Co-Design of the Queensland Aphasia Research Centre

84%
of stroke survivors in Australia have needs that are **not met**

Co-design of QARC Origins

In this project we will **work together** with people with aphasia, their families and clinicians to identify and design the services that are **most needed** by the community.

The Co-design of QARC project is led by PhD candidate Lisa Anemaat together with Dr Sarah Wallace, Prof David Copland and Prof Victoria Palmer. The project has received $15,000 in funding from Speech Pathology Australia.

Recruitment video co-developed for people with aphasia, by people with aphasia

"What are the priorities of people with aphasia, their significant others, and speech pathologists for the development of aphasia services in Queensland?"

Co-design process

Stage 1
Project design, set up and ethics

Stage 2
Exploring experiences of care for people with aphasia, family members and speech pathologists to find gaps in aphasia services.

Stage 3
Analysis of stakeholder experiences and identification of unmet needs. Bringing together ideas and priorities from across QLD for voting

Stages 4 & 5
Collaborative understanding – People with aphasia, family members and speech pathologists vote on their top priorities

Stage 6a
Co-design of concept designs for co-design workshops

Stage 6
Co-design workshops

Stage 7
Celebration and review event

People with aphasia

- Emotional Impact
- Impairment - life with aphasia
- Healthcare provision
- Service delays
- Access to care (equity, peers, more)
- Communication & communicating
- Hospital environment

Speech pathologists

- Aphasia awareness
- Caregiver support
- Peer support and support groups
- Culturally appropriate resources
- Equitable access to services
- Communication partner training
- Education and upskilling

Queensland Aphasia Research Centre

Queensland Aphasia Research Centre

The Queensland Aphasia Research Centre (QARC) is a collaborative partnership between Metro North Hospital and Health Service and The University of Queensland. The partnership combines clinical services, research and education to meet the needs of people with post-stroke aphasia and their families.

New aphasia therapy program

An intensive therapy program for people with post-stroke aphasia – the CHAT program – is now available at Metro North's newest hospital, the Surgical, Treatment and Rehabilitation Services (STARS).

CHAT program

The **Comprehensive High-dose Aphasia Treatment (CHAT)** program is a new, high quality treatment package that will be delivered at STARS.

The CHAT program forms part of the clinical research services at STARS.

You will be **invited to participate** in research investigating the outcomes of the service.

CHAT program

1. Is **evidence-based.**
2. Offers a **large amount** of **aphasia therapy.**
3. Is suitable for people with aphasia from **1 month post-stroke.**
4. Provides support for **home-practice**.
5. Will be delivered by **speech pathologists** with the support of **aphasia researchers**.

The CHAT program includes:

- Comprehensive **assessment**
- Patient-centred **goal setting**
- **Education** for people with aphasia and their family
- **50 hours** of **therapy** delivered over **8 weeks**
- Individual, computer and group therapy sessions.

Contact us

If you wish to speak to staff at QARC about this research please contact us via:

Phone: (07) 3365 7595
Email: qarc@uq.edu.au

If you wish to speak to the STARS Speech Pathology department about the program or referrals please contact via:

Phone: (07) 3647 6205, ask for the CHAT service
Email: STARS_SpeechPathology@health.qld.gov.au

Medical Referrals:

- Patients will undergo assessment at STARS and eligible patients will be placed on a waiting list.
- Refer via Metro North Central Patient Intake Unit (CPIU).
- Medical referrals to be made to: STARS Specialist Outpatient Services – Rehabilitation. Reason for referral: STARS Rehab Speech Pathology CHAT program.

How to refer to CPIU:

- Via Secure Web Transfer. Speak with your local Primary health Network for access.
- Fax to 1300 364 952
- Mail to: Central Patient Intake Unit
  Aspley Community health Centre
  776 Zillmere Rd, Aspley 4034

For further information about referrals contact CPIU on 1300 364 938 (Mon-Fri, 8am-5pm) or visit 'Refer Your Patient MNHHS' website
www.health.qld.gov.au/metronorth/refer

This research has been approved by the Royal Brisbane and Women's Hospital Human Research Ethics Committee (HREC/2020/QRBW/50105). V2.0 Date 11.03.2021

