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B.S. Clinical Health Studies
Abstract to be presented and considered for award

Introduction:

Every 40 seconds, someone in the United States has a stroke. A stroke, or Cerebrovascular Accident (CVA), is caused by an interruption of blood supply to the brain, leading to damage in cerebral function. An ischemic stroke, more specifically, is caused by an occlusion of an artery and is the most prevalent type of stroke. A patient's prognosis after stroke can be impacted by the individual's comorbidities, defined as more than one medical or psychosocial disease or condition present in the same person at the same time. The sum of stroke type and comorbidities can greatly impact response to care and recovery both in the rehabilitation setting and after discharge. The purpose of this case report is to illustrate that not all patients have a smooth recovery and transition to home. There is a strong need to address all facets of a patient's health to optimize functional outcomes and ensure continuum of care beyond the hospital setting.

Case Description:

The patient of interest was a 71-year-old female with a medical diagnosis of right temporoparietal CVA and complex past medical history. Once medically stable, she was evaluated by physical therapy in an inpatient rehabilitation facility. The history obtained from the patient, patient's family, and chart review indicated the patient was of a low socioeconomic status with limited social support. She was previously independent with all activities of daily living (ADLs), including managing her Type II Diabetes Mellitus, and was able to ambulate community distances without the use of an assistive device. During the patient interview, it was determined that the patient was a poor historian due to confusion, inability to pay attention to task, and confabulation with contradicting reports.

Physical therapy examination revealed the following: decreased strength in left lower extremity, impaired coordination in bilateral upper and lower extremities, and decreased sensation in left distal lower extremity. The patient required minimal assistance (minA) for static sitting balance and maximal assistance (maxA) for dynamic sitting balance. The patient required maxA during bed mobility and total assistance (totalA) of two people to transfer from the bed to the wheelchair. At initial evaluation, the patient was unable to perform ambulation, stairs, or wheelchair propulsion.

Intervention and Prognosis:

The patient was treated with a multidisciplinary approach utilizing physical therapy, occupational therapy, and speech language pathology. Between disciplines, the patient was treated with at least 3 hours of therapy per day for at least 6 days a week. The patient was in the inpatient rehabilitation facility for 26 days. Physical therapy treatment sessions focused on improving bed mobility, transfers, and gait to increase the patient's independence and restore

functional mobility. The most problematic issues for physical therapy treatment progression were uncontrolled Diabetes Mellitus, fear avoidance behaviors, anxiety, and the patient's difficulty attending to tasks. Due to these challenges, the patient's level of function fluctuated greatly between sessions. These barriers, in addition to the patient's lack of social support and low socioeconomic status, contributed to the predicted prognosis of fair. The patient's goals were set at contact guard assistance (CGA)/minA.

Outcomes:

The patient achieved functional improvements by discharge, but did not attain independence in any physical therapy area, with the exception of wheelchair mobility. Due to the patient's psychosocial obstacles, anxiety, and fluctuations in function, it was unclear whether she or her family were able to properly manage her pre-existing comorbidities or give her the required assistance she needed for functional mobility. Despite recommendations from the rehabilitation team to be discharged to a subacute facility, or home with 24-hour supervision and assistance, the patient was discharged home with home health care 3 days per week per patient and family request.

Discussion:

By not achieving full independence in most areas of functional mobility, the patient is at an increased likelihood of dependent living; therefore, her discharge destination was controversial. It was unknown upon discharge if the patient could consistently demonstrate independence with medication management and household mobility and it became clear the patient would not have 24-hour supervision.

Unfortunately, problematic discharges happen regardless of recommendations. In these cases, it is the responsibility of the rehabilitation team to advocate for their patient's continued recovery to the patient, patients' families, and insurance companies.

References:

1. Berlowitz DR, Hoenig H, Cowper DC, et al. Impact of comorbidities on stroke rehabilitation outcomes: does the method matter? *Arch Phys Med Rehabil.* 2008;89:1903-1906.
2. Centers for Disease Control and Prevention. Comorbidity Statistics. Available at: https://www.cdc.gov/arthritis/data_statistics/comorbidities.htm. Accessed September 23, 2017.
3. Centers for Disease Control and Prevention. Stroke Facts. Available at: https://www.cdc.gov/stroke/facts.htm. Accessed September 23, 2017.
4. Glass TA, Matchar DB, Belyea M, Feussner JR. Impact of social support on outcome in first stroke. *Stroke*. 1993;24:64-70.
5. Granger CV, Hamilton BB, Fiedler RC. Discharge outcome after stroke rehabilitation. *Stroke*. 1992;23:978-982.
6. Mackenzie AE, Chang AM. Predictors of quality of life following stroke. *Disabil Rehabil.* 2002;24:259-265.
7. Ostwald SK, Davis S, Hersch G, et al. Evidence-based educational guidelines for stroke survivors after discharge home. *J Neurosci Nurs.* 2008;40:173-191.
8. Tatemichi TK, Desmond DW, Stern Y, et al. Cognitive impairment after stroke: frequency, patterns, and relationship to functional abilities. *J Neurol Neurosurg Psychiatry.* 1994;57:202207.
9. World Health Organization. Stroke, cerebrovascular accident. Available at: http://www.who.int/topics/cerebrovascular_accident/en/. Accessed September 23, 2017.