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

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Publication date:
2018

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Discovery Research Portal](#)

Citation for published version (APA):

Griffiths, T., & Hale, C. (2018). *What can combined TOM-AAC data tell an AAC Service about the difference we make to clients?*. Poster session presented at Therapy Outcome Measures Connect, Birmingham, United Kingdom.

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

Tom Griffiths and Catherine Hale

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**.

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).

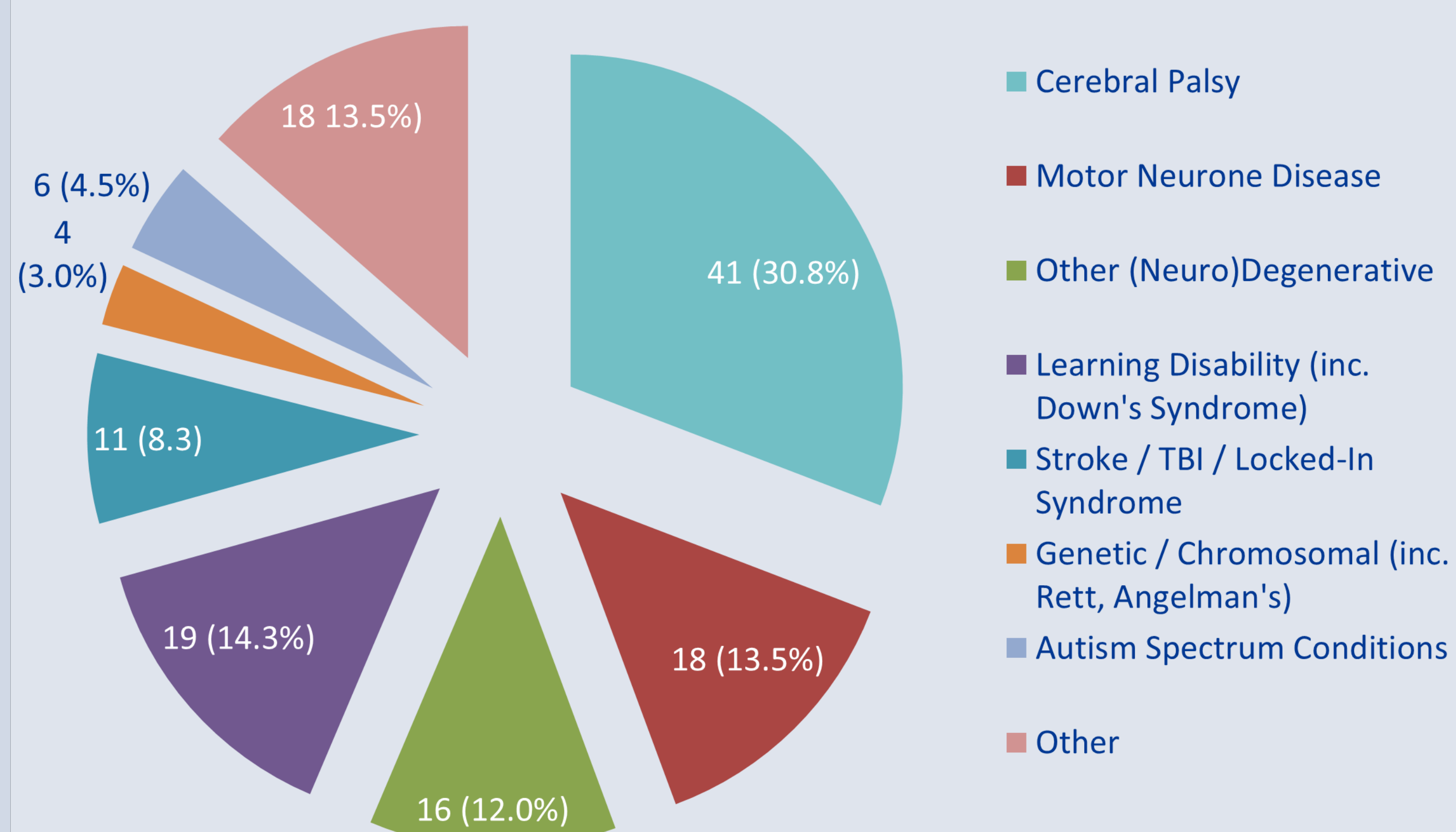
Methodology

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%)

Clients with Outcome Scores (by condition)



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