The University Of Queensland AUSTRALIA

Metro North Hospital and Health Service | Queensland Government

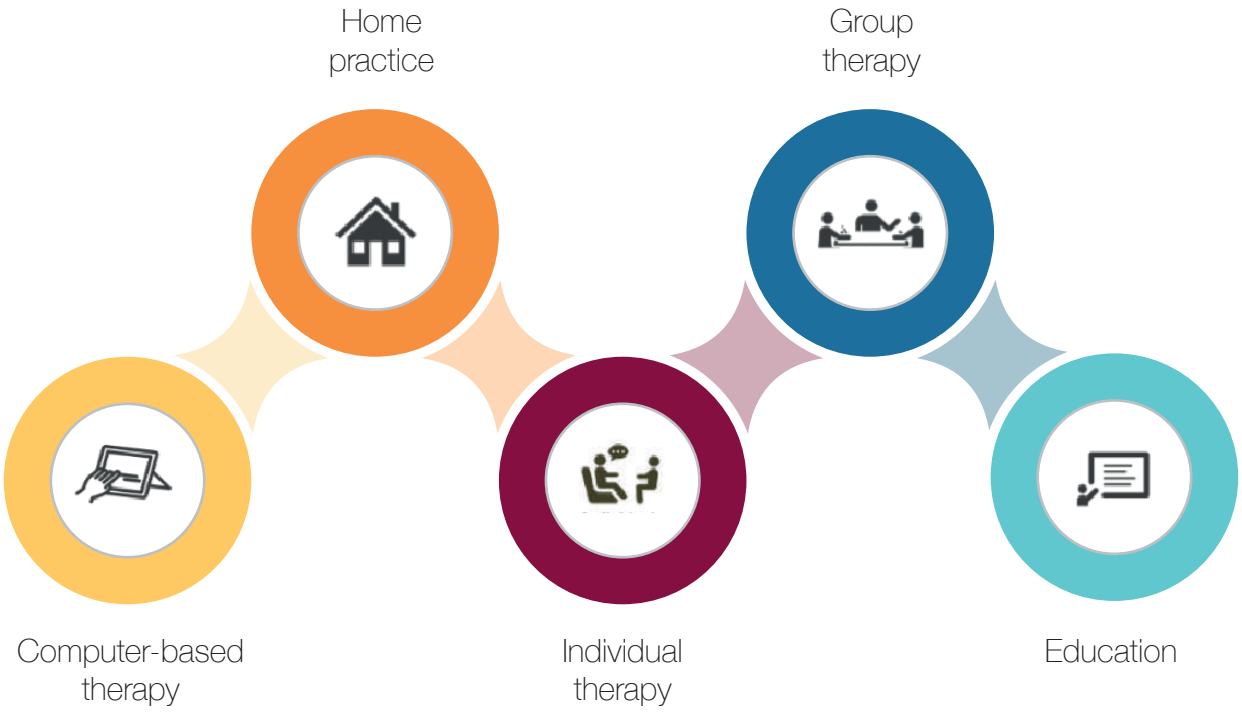
TeleCHAT

TeleCHAT is a comprehensive high-dose aphasia therapy program delivered straight to a person's home via telerehabilitation/over the internet.

TeleCHAT is a comprehensive high-dose aphasia therapy program delivered straight to a person's home via telerehabilitation/over the internet. TeleCHAT has been translated from the in-person CHAT program developed by The University of Queensland.

The TeleCHAT project is led by Dr Annie Hill. PhD candidate Genevieve Vuong is currently researching the usability, feasibility, and acceptability of delivering the therapy program into a person's home via telerehabilitation. Clinical and cost outcomes are also being evaluated.

TeleCHAT uses videoconferencing software to enable people to participate in this comprehensive and high-dose therapy from home.



