Intervention - eye gaze technology

- Assessing needs SA - 4 slides
- Modelling SA – 9 slides and videos
- Core vocabulary SA – 15 slides
- TD Resources? H
  - implementation ideas, Communication Partner issues
- Using books, toys, and iPads focus for activities - Videos
- Eye tracking H
- 3:00 break
- Teaching vocabulary
- Social participation
- Literacy (SA and H)
- References

Assessing Needs

- Standardised tools can not be used with girls with Rett syndrome
- Assessment protocol - SA outline
- TobiiDynavox has resources to help with assessment
- Links:
  - https://dynavoxtech.force.com/devices
  - https://dynavoxtech.force.com/devices/apex/EvaluationTools

Assessing Needs – TD Resources

Observing the Communication Environment

- Partners behaviours and the support provided
- Functions of communication
- Successes
- Possible changes to the environment or communication system
- Skills to teach

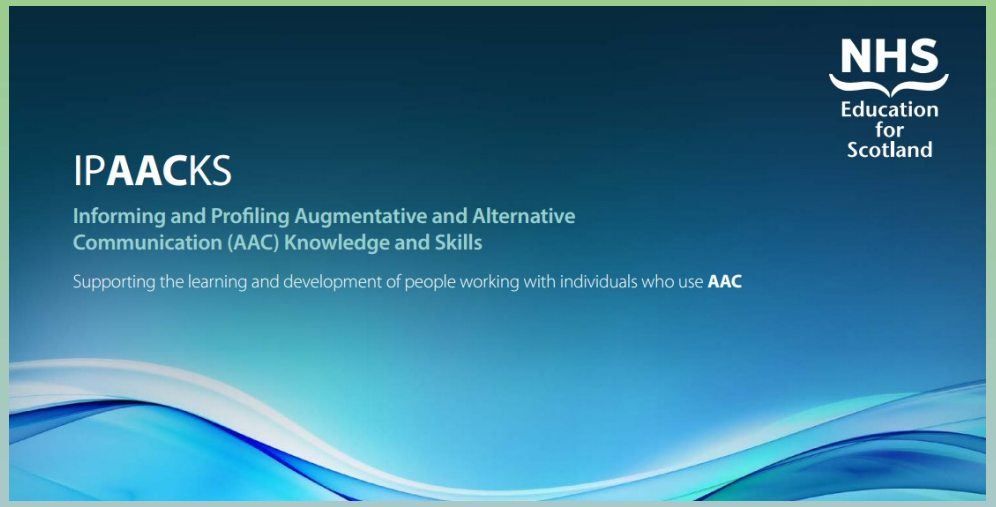
Assessing Needs – TD Resources

AAC Needs Assessment

- Things to talk about
  - would like to talk about
  - can already talk about
  - mode of communication
- Specific environments and partners
  - Topics
  - activities
- Communication skills and functions
  - can do successfully / has difficulty

Assessing Needs – Other Resources

- Informing and Profiling Augmentative and Alternative Communication (AAC) Knowledge and Skills, NHS, Education for Scotland (IPAACKS)



http://www.nes.scot.nhs.uk/media/2507407/nesd0214aacframework-re.pdf

Teaching vocabulary

Children need modelling, opportunities, explicit instruction and appropriate prompts to learn to use pictures/symbols as communication tools

(Videos)

Modelling and Aided Language Input

- The concept of Aided Language Input is simple: Speak AAC to the learner
- Video

Teaching vocabulary - Modelling

Imagine you are adding close captions to a silent movie

- Reading and Responding to the Child's Non-Verbal Signals, Garcia A. 2016-01-29

Modelling, AAC Style

- *Modelling helps children and adults learn their AAC faster*: See studies by Kathryn Drager, Cathy Binger and Janice Light, Jennifer Kent-Walsh, Shakila Dada and Erna Alant

- *Modelling is by far the easiest way for the SLT/Teacher/Family get competent with the child's AAC system*

Modelling, AAC Style

- *It's common sense*: Think about it: How many times does a typical 1-year old hear the word 'more' before she says it? Children using AAC need the same kind of exposure to 'their' language systems

- *It's motivating*: It intrigues the child, making them want to use the device, too. The child can sometimes show the adult how much better they are at finding a symbol.

AACtual Progress: Learning to Use Aided Language Input

- *It takes time to get good at this*. We're speaking pidgin AAC until we get fluent, so just keep at it. Give yourself permission to be halting at first. Keep at it and the fluency will come.

- *It helps to start small*. If the communication aid is complex, don't try to tackle everything at once. Get comfortable with modelling using the main pages or screens first, then move onto other places where vocabulary is stored.

