

Analysis of the Integration of Andago V2.0 into an Intensive Neurorehabilitation Centre

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Introduction: This poster demonstrates the lessons learnt in applying the Andago V2.0 device - a mobile, body-weight-supported gait trainer - into our multidisciplinary intensive neurorehabilitation centre, looking both at usability for patients and clinicians, as well as exploring 2 case studies.

Patient and staff feedback was gathered to assess utility, safety, and clinical relevance. Logbooks were used through Masterclass in NeuroTechnology (MiNT) to capture information including how the device was used, by whom, the adjustments made, and the success of using the device. A topic is also being created for MiNT level 2 on Andago V2.0.



Method: Two patients (one spinal cord injury (SCI) and one stroke) used the Andago V2.0 within the sub-acute phase of their intensive neurorehabilitation. Both were walking with walking aids for short distances. The outcome measures that were used incorporate a mixture of upper limb, sensory, trunk, and lower limb measures, as well as specific gait assessments.

Data Collection: Logbooks through MiNT, and gathering feedback from patients. Detailed questionnaire for all staff members.

Case One (SCI)	Case Two (Stroke)
Intensity of Andago V2.0 1 x week 30 minutes 10 months	Intensity of Andago V2.0 2 x month 1 hour 6 months
Clinical application: Balance, standing tolerance/ quality, gait, steps, sensory re-education Alongside other rehab	Clinical application: Balance, gait, sensory re-education, confidence Alongside other rehab
Considerations: pain, sensory loss, fatigue	Considerations: processing, recall, expressive and receptive language difficulties
Outcomes included: Trunk Impairment Scale (TIS) 10 metre walk test (10MWT) Timed Up and Go (TUG)	Outcomes included: Nottingham Sensory Assessment Scale for Assessment and Rating of Ataxia (SARA)
Achieved goal of washing up with reduced upper limb support	Achieved goal of walking to Bristol Bears game with quad stick

Results: The results were very positive. Both patients demonstrated significant improvements in gait function and progression of their walking aids. They have achieved their short-term goals. Both cases improved in all outcome measures, with clinically significant improvements in the outcomes shown below. This is in line with Cochrane findings that electromechanical-assisted gait with conventional physiotherapy is more likely to show improvements in gait after a stroke (Merholz et al, 2025).

Case One
Trunk stability +17.4%
Walking Speed +48%
Getting up and walking +49.9%

Case Two
Ataxia improvement +20.8%
Walking speed +37%



Case 1 Pictured using alongside other Neurotech (Myro) for standing balance / weight shift



Case 2 Pictured using for gait training over an unstable surface

Feedback from patients

"You know you're not going to fall"

"Allows you to walk without aids... So it feels more natural in the way that you walk"

"Allows you to walk across the room rather than being stuck on a machine"

Feedback from staff

"Patients like to use the Andago V2.0 to build their confidence in balance because of the safety of using the bodyweight support system"

Feedback gathered through staff survey: Overall staff reported

- high acceptability
- ease of use
- positive impact on therapy delivery within the neuro gym for balance and gait, alongside other tech
- Greater potential in larger space, and help achieve higher step count/ increased repetitions for neuroplastic change and functional recovery (Crozier et al, 2018).