Designing TeleCHAT

1. Translating CHAT: Translating the CHAT program to deliver via telerehabilitation 'TeleCHAT'
2. Development and evaluation of the training programs to support the delivery of the TeleCHAT program
3. Evaluation of the feasibility, usability and acceptability of TeleCHAT through a series of pilot trials
4. Delivery of TeleCHAT: TeleCHAT has successfully completed 3 cohorts and will continue to collect clinical outcomes and cost data throughout 2022
5. TeleCHAT and beyond: TeleCHAT is part of a 20 site Partnership Grant which implements CHAT into health services in QLD, SA and NSW

Participant feedback

- Participants found TeleCHAT usable
- Participants were satisfied with TeleCHAT and would recommend it to other people with aphasia

"I think face to face or zoom is no difference"

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LifeCHAT

LifeCHAT is a technology system that aims to support people to self-manage their aphasia therapy and motivate them to do that therapy.

LifeCHAT Origins

The idea for LifeCHAT originated from discussions with stroke survivor and study co-investigator, Gopal Sinh, who wanted a way to track his progress and recovery.

Gopal was told by his family and friends how his communication was improving during his recovery, however he wasn't able to recognise these improvements and this affected his motivation to continue with therapy.

The LifeCHAT project is led by Dr Sarah Wallace and post-doctoral researchers Dr Peter Worthy and Dr Megan Isaacs. The project has received $389,000 in funding from the Medical Research Futures Fund (MRFF).

Codesigning LifeCHAT

1 Experience Gathering

Exploring the experiences of people with aphasia, their families and clinicians in completing aphasia therapy at home.

2 Codesign Team

People with aphasia, family members, and clinicians are brought together to work in partnership with the research team.

3 Design & Develop

The LifeCHAT app is designed and developed in a series of workshops.

4 Usability & Acceptance

Evaluation to ensure that LifeCHAT meets expectations and needs

5 Feasibility & Efficacy

People with aphasia, family members, and clinicians trial the prototype LifeCHAT app.

LifeCHAT in the news
https://bit.ly/lifeCHATnews

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CHAT Partnership

Comprehensive **H**igh-dose
Aphasia **T**reatment Partnership

CHAT Partnership Origins

In aphasia, major evidence-practice gaps have been identified and include the inadequate amount and intensity of therapy provided to people with aphasia. The CHAT program has been developed by UQ researchers to address this gap.

CHAT is an intensive therapy program for people with post-stroke aphasia which incorporates the best available evidence. Running for 8 weeks, the CHAT program includes assessment, patient-centered goal setting, patient and family education and 50 hours of language therapy delivered in individual, computer-based and group sessions.

The CHAT partnership project is a collaboration between key stakeholders with the aim to successfully translate the CHAT program into clinical practice. Partners include The University of Queensland, Monash University, Southern Cross University, University of Technology Sydney, 5 Hospital and Health Services in Queensland, 1 Local Health District in New South Wales, 1 Local Health Network in South Australia, The Stroke Foundation, Speech Pathology Australia, Australian Aphasia Association, Statewide Rehabilitation Clinical Network and the AH-TRIP initiative at the Royal Brisbane and Women's Hospital.

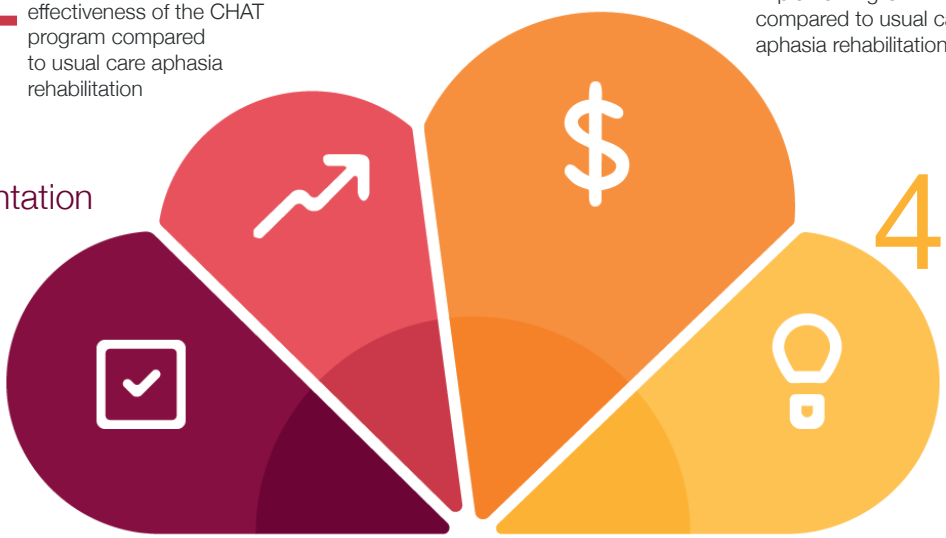
The CHAT partnership project is led by Professor David Copland, post-doctoral researcher Dr Marie McSween and PhD student Rachel Levine. CHAT partnership is funded by a 5-year NHMRC partnership projects grant.