Learning to Use Aided Language Input

- *It helps to start off by modelling only KEY WORDS in the sentence*. Those words are already highly familiar to you and they are generally words that are easy to read. That makes it a bit easier to develop a smooth motor pattern for saying those words so that you can move from hunt-&-peck to slide-&-glide.

- *Using aided language input helps with our oral language.* It makes us choose our words carefully. It also slows us down which really benefits the girls who may have language processing difficulties.

Aided Language and Modelling

- *Visual cues can be very helpful in reminding us to use the strategy*. A quick gesture from a colleague or a sticky note helped you get back on track when you start to say things without the AAC.

Don't forget to model!

- *Using aided language input helps pick up on flaws in the programming or design of the AAC system.* You might spot errors in the colour coding, or typos in the text

Further Reasons to Advocate for Aided Language Stimulation

- *It can be done everywhere*. No special equipment is needed. Classroom, playground, restaurant, therapy room, kitchen. Once you start to learn the person's AAC system, this is a highly portable strategy that you can implement with no preparation.
- *It's contagious*. Want more people to start using aided language input with an AAC user you know and love? Use it yourself as often as possible and pretty soon you will notice others following your lead.

Modelling - Everyone can do it

- Modelling is not a strategy reserved for highly trained professionals
- Some of the best implementers of this strategy are paraprofessionals and peers/family members
- “It's such a beautiful gift to model AAC -- whatever system. It's so respectful. It's such a sign of love we can give to our children. When we keep this in mind -- the overwhelming task of trying to help a non verbal child find their voice slowly begins to feel less like a task and more like a gift.”

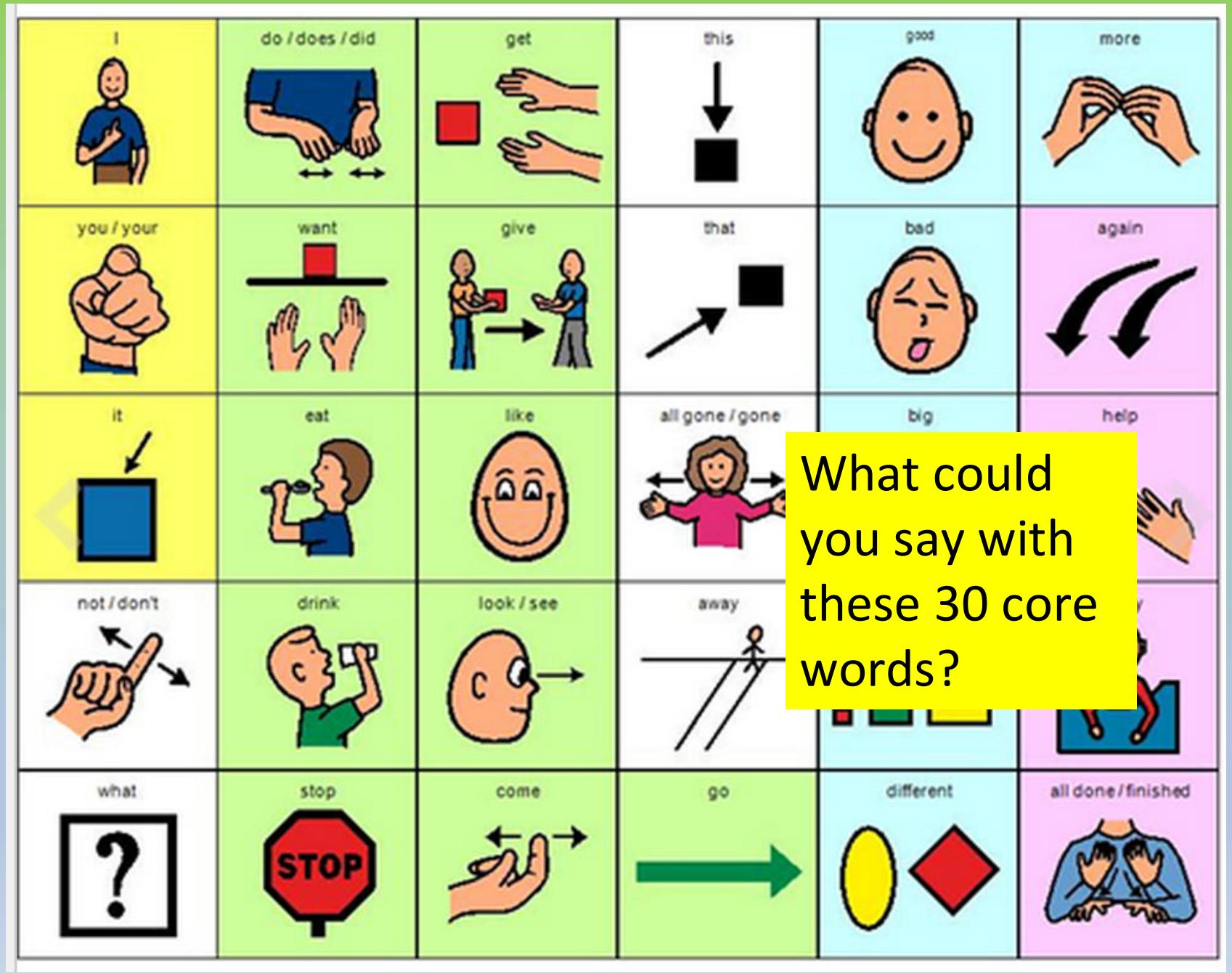
  – Karen Owens, Mom to four non-verbal children

