CanCommunicate: Optimising communication in brain tumour

CanCommunicate significantly improved self-perceived communication disability, demonstrating that tailored, goal-based communication intervention can have beneficial outcomes for people with a brain tumour.

Dr Emma Finch, Ms Erin Kelly, Ms Philippa Butler, Prof Tamara Ownsworth, Prof Mark B. Pinkham, Prof Jennifer Fleming, Dr Emmah Doig, Dr Leisa Turkington, Dr Clare Burns, Dr Anna Farrell, Prof John E. Pierce, Dr Rachel Wenke, Prof David Copland, Prof Steven McPhail, Dr Sonia Brownsett

INTRODUCTION

- In Australia, brain tumours have a five-year survival rate of only 25% [1] and a lifetime individual cost of $1.3 million [3].
- Over 2/3 of people with a brain tumour report some level of communication disturbance [2] yet less than 30% of people with brain tumours in Australia receive speech pathology services [4].
- When people with brain tumours receive speech pathology intervention there is no evidence-based intervention designed specifically to meet their communication needs.

OBJECTIVES

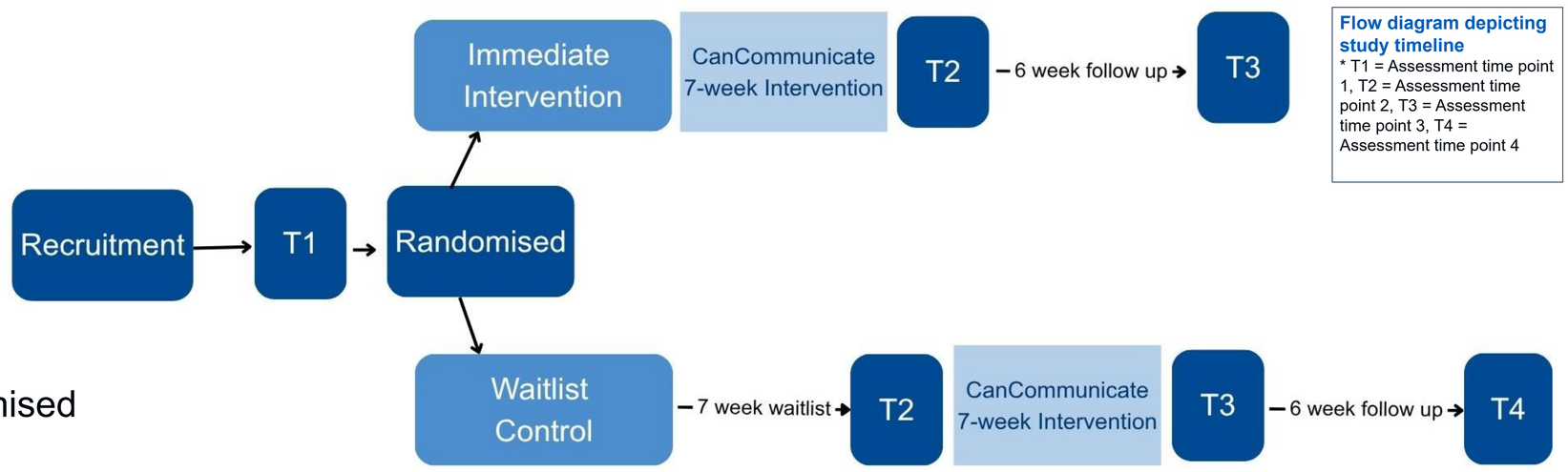
- We developed, piloted and trialled an intervention called "CanCommunicate" for people with communication difficulties following brain tumour.
- **AIM:** To evaluate the efficacy of CanCommunicate for improving perceived communication disability and quality of life (QoL) in people with brain tumour, compared to usual care.