CHAT
Comprehensive High-dose Aphasia Treatment

CHAT partnership project aims

2 Effectiveness
To determine the effectiveness of the CHAT program compared to usual care aphasia rehabilitation

3 Cost-effectiveness
To examine the potential cost-effectiveness of implementing CHAT compared to usual care aphasia rehabilitation



1 Clinical implementation
To evaluate the clinical implementation of the CHAT program in clinical settings around Queensland, New South Wales, and South Australia

4 Knowledge & skills
To investigate whether therapists report and demonstrate increased knowledge and skills in the provision of comprehensive high-dose aphasia treatment

Queensland **Aphasia** Research Centre

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Aphasia Tech Hub

Improving access to technology for people with aphasia, their support people and treating clinicians

Lead by Dr Jessica (Jess) Campbell
Lead consumer advisors: Phill Jamieson, Kim Barron

What we do

Free workshops and seminars

Free **one-to-one consultations** and **coaching**, matching tech with the goals of a person with aphasia and assistance in developing skills

Technology **open house** during QARC coffee group

Student and clinician training

Design collaboration (Aphasia Tech Quest)

Self-directed tech-enhanced **home therapy** early stage effectiveness trial (CHAT-Maintain)

APHASIA TECH QUEST
Collaborative Design Solutions

Our impact

Average satisfaction rating for consultations: **94%**

Equipment purchased, installed, donated devices refurbished

People with aphasia, support people **receiving services:** 57 in 2021, 28 in 2022 (to date)

Clinicians **receiving services**: 28 in 2021, 55 in 2022 (to date)

$141,203 grants received (Stroke Foundation, School of Health and Rehabilitation Sciences, QARC Seed Grant)

Media reach for CHAT-Maintain project announcement: **5.76 million**, 22 mentions

42 new resources developed, provided to people with aphasia, clinicians

Proposed next steps

My Aphasia Team Finder: developing novel app + website to help people with aphasia find their support team, peer mentors, especially those living rurally/remotely, single people, culturally and linguistically diverse people

Free bank of resources on QARC website

Implementech: partnering with health services to integrate evidence-based treatment technology into practice

AssistMe: exploring accessibility/benefits of voice assistants e.g. Amazon Echo, Google Home

New Aphasia Tech Hub project CHAT-Maintain explainer video

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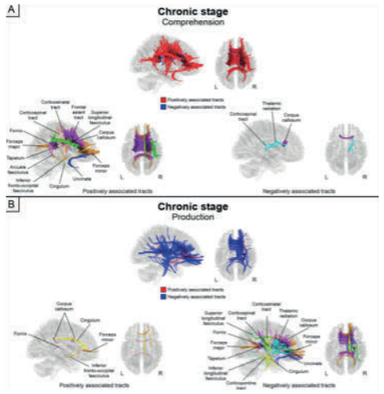
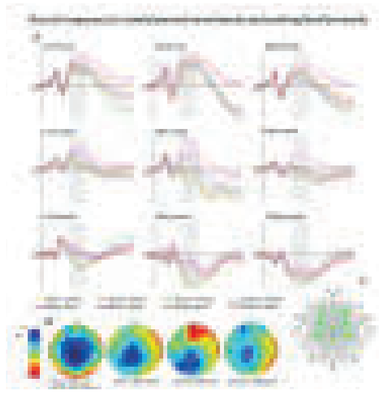
Neurobiological predictors of aphasia

Dr Sonia Brownsett, Aoife Reardon, Kim Garden, Samuel Armstrong, Jennifer Lee, and Veronika Vadinova

Queensland Aphasia Research Centre



We investigated which white matter tracts in the right hemisphere were associated with language skills after stroke. We found tracts that were both positively and negatively associated with language comprehension and production.



