



ABIL Conference 2025

From Hospital to Home: Co-Developing neumind to Support Cognitive Rehabilitation and Independence

Luke & Ellis Parry







Acute
0 - 8 months



Inpatient Rehab
8 - 24 months



Community
2 - 5 years



OZC
2017



Home
2018 - now





Acute
0 - 8 months



Inpatient Rehab
8 - 24 months



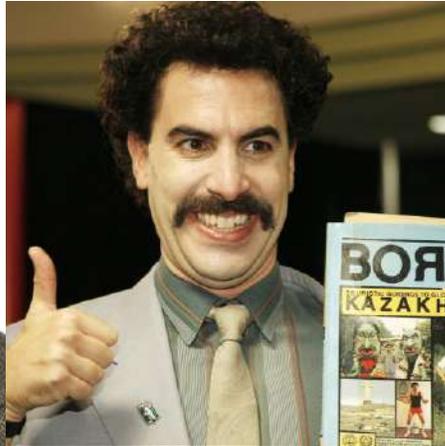
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THE CARE CLIFF...

🔍 How do I get better from brain injury?





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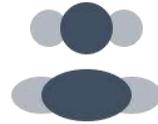




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2018 - now

THE
*Oliver
Zangwill*
CENTRE

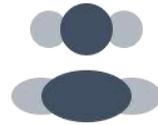




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Understanding



Awareness



Strategies



Meaningful Values and Goals



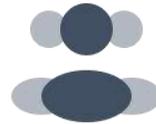
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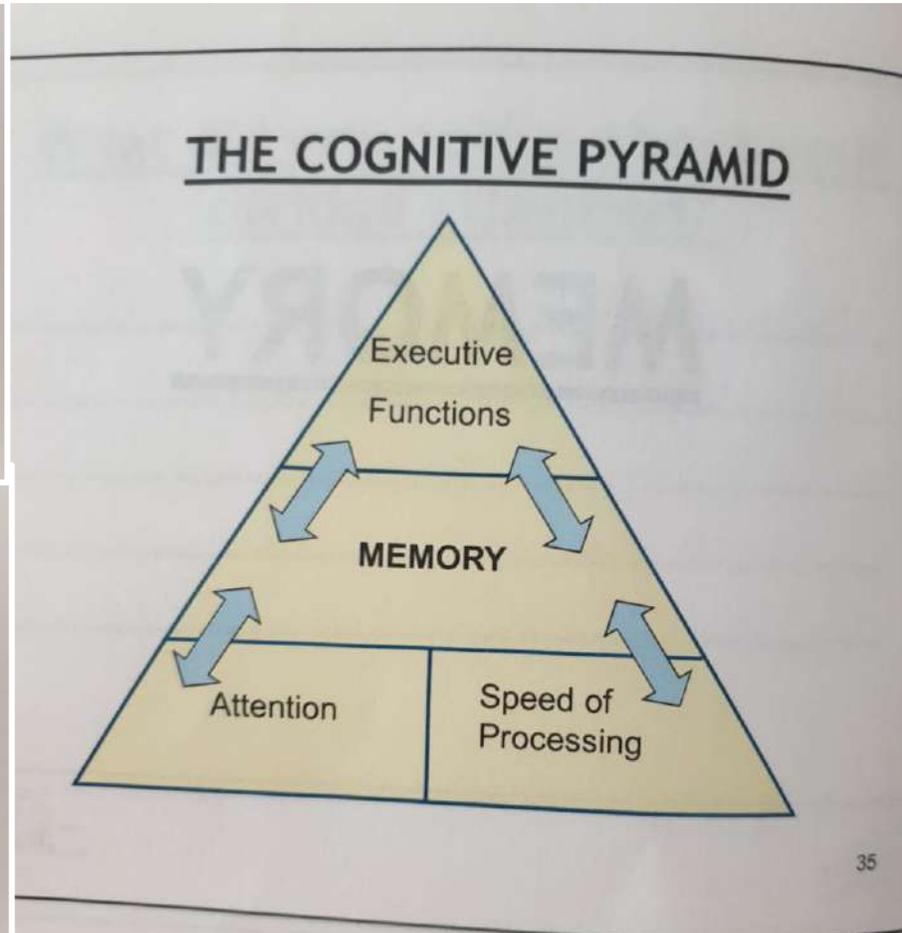
2018 - now

STRATEGIES

- Phone
- Journals

Task: remembering phone numbers

- Use repetition and spaced retrieval to learn Andrew's phone number :
 - 01353 652169



Strategy: STOP THINK!

- If you notice that your attention has slipped...
 - 
 - 
- Refocus - what were you supposed to be doing?
- Get back on track.

ERRORLESS LEARNING

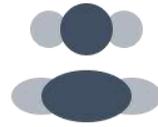
- People often say we learn from our mistakes
- **HOWEVER** - Both correct and incorrect guesses get remembered, so you may repeat a mistake without realising
- You can learn more efficiently if you are prevented from making a mistake while learning ☺
- *Example*
 - "Someone new started at work. His name was Mark, but somehow I got it into my head that his name was Mike, and now I keep calling him the wrong name."



