

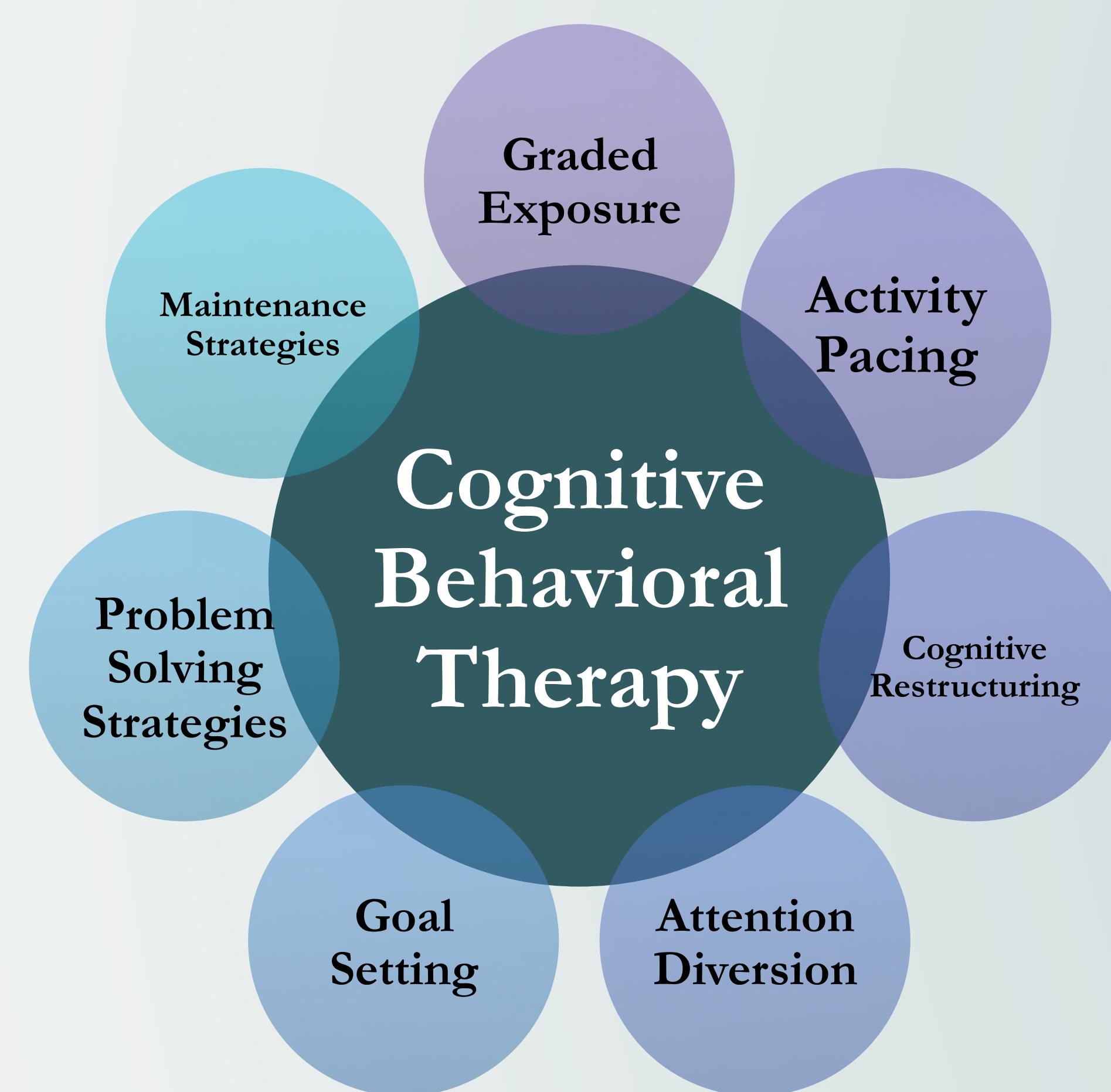
# Physical Therapy and Cognitive Behavioral Therapy for a Patient with Multiple Co-morbidities – A Case Report



