



Neu Living Case Study

(Please note: the client's name has been changed to ensure anonymity)

Introduction

Rachel is a 45-year-old woman with a complex medical background including both physical and mental health challenges.

Case Presentation

Social:

Rachel has previously lived independently; however, prior to her hospital admission she moved in with her mum due to being unable to manage independently because of her mental health.

Medical:

Rachel was transferred to Neu Living for ongoing assessment and rehabilitation following a prolonged hospital admission due to right MCA and ACA infarcts. On transfer to Neu Living, Rachel required assistance for transfers using a **Rotunda or Return** stand aid to support safe standing and pivoting.

Objective Assessment

- Cognitive impairment; however, she is able to follow commands and engages well with therapy
- Left hemiplegia with foot drop – has orthosis provided by NHS service, significant upper limb weakness
- Ambulates with a quad stick
- Wide-based gait with step-to gait pattern
- Tonal changes to left upper limb in flexor pattern MAS 1 to left wrist and finger flexors

Rehabilitation Goals

- Walk independently on level surfaces (with or without a walking aid)
- Walk independently outdoors (with or without a walking aid)
- Climb and descend steps/stairs independently



- Regain functional use of upper limbs for daily tasks including washing, dressing, grooming, and meal preparation – likely to be a long-term goal due to persistent weakness

Management and Treatment

Mobility-Based Rehabilitation:

- Rachel has engaged in 1:1 physiotherapy sessions focusing on walking practice with and without walking aids
- She has practised gait training with and without external cues to address her wide base of support and unequal stride length
 - Activities include mini hurdles, targeted stepping using coloured dots/lines, and treadmill walking
- Cardiovascular training using the treadmill
- Strength training using step-ups, squats, side-stepping, resistance bands, and free weights
- Balance training with varying base of support
- Step and stair practice using handrails and therapist assistance

Upper Limb Rehabilitation:

- Upper limb sensation rehab including stretches, massage, textural stimulation
- Functional rehab including hand-over-hand reach to grasp, grasp/release, hand-to-mouth, air hockey game
- Motor imagery for upper limb function
- Weight-bearing to left upper limb in standing for tonal management

Clinical Outcomes

Assessment	Baseline	4-Week Review
Upper limb strength	Shoulder flexion 3/5 Elbow flexion 3/5 Elbow extension 2/5 Wrist flexion 3/5 Wrist extension 0/5	Shoulder flexion 3/5 Elbow flexion 3/5 Elbow extension 2/5 Wrist flexion 3/5 Wrist extension 1/5



Assessment	Baseline	4-Week Review
	Finger flexion 3/5 Finger extension 0/5	Finger flexion 3/5 Finger extension 1/5
10-Meter Walk	21 seconds with quad stick	19 seconds unaided
5 Rep Sit-to-Stand	18 seconds	14 seconds
4-Stage Balance Test	Stage 1	Stage 1
Berg Balance Scale	32/56	27/56

Progress to Date

Rachel has made good progress with her mobility during her time at Neu Living. She is now showing measurable improvement towards her goal of independent walking on level surfaces. This is supported by improvements in her timed 10-meter walk with reduced reliance on upper limb support, reduced sit-to-stand times, and improved Berg Balance Score.

Her upper limb recovery hasn't been as significant, which was to be expected given her persistent weakness in shoulder abduction and wrist and finger extension.

Given Rachel's mental health history, she has engaged well with therapy staff, building a strong therapeutic relationship that has increased her confidence and willingness to participate in a variety of rehabilitation approaches.

Although baseline cardiovascular measures were not collected, Rachel demonstrated increased exercise tolerance, particularly during treadmill training.

Next Steps

Going forward, Rachel will continue to work towards her goals by engaging in a variety of rehabilitation activities. This includes further gait re-education and gradual reduction of dependence on balance aids. It may also be appropriate to explore options for supported outdoor mobility and accessing the wider community, which could involve trialling different mobility aids or referral to the FES Gait Clinic at NGH.

Further to this, recommencing FES for her upper limb may also be appropriate to support extensor activity.

Conclusion



Overall, Rachel has responded well to a varied rehabilitation programme and functional exercises at Neu Living. She has engaged positively with all therapy opportunities, including regular use of the gym. Rachel is pleased with the progress she has made and remains motivated to continue working towards her rehabilitation goals. Ultimately, we hope to support Rachel's longer-term goal of returning to semi-independent living near her family outside Sheffield.