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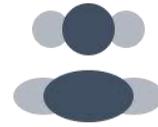




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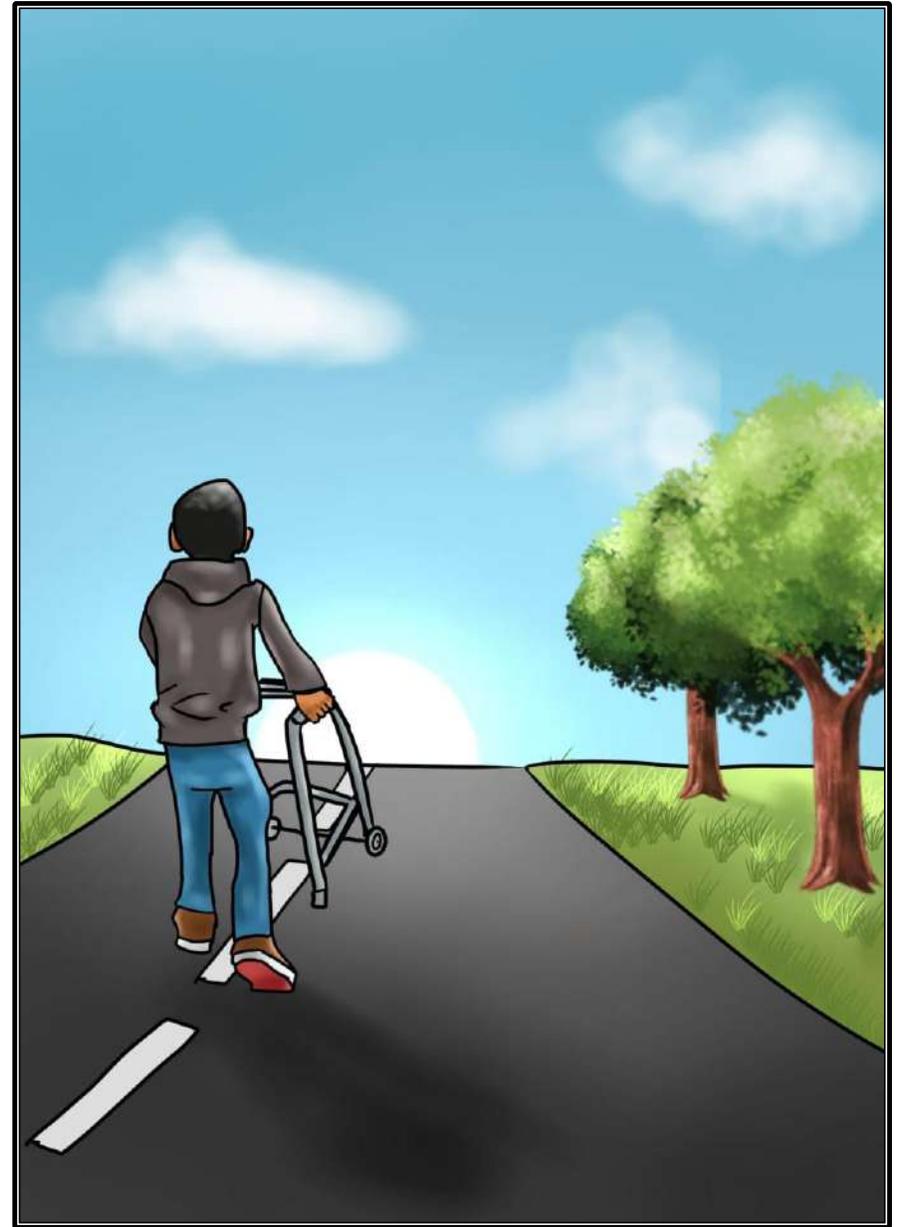
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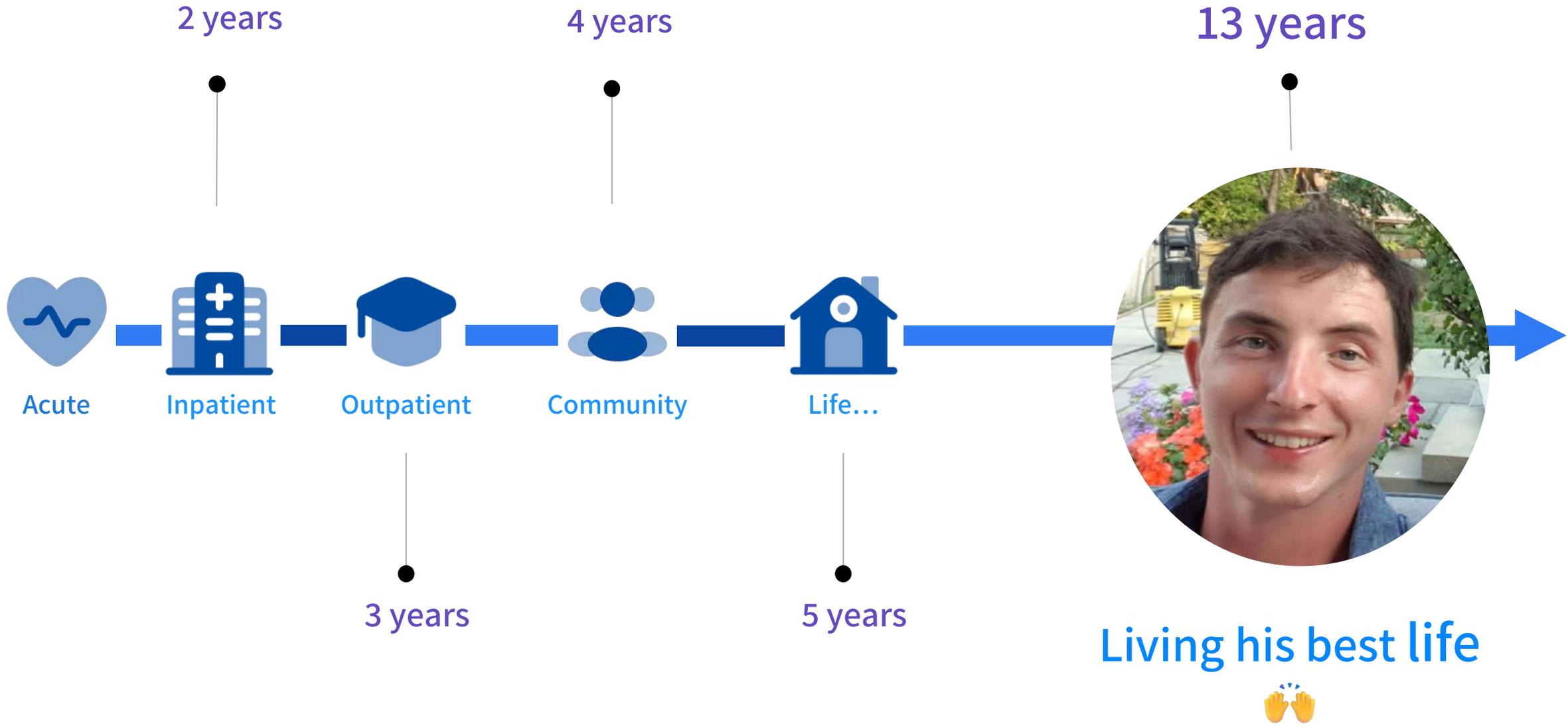