We used electroencephalography (EEG) to investigate healthy word learning. We show that new words are rapidly encoded by the brain. Improving our knowledge of healthy brain function enables us to better understand how the brain changes when damaged or diseased.

Contribution of the right hemisphere to language recovery

Neural responses of learning new words

Our team uses multiple brain imaging methods and analyses to understand how damage to the brain causes aphasia and how we can use this information to make more reliable predictors of aphasia and aphasia recovery.

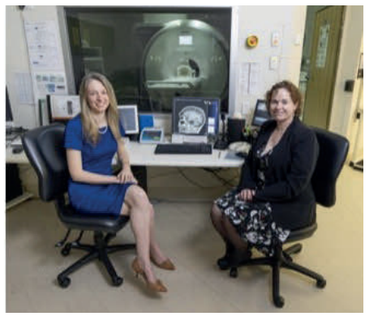
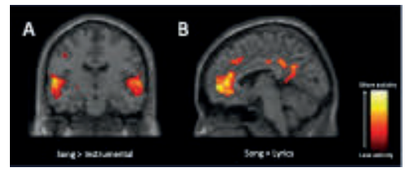


Image: The team is working to develop a pre-surgical fMRI language mapping protocol which reduces the risk of post-surgical aphasia in patients with medication resistant (refractory) epilepsy.

Improving the Validity and Reliability of Presurgical Language Mapping in Refractory Epilepsy

The relationship between listening to music and language



This research provides insights into the age-related changes in music and language processing, and so can be used to develop interventions to support language recovery after stroke.

Investigating the volume of stroke lesion

The importance of brain health in predicting aphasia outcomes

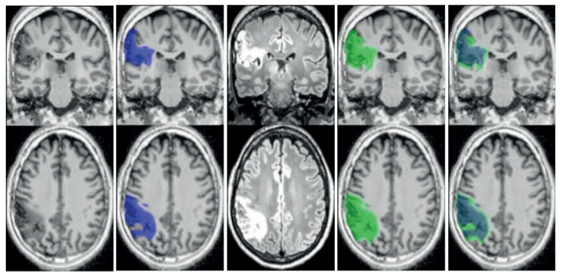
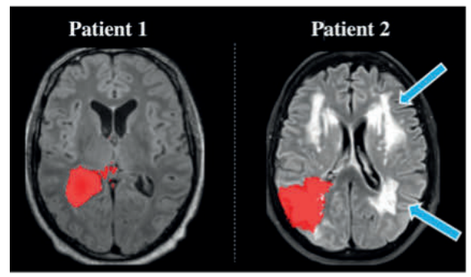


Image: An example of how lesion estimation can differ between MRI sequences.

We investigated the optimal MRI sequence to identify damaged stroke lesions. These results will help improve predictions of recovery and inform future studies and clinical practice about which MRI sequences should be used.

We are investigating whether age-related brain damage contributes to aphasia severity. This will contribute to our understanding of how brain health interacts with aphasia.



Brain scans of two patients and their stroke lesions (in red). Blue arrows (Patient 2) highlight additional damage in the brain's white matter that is unrelated to the stroke event.

MEASuRES

Driving quality improvement through **M**eaningful **E**valuation of **A**phasia **S**e**R**vic**ES**

MEASuRES Origins

Currently there is no systematic way of determining if Australian aphasia services reflect evidence-based standards or produce outcomes that are meaningful to people with aphasia.

MEASuRES aims to use real-world data to understand aphasia care and outcomes.

Led by Dr Sarah Wallace and PhD students Sally Zingelman and Marissa Stone, MEASuRES is funded by an NHMRC Investigator Grant.

The MEASuRES projects

01

Development and implementation of a minimum dataset for aphasia services. The dataset will be designed in partnership with people living with aphasia and health professionals.

02

Understanding aphasia care and outcomes through data linkage with existing patient registries

- Australian Stroke Clinical Registry (AuSCR)
- Australian Rehabilitation Outcomes Centre (AROC)

03

Demonstrating the value of aphasia treatments through improved economic evaluation measures

04

Providing the right treatment, to the right person, at the right time, by establishing clinically relevant benchmarks of change

05

Developing targeted interventions to close evidence-practice gaps

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