Core Vocabulary

- **What is Core Vocabulary?**
- Core vocabulary is a small set of simple words, in any language, that are used frequently and across contexts (Cross, Baker, Klotz & Badman, 1997)
- Core vocabulary contains all parts of speech - nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections and serves as a great medium for teaching language.
- Core words are familiar and most of them are short - six letters or less.

Core Vocabulary

- Core vocabulary words make up 80 percent or more of everyday communication and are the heart of language development
- Action words like "want," "put," "get”; nouns like "thing," "stuff," and "people;" pronouns such as "I, me, my, mine," and "he, she, it, them," form easy sentences with demonstratives like "this" and "that." Early adverbs such as "here" and "there" enable all children to express themselves. "Put it here," "Get me this," and "I want that" are what little kids say when they are building their sentences
- Data suggests that children with disabilities build early language three-word phrases with core vocabulary (Baker, Hill & Devylder, 2000)


I
do / does / did
get
this
good
more
you / your
want
give
that
bad
again
it
eat
like
all gone / gone
big
help
not / don't
drink
look / see
away
what
stop
STOP
come
go
different
all done / finished
What could you say with these 30 core words?

You can say all these phrases with 30 core words

- Come again
- Get help
- Go *away (Language learning and self-advocacy!)*
- You are bad/good
- Stop it.
- Ready, go!
- Go get it.
- I like it.
- I want all done!

- I want more
- You do/did it
- You stop it
- You want it
- What you want? *(Great opportunity to model questions and teach how to form them)*
- You give that.
- Do you see it? *(Love this both because it teaches the interrogative form and also because it is partner-focused. Both play an important role in maintaining social connections).*

More to say with 30 core words

- I want more help.
- What do you want?
- Help, I want your drink!
- I like your drink more.
- I want (to) get (to) go away.
- I(m) ready (to) help you.
- See, you do like it more.
- Do you want this good drink?
- Your drink is finished
- I give you this drink again.
- Come see what I did. *(Love the idea of teaching people who use AAC to show off, a normal part of language development that we sometimes overlook)*
- I want different drink. *(Great opportunity for concept development!)*
- What you do that again, you big bad it! *(This one makes me laugh. Why motivate kids with food or special toys, when you can make the interaction itself something goofy and enjoyable? Life is too short not to have fun in therapy.)*

Teaching vocabulary

When choosing what words to teach, follow the “3F rule”. Select words and messages that are:

- Functional
  - useful things that the child cannot communicate efficiently with gestures only
- Fun
  - motivating messages that have a clear pay-off for the child
- Fast
  - messages that the child can communicate in a quick, efficient manner

Teaching Core Vocabulary

- Introduce the new word(s) using focused **aided language** stimulation;
- Teach the new word(s) with explicit instruction activities
- Elaborate on the new word meanings with engaging practice activities
- Provide repeated exposure to the new word(s) on an ongoing basis
- Check for understanding and re-teach, as necessary.

Teaching Core Vocabulary

- **Provide access to core vocabulary**: Before we can start teaching core vocabulary, we have to give clients with AAC needs, communication tools that have a good base of core vocabulary. That can be done in a no tech way, using communication boards and books. Low tech AAC devices can also be set up for core language.

Teaching Core Vocabulary

- **Don’t underestimate the amount of vocabulary needed**: It’s tempting to size up beginning communicators who are expressing very little and draw the conclusion that they only need a few dozen words on their AAC devices/tools. If we take that approach, though, we’re limiting their exposure to a wider vocabulary set. Finding the balance between too few and too many takes some clinical judgment - there are no hard and fast rules.

