size</td>
<td>Tell</td>
</tr>
<tr>
<td>Co-worker</td>
<td>Shopping</td>
<td>Transportation</td>
<td>Minutes or Hours</td>
<td>Where?</td>
<td>Shape</td>
<td>Do</td>
</tr>
<tr>
<td>Medical</td>
<td>Medical</td>
<td>Phone</td>
<td>Week or Month</td>
<td>How?</td>
<td>Location</td>
<td>Fix</td>
</tr>
<tr>
<td>Community</td>
<td>Community</td>
<td>Computer</td>
<td>Year</td>
<td>Why?</td>
<td>Something have</td>
<td>Talk about</td>
</tr>
<tr>
<td>Something else</td>
<td>Something else</td>
<td>Something else</td>
<td>Something else</td>
<td>Something else</td>
<td>Something else</td>
<td>Something else</td>
</tr>
</tbody>
</table>
Visual Scene Displays

• Photographs that depict familiar environments, objects, activities or people that allow learners to convey a message that relates to the scene

• Make them personally relevant

• Include the person in choosing the photo/taken the photo and generating the utterances

• VSDs support emerging communicators and context-based communicators who have difficulty comprehending grid-based communication systems-e.g. aphasia and LD
Access difficulties
Spacing

Change the layout to fit the skills – you can point with your fingers, thumb, fist, eyes.

Smaller and further apart might help increase accuracy.
Spacing
Key guard or stylus
Colour coding- for minimal access direct

- ABC layout
- Coded Access – the small chart requires a smaller range of movement. Point to the NUMBER then the COLOUR to indicate the letter on the bigger chart
- The small encoded chart only requires a small movement to point to the numbers and colours.
- Coded access will add complexity to the task.
Partner scanning

Listener Mediated Scanning Charts

• These charts are used when the person doesn’t have the physical movement to point to the letters.
• They may also have visual difficulties meaning that they cannot see the letters.
• The communication partner will read the options aloud. The person will need a reliable way of indicating ‘YES’. 
Partner scanning: examples

- Flipchart
- Simplifies the array of letters to choose from

Colour coded for listener mediated scanning (red row, yellow row etc)
Partner scanning: how?

- THERE MUST BE a way of communicating ‘yes’

There are two ways of making selections:

1. The individual **waits** until they see/ hear the desired option and then indicates ‘**yes that’s the one I want**’ by an agreed movement or vocalisation, or by activating a single message voice output communication aid that says “yes” or similar.

   or

2. The individual communicates ‘no’ **after each option offered** (by an agreed movement or vocalisation, or even by activating a second single message voice output device) until they see and / or hear the desired option and then indicates ‘yes that’s the one I want’.
Yes & no responses

- Ensure all agree

- Unconventional gestures are ok

- Some examples include: eyes up for yes/down for no, hand raise for yes, looking at yes/no cards

- Put it on chart/in a book
Partner scanning: key questions

• How does the person indicate ‘yes’?
• Does the person need to see and hear or hear the letters read aloud or just see the letters pointed to (visual + auditory scan/auditory scan/visual scan)?
• Does the communication partner need to write down the letters as they go along to keep track?
• How is an error or mistake addressed?
• Does the person mind if I predict what they want to say?
Partner scanning: phrase lists and books

Please read through these and the person can tell you which one she/he needs—it is quicker if you check the category with them first e.g. A, B, C or D

A. Emergency/IMPORTANT!
1. Call my husband
2. Call Paramedics
3. I need medicines
4. Toilet
5. Drink

B. Wash related;
6. Wipe my face
7. Wipe my nose
8. Wipe my mouth
9. Brush my teeth
10. Wash my hair
11. Brush my hair
12. Put Vaseline on my lips
13. Medicines

C. Comfort:
14. I am uncomfortable
15. Move my arms
16. Move my legs
17. Move my head
18. Reposition me
Partner scanning: PODD
Partner scanning: communication book
Vision

Core Vocabulary / Commenting Chart

- more, again
- help
- want
- like
- stop, finished
- different
- look
- don't like

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Visual impairment symbols sets

- **Widgit**
  - Original: cereal (Line thickness, proximity and perspective)
  - Modified: cereal
  - Original: farm
  - Modified: farm

- **PCS**
  - Like
  - Like
  - Help
  - Help
Tactile letter charts
Eye pointing
E-tran frame

- Position the frame between yourself and the user
- The user will look at the letter they want and you will follow their eyes
- Symbols can also be used
E-tran frame: encoding

Encoding is used to make it clear which letter/symbol they are looking at.

