

Over the past two decades there has been a rapid growth of TBI rehabilitation programs. These have filled a vacuum in TBI care, but the exact form and intensity of TBI rehabilitation required for a given individual remains highly controversial. TBI rehabilitation is often labor-intensive, expensive and emotionally demanding of patient and staff alike. Yet, most rehabilitation strategies have not been subjected to the degree of scientific scrutiny for effectiveness and cost-efficiency that has been expected of other medical therapies in general use. In particular, the remarkable ability of the young adult brain to compensate for injury naturally often has not been considered in the evaluation of outcome from various treatments..

Open design studies have suggested that an interdisciplinary inpatient rehabilitation approach may improve outcome in these persons, and that the ones with severe head injuries benefited more from early versus late inpatient rehabilitation. Few controlled studies of long-term outcome have been reported, however, and none have used a prospective, randomized design.

There is insufficient evidence on which to base decisions regarding the application of intensive inpatient rehabilitation programme. Currently, studies use "number of hours of therapy" as a measure of treatment intensity, which does not take into account the quality or productivity of each session. A better measure of intensity must be developed, and new studies conducted, to address this issue. (Andres M. Salazar. M.D., 1999).

What makes it so difficult to prove that rehabilitation works? First, there is the heterogeneity of the sample (age, problems before the injury,..). Second, there are no two identical head injuries (laterality of the lesion, diffuse or focal lesion, time from injury to rehabilitation,...). Third, researchers cannot use a traditional control sample in which treatment is not provided (It is not ethically accepted to place individuals in a no-treatment control sample). Fourth, the treatments applied are different between rehabilitation services.

Inpatient treatment

Once the TBI patient has emerged from coma and has been medically stabilized but is not yet alert (still at Rancho level I-III), he or she is transferred to an inpatient rehabilitation program. These programs may be provided within hospitals or nursing homes and are designed for patients who can benefit from three or more hours of restorative therapy per day.

Such therapies may include physical therapy, occupational therapy, speech therapy, cognitive retraining (Carney, 1999) and vocational services.

The rehabilitation team may consist of the following members:

Physical Medicine and Rehabilitation Physician: Physician who is specialized in the management of TBI patient and in European Countries usually is the coordinator of the team.

Neurologist: Physician who specializes in disorders of the brain. He diagnoses the type of injury and makes recommendations for surgery and medications.

Dietician: Professional who seeks to meet the nutritional needs of the patient through proper diet. Careful consideration is taken of pre-trauma weight and eating habits.

Psychiatrist: Medical doctor who specializes in the relationship between the neurological system and psychiatric disorders. He provide individual therapy.

Neuropsychologist: Psychologist who specializes in the relationship between the brain and behavior. He performs tests to determine levels of functioning in the areas of cognition, intelligence, and personality. He may also provide individual and/or family therapy.

Nurse: Professional who provides daily care.

Occupational Therapist: Professional who focuses on the patient's physical, cognitive, and perceptual disabilities. He helps the patient regain function of arms, hands, and fingers and return to the activities of daily living. He works on fine motor skills, hand-eye coordination, and self-care skills. He may also provide any necessary special equipment.

Physical Therapist: Professional who assists the patient return to the highest level of motor functioning as possible. He helps the patient regain function of the body movements needed for basic actions such as standing, walking, and sitting. He evaluates the need for special equipment and constructs a program of exercise and movements. Also helps with problems breathing when the patient is in the early stages of hospital care.

Social Worker: Professional who assists the patient to meet his social and psychological needs with planning and counselling. He acts as a liaison between the professional team and all other parties concerned, including family, funding sources, and past or future facilities. He also completes various assessments.

Speech and Language Therapist: Professional who helps the patient regain communication skills, including speech, language, memory, thought processing, reading, and writing.

Recovery from head injury is often difficult and uncertain. Each person who sustains a head injury, and each family who experiences the resulting struggles, is affected differently. Depending upon the severity and nature of the injury and the family situation, some individuals are able to regain a high level of independence and return to family life. Others may be unable to rejoin their families and require long-term supportive care.