

Strength and Movement Interventions for a Female Patient with Neck and Upper Back Pain: A Case Report

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Background

- Neck pain is the second most common injury in the healthcare field
- Neck pain has a variety of causes including trauma, weakness of surrounding structures or breakdown over time
- The Clinical Practice Guidelines (CPG) suggest manual therapy, strengthening and normal movement for treatment of neck pain¹

Purpose

- The purpose of this case report was to utilize current methods of treatment for neck pain² in a patient with a significant amount of neck pain, and to provide clinicians with a structured reference with exercise progression and management for treating patients with these or similar symptoms.

Figure 1. 3D diagram of cervical spine



<https://www.flinthab.com/2019/cervical-spine-injury/>

Case Description

- 25-year-old female with previous experience of neck/back pain
- The patient had neck/upper back pain and numbness/tingling in bilateral arms
- Primary work was stocking shelves in a department store
- Pain level rated at 8/10 on NPRS
- The patient was very fearful of movement during her initial evaluation

Interventions & Timeline

- The patient attended physical therapy for 13 visits
- Interventions included scapular strengthening, cervical/thoracic range of motion and DNF training

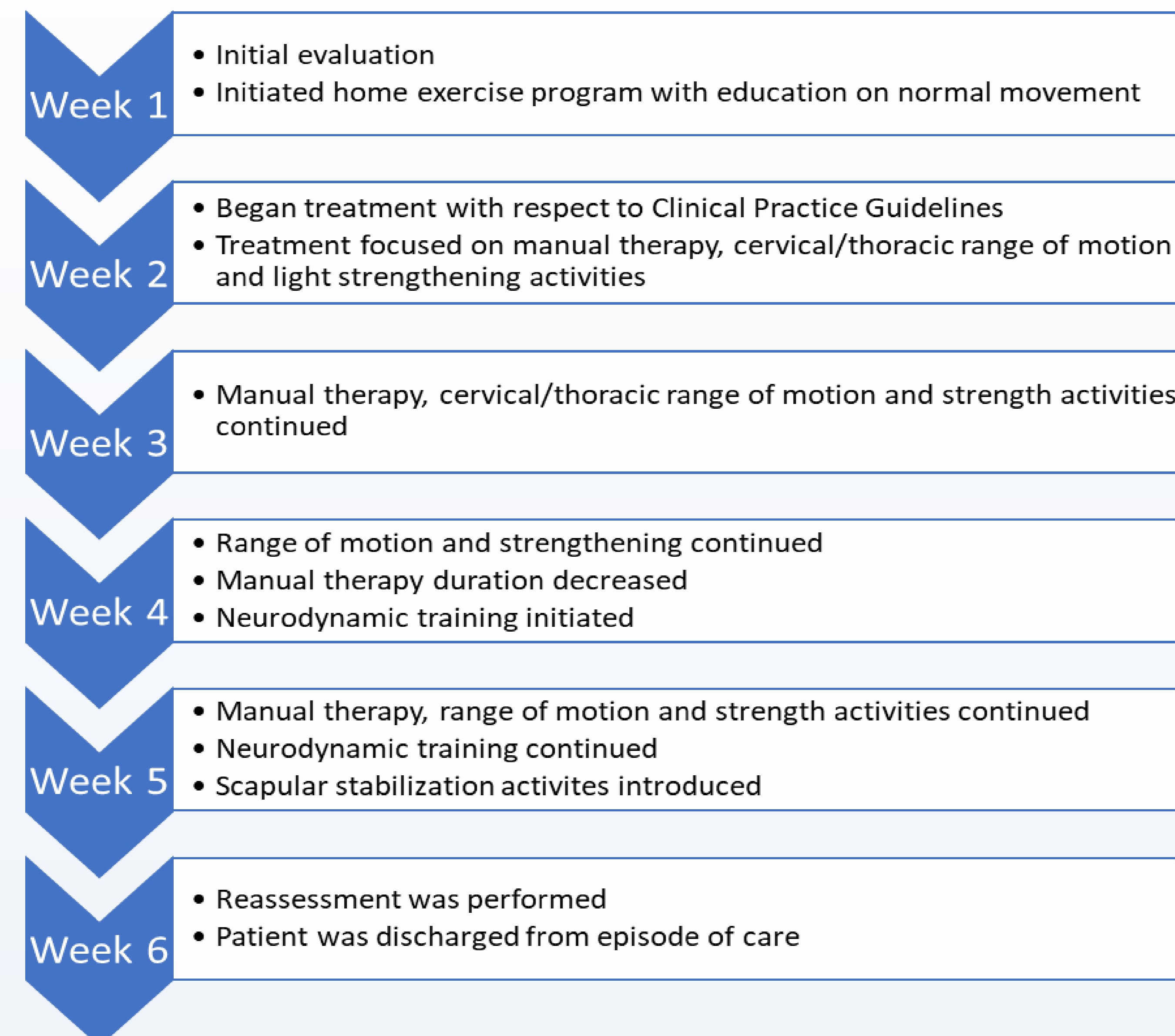
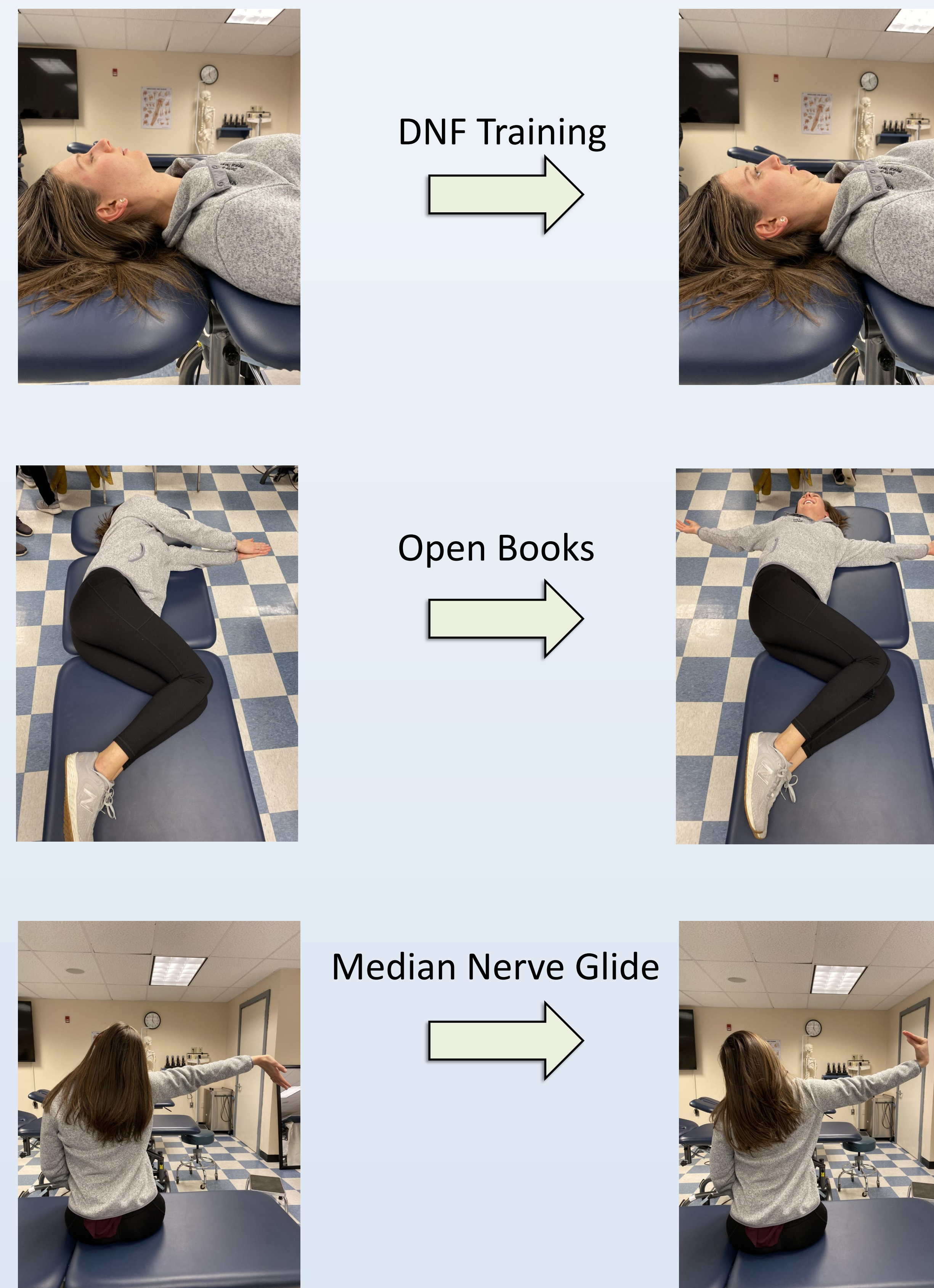
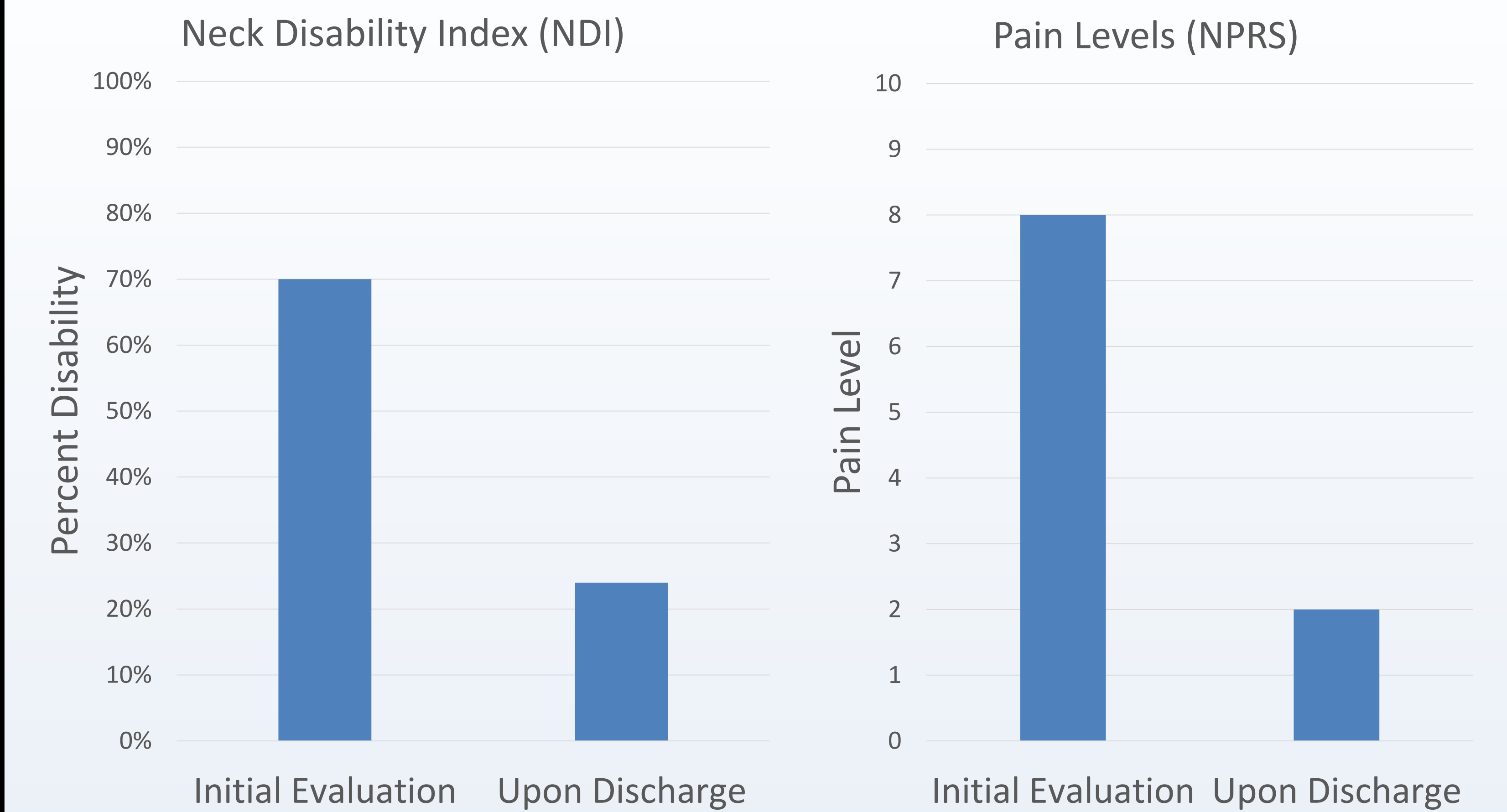