Home
2018 - now



The Road to Recovery





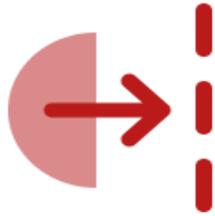


The Rehabilitation Gap: Challenges After Discharge



Huge Gaps in Care

No long term support and limited contact time



No Continuity

Information lost and lack of continuity through transitions



Not Accessible

Information not tailored to impairments



Families Unsupported

Families disconnected and unsupported

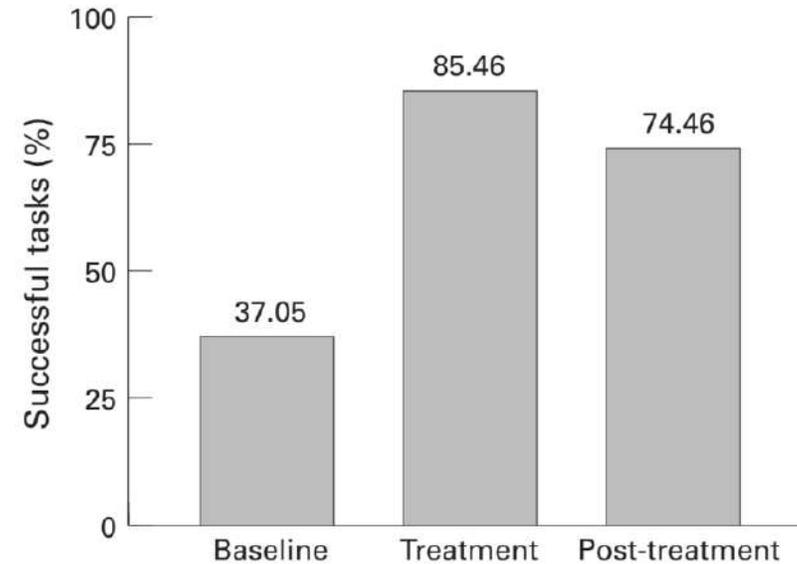
Where to begin?



Journal of Neurology, Neurosurgery, and Psychiatry 1997;63:113–115

Evaluation of NeuroPage: a new memory aid

Barbara A Wilson, Jonathan J Evans, Hazel Emslie, Vlastimil Malinek



Mean percentage of tasks completed successfully in baseline, and during and after treatment.