Steps for the user:
1. Look to the group of letters/symbols
2. Identify which letter/symbol you want by looking towards the colour of the group it is in e.g. Look at block ABCDEF, then look at YELLOW indicates ‘B’.
E-tran frame: key questions

- Can all the colours be seen?
- Is the person colour blind?
- Can the person move their gaze from left to right and up and down?
- Where is the best position for the chart?
Encoding types

Encoding with dots

Encoding with outer borders
E-tran frame: tips

• When someone is communicating using eye pointing, make sure you give them feedback on where you think they are looking as you respond.

• It can be helpful to make a statement such as:
  • “I think you are looking here [tap the symbol]”
  • “I think you’re telling me the letter m”
  • “You’re looking at the bed symbol”
E-tran frame: encoding with phrases

Speak Book is available at:
http://www.speakbook.org/
Combined access- eye pointing then scanning
Have the patient at the same time as you focus on the smiley face in the middle of the sheet.

Then, have the patient focus on the first letter of the desired word.

Move the sheet until your eyes “link” with the patient’s through the desired letter. It should be a straight line between you, the letter and your patient’s eyes.
Head movement: laser pointer attached to head/glasses
Symbol Vocabulary
When to use symbols

-Symbols represent ideas and words a person want to talk about

-For people who have language or cognitive difficulties or English is not a first language

-Iconicity - some things are not easily ‘photographable’

-It is handy if people use a similar picture language rather than everyone using different ones
Symbol sets

- **PCS**
  - Hello
  - Happy
  - Help
  - Elephant

- **Makaton**
  - Hello
  - Happy
  - Help
  - Elephant

- **Symbol Stix**
  - Apple
  - Pear
  - Car
  - House
  - Salad
  - Noodles
  - Mobile
  - Internet
  - Email
  - Truck
  - Tractor
  - Parcel
Meal Time

PCS In Context

ThinLine – In Context

- Created for the Stroke and Brain Injury vocabulary in Compass
- Illustrative images featuring various contexts applicable to adult living
Hierarchy of symbol recognition

Most important when recognising symbols:

• The individual’s experience
• The individual’s ability to learn
• ‘Iconicity’ of the symbol

• Information available at: https://www.talkingmats.com/the-hierarchy-of-visual-representation/
Choosing symbols

Think about:

• what they have used before
• symbol system on their high tech device if they have one
• the dangers of 'free' symbols- uurgh!
What about photos?

- The **detail** in a photograph can make it difficult to perceive the image and they may find it easier to see a symbol.

- ASD clients can have weak central coherence

- **BUT** photographs can be a great way to represent specific things on a communication chart e.g. mum
Choosing vocabulary

- Know the individual's preferences
- Identify and analyse daily routine
- Communication needs/opportunities in various environments
- Consider communication partners
- Use a tool such as Talking Mats to generate vocabulary
Symbol users: communication books

• Many types with different layouts
• No right or wrong format
• Must meet the communication need
Organising vocabulary

- Tailor to individual needs
- Consider learning vs function

- Variety of ways to organise symbol vocab based on:
  - Activity
  - Category
  - Language
  - Language (core focus)
  - Specific approaches: PECS and PODD
Organising vocabulary: activity

- Grouping is based on activity/situation
- This provides contextual cues for users
- Works well for predictable communication
- Limiting for users that need to express unique opinions/ideas
- Example: ‘At home’ folder on home page

- Opens onto a page with more vocab with some sentence starters
Organising vocabulary: category

- Requires categorisation skills
- Noun-based
- Works well for requesting items
- Limiting for users that need to express unique opinions/ideas
- Works well in conjunction with language based organisation
Organising vocabulary: language

- Grouping is based on linguistics
- Encourages language and literacy development
- Allows for flexible and unique expression
Organising vocabulary: core words

• Core vocabulary (verbs, pronouns, adjectives, prepositions)
  – Frequently used words (80%)
  – Small number of words (400-500)
  – Use across contexts and environments
  – Various parts of speech
  – Need symbols to depict them

