What can combined TOM-AAC data tell an AAC Service about the difference we make to clients?

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Communication Aid Service East of England (CASEE)

Our Service

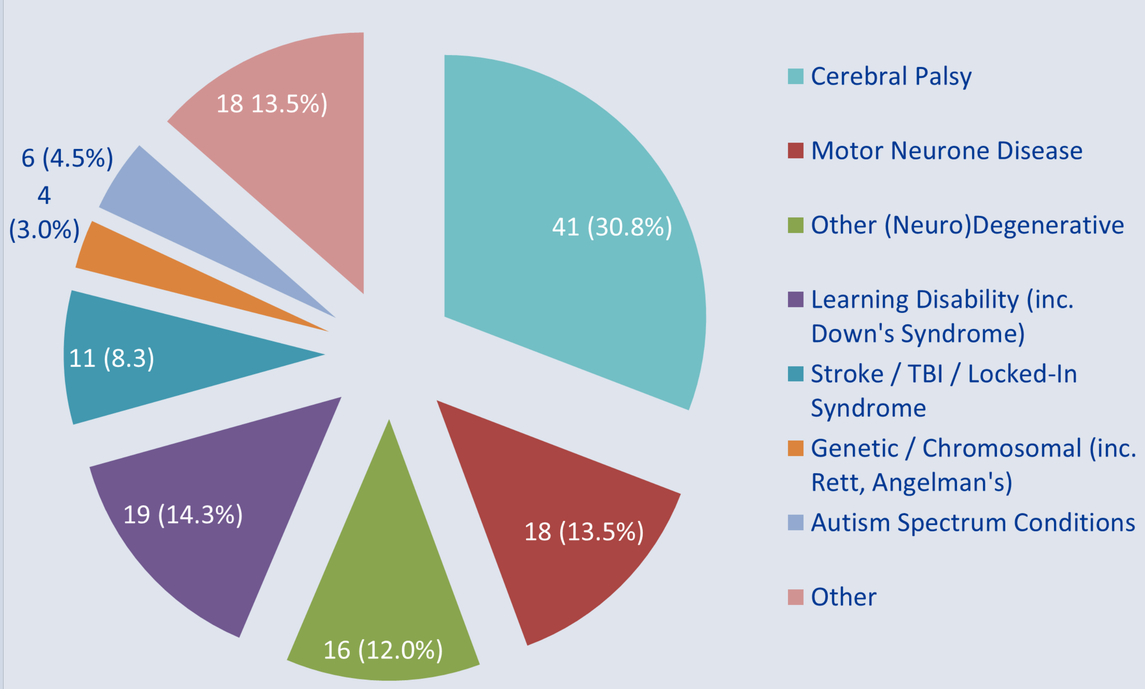
•Established in 2016, the **Communication Aid Service East of England (CASEE)** is a regional service offering specialist augmentative and alternative communication (AAC) input to six counties – Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk – with a total population of 6.2 million.

•The service has a **multi-disciplinary team** including Speech and Language Therapists, Occupational Therapists, Clinical Technical Professionals, Educationalists and Administration Staff.

•The service is **Specially Commissioned by NHS England** for the provision of complex, "high-tech" AAC systems and devices to people meeting nationally agreed criteria.

•In the period April 2016 – August 2018, **352 clients were seen** and **174 final systems were issued**.

Clients with Outcome Scores (by condition)



Collection and Use of TOM-AAC Scores

- TOM-AAC is a subscale of the *Therapy Outcome Measures* (Enderby & John, 2015) which aims to measure the impact of AAC provision on: **Impairment, Activity, Participation and Wellbeing**. The use of this outcome measure was recommended by the national AAC outcomes measures working party and was adopted by all Specially Commissioned AAC Services across England.
- The CASEE Team collects data for all clients at the initial assessment (baseline) and review appointment (outcome).

Methodology

Baseline and Outcome data were collated following a case note and database review, with data drawn from all clients given both scores (*n* = 133)

Compliance

Baseline scores were given to 220 of 352 clients (62.5%)

Outcome scores were given to 133 of 174 clients (76.4%)

Change in TOM-AAC Score

(Baseline – Outcome; Across all diagnostic groups)

Descriptor	Mean Change	Standard Deviation	Range
Participation (*n* = 133)	**+ 0.654**	.749	4.5
Activity (*n* = 133)	**+ 0.654**	.793	4.0
Wellbeing (*n* = 113)	**+ 0.226**	.547	4.0
Carer Wellbeing (*n* = 26)	**+ 0.231**	.751	4.0
Support (*n* = 23)	**No Change**	.879	3.5

Discussion

- Clients issued with high-tech AAC devices showed a mean increase across all but one domain
- Large range in scores indicated that this is a heterogeneous group
- One-Way ANOVA indicated no significant difference in outcome between diagnostic groups

Correlations

Pearson's correlations conducted to see if relationships existed between any descriptors:

•**Highly significant correlation between cognitive and comprehension impairments** (*r* = .802 *n* = 133 *p* = < .005)

•**Highly significant correlation between changes in activity and participation** (*r* = .642 *n* = 133 *p* = < .005)

•**Highly significant correlations exist between wellbeing, activity and participation**

- Activity (*r* = .259 *n* = 113 *p* = .006)
- Participation (*r* = .288 *n* = 113 *p* = < .005)

•**Higher scores in verbal output are negatively correlated with activity outcomes** (*r* = -.205 *n* = 133 *p* = .018). **In clients with MND, this correlation is more significant** (*r* = -.682 *n* = 18 *p* = < .005)

•**In other degenerative conditions where there is more cognitive involvement, higher cognition scores are partially correlated with increase in activity** (*r* = .532 *n* = 16 *p* = .034)

Conclusions

This single-centre study uses TOM-AAC to provide more evidence that **provision of AAC can increase functional communication, which in turn increases participation and involvement**. Where clients' wellbeing was scored, this also increased.

Correlations exist at outcome between **activity and participation** and **cognition and comprehension**.

The relationship between verbal output at baseline and activity outcomes may indicate that **clients who are still speaking / more able to speak at time of provision make less use of AAC systems**.

In degenerative conditions with cognitive involvement, some evidence is emerging of a positive correlation between cognition at point of provision and activity outcomes.

Reference: Enderby P & John A (2015) **Therapy Outcome Measures for Rehabilitation Professionals: 3rd Edition**. Guildford: J & R Press