Teaching Core Vocabulary

- "We should approach this pretty much the way we do with speaking children. We model language slightly above their current abilities, right? So with AAC learners, we should provide AAC tools that allow us to do the same thing. If she knows or uses about a dozen words, then I might start with AAC tools that have about 18-24 words. That gives me room to use it to talk to her and provide receptive exposure to words that she doesn't yet know. Some of them are the next words that we're planning to teach. Think of it as a ladder. If you don't provide access to the next rung, she won't be able to climb. **If I only provide access to the words she knows now, how will she ever learn new words**?"

  – Caroline Musslewhite, SLP

Teaching Core Vocabulary

- **Keep the process moving**: As the learner starts to catch on to the words you are teaching, add more so you can begin to expose the girl to new vocabulary. It's a fluid process.

Teaching Core Vocabulary

- **Provide frequent opportunities for core word practice**: By definition, core words are common and appropriate for almost every situation. One of the best ways to get learners competent with core vocabulary is to have them say those words frequently. If Jenna's target words are 'it,' 'do,' and 'not,' then she should be saying them all day long. These words, individually and in short sentences, can be fit into almost any daily routine or activity (e.g. Do it. I do. Do not. You do not). Once they get used to the idea that you will build these opportunities into their routine, pause expectantly and wait for them use the words.

Teaching Core Vocabulary

- **Expect to provide a lot of support**: In the beginning stages of word learning, it's normal for AAC learners to need help. At this stage, it's better to give them practice using the word correctly with some help, than having them fumble around on their own and not say it at all.

Teaching Core Vocabulary

- **It's not about mastery**: Try not to get trapped into thinking that AAC learners have to prove that they know their current words before we give them access to more. Instead, look for signs that they are starting to 'get it.' We do more harm by restricting access to vocabulary than we do by giving them too many words. Unless you have strong data to show that a particular communicator learns fastest when they achieve mastery before moving on, give them the benefit of the doubt. It's almost 30 years since Anne Donellan planted this seed. In her 1984 article, she suggested that when we don't have enough information to be sure, we should operate on the assumption that, if wrong, leads to the least dangerous effect on the outcome.

References for Core language

- Donnellan, A. (1984). The criterion of the least dangerous assumption. Behavior Disorders, 9, 2, 141-150.
- https://kateahernesma.wikispaces.com/CORE+WORDS+TEACHING+TIPS
- http://www.slideshare.net/teechkidz/eye-gaze-and-education-in-rett-syndrome

Implementation Ideas

- Using books, toys, and iPads focus for activities
- Insert links to videos – Callie Ann
- Links to videos = praacticalaac.org
- Videos - Hector?

Eye tracking

- Hector to cover this

Colour Coding AAC

- A robust AAC system will be very colourful indeed, as it will be rich with nouns (orange), people and pronouns (yellow), verbs (green), adjectives (blue), questions (purple), conjunctions (white), prepositions and social words (pink), adverbs (brown), emergency/important/negative words (red), and determiners (grey).
- With words from all of those parts of speech, all functions of communication are possible, taking the AAC user far beyond “I want” and opening up a world of communication opportunities and partners.

Literacy

- Firing the imagination is not limited to books with text. Wordless picture books may tap into more imagination, more language, more critical thinking, and more projecting of one's self into the story. Whether illustrations are simple or lush, the reader uses them to answer so many questions, because that is the only way the story can be told: *Who or what is in the picture? Where and when is this taking place? What is happening? Why is this happening? What is the problem? What are some solutions? How did the character's actions work out? What is the difference between this picture and the one before and the one after? Did anything change? How does the character feel? What is the character thinking? How would you feel? What would you do? What will happen next?* And on and on….
- https://speakingofspeechblog.wordpress.com/2016/03/25/the-many-uses-of-wordless-picture-books/

Wordless Books

- Wordless picture books are especially good for children who use AAC. In addition to building all of the skills detailed above, the children can use their AAC system at the single word, phrase, or full sentence levels to tell the story, answer your questions, and ask questions of their own. This builds fluency with the system as they learn how to navigate to needed core and fringe vocabulary, and helps AAC users increase their mean length of utterance (MLU).

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- Aided Modeling Interventions for Children With Autism Spectrum Disorders Who Require AAC. Kathryn D. R. Drager

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- Using Aided AAC Models, Recasts, and Contrastive Targets to Teach Grammatical Morphemes to Children Who Use AAC.Cathy Binger, Molly Maguire-Marshall, and Jennifer Kent-Walsh

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- The Effect of Aided Language Stimulation on Vocabulary Acquisition in Children With Little or No Functional Speech.
  - Shakila Dada and Erna Alant