Figure 2. Therapeutic exercises. DNF = Deep Neck Flexors



Outcomes



Cervical Range of Motion

Initial Evaluation	Upon Discharge
Forward Bending: 20°	Forward Bending: 37°
Backward Bending: 35°	Backward Bending: 40°
R Rotation: Unable to assess due to pain	R Rotation: 65°
L Rotation: Unable to assess due to pain	L Rotation: 65°
R Side Bend: Unable to assess due to pain	R Side Bend: 40°
	L Side Bend: 30°

Figure 4. Outcomes at initial evaluation and discharge

Conclusion & Discussion

- The patient reported decreased pain and increased range of motion was observed following treatment
- Patient was able to return to previous level of function per her report
- Improvements were seen in NDI and pain via NPRS
- Possible contributing factors to the patient's improvement include the plan of care developed according to the Clinical Practice Guidelines for cervical pain, and the patient's previous success with physical therapy

Acknowledgements

- The author acknowledges Matthew Somma, PT, DPT, MTC, CSCS for assistance with this case report, Jessa Brooks, PT, DPT for supervision of patient management and the patient for participation in this case report
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References

1. Elbinoune I, Amine B, Shyen S, Gueddari S, Abouqal R, Hajjaj-Hassouni N. Chronic neck pain and anxiety-depression: Prevalence and associated risk factors. *The Pan African medical journal.* 2016;24:89. doi: 10.11604/pamj.2016.24.89.8831
2. Blanpied PR, Gross AR, Elliott JM, et al. Neck pain: Revision 2017. *J of Ortho & Sports Phys Ther.* 2017;47(7):A-A83. doi: 10.2519/jospt.2017.0302