

Development of a Multidisciplinary Specialist Communication & Assistive Technology (CAT) Clinic within the Public Health Sector

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Communication and Assistive Technology (CAT) Clinic*

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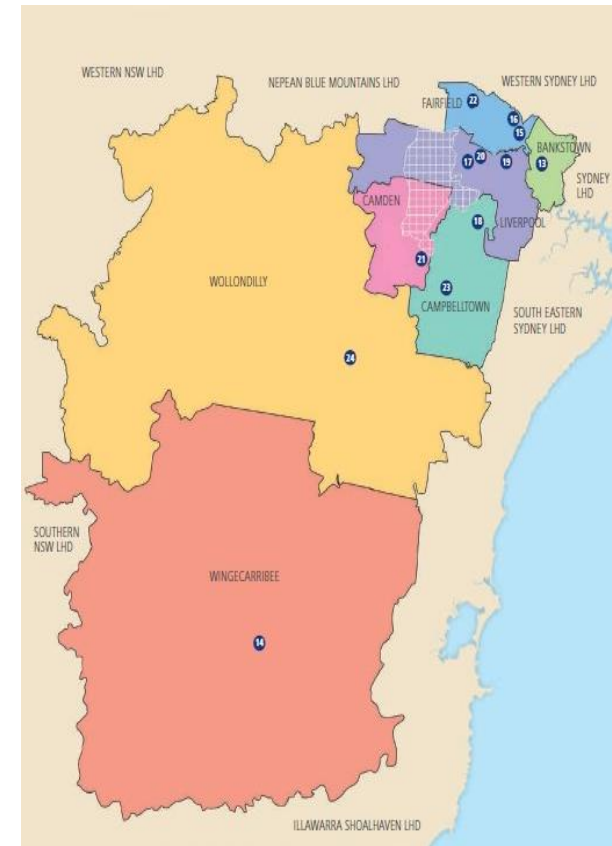


- Background
- Purpose
- Functionality
- Results
- Discussion



- Communication and Motor Neurone Disease (MND)
 - 80-95% of individuals with MND present with dysarthria (Beukelman et al, 2011).
 - Most individuals become unable to speak and subsequently require augmentative and alternative communication (AAC) (Ball et.al, 2007).
- Functional deficits and MND
 - MND impacts on function through weakness, muscle wasting, spasticity and fatigue (Arbesman & Sheard, 2014 ; Mackenzie et al, 2016)
 - Many individuals require Environmental Control Units (ECU) to maintain their independence (Hobson et al, 2016)
- Multidisciplinary specialist care
 - Improved clinical outcomes (Hobson et al, 2016)

- A large geographical area (6,243 sq/km)
- Over 1 million residents
- Culturally and linguistically diverse (CALD)
- Low socioeconomic backgrounds
- Clients with MND
 - 578 members registered in NSW
 - 79 members lived in SWSLHD



Service Background

- AAC assessment and intervention considered standard care
- In 2013, Speech Pathology (SP) and Occupational Therapy (OT) commenced joint ad hoc assessment and intervention
- Fragmented model of care
- Gaps identified in specialty service provision for AAC and ECU
- Significant advances in AAC and technology (Hanson et al, 2011)

Evolution of CAT Clinic

- In January 2018, the multidisciplinary CAT clinic was established
- The only NSW Health funded CAT Clinic
- Benchmarked with various MND services across Australia
- Utilised existing staffing
- Acquired a broad range of AAC and ECU

Purpose of CAT Clinic

- Improve service delivery and efficiency
- Provide assessment and intervention in a timely manner
- Maintain communication throughout disease progression
- Maximise independence and participation in activities of daily living
- Improve quality of life (QOL)

- The multidisciplinary team provides expertise in:
 - Assessment and prescription of AAC and ECU
 - Set up and maintenance of AAC and ECU
 - Providing education and training
- Primarily centre-based
- Telehealth and remote access available
- Fortnightly Clinic

| | | Number (n) | Percentage (%) |
|--|------------------------------------|------------|----------------|
| Total Number of Clients (n= 42) | Attended Pre CAT Clinic | 28 | 66.7 |
| | Attended CAT Clinic | 14* | 33.3 |
| Gender (n=37) | Male | 19 | 51.4 |
| | Female | 18 | 48.6 |
| Age (n=37) | <40 | 1 | 2.7 |
| | 40-59 | 15 | 40.5 |
| | 60-79 | 21 | 56.7 |
| | >80 | 0 | 0 |
| Language spoken (n=37) | Broken English | 2 | 5.4 |
| | Fluent in English | 28 | 75.7 |
| | Language other than English (LOTE) | 7 | 18.9 |
| Type of MND (n=37) | Bulbar Onset | 20 | 54.1 |
| | ALS | 13 | 35.1 |
| | Flail Limb | 3 | 8.1 |
| | PLS | 1 | 2.7 |
| Length of MND Diagnosis (n=37) | <12 months | 8 | 21.6 |
| | 1-3 years | 15 | 40.5 |
| | 3-5 years | 8 | 21.6 |
| | > 5 years | 6 | 16.2 |

