Relationship of Gait Speed with Discharge Planning in the Sub Acute Setting

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Purpose/Hypothesis: The use of gait speed, often referred to as the “sixth vital sign”, has been suggested to be an accurate outcome measure for patient examination in a variety of rehabilitation settings. Discharge planning from a sub-acute rehabilitation setting is often challenging as there are minimal objective guidelines. The purpose of this study was twofold: to compare between initial and final discharge gait speeds in the sub acute setting as well as to assess how discharge gait speed related to those of community dwelling individuals.

Number of Subjects: Subjects (n=19) were recruited from the sub acute unit at Gurwin Rehabilitation Center in Commack, New York. Subjects included 15 females and 4 males, ranging in age from 50-96 years old.

Materials/Methods: Gait speed (m/s) for a 7 meter walk was recorded at initial evaluation, 1-2 weeks during rehabilitation and just prior to discharge. Parametric analysis compared gait speeds at initial evaluation and at discharge (95% probability, 2-tailed). Single sample hypothesis testing was used to compare subject’s gait speed values to normative gait speed values cited in the literature.

Results: Discharge gait speed values for all subjects were significantly faster than those recorded at initial evaluation: \( t(18) = -3.034, p<.05 \). At discharge, all study participants were discharged to their home setting. Mean gait speed for females in the 60-60 year old and 80+ year old groups were not significantly different when compared to normative values for community dwellers. However, females in the 70-79 year old age group were significantly slower than gender and age matched community dwellers. Limited sample size precluded performing the comparison with normative values for males. In addition, individual subject’s diagnosis did not significantly affect this outcome.

Conclusions: The patients discharged to their home setting from this study’s sub-acute rehabilitation center demonstrated discharge gait speeds that were significantly faster than their initial examination gait speeds. The discharge gait speeds of females in the 60-69 year old and 80+year old age groups were not significantly different from normative values for community
dwellers.

Clinical Relevance: In a sub-acute setting, a valid and reliable measure to determine whether a patient may be safely discharged to their home versus other settings would be an extremely helpful guide for the treating clinician. Although no such guidelines are provided for in the literature, the current study suggests that gait speed may be utilized as such an outcome measure.