

Predictive Cost Model for Utilizing Auto-Ambulator Rehab Machines

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Abstract

The AutoAmbulator (AA), which was developed by HealthSouth Corp and has been used within the majority of their hospitals, is an innovative therapeutic device designed to help rehabilitate patients who experience difficulty walking. Using the clinical practice of body weight supported ambulation combined with advanced robotics; the AA simulates normal walking motion. This study evaluates the clinical outcomes (a patient diagnosis analysis based on FIM (Functional Independence Measure) scores, patients' length of stay and financial impacts of patients using the AutoAmbulator compared to those who do not use. The model was developed to predict the clinical outcomes and their related cost when an inpatient was admitted. This model can also be used to make a financial decision on purchasing AA machines at certain hospitals. As it has been observed that the effectiveness of this technology varies depending on the patient's diagnosis, it is not efficient for use in all hospitals.

Keywords: Cost Analysis, Healthcare, Predictive Model, Gait Dysfunction