* 5 clients were seen both pre and post clinic

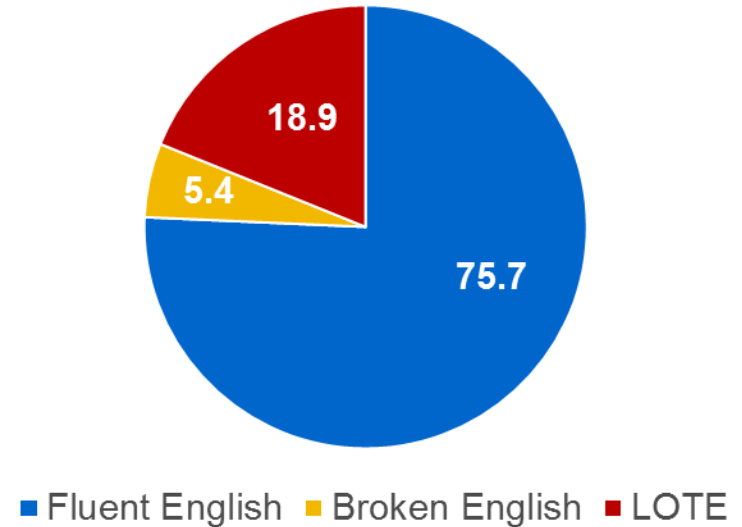
AAC Intervention

| | | Number | Percentage (%) |
|---|--|--------|----------------|
| Non-electronic AAC used (N=37) | Etran | 2 | 5.4 |
| | Picture Communication Board | 9 | 24.3 |
| | Alphabet Board | 3 | 8.1 |
| | Handwriting | 17 | 45.9 |
| | Gesture | 19 | 51.4 |
| | Pacing | 1 | 2.7 |
| Electronic AAC Used (N=37) | Commercial Tablets with Communication Software | 23 | 62.2 |
| | Specialist Communication Tablet | 9 | 24.3 |
| | Mobile | 17 | 45.9 |
| | Message mate | 1 | 2.7 |
| | MegaBee | 1 | 2.7 |
| | Desktop Computer | 1 | 2.7 |
| | Laptop | 3 | 8.1 |
| | Boggie board | 1 | 2.7 |
| | Declined | 2 | 5.4 |
| Voice Banking (N=37) | Message Banking | 9 | 24.3 |