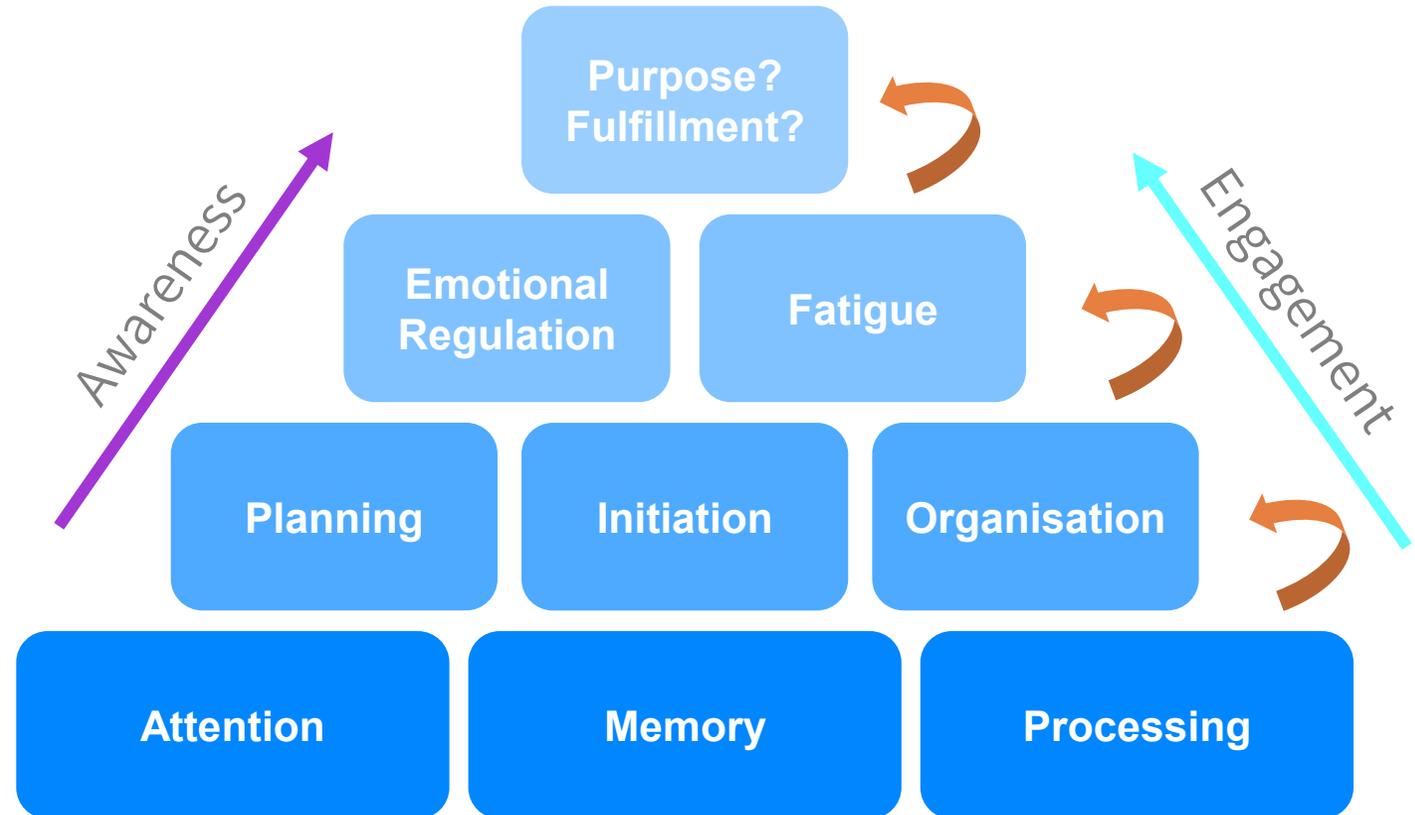
Alfred



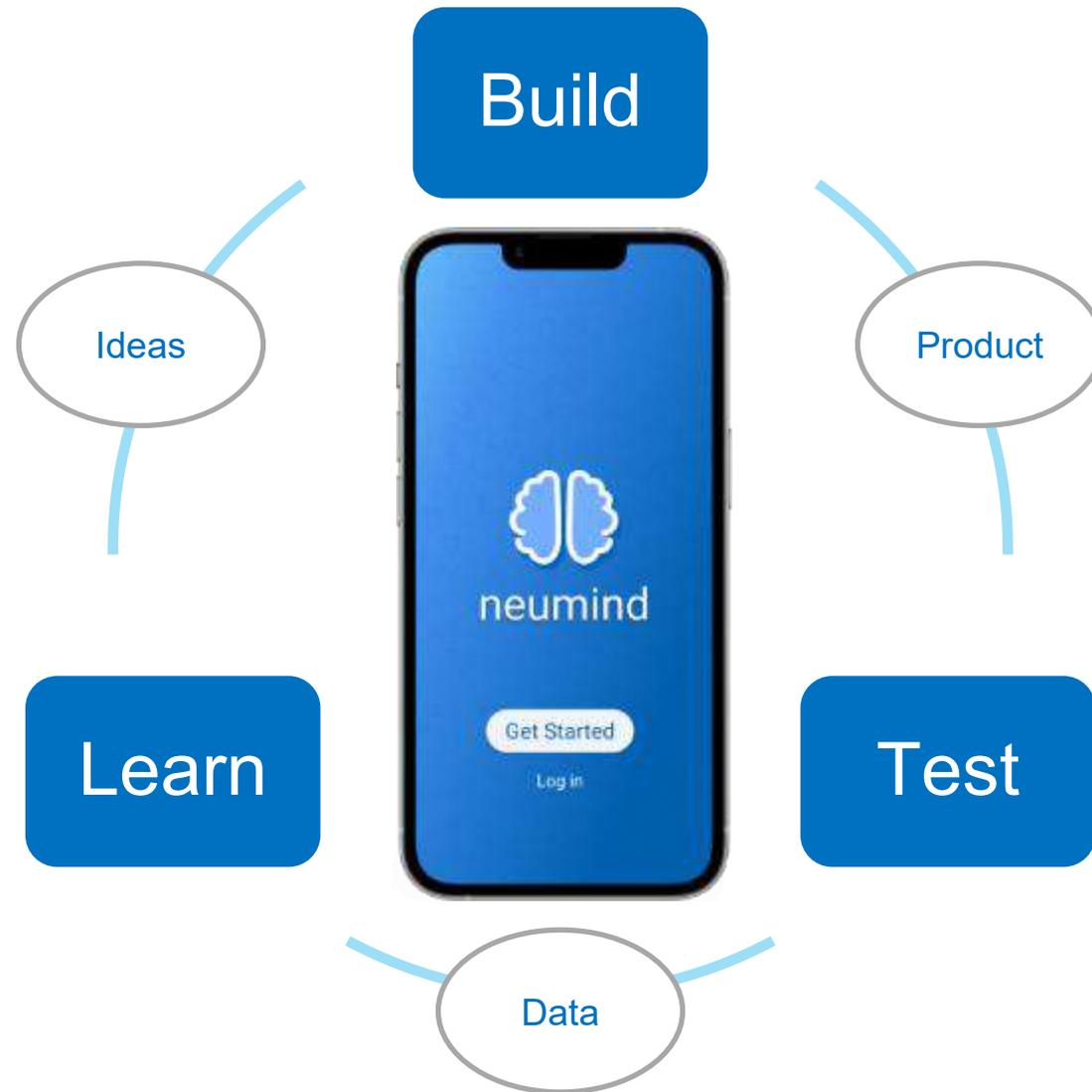
Lessons from Alfred



- ① People need simple and accessible information
- ② A digital tool requires a foundation of cognitive support
- ③ Designing for engagement is critical



Iterate with Users



Clinical & Academic Input



Young Innovators Award Winner 2020/21



University of Glasgow

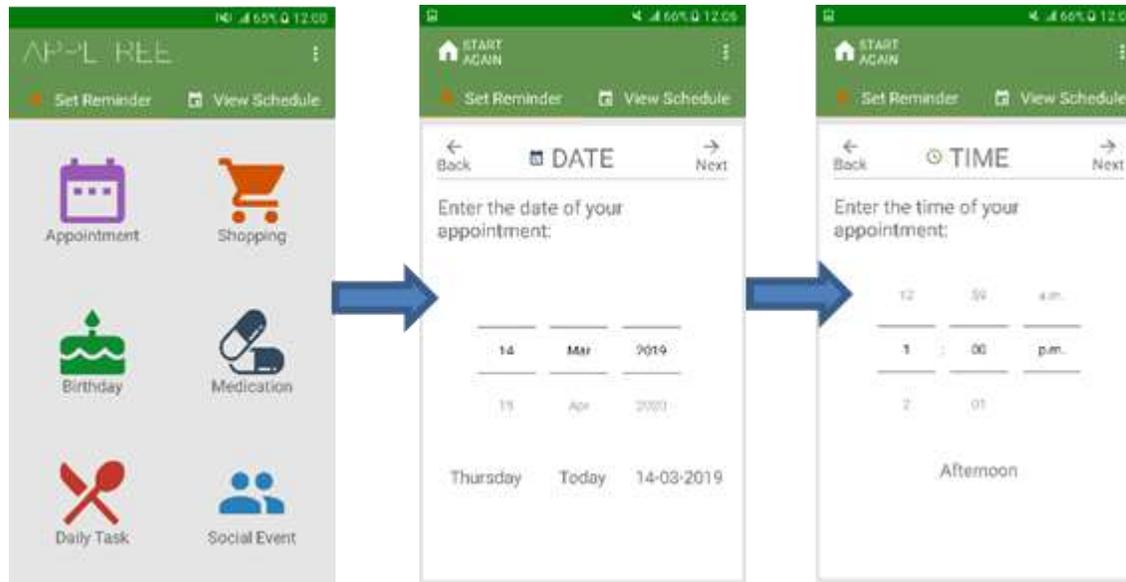