Jeanine Manubay, DPT Student and Kirsten Buchanan, PhD, PT, ATC  
Department of Physical Therapy, University of New England, Portland, Maine

## Unique

- Traditional physical therapy (PT) interventions can be challenging to implement in the complex patient with multiple comorbidities.
- Cognitive behavioral therapy (CBT) is a behavioral therapy technique used to change obstructive behaviors and improve functional and emotional health.<sup>1</sup>
- CBT has shown positive outcomes in patients with cancer and elderly patients with depression, but has not been studied in conjunction with PT in medically complex patients.<sup>2,3</sup>



## Purpose

- The purpose of this case report was to document the utilization and outcomes of CBT along with traditional physical therapy for a medically complex patient diagnosed with end stage renal disease and multiple co-morbidities.

## Foundation

- Complex patients have been defined as those with a co-occurrence of two or more medical, social or behavioral conditions.<sup>4,5</sup>
- As of 2012, one in four adults in the United States had two or more chronic conditions with almost half also having multiple co-morbidities.<sup>6</sup>
- CBT challenges negative thoughts and has been used extensively and effectively in psychology research.
- There is a paucity of research using an interdisciplinary approach of PT and CBT in the medically complex patient.

## Description

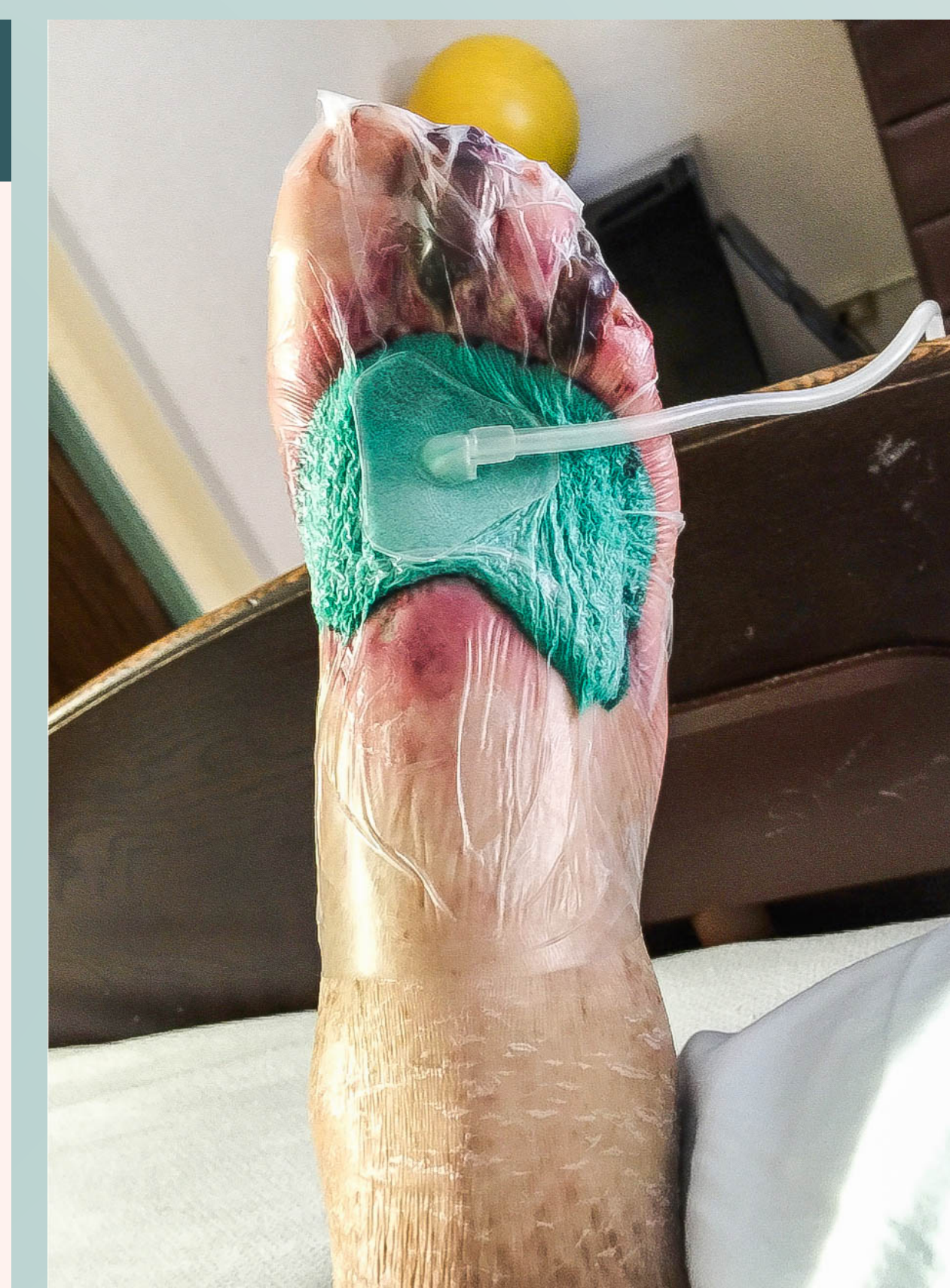
- 51-year-old male admitted to a skilled nursing facility (SNF) after a recent transmetatarsal amputation on the left foot.
- Prior to admission, the patient described an active lifestyle including hiking and a career as a U.S. postal serviceman.
- The patient demonstrated a significant decrease in activity tolerance and motivation.
- The patient did not report a strong social or family support system.