Data Collection

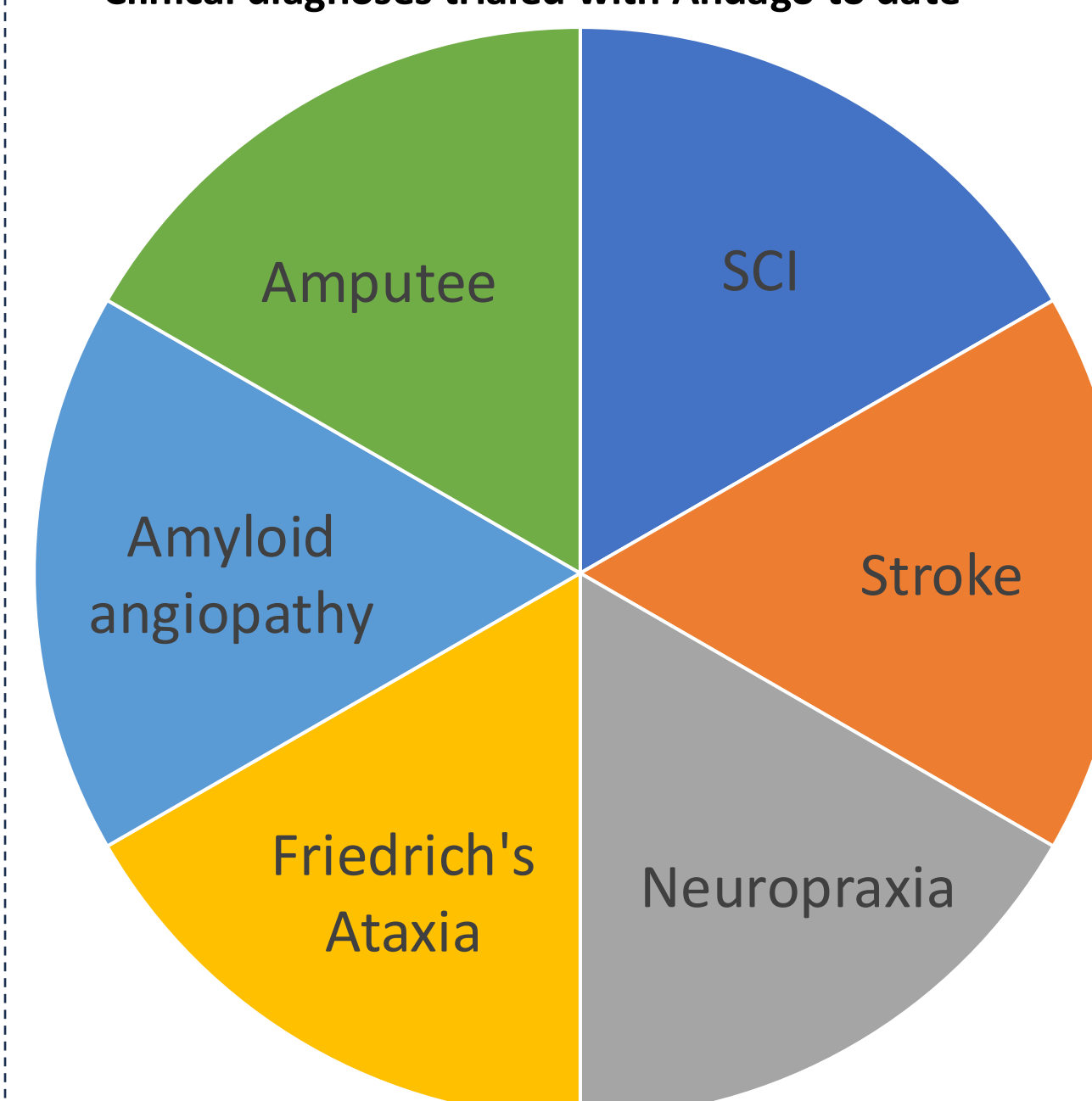
Logbook data is currently being analysed to explore trends in device usage which will influence future clinical practice and guidelines related to Andago implementation.

The creation of the education module MiNT Level 2 - Andago was facilitated through having the device in the clinic to fully understand its application and maximise its potential with a broad spectrum of patients. This highlights the importance of clinical and industry collaborations.

Data captured by Logbooks

- Clinical reasoning
- Clinical diagnosis
- Device limitations / adaptations
- Hardware / software issues
- Duration of use

Clinical diagnoses trialed with Andago to date



Clinical Applications	
	Gait
	Balance
	With a step
	With other neurotech devices
	Functional tasks
	Different postural sets

Conclusion:

The Andago V2.0 was successfully embedded into the practice, suggesting benefits for functional ambulation and therapy engagement, offering a valuable adjunct to rehabilitation in the neurorehabilitation population. It will be useful to see how it continues to fit in the centre with a wider population and with further data gathering.

References:
Electromechanical-assisted training for walking after stroke, Merholz et al, Cochrane May 2025

High-Intensity Interval Training After Stroke: An Opportunity to Promote Functional Recovery, Cardiovascular Health, and Neuroplasticity Jennifer Crozier, Marc Roig, PhD, [...], and Ada Tang, PhD <https://orcid.org/0000-0002-6641-4017> atang@mcmaster.ca+9. Volume 32, Issue 6-7 <https://doi.org/10.1177/1545968318766>

