

# Colours and Symbols (CAS)

A new low-tech supported communication tool for people with aphasia

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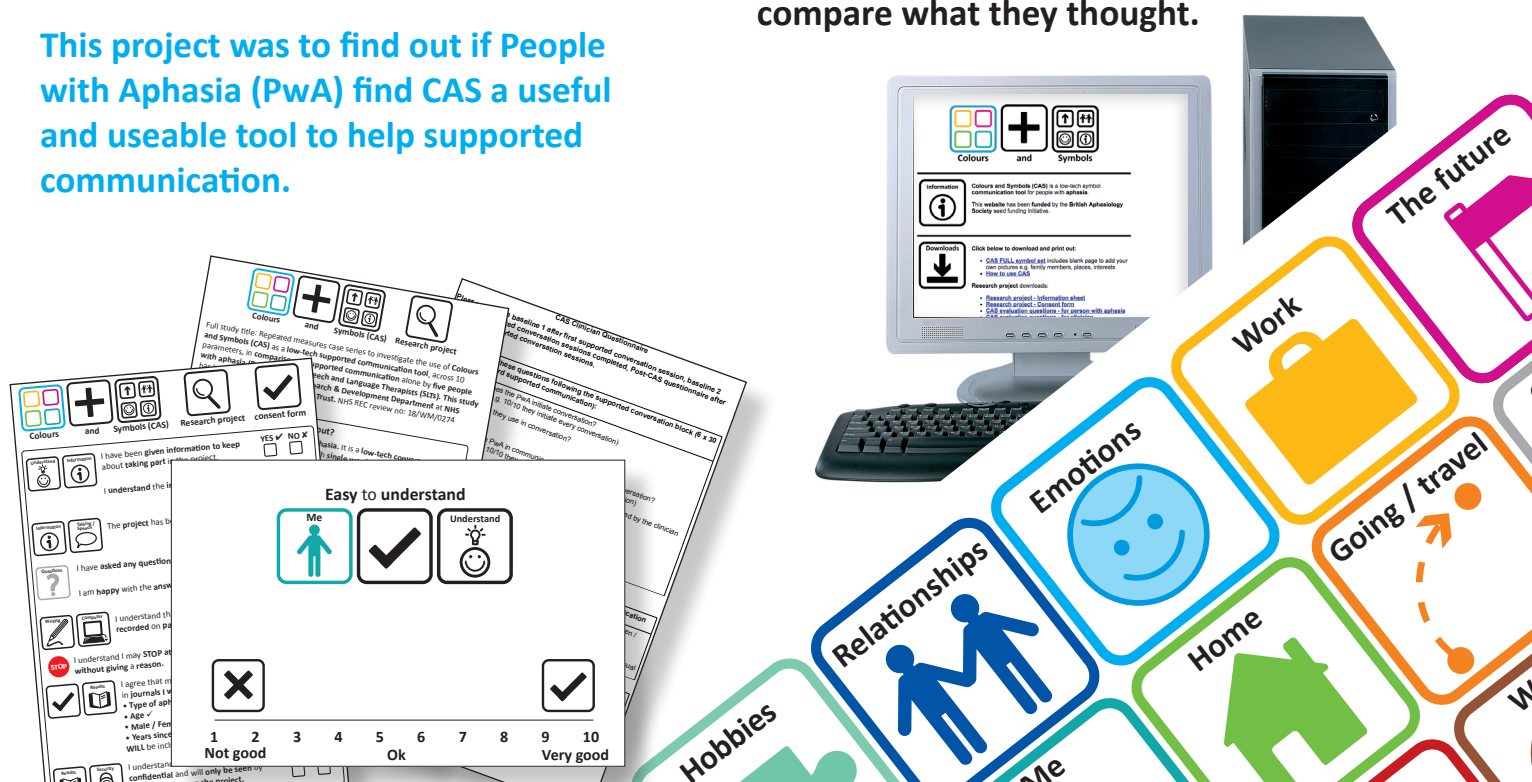
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## Summary:

Colours and Symbols (CAS) was developed by Sarah Banfield in 2014 and has been used with people with communication difficulties at NHS WSFT since 2016.

This project was to find out if People with Aphasia (PwA) find CAS a useful and useable tool to help supported communication.

Speech and Language Therapists provided 9 PwA a total of 3 hours supported communication followed by 3 hours supported communication using CAS to compare what they thought.





# Colours and Symbols (CAS)

## Method:

The Principal Investigator (PI) prepared an **aphasia-friendly**:

- **questionnaire**
- **consent form**
- and **project information sheet**
- and a **questionnaire for Speech and Language Therapists (SLTs)**
- **designed and built** a simple **website**: [www.cas-aac.org.uk](http://www.cas-aac.org.uk)
- created **9 copies of CAS tool**

**NHS ethical approval** was required, including additional paperwork:

- an **application form**
- a **project protocol**
- **HRA schedule of events**
- **statement of activities**

## Recruitment:

Research sites were contacted via  
**RCSLT research newsletter, word of mouth, presentations and Twitter.**



The PI contacted **local Research & Development** teams to **agree inclusion** and **delivered training** to each SLT team.

