

New Approaches in the Care and Treatment of Persons with Brain Injury

Overview of Traumatic Brain Injury in California

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The Centers for Disease Control estimate 1.4 million Americans receive Traumatic Brain Injuries annually. TBI is an injury sustained after birth from an external force to the brain or any of its parts that results in psychological, neurological or anatomical changes in brain functions. Nationwide, the CDC identifies 5.3 million Americans as having long-term or lifelong disabilities associated with TBI, including 350,000 Californians. Approximately 50,000 people die annually from TBI. Medical and indirect costs, such as lost productivity, totaled \$60 billion nationally in 2000.

More than a quarter of the TBI cases result from falls, another 20 percent are the result of vehicle accidents and 30 percent are from either assaults or blows. Additionally, there are two, recent, high-profile population TBI patients:

- ▶ Athletes, especially football players. Spurred by a June 2009 study at a brain trauma research center based at Boston University that showed six of six ex-NFL football players had extensive TBI from playing the sport, a controversy has continued to play out through the fall about whether concussions in sports lead to lifelong brain trauma.
- ▶ Iraqi and Afghanistan war veterans. The U.S. Department of Veteran's Affairs, which established a TBI administration after the Gulf War, noted that while 14 percent of previous war veterans had TBI, this war's brain injured veterans is "much higher." Some providers estimate that 60 percent of injured vets also have TBI.

Long term symptoms of Traumatic Brain Injury include memory loss, physical aggression, depression, difficulty expressing thoughts or understanding others, seizures, impaired social skills and inappropriate sexual activity, inability to accept limitations and heightened risk of Alzheimer's.

In California, funds from traffic and other motor vehicle fines are diverted into a variety of funds, including a Traumatic Brain Fund.¹ In FY 2009-2010 the fund total was \$1.05 million. This finances seven Traumatic Brain Injury Services of California centers throughout the state, which provide referrals and written materials to TBI survivors.

¹ California Penal Code Section 1464 (f)(8)(A) directs 0.66 percent of fees be transferred into the Traumatic Brain Injury fund.

With 350,000 TBI survivors, California has the highest number of any state. Yet, according to a 2004 summary of state TBI trust funds, California allocates fewer total dollars to its TBI trust fund than many states, including Kentucky, Louisiana, New Mexico and Oklahoma.

Best practices indicate survivors of TBI should be treated in a continuum of care that ranges from acute and/or emergency hospitalization to residential therapeutic services, to supports at home, to life skills and job training. In California, treatment options frequently do not include the step between acute hospital care and community services. Nursing home care has not been proven an effective model for individuals with Traumatic Brain Injury as TBI requires a multi-dimensional therapeutic focus.

Some insurers exclude rehabilitation coverage for TBI; most allow only limited days of rehabilitation that fall short of best practices, according to the California Brain Injury Association.

Services for TBI in California are delivered primarily along a continuum of community service organizations overseen by a variety of state departments, including the Departments of Rehabilitation, Social Services, Public Health, Health Care Services and others. California's community care facilities do not currently serve military TBI survivors because they lack the capacity and funding to meet their needs and are referred instead to the Veteran's Affairs TBI site in Palo Alto and other general treatment VA facilities.

A cost-benefit analysis² published in December 2007 calculated a \$4.08 billion annual savings overall, including \$262 million in medical costs, if recommended treatment practices were implemented nationwide. Those states that did implement recommended practices saw a 15 percent decrease in deaths for severely injured TBI patients 12 years or older who survived one day of hospitalization.

² "Cost-Benefit Analysis of BTF Guidelines," *The Journal of Trauma, Injury, Infection and Critical Care*, 2007; Vol. 63: pages 1271-1278.