Evidence-Based Features: What the Science Told Us



Step by step reminder setting

2 fewer errors for every three reminders set vs traditional user interface style



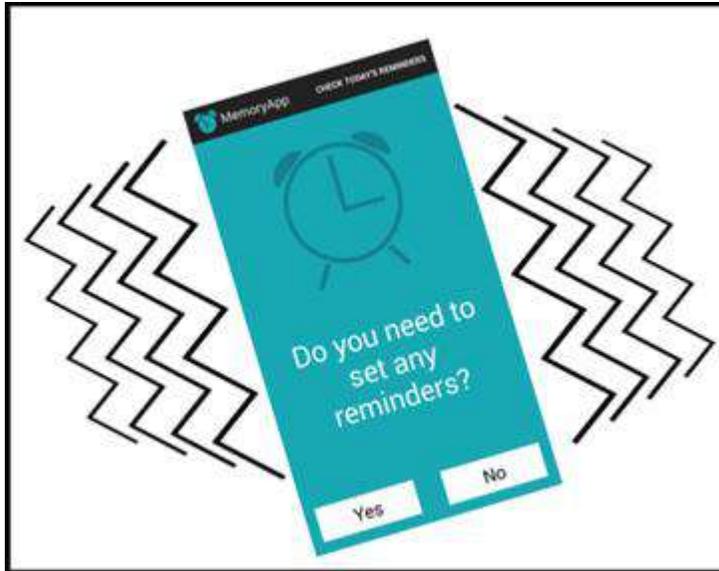
Jamieson, M., Lennon, M., Cullen, B., Brewster, S., & Evans, J. (2022). Supporting people with acquired brain injury to use a reminding app; narrow-deep vs. broad-shallow user interfaces. *ACM Transactions on Accessible Computing (TACCESS)*, 15(1), 1-23.

