

Functional Training in a Patient with Middle Cerebral Artery Stroke with Multiple Comorbidities: A Case Report

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Unique & Foundation

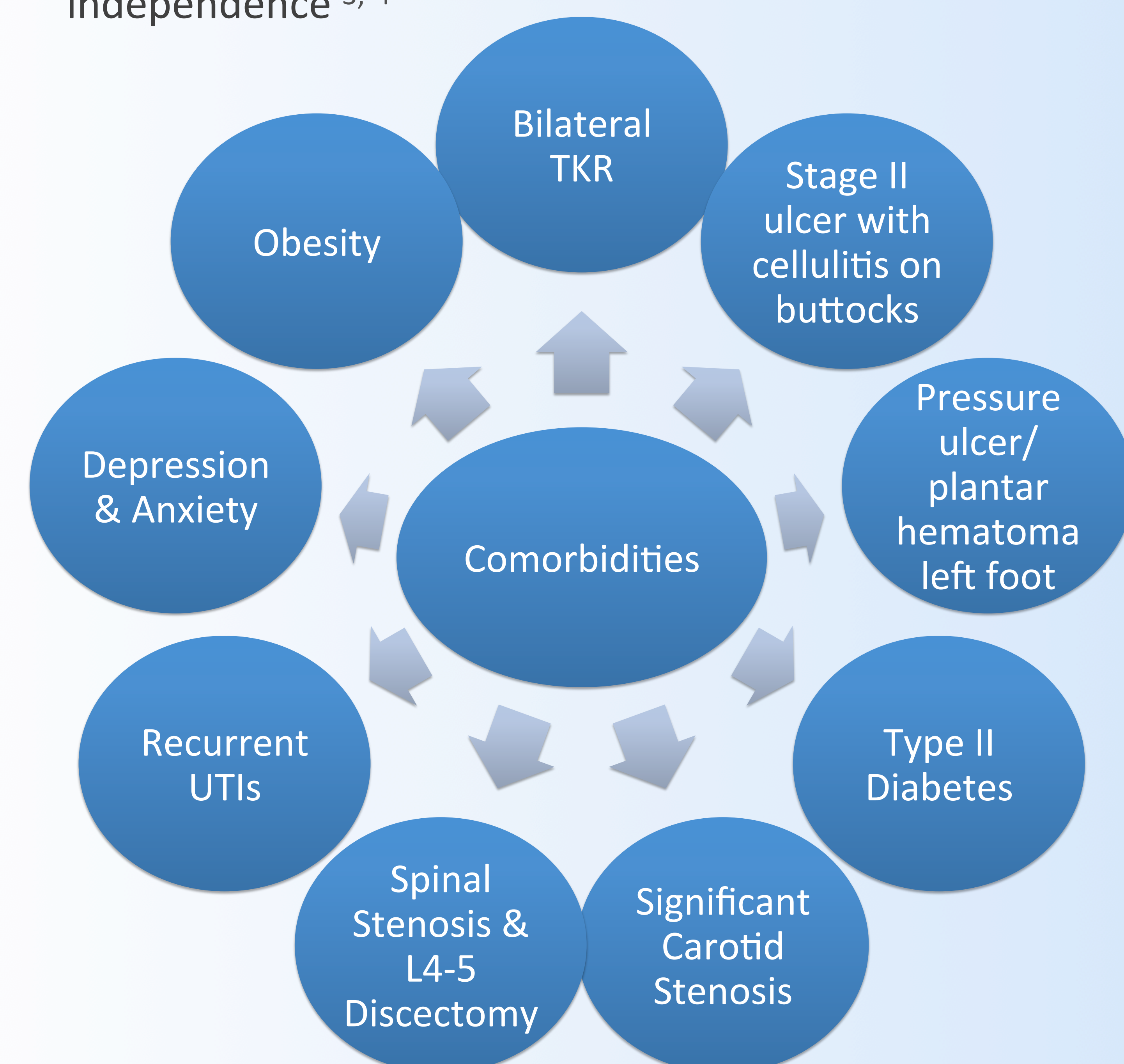
- 795,000 people experience a stroke yearly, making it the leading cause of long-term disability, costing \$34 billion^{1, 2}
- Strokes affecting the middle cerebral artery (MCA) cause impairments of strength, sensation, coordination, and balance of the contralateral side¹
- Recovery from stroke is affected by premorbid status²
- Cardiovascular disease causes a majority of strokes¹

Purpose

The purpose of this case report is to describe a progressive PT plan of care for a patient following MCA stroke with multiple comorbidities in the skilled nursing setting.

