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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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# 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.

#### **Collection and Use of TOM-AAC Scores**

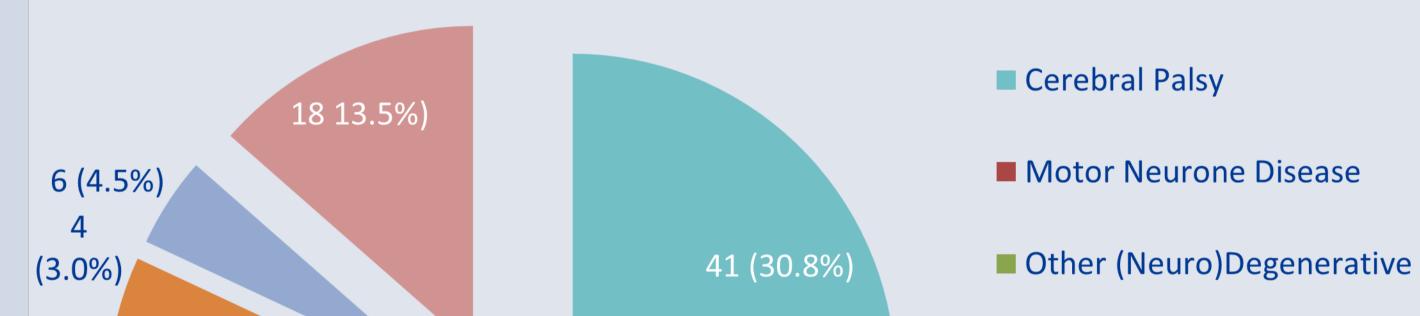
• TOM-AAC is a subscale of the *Therapy Outcome Measures* (Enderby & John, 2015) which aims to measure the impact of AAC provision on:

•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)



**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)

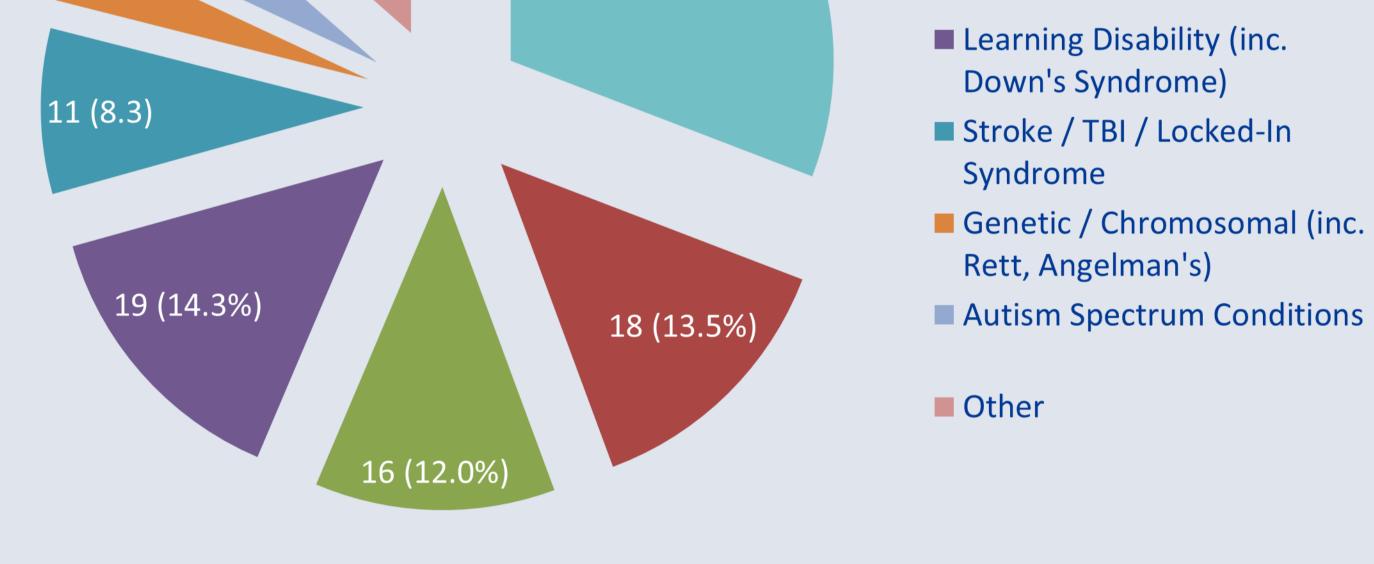
# Compliance

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
<b>Activity</b> ( <i>n</i> = 133)	+ 0.654	.793	4.0
Wellbeing $(n = 113)$	+ 0.226	.547	4.0



<b>Carer Wellbeing</b> ( <i>n</i> = 26)	+ 0.231	.751	4.0
<b>Support</b> ( <i>n</i> = 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)

## 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**.

•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)

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

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.