Evidence-Based Features: What the Science Told Us



Unsolicited prompt - 'Nudges'

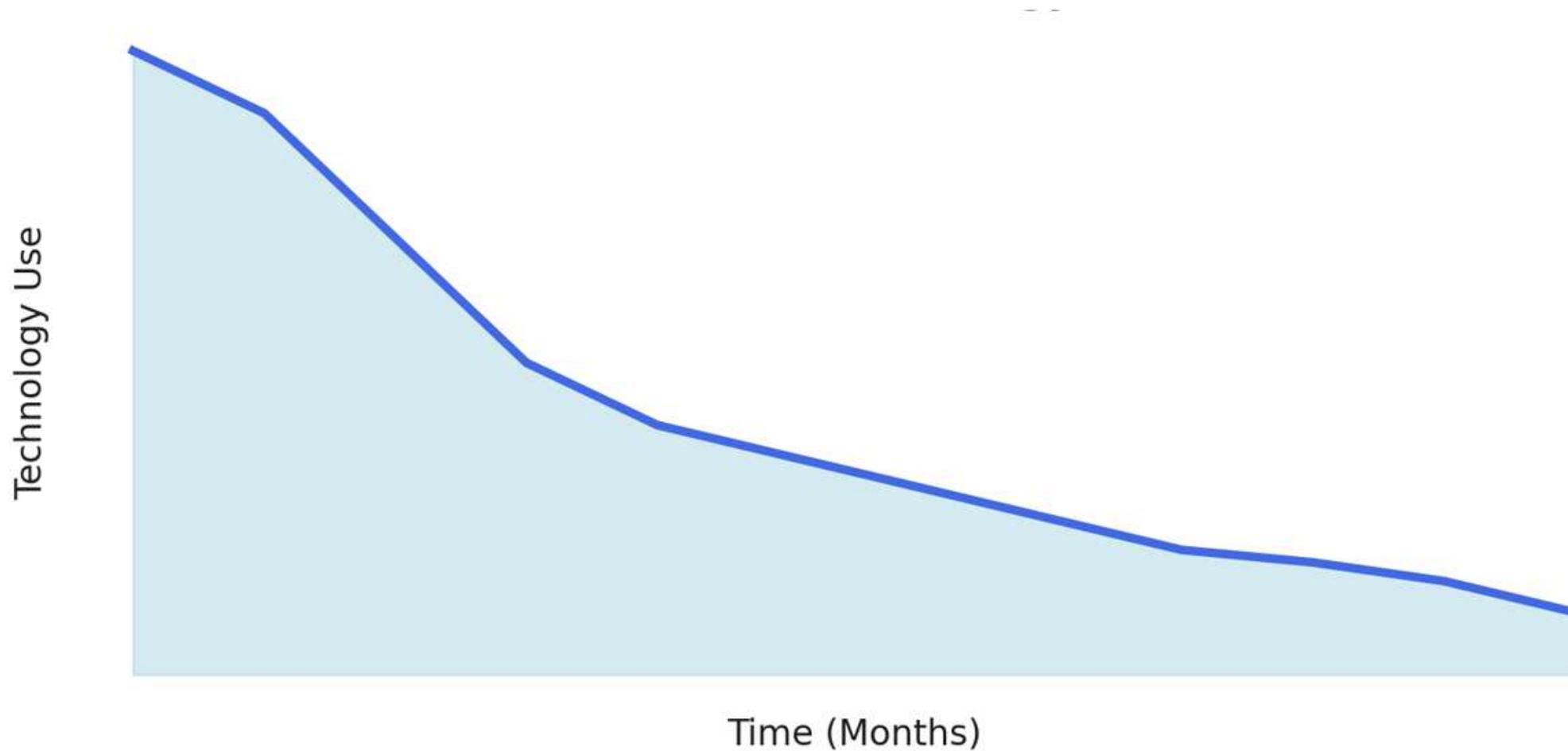
Nudges increased app use for people in community and inpatient rehabilitation settings.



Jamieson, M., O'Neill, B., Cullen, B., Lennon, M., Brewster, S., & Evans, J. (2017, May). ForgetMeNot: Active reminder entry support for adults with acquired brain injury. In *Proceedings of the 2017 CHI conference on human factors in computing Systems* (pp. 6012-6023).

Jamieson, M., Cullen, B., Lennon, M., Brewster, S., & Evans, J. (2022). Designing AppITree: usable scheduling software for people with cognitive impairments. *Disability and Rehabilitation: Assistive Technology*, 17(3), 338-348.

Neumind User Engagement study



User Engagement Study - Methods



Participants

- 12 adults with ABI neumind app user (self-selected)



Data Collection

- Interviews (30-60mins)
- App usage data
- Past user feedback recordings



Analysis

- Thematic analysis
- Usage categorization (daily, weekly, monthly)
- App usage trends

Findings



Themes

Perceived Benefits

Introduction and Ease of Initial Use

Customization & Personalization

Integration into Rehabilitation and Daily Life

Community and Social Support

Technical and Functional Challenges

“...my routine for leaving the house was one that I used to use quite a lot... I've got my confidence to go out again. That's one I can come back to.”

“Had I had the app earlier on, it would have been invaluable.”

“It's not often you come across people who you know have brain injury. I'm 20 years down the line and I know there's questions I can always answer (in the neumind community).”

