

REHABILITATION LENGTH OF STAY FOLLOWING TRAUMATIC BRAIN INJURY: ARE PATIENT'S GETTING THE FULL DOSE?

Jessica G. Ashley, Ph.D., Mark J. Ashley, Sc.D., Philip J. Seneca, Ph.D., Lisa A. Kreber, Ph.D.

Studies have provided reasonable evidence to suggest that the intensity of treatment and duration of treatment both contribute to greater reduction of disability. The goal of this study was to conceptualize the time required for a patient to transition to a lower disability level during inpatient rehabilitation. This retrospective analysis included data obtained during the years 1990-2009 from the Traumatic Brain Injury Model Systems (TBIMS) national dataset. Survival analysis using Disability Rating Scale (DRS) admission disability categories and scores from admission and discharge was conducted to determine the length of time required to change disability level to a lower specified level. Separate analysis was done based upon injury severity upon admission. The first survival analysis addressed those patients admitted with a moderate disability rating at admission (score of 3.5-6.0). The terminal event was defined as achieving a rating of partial disability (DRS score of 3 or below). The median length of stay for the moderate category of patients to reach the terminal event of DRS rating was 18 days. A second survival analysis included those patients admitted to inpatient rehabilitation with a DRS category of moderately severe and above (score of 6.5-29.0). The terminal event for this subset of the sample was defined as achieving a rating of moderate disability (DRS score of 6 or below). The median length of stay to reach the terminal event was 17 days for moderately severe, 30 days for severe, 58 days for extremely severe, and 94 days for vegetative patients. The data suggests time to reach the terminal DRS score varies with level of disability at admission. Further, the data allows a more objective prognostication about the likelihood of a specific patient attaining a particular level of improvement during inpatient rehabilitation and may provide for an objective determination of required rehabilitation treatment.