Left transmetatarsal amputation

## Co-morbidities

- Bilateral (BL) foot ischemia
- Acute osteomyelitis of the L ankle and foot
- Morbid obesity
- Diabetes mellitus type 2
- Vasculitis
- Chronic dry gangrene on the R foot
- Peripheral vascular disease (PVD)
- MRSA
- Enterocolitis
- Congestive heart failure (CHF)
- Hypertension (HTN)
- Atherosclerosis
- Previous heart valve replacement surgery

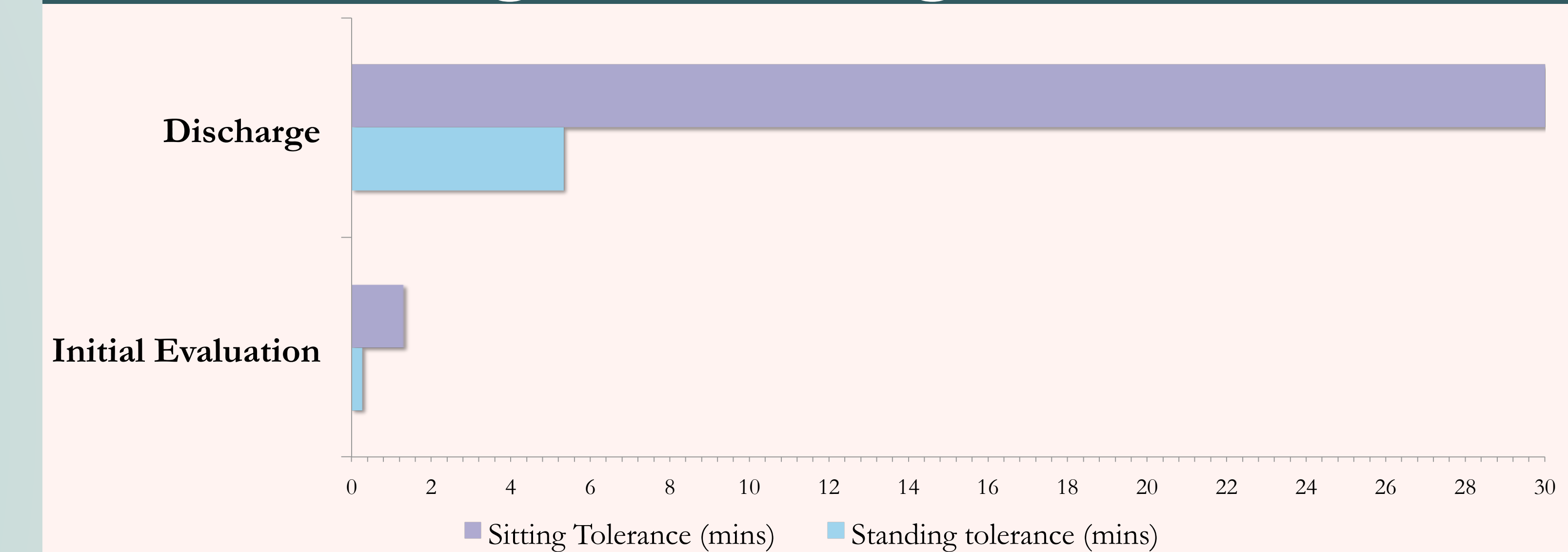


Right foot with NPWT

## Observations

- The patient demonstrated objective and subjective improvements in activity tolerance, trunk control and confidence during sitting and standing activities.
- The patient's plan of care was not completed and he was re-admitted to the hospital due to an exacerbation in his medical condition requiring a transtibial amputation (TTA) on his left lower extremity.

## Sitting vs. Standing Tolerance



## Conclusions

- The patient reported a higher level of confidence and found the inclusion of CBT helpful.
- It was unclear whether the addition of CBT or traditional PT interventions were the primary factor in the gains made.
- CBT may be a helpful tool for the PT treating a medically complex patient.

## Acknowledgements

- The author acknowledges Kirsten Buchanan, PhD, PT, ATC for assistance with case report conceptualization and guidance and Teodoro Cirujales, PT, DPT, CEEAA, WCC, CKTP for supervision and assistance with the collection of data.