Benchmarking Neumind



User Retention Metric	Neumind	Mental Health Apps (Typical)	General Health Apps (Typical)
6-month retention rate	~ 83% (active users)	~3–4%	~3–4%
12-month retention rate	~ 55% (active users)	<10% (typically < 5% for most)	<10% (majority of apps)

Learning from the Front Lines: Clinical Use



4mo

Observing and learning at
The Wolfson Outpatient
Cognitive Rehabilitation
Service (WOCRS)

Challenges to Clinicians

Time to learn and train

Accurate monitoring of tasks or strategies outside of sessions

Setting meaningful and personalized homework

Current Solutions



Rehab Ringbinder, Worksheets and forms

Time consuming

Easy to lose

Not engaging or accessible



Dozens of different tools and apps

Confusing and difficult to
manage

Needs lots of practise & training



Disconnected support

Communications often
lost

No central source of
accessible information

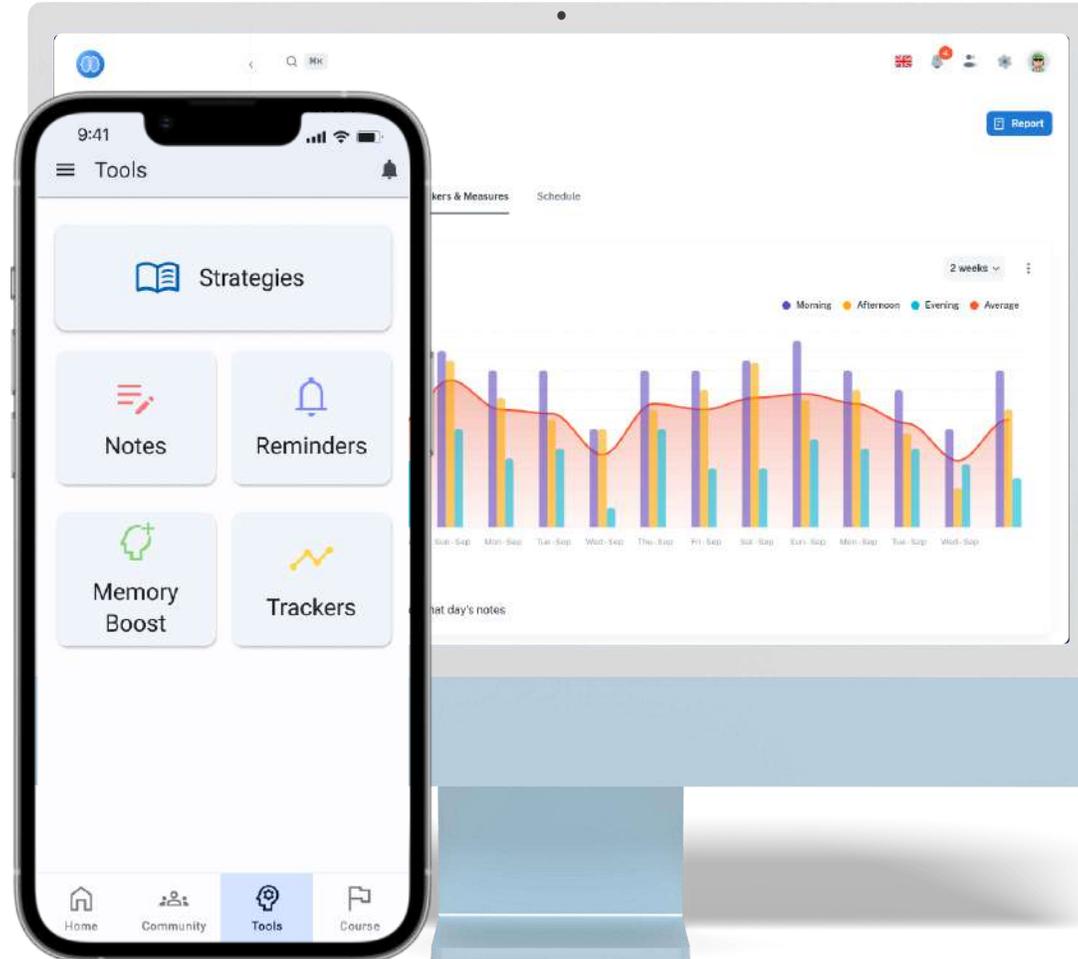
neumind platform



1 App

Digital companion for patients & caregivers

- Central source of information
- Help deliver and practise what you learn in rehab
- Support cognition and daily-living