Research sites recruited:

**NHS WSFT (project sponsor) - Bury St Edmunds**  
**NHS CPFT - Peterborough and Cambridge**  
**Sirona CIC - Bristol**  
**NHS NCH&C - Norwich**  
**NHS CNWL - Milton Keynes and Camden**  
**NHS SGUH - Roehampton, London**

## Participants:

**Nine People with aphasia (PwA)** were identified from **their Speech and Language Therapy caseloads**.



Their SLTs **explained the project** and **gained consent** using **aphasia-friendly materials**.



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### Therapy:

The Speech and Language Therapists provided:

**3 hours**  
 Supported Communication

**Questionnaire 1 - after 30 mins**

**Questionnaire 2 - after 3 hours**

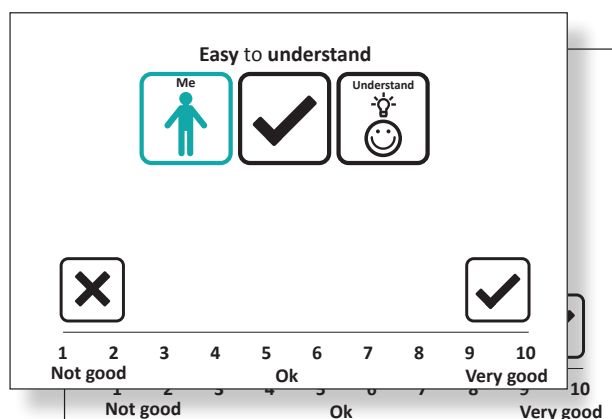
**3 hours**  
 CAS plus Supported Communication

**Questionnaire 3 - after 3 hours**

Typically sessions were delivered as **6 x 30 minute sessions**, although varied from site to site.

PwA asked to **rate on a scale** if the conversation they'd just had:

- was **easy to understand**;
- gave them **more choice in conversation**;
- let them **start conversations**;
- made them feel **equal in conversations**;
- let them **talk about their ideas and worries**;
- gave them **confidence in conversations**;
- helped them **understand information**;
- let them **ask questions**;
- **reduced breakdowns** in conversation;
- if they **felt positive about the future**.



### Results:

**Individually** PwA were **variable** and there was not enough data for statistical analysis.

As a **group** PwA scores were analysed across questions using the **Wilcoxon Signed rank test**.

- There was **no statistically significant difference** in supported communication questionnaires 1 & 2 so **scores were averaged**.
- There **was a statistically significant difference** between **CAS plus supported communication and supported communication on its own**.
- **CAS was rated higher across all questions except feeling positive about future**.





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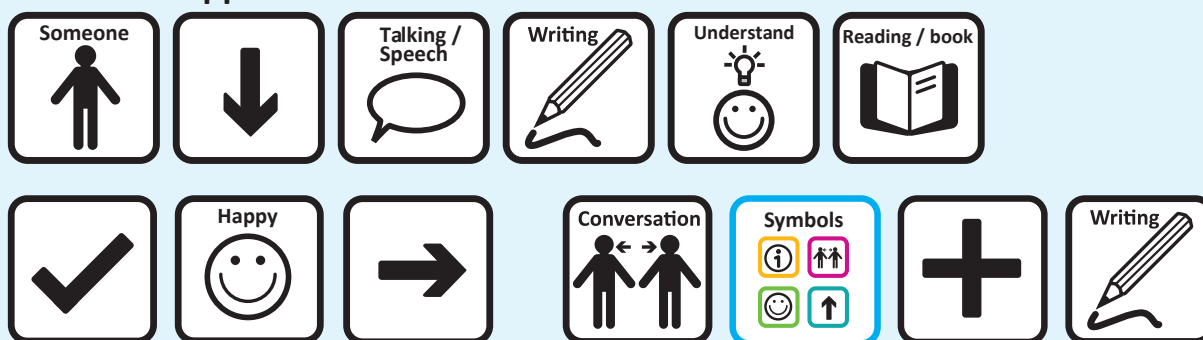
## Speech and Language Therapists said:

- CAS is a useful new tool for supported communication.
- It is **quick and easy to use** and **most PwA understood it from the first session**.
- The **size of the A2 whiteboards** used is **difficult** for use outside home/hospital.
- it can **take time** for them and PwA to **become familiar with the symbols included**
- some had **suggestions for additional symbols** required.



## Conclusion:

- People with aphasia report that CAS is a useful and usable conversation tool to enhance supported communication.



- People with aphasia say CAS helps especially: **starting conversations**, giving more choice in conversation, asking questions, talking about ideas and worries, and being easy to understand.
- Minimal learning is required to use CAS.
- CAS works best for people who are **motivated to communicate** and have **insight into their need for AAC**.
- Experienced SLTs are key in deciding **how best to introduce CAS** and adapt to **meet individual needs**.
- Supportive conversation partners aid success.
- CAS is a **flexible, low-tech, low cost communication tool** for people with aphasia.



## Future directions:

- Design extra symbols suggested by SLTs and PwA
- Explore **more portable/compact versions** of whiteboard
- Look at **high-tech version: stickers/ apps/ memoji**
- Develop online video resources to help people to use CAS

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