Description

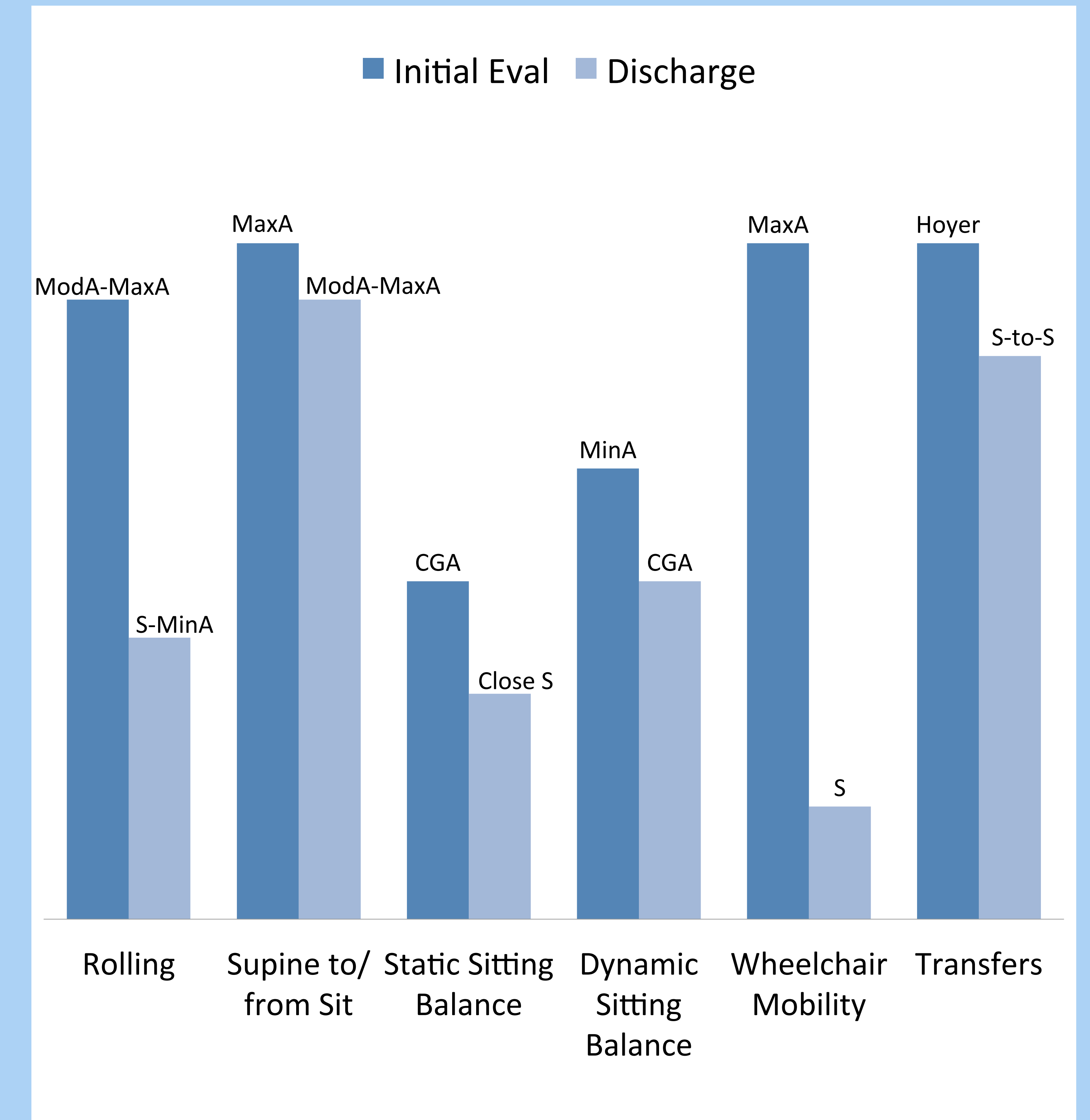
- 71-year-old with subacute right MCA infarct (anterior aspect right insular cortex) and type II non-ST elevation MI
- 39 days in hospital and acute rehab before SNF admission
- PT exam: dense left sided hemiplegia, affecting his arm more than his leg, impaired strength, balance, sensation
- 35-80 minutes of PT five days a week
- PT goals included independent bed mobility and transfers without the use of a hoist
- PT POC focused on task-oriented training, therapeutic exercise, and neuromuscular re-education to improve strength, activity tolerance, and functional mobility and independence^{3, 4}



Interventions

Therapeutic Exercise	Therapeutic Activities	Neuromuscular Re-education
<u>Supine & Seated Exercises:</u> <ul style="list-style-type: none"> • 1x10 reps, progressing to 2x20 reps • AROM, AAROM, and PROM • PENS electrical stimulation was utilized during ther-ex 	<u>Bed Mobility:</u> <ul style="list-style-type: none"> • Rolling • Supine ↔ Sit • Repositioning <u>Transfers:</u> <ul style="list-style-type: none"> • Hoyer lift: bed ↔ wheelchair • Sit-to-stand lift: bed ↔ wheelchair, wheelchair ↔ commode or mat table <u>Wheelchair Mobility:</u> <ul style="list-style-type: none"> • Using R UE and R LE 	<u>Edge of bed:</u> <ul style="list-style-type: none"> • Feet supported on ground and right UE support • Feet supported without upper extremity support <u>Standing:</u> <ul style="list-style-type: none"> • Standing Frame: Hip harness with right UE support • Sit-to-stand: Trunk harness with right UE support • Parallel bars: Assist of three, with left knee blocking and right UE support

Outcomes



Observations & Conclusions

- The patient spent 35 days in the SNF
- Insurance denials and cessation of funds lead to discharge
- Treatment sessions were based on day-to-day status
- Treatments addressed his strength, balance, and functional mobility, with careful attention paid to matters related to his comorbidities
- Caregiver training was provided to aid in transition home
- Future studies should be conducted to further examine ideal PT interventions to improve functional outcomes for patients following stroke who have multiple comorbidities

References

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Figure: Patient utilizing a sit-to-stand lift. He used his right arm to assist in pulling himself upright, and left hemiplegic arm was supported in a sling. His knees were blocked to facilitate LE extension and upright standing posture. A mirror was utilized in front of the patient to allow him to visualize his posture during activity.