UNMET NEED
"In the last couple of days he's not speaking at all. He can't get anything out. He doesn't even try now"
(Family member)

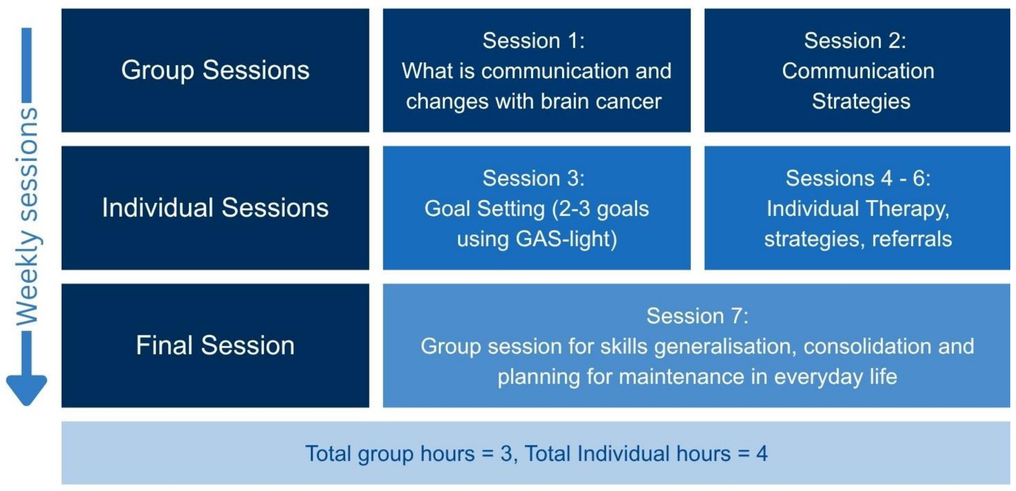
UNMET NEED
"It sort of feels like you're getting dumped in the trash"
(Family member)

METHODS

- CanCommunicate is a 7-week communication intervention:
  - Guided by Goal Attainment Scaling
  - Group and individual sessions
  - Delivered in-person or via telehealth
- RCT design: Participants were randomised to CanCommunicate (immediate intervention) or a wait list (control).



Flow diagram depicting study timeline
* T1 = Assessment time point 1, T2 = Assessment time point 2, T3 = Assessment time point 3, T4 = Assessment time point 4



- CanCommunicate was based on:
  - Clinical guidelines for other neurological populations
  - Chart audit of communication management for people with a brain tumour (n = 448)
  - Interviews with people with a brain tumour and their significant others (n = 21)
  - Consumer advisory group Input on design

OUTCOME MEASURES:

- CAT DQ, FACT-G, LCQ & semi-structured interviews pre and post.

RESULTS

- 39 people participated (Immediate intervention n = 24, waitlist n = 15).
- Significant between-group difference on the CAT DQ over time ($p = 0.04$) in favour of the intervention group, but not for LCQ ($p = 0.58$) or FACT-G ($p = 0.80$).
- When data were combined for all participants who completed CanCommunicate (n = 23), ratings were significantly improved on the CAT-DQ ($p < 0.001$) and LCQ ($p = 0.04$) at 6-week follow-up.
- Participants perceived CanCommunicate favourably and made suggestions for further optimisation.

Qualitative Summary:
Positive experience
Improved confidence
Valued flexibility

"It has made my brain work better I think"
(participant quote)

"Online just makes it better when you're feeling exhausted and not well"
(participant quote)

CONCLUSIONS

- CanCommunicate improved self-reported communication disability and achievement of communication goals, but not QoL measures. Participants perceived the intervention favourably.
- Largest RCT of a communication intervention with people with brain tumour.
- The diverse multidisciplinary team and the consumer involvement in the co-design of the intervention were pivotal to the success of the project.

Link to article:

Link to manual:

Acknowledgements: Metro South Health Research Support Scheme, Princess Alexandra Hospital Speech Pathology and Oncology teams, and participants and their families.

Affiliations: Metro South Health, West Moreton Health, The University of Queensland, Griffith University, Metro North Health, La Trobe University, Gold Coast Health, Queensland University of Technology

References
1. Australian Institute of Health and Welfare (2017). Brain and other central nervous system cancers. Cat. no. CAN 106. Canberra: AIHW.
2. Brownsett, S. L. E., et al. (2019). Language deficits following dominant hemisphere tumour resection are significantly underestimated by syndrome-based aphasia assessments. Aphasiology, 33(10), 1163-1181.
3. CanTeen Australia (2017). The economic cost of cancer in adolescents and young adults.
4. Halkett, G. K. B., et al. (2022). Supportive care of patients diagnosed with high grade glioma and their carers in Australia. Journal of Neuro-Oncology, 157(3), 475-485.