• Fringe Vocabulary
  – Infrequently used words (20%)
  – Large number of words (thousands)
  – Topic and situation specific
  – Mostly nouns
  e.g. ‘Can we go to Starbucks to get a Latte?’
Demonstration

Fringe based communication chart

Cafe Chart

- Tea
- Coffee
- One
- Two
- Milk
- Sugar
- Cake
- Biscuit
Demonstration

Fringe & core communication chart

The Picture Communication Symbols ©1983-2014 Dynavox Moyer-Johnson are used under contractual agreement. All rights reserved worldwide.
Core & fringe book
PECS - Picture Exchange Communication System
PODD (Pragmatic Organisation Dynamic Display)
Consistency of placing

• Make sure you put the same words in the same places e.g. ‘more’ in top left corner of every page.

• Plan for the future when designing a communication chart

• If you feel that someone can only cope with ten symbols for now but that you would like to move them on - create a chart with ten cells now, and hide the other spaces.
Consistency examples

I can only manage 8 now..

...I might manage more later..
AAC Colour schemes

- Colour can help to make the symbol stand out on a page.

- High contrast colours like yellow and black can help some people to see the symbol more clearly.

- Colour coded system can relate to whether the word is a noun, verb, adjective etc.

- Examples of such systems include the Fitzgerald key

The modified Fitzgerald key is as follows:
- Blue: Adjectives
- Green: Verbs
- Yellow: Pronouns
- Orange: Nouns
Example - colour coding
Examples of how low tech symbol systems can be used:

- Dinner mat
- Wallet
- Book
- Chart
- Keyring
- Lanyard
- Strips
Modelling

- Use the AAC system to talk to the AAC user – value their method
- Modelling supports responsiveness and use of AAC for people with complex communication needs (Beck et al, 2009)
- Model as often as you can
- Point to symbols while you talk.
- For e.g. if they are watching a television programme and laughing, you could comment, “You like this”, while pointing to a ‘you like’ symbols
- Fine to make mistakes!
- Modelling for adults with progressive conditions?
Modelling

The average 18-month-old has been exposed to 4,380 hours of oral language at a rate of 8 hours/day from birth. A child who has a communication system (AAC) and receives speech/language therapy 2 times/week for 20-30 minutes will reach the same amount of language exposure (in their AAC language) in 84 years.

Jane Korsten, SLP
ASD and modelling

• Consider joint attention and imitation skills
• May need to work on these skills first
• May need to provide more direct prompting initially
• But beware of prompt reliance!
• Fade prompting as soon as possible
Closing tips and tricks
Clear AAC guidelines

- Richard looks up for ‘yes’:

- Richard looks down for ‘no’:
AAC Guidelines examples

- David uses a special stylus to point to his yes/no cards and to type on the device:

- The charger is inserted into the right side of the device and is labelled orange:
Making low-tech resources

• Invest in appropriate materials e.g. laminator, symbol software, keyrings and bungee cord
• Go online for inspiration or ask us-no need to reinvent the wheel!
• [http://lowtechsolutions.org/](http://lowtechsolutions.org/)
• Resource list at the end of this power point
Thank you for listening!
Any Questions?
compass@rhn.org.uk
0208 780 4500 ext 5965
https://www.rhn.org.uk/what-makes-us-special/services/compass/
Don’t reinvent the wheel!
Charts in other languages

Widgit

Eastern Health charts
Resource list

- http://lowtechsolutions.org/
- http://www.patientprovidercommunication.org/gallery/
- http://www.speakbook.org/
- http://amyandpals.com/communication-solutions-gallery/
- http://www.talkingmats.com/
- https://acecentre.org.uk/resources/
- https://barnsleyat.wordpress.com/2015/02/20/means-reasons-and-opportunities/
- http://praacticalaac.org/praactical/aac-vocabulary-lists/
- http://aacbooks.net/book1/
- https://rerc-aac.psu.edu/aac-for-aphasia-a-review-of-visual-scenes-display-project-webcast/
- http://praacticalaac.org/praactical/five-resources-for-making-and-using-visual-scene-displays/
- https://cehs.unl.edu/aac/visual-scene-resources/
- https://www.assistiveware.com/blog/assistiveware-core-word-classroom
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