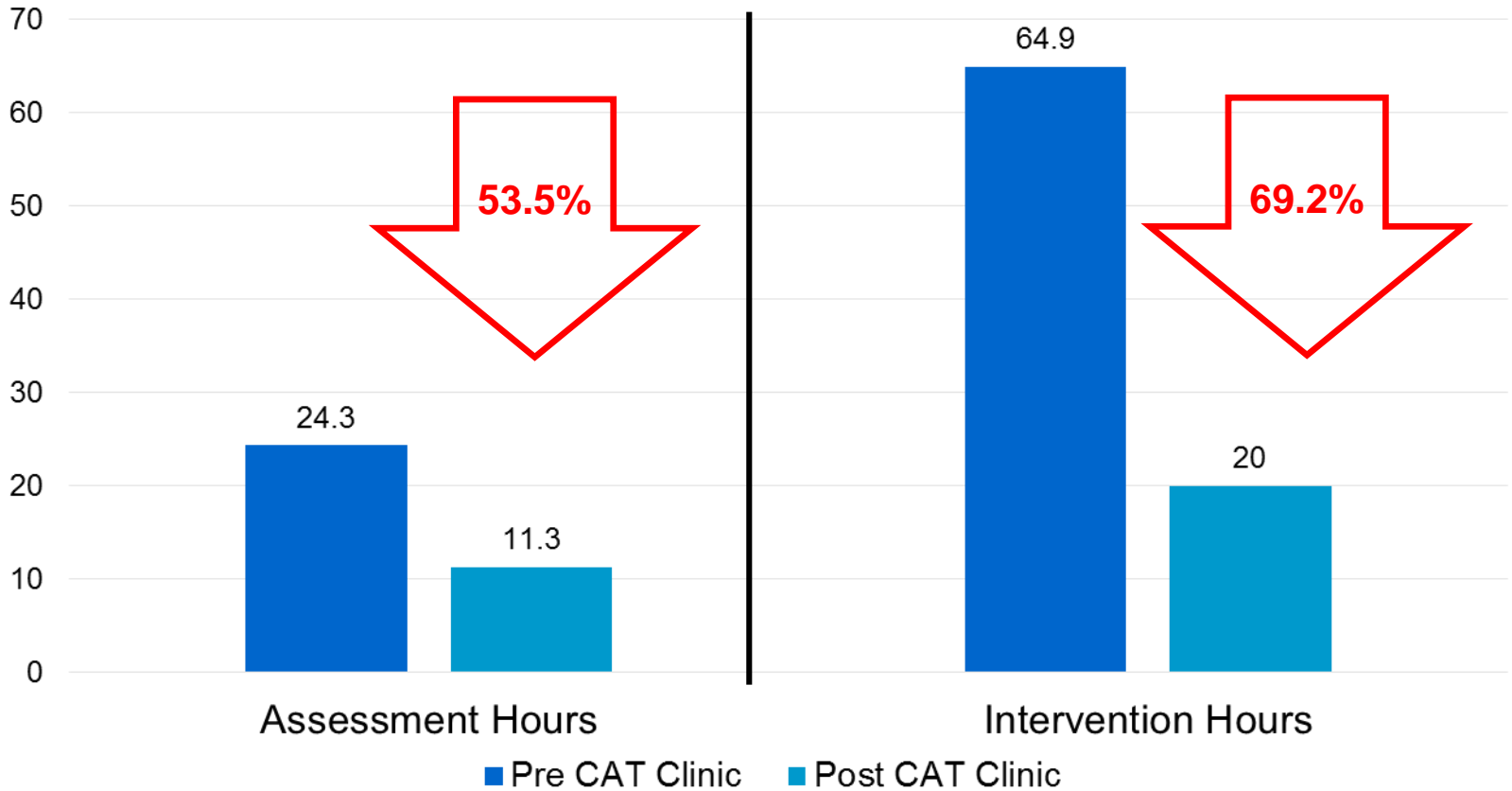
| | | Number (n) | Percentage (%) |
|--|--------------------|------------|----------------|
| Alternative Access (N=37) | Voice Activation | 1 | 2.7 |
| | Switch Adaptation | 11 | 29.7 |
| | Laser Head Pointer | 1 | 2.7 |
| | Eye Gaze | 8 | 21.6 |
| Environmental Control Units (N=37) | External Devices | 5 | 13.5 |
| | Internal Devices | 4 | 10.8 |

- 24.3% of clients spoke broken English or a language other than English (LOTE)
- CALD inclusion strategies:
 - Health language interpreters
 - Bilingual communication software
 - On-screen keyboards
 - Customized communication boards
 - Message banking

Languages spoken by CAT Clinic Clients



Assessment and Intervention Hours





Name: Grace

Age: 61

Dx: ALS (Feb 2001)

AAC: Dell Laptop, LG monitor and Tobii

Camera & Tobii Eye Mobile Mini

ECU: Progress Star

Equip: Rehadapt WC mount

“The communication device (CD) has given me total freedom and QOL. It has been so wonderful to join in the conversation at last”

“The CD has been such a blessing for me and my family. The freedom and independence it has provided in my life, especially through this awful disease”

“It’s been so great to control the television. It takes so much pressure off my family and carers. I feel very independent”

“I use the device for emails, internet, reading and controlling the TV”



Name: Nahrain

Age: 36

Dx: Bulbar MND (Jan 2015)

AAC: GridPad Eye 13 + Etran

Equip: Daisy WC mount

“I’m no longer able to talk but my CD allows me to speak and socialise with my family and friends”

“My CD has allowed me to share my point of view when speaking with health professionals”

“I can’t imagine my life without my CD as it would be very frustrating not being able to communicate”

“Going out with my CD has made it fun and exciting as I can now communicate at events and outings”

“I’ve been able to create detailed notes on my routine and am able to tell my carers what to do”

- Challenges of CAT Clinic
 - Enhancements
 - CALD clients
 - Funding bodies for assistive technology
 - Large geographical area
 - Evolving technology

- Future Planning of CAT Clinic
 - Increase frequency and catchment area
 - Training staff
 - Improve engagement of CALD clients
 - Ongoing research

- The multidisciplinary CAT Clinic has improved clinical outcomes:
 - Timely assessment and intervention
 - Gains in service efficiencies
 - Prescription of devices compatible throughout disease progression
 - Improved QOL, independence, community participation

- Utilises existing resources and staffing

- Modify service provision to meet the needs of CALD clients

- Grant applications can assist with purchasing technology

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