

# “Retrain My Brain”: Developing an interdisciplinary group attention training programme for severe paediatric acquired brain injury (ABI)

**Dr Jenny Jim, Dr Laura Carroll, Dr Jonathan Pool,  
Helen Johnson & Jo Lloyd**

## Objective

- There is an emerging evidence base for cognitive rehabilitation with promising results for targeted interventions addressing specific neurocognitive functions.
- Studies have shown attention training to be feasible on an individual basis<sup>1</sup>.
- The objective was to use these findings to devise a group-based attention training programme for children and young people (CYP) in a post-acute inpatient setting at The Children's Trust.
- This intensive neurorehabilitation environment helped devise a truly interdisciplinary approach, using expertise from all disciplines to maximise exposure to multi-modal tasks.

## Results

- A five-day, 45 minute group session programme was devised (Fig. 2).
- Sessions are based on physical, visual or auditory attention or a combination of all 3 for a 'circuits' day.
- We prioritised the inclusion of process (drills/ repetitive practice) and strategy (metacognitive) components within the group session, but also recognised the importance of trying to generalise training to functional activities.
- Groups also contain a brief educative component at the start of each session (the four components of 'Cognitive Rehabilitation Therapy'; as defined by The Society for Cognitive Rehabilitation, 2010-2013).
- Sessions designed with suitable activities for secondary school aged children on the rehabilitation programme.
- Education, therapy and care staff support with running the sessions.

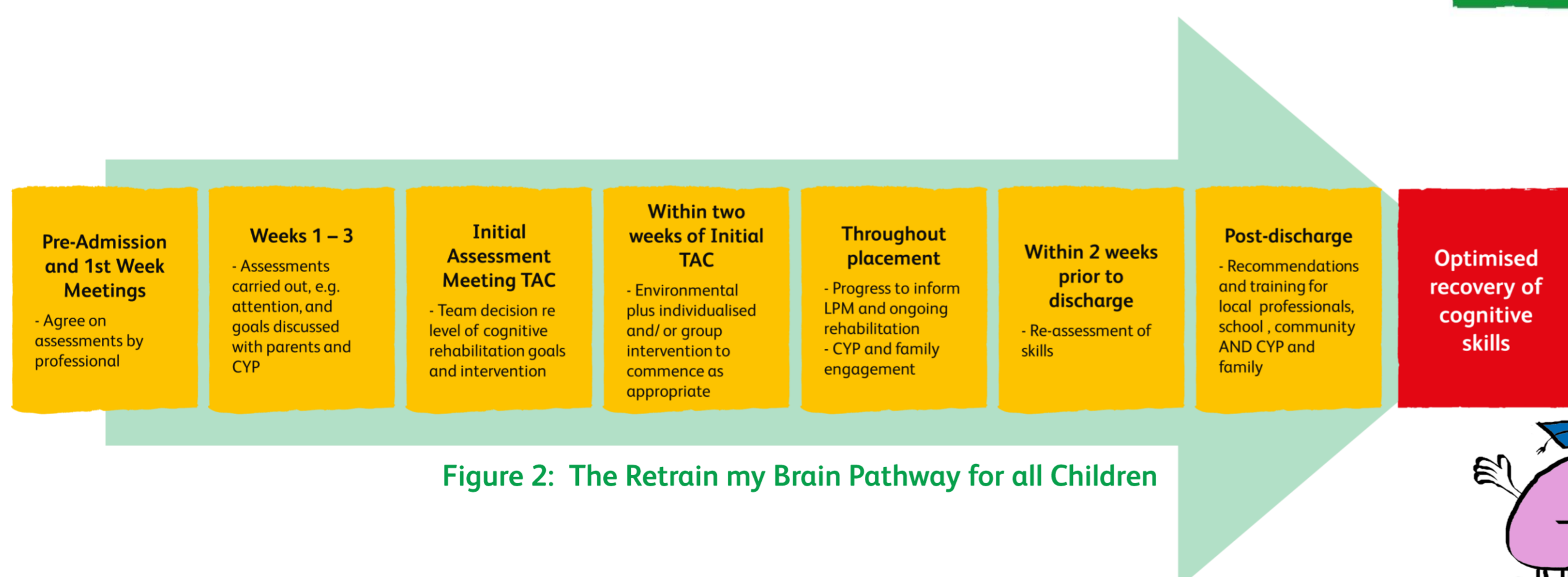


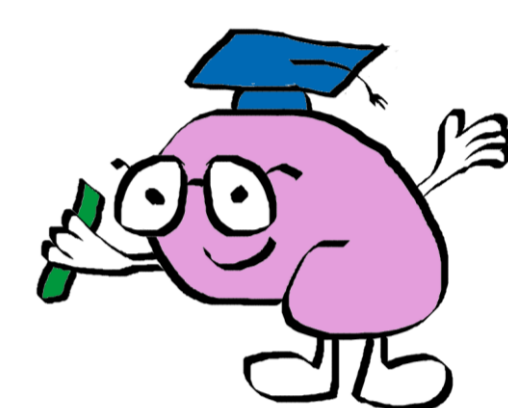
Figure 2: The Retrain my Brain Pathway for all Children

## Conclusion

- A six-week feasibility study has taken place. Having established that the programme is feasible, and having reviewed the implementation of the study, a six-week pilot study is underway. The pilot includes pre- and post-assessment measures using both the TEACH to measure changes in attention and the BRIEF-2 to measure changes in executive functioning.
- If successful, then a larger study will be designed and to include a wider group of the CYP resident within the service.
- This might lead to further studies examining the effects of this approach on other neurocognitive functions.

