

Addressing the research-practice gap in aphasia therapy with value based healthcare:

Outcomes of the Comprehensive, High-dose Aphasia Treatment (CHAT) implemented at the Surgical, Treatment and Rehabilitation Service

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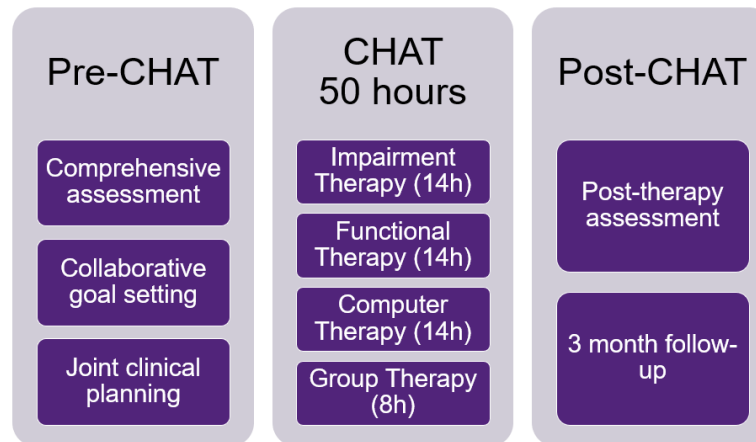
What is aphasia?

- Aphasia is an acquired neurological communication disorder that impacts a person's ability to understand what they hear, read, say and write.
- Aphasia itself does not impact a person's intellectual ability.
- *Person with aphasia (PWA): "I have a clear idea I want to say. I have a clear idea, point after point, all of a sudden gone. Clarity in my head. On one side I have clarity and on the other side this void. It's the same head but a different page."*
- Aphasia has the largest negative impact on health-related quality of life, when compared to 60 other devastating diseases [1].



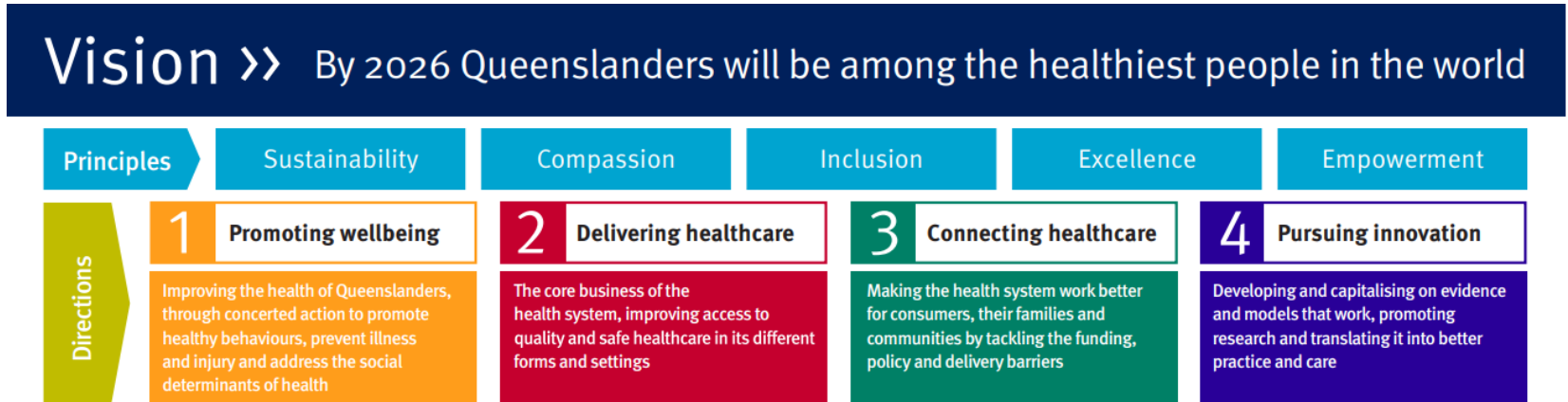
Aphasia: the research-practice gap

- There is evidence that Intensive Comprehensive Aphasia Programs (ICAP) yield improved communication outcomes for people with aphasia; however, this is rarely realised in a clinical setting [2] despite the detrimental impact of aphasia on quality of life.
- We have implemented the **Comprehensive, High-dose Aphasia Treatment (CHAT)** program at the Surgical, Treatment and Rehabilitation Service (STARS), in collaboration with the Queensland Aphasia Research Centre (QARC). This is the first ICAP to be embedded in an Australian healthcare setting.
- CHAT involves 50 hours of face-to-face personalised aphasia therapy delivered over 8 weeks in a cohort model. It is accessible to people across Queensland with acute or chronic aphasia, as inpatients or outpatients. CHAT integrates the International Classification of Functioning, Disability and Health model into its evidence based program.



Queensland Health's commitment to value based healthcare

CHAT aligns with Queensland Health's vision and 10-year strategy "My Health, Queensland's future: Advancing health 2026" by following its directions 2) and 4):



CHAT also addresses objectives 1-4 of the Metro North Health Strategic Plan 2020-2024:



Service Outcomes for the first 12 months of CHAT in STARS

- The implementation of the CHAT program at STARS demonstrates a successful clinical-research collaboration between Metro North Hospital and Health Services and the Queensland Aphasia Research Centre, The University of Queensland
- 2.0 FTE speech pathology positions have been secured (Jan 2021 – July 2023) for the delivery of CHAT within the speech pathology clinical service at STARS
- Referral pathways and intake processes for this new model of care have been established
- Collaboration and joint service delivery with the multidisciplinary team, including social work, neuropsychology, occupational therapy and allied health assistants has been successfully established