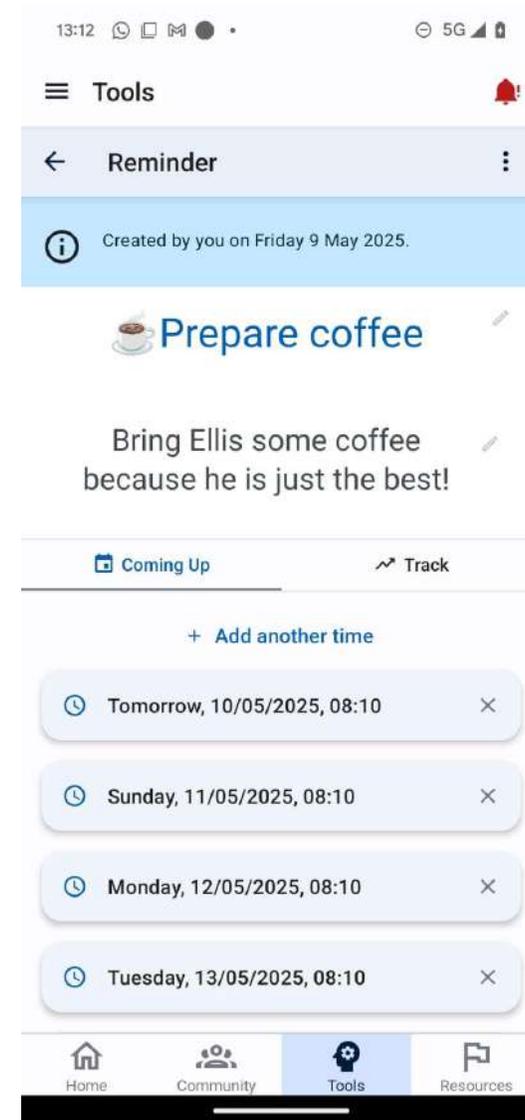
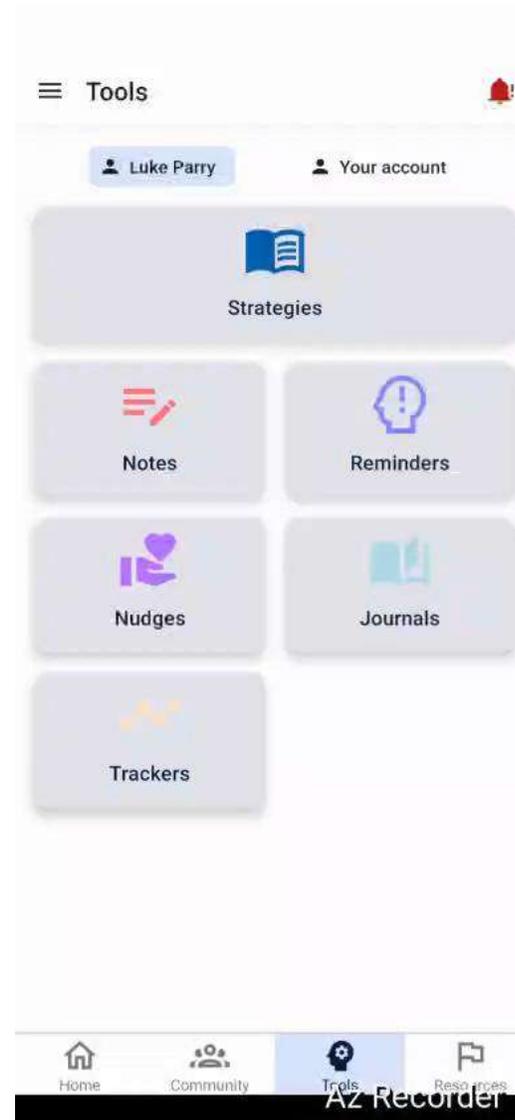
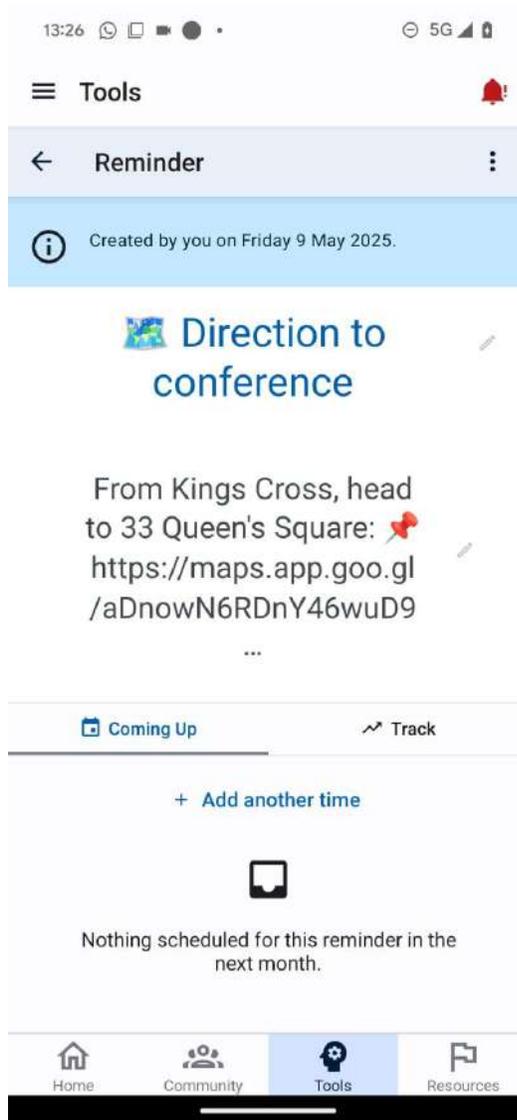


2 Dashboard

Remote therapy and client management

- Assign + reinforce therapies or strategies
- Improve coordination and track progress
- Automate clinical processes

How Luke uses neumind





By objective measures, Luke's now fitter and smiles more than Ellis



What's Next?



AI Coach & Conversational Interfaces

Data-Driven Insights for Professionals

Predictive Assistance & Adaptive UX

Hyper-Personalised Support

Outcomes



85%

of clients report improved independence

100%

of family members feel more engaged and confident

“ I use neumind for reminders about medication and hospital appointments. But I also try to balance it out with fun things as well to remind me to meet friends for a coffee. I think that’s quite important as well.

The app is a lifesaver! ”

Sian - Stroke Survivor

“ I love neumind because not only does it help people to remember and carry out their plans, it allows their family, carers and health team to support them and follow their progress. ”

Jill - Neuropsychologist



But We Can't Do it Alone!

If you want to use neumind or support what we're doing, please sign-up and get in touch!

Email: ellis@neumind.co.uk

Sign-up

Scan the QR code or from:

neumind.co.uk