## Method

- Literature review undertaken using the question “What are the common ‘effective ingredients’ to successful cognitive skills training groups/ programmes tested with CYP that have severe-moderate ABI?”
- Then narrowed to any attention-based programmes (AMAT-C, AIM, FORAMEN, Attenzione e Concentrazione, Rehacom & DSIT).
- The key ingredients were distilled to be:
  - Combination of process-specific and meta-cognitive strategies
  - Involvement of a coach/parent
  - Routine and frequent use/exposure
  - Appropriate intensity of repetition
  - Ability to individualise the approach
  - Having motivating activities
- Key researchers/ practitioners in the field were consulted and invited to collaborate.
- An internal interdisciplinary team (Fig. 1) was formed and materials devised on the findings of the review and other available guidance.



## What is ‘Retrain My Brain’?

- Retrain my Brain is an innovative interdisciplinary approach to ensuring cognitive rehabilitation happens across The Children's Trust for all children accessing rehabilitation.
- It has been designed from the emerging evidence base around retraining injured cognitive or ‘thinking’ skills.
- It involves:
  - Group sessions, individual 1:1 programmes for the children and families
  - Staff training to understanding how all of us, in whatever role we have can contribute

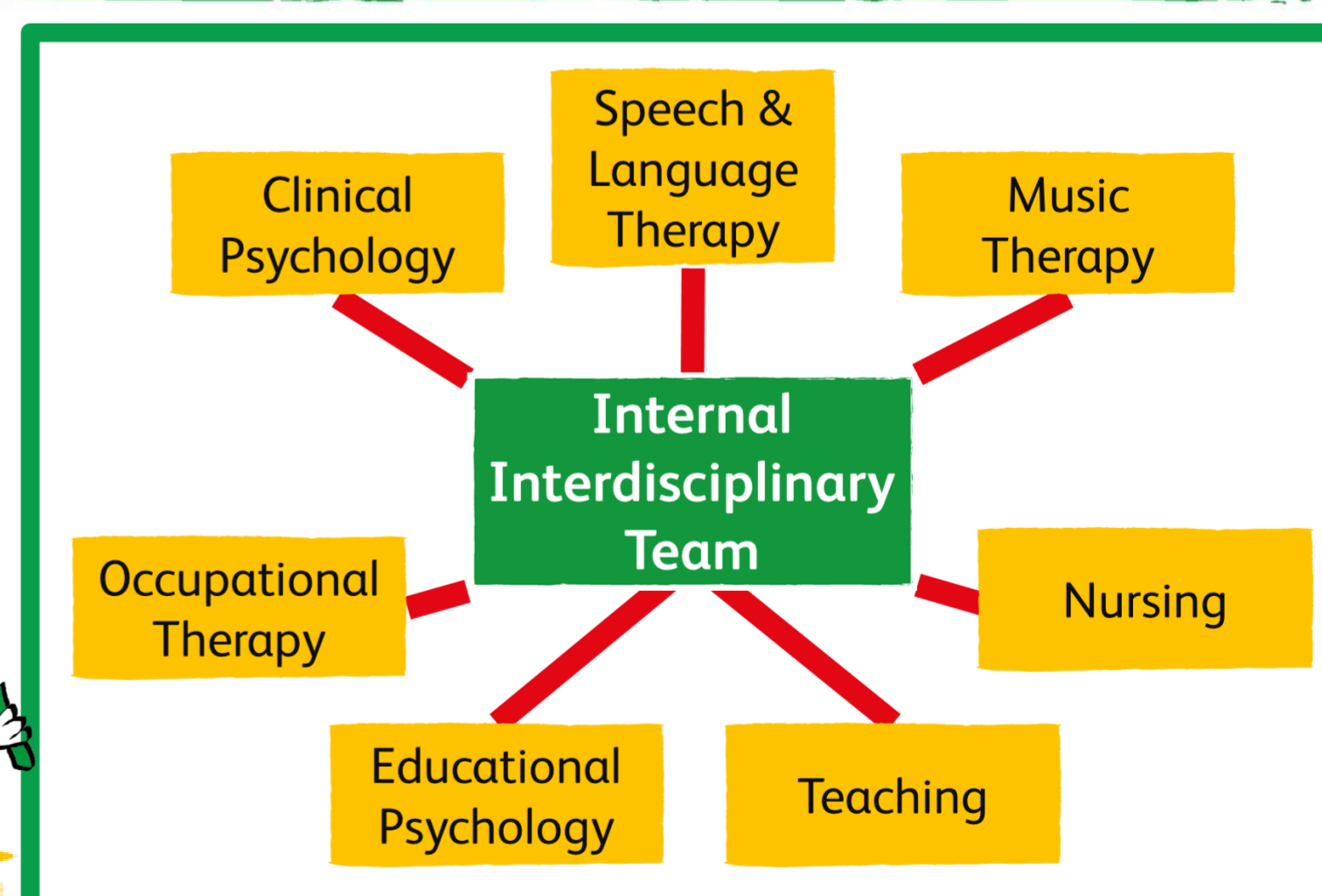


Figure 1: Retrain My Brain – Internal Interdisciplinary Team

## References

- Limond, J., Adlam, A-L.R., & Cormack, C. (2014). A model for pediatric neurocognitive interventions: Considering the role of development and maturation in rehabilitation planning. *The Clinical Neuropsychologist*, 28(2),181-198.

[icarroll@thechildrenstrust.org.uk](mailto:icarroll@thechildrenstrust.org.uk)

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