

# ***Health Policy Newsletter***

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**Volume 11 Number 2**

**May, 1998**

**Article 6**

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## **The Traumatic Brain Injury Model System of Care at MossRehab**

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**Suggested Citation:**

Hart T, Whyte, J. The traumatic brain injury model system of care at MossRehab. *Health Policy Newsletter* 1998; 11(2): Article 6. Retrieved [date] from <http://jdc.jefferson.edu/hpn/vol11/iss2/6>.

## The Traumatic Brain Injury Model System of Care at MossRehab

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Traumatic brain injury (TBI) is a health problem of major proportions. Nearly 400,000 persons in the U.S. suffer TBI each year as a result of motor vehicle accidents, interpersonal violence and other causes.<sup>1</sup> Although the majority of injuries are relatively mild, an estimated 50,000-75,000 persons per year are injured severely enough to become permanently disabled.<sup>2</sup> The disability of TBI involves not only physical but cognitive and behavioral impairments, leading to a range of serious social and vocational handicaps for survivors, most of whom are young adults. Successful rehabilitation of TBI is extremely challenging and requires highly specialized, multi-disciplinary programs that provide a continuum of care from emergency trauma services through community re-integration and vocational training efforts.<sup>3</sup>

The National Institute on Disability and Rehabilitation Research (NIDRR) provides funding for Model Systems of Care for specified disability groups. Model Systems are research and demonstration projects with a mandate to develop innovative treatments, evaluate the cost-effectiveness of care, and provide comprehensive data on outcomes. Since 1987 NIDRR has funded five Model Systems in the U.S. that focus on treatments and outcomes for TBI.<sup>4</sup> In October, 1997, MossRehab's Drucker Brain Injury Center and the Moss Rehabilitation Research Institute, in partnership with Albert Einstein Medical Center (AEMC) and Temple University Hospital (TUH), were awarded a competitive TBI Model System grant for funding until the year 2002. Our Model System will contribute to the national data base on TBI such information as medical aspects of the injury, demographic variables, and neuropsychological test scores, as well as longitudinal outcome data collected over the five-year funding period and beyond. We were also funded for 11 research projects to be completed locally or in collaboration with other TBI Model Systems in Texas, Michigan, Ohio and California.

Our team will be studying such research areas and questions as:

**Measurement:** Can we develop new ways to measure attentional problems that affect patients with TBI? What are the most accurate models with which to predict different kinds of outcomes? Do the ways we measure social and community outcomes contain racial or ethnic bias?

**Treatment:** What are the most clinically effective and cost effective ways to rehabilitate motor functions after TBI? Can extended monitoring and follow-up services enhance job maintenance for survivors of TBI?

**Technology:** Can the Internet be used to help decrease the social isolation of those with severe TBI? Can pagers and miniaturized computers help persons with TBI to learn new job skills?

**Costs:** What factors affect the costs of rehabilitation and medical care for persons with TBI? How do the constraints of managed care affect outcomes? On the clinical side, patients and families participating in our Model System will receive "extra" follow-up and case coordination services. However, the Model System award also recognizes the existing level of clinical excellence in the TBI programs of the partner institutions, from the emergency services of AEMC and TUH to the specialized

vocational and social rehabilitation services of the Drucker Brain Injury Center at MossRehab.

In our first five months of operating the TBI Model System, we have established procedures for collecting the longitudinal data (and have enrolled about a dozen subjects); set up collaborative projects with other Model System sites around the country; and begun work on six local research projects. In the near future we will be setting up a number of advisory boards in which professionals and consumers of TBI services will be invited to help steer both clinical and research activities of the Model System. It is anticipated that local and regional conferences will be held to disseminate our findings and those of the national Model Systems.

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