## References

- What is Cognitive Behavior Therapy | Beck Institute. *Beck Institute for Cognitive Behavior Therapy*. 2016. Available at: <https://www.beckinstitute.org/get-informed/what-is-cognitive-therapy/>. Accessed September 18, 2016.
- Goedendorp MM, Peters ME, Gielissen MF, Wities JA, Leer JW, Verhagen CA, Bleijenberg G. Is increasing physical activity necessary to diminish fatigue during cancer treatment? Comparing cognitive behavioral therapy and a brief nursing intervention with usual care in a multicenter randomized control trial. *Oncologist*. 2010;15(10):1122-32. doi: 10.1634/theoncologist.2010-0092.
- Huang TT, Liu CB, Tsai YH, Chin YF, Wong CH. Physical fitness exercise versus cognitive behavior therapy reducing the depressive symptom among community-dwelling elderly adults: a randomized control trial. *Int J Nurs Stud*. 2015 Oct;52(10):1542-52. doi: 10.1016/j.ijnurstu.2015.05.013
- Mcgrevey, S. What makes patients complex? Ask their primary care physicians. *Massachusetts General Hospital*. 2016. Available at: <http://www.massgeneral.org/about/pressrelease.aspx?id=1424>. Accessed September 25, 2016.
- Grant RW, Ashburner JM, Hong CS, Chang Y, Barry MJ, Atlas SJ. Defining Patient Complexity From the Primary Care Physician's Perspective. *Ann Intern Med*. 2011;155(12):797-804. doi:10.7326/0003-4819-155-12-201112200-00001.
- Chronic Disease Overview | Publications | Chronic Disease Prevention and Health Promotion | CDC. *Cdcgov*. 2016. Available at: <http://www.cdc.gov/chronicdisease/overview/>. Accessed September 13, 2016

## Interventions