Service Outcomes for the first 12 months of CHAT in STARS

- This new service delivery model has resulted in increased access to specialist, high-dose, comprehensive, evidence-based aphasia rehabilitation. People with aphasia (PWA) who were > 1 month post-stroke with communication goals were eligible to participate.
 - 2021: 68 enquiries for CHAT → 34 PWA assessed for suitability → 25 PWA appropriate to receive CHAT → 23 PWA participated in research
 - Inclusion criteria for CHAT: rehabilitation readiness to participate in intensive therapy, able to collaboratively set SMART goals, availability to attend STARS 3-4 days per week
 - 1092 hours of evidence-based aphasia therapy was delivered as part of the CHAT program in 2021
- The CHAT service has been recognised with:
 - Collaborative for Allied Health Research, Learning and Innovation (CAHRLI) Local Award (2021)
 - Metro North Research Excellence Awards (2022): Health Services and Implementation Research Award (Finalist) and Consumer Engagement Award (Highly Commended)



Clinical Outcomes for the first 12 months of CHAT in STARS

- Evaluation of the clinical effectiveness of the CHAT program has been investigated alongside the implementation of this new service delivery model.
- In 2021, 23 PWA were consented into the research project. All participants completed the program and the dose of therapy received was high (mean dose = 47.5 hours, range 36.3 – 53 hours)
- Clinical outcomes included measures of participants language impairment (Comprehensive Aphasia Test), functional communication (Communication Effectiveness Index, CETI), communication-related Quality of Life (Stroke and Aphasia Quality of Life Scale, SaQOL) and communication-confidence (Communication Confidence Rating Scale for Aphasia, CCRSA)
- Statistically significant improvements in participants' language impairment (CAT), communication effectiveness (CETI), communication-related quality of life (SaQOL) and communication confidence (CCRSA) were observed immediately post-CHAT ($p < .05$) [4]
- Statistically significant improvements were maintained for participants communication effectiveness (CETI) and communication-related quality of life (SaQOL) at 3 months follow-up ($p < .05$) [4].

Addressing Health Inequities

- Our findings demonstrate that an ICAP can be successfully delivered within a healthcare service as part of usual care, thus bridging the research-practice gap.
- We found that PWA made clinical improvements at an impairment level, functional level and in their quality of life.
- CHAT is meeting the objectives of the Metro North Health Service Strategic Plan 2020-2024 by delivering on its strategies.



Addressing Health Inequities

Metro North Health Strategic Plan 2020–2024 (2022)



OBJECTIVE 2

To improve health equity, access, quality, safety and health outcomes.

Strategies:

- CHAT improves health equity by delivering accessible evidence-based services that maximises the quality of health outcomes for PWA
- CHAT is a collaborative partnership between MNHHS and QARC that translates to operational impact

OBJECTIVE 3

To deliver value-based health services through a culture of research, education, learning and innovation.

Strategies:

- CHAT improves health equity by delivering accessible evidence-based services that maximises the quality of health outcomes for PWA
- CHAT is a collaborative partnership between MNHHS and QARC that translates to operational impact

OBJECTIVE 4

To be accountable for delivery of sustainable services, high performance and excellent patient outcomes.

Strategies:

- CHAT has redirected the usual model of care towards an innovative high intensity aphasia therapy model, as per the supporting evidence base.
- CHAT embeds a culture of transparency and clinical accountability through its robust governance process inherent to its clinical research partnership. This fosters an ongoing quality improvement cycle to attain best possible outcomes.

Strategies to support implementation

- The implementation of CHAT was supported by key implementation strategies, which are being evaluated for research:
 1. **Service-level commitment to the program** – service funded 2.0 FTE SP staff dedicated for CHAT delivery
 2. **Training** – experienced CHAT researchers developed and delivered a training program to speech pathologists, students, allied health assistants (training was modified for different groups and included educational elements and video-based case studies).
 3. **Support/Enablement** – ongoing support was provided to CHAT clinicians from a number of sources including internal supports (supervision) and external supports through collaboration and problem-solving with the research team
 4. **Provision of resources** – access to assessments and evidence-based therapy programs and technology

Implementation and Translation to Practice

- The implementation of CHAT at STARS has achieved clinical improvements for PWA at an impairment level, functional level and in their quality of life
- A formal process evaluation of CHAT implementation is ongoing and through its iterative cycle of delivery, improvements continue
- Through the process evaluation, we seek to understand how clinician and service level changes can be sustained into the future
- Consumer feedback continues to be overwhelmingly positive

“We advocate that CHAT be a fundamental right for every person with aphasia” - Family member

“Ingredients of this program are very very simple, and that, between miracle and the program is... the people who make this miracle” - CHAT participant

References

1. Lam, J.M.C., and Woodchis, W.P., *The relationship of 60 disease diagnoses and 15 conditions to preference-based health-related quality of life in Ontario hospital-based long-term care residents*. *Medical Care*, 2010. 48(4): p. 380-387
2. Leff, A.P., et al., *Clinical effectiveness of the Queen Square intensive comprehensive aphasia service for patients with poststroke aphasia*. *Stroke*, 2021. 52(10): p. e594-e598
3. Menahemi-Falkov, M., et al., *A systematic review of maintenance following intensive therapy programs in chronic post-stroke aphasia: importance of individual response analysis*. *Disability and Rehabilitation*, 2021: p. 1-16.
4. Dignam, J., Burfein, P., Campbell, J., Greig, E., Hill, A. J., O'Brien, K., . . . Copland, D. (2022). *Evaluation of the clinical effectiveness of the Comprehensive, High-dose Aphasia Treatment (CHAT) program at the Surgical, Treatment and Rehabilitation Service (STARS)*. Paper presented at the International Aphasia Rehabilitation Conference, Philadelphia, USA.