

**Colorado Traumatic Brain Injury
Trust Fund Program
Report to the Joint Budget Committee
and Health and Human Services Committees**

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Reporting Period
January 1, 2009 – June 30, 2009

Traumatic Brain Injury Program
Colorado Department of Human Services
Division of Vocational Rehabilitation

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Program Overview

The Colorado Traumatic Brain Injury (TBI) Program was created by Title 26, Article 1, Part 3 of the Colorado Revised Statutes to improve the lives of Colorado residents who have survived traumatic brain injuries. This statute created the Colorado Traumatic Brain Injury Trust Fund (Trust Fund) to finance program activities, and the Colorado Traumatic Brain Injury Board to advise the Program on operations of the Trust Fund. The TBI Board is administered within the Colorado Department of Human Services (CDHS). Three members are designated in statute and ten members are appointed by the Governor with the consent of the Senate. Please see below for a list of board members. The Board has established four ongoing committees to assist staff in policy-setting of program goals and strategic planning for the Trust Fund: Services, Research, Education and Futures.

TBI Trust Fund Program Operations

Program Administration

The TBI program is administered by the Department of Human Services. It is housed within the Division of Vocational Rehabilitation (DVR). The emphasis of DVR's mission on independence and its programs regarding rehabilitation services, training, and vocational guidance and counseling for individuals with disabilities provides an environment of highly supportive and complementary services. CDHS staff work closely with the TBI Board and perform the following functions for the program: financial management, policy development, program development and implementation, contract management, program monitoring, administrative support, web site maintenance, public assistance and information, reporting, and marketing and public relations.

Trust Fund Board of Directors:

Name	Employment/Affiliation
David Arciniegas, MD	University of Colorado Health Sciences Center
Holly Ann Batal, MD	Denver Health
Susan Charlifue, PhD	Craig Hospital
Myriam DeLeon, RN MSN	Denver Public Schools
Jeanne Dise-Lewis, PhD	The Denver Children's Hospital
Barbara Gabella	Colorado Department of Public Health and Environment
Kim Gorgens, PhD	University of Denver
Christina Hoagland, OTR, Survivor	Community Hospital
Kenny Hosack, MA	Craig Hospital
Bill Levis, J.D.	Brain Injury Association of Colorado
David Matero, MD	University of Colorado School of Medicine
Nancy Smith	Department of Human Services, DVR

Governor's Executive Order – On December 8, 2008, Governor Bill Ritter signed an Executive Order requiring collaborative efforts across state agencies to assist in the coordination of services for those affected by a traumatic brain injury. As a result of this order a TBI Executive Order Work Group has been convened and meeting monthly since April 2009. The work group is comprised of representatives from the following State Departments; Corrections, Health Care Policy and Financing, Higher Education, Human Services, Labor and Employment, Military and Veteran's Affairs, Personnel and Administration, Public Health and Environment, Public Safety, Regulatory Agencies, Transportation and Education. In addition the work group is working closely with the Brain Injury Collaborative and other interested stakeholders from the private sector. The purpose of the Executive Order is to increase the collaboration and effectiveness of state services to the growing population of people living with the effects of traumatic brain injury. The work group has been tasked with submitting a report with recommendations to the Governor by December 1, 2009.

Revenue and Expenditures

During the reporting period of January 2009 – June 2009, the Trust Fund received \$1,251,162 and expended \$1,574,670.

During the 2009 Legislative Session, SB09-133 and SB09-005 were passed. The TBI Trust Fund receives revenue from surcharges assessed for convictions of certain traffic offenses. SB 09-133 raises the surcharges by \$5.00 across the existing violations; driving under the influence of alcohol (DUI) or driving while ability is impaired (DWAi), speeding and youth under eighteen years of age riding a motorcycle or motorized bicycle without a helmet. The surcharges are now \$20.00 for drinking and driving related convictions and \$15.00 for speeding and helmet convictions.

Previously, the funds were divided across program areas with percentages that were not flexible; 65 percent for services, 30 percent for research and 5 percent for education. The passage of SB09-005 allows for more flexibility of the percentages. Now a minimum of 55 percent of the funds go to services, 25 percent research, and 5 percent education.

Services

All individuals receiving assistance from the Trust Fund receive care coordination services. Care coordination is designed to provide clients with skills they can use throughout their lifetimes, and to connect clients with resources in their communities that will be available following their participation in the Trust Fund Program. In addition, the Trust Fund may be used to purchase a variety of other services including but not limited to:

- community residential services;
- structured day program services;
- psychological and mental health services for the individual with the traumatic brain injury and the individual's family;
- prevocational services;
- supported employment;
- companion services;
- respite care;
- occupational therapy;
- speech and language therapy;
- cognitive rehabilitation;
- physical rehabilitation; and
- one-time home modifications.

These additional services (beyond care coordination) are referred to as "purchased services." The Trust Fund may not be used to pay for institutionalization, hospitalization, medications, rent, utilities, vehicles or appliances.

Services Provided During the Reporting Period of January 1, 2009 – June 30, 2009

Intake, Eligibility and Referral Services:

	Children	Adults
Applications Received	45	209
Eligible Applicants	89%	87%
Eligible Veteran Military Applicants	0%	28%

Clients Served:

Children Served	Adults Served*	Children Waitlist	Adult Waitlist
95	396	0	238

**Six percent of adults served were veterans with 23 percent of the waitlist being veteran/military personnel.*

Evaluation - The TBI Program also reports on the following Key Indicator for the Division of Vocational Rehabilitation; "How satisfied were you that the services that you received connected you to appropriate resources and supports which facilitate your rehabilitation?" The Overall average client satisfaction for the reporting period for adults was 3.88 out of 5.0. For children the overall average client satisfaction was 3.85 and the combined average was 3.87.

Research

The TBI Trust Fund Board awards grants to support research in Colorado related to the treatment and understanding of traumatic brain injuries. The Research Program has established the following three research priorities for the research program: basic science, clinical science and health services and outcome research.

During the period of January 2009 – June 2009, the Program received one new proposal and four revised applications. The following four projects, totaling \$1,437,580.96, are approved for funding:

Title: The Role of Eicosanoids in Traumatic Brain Injury

Principal Investigator: Kim Heidenreich, Ph.D.

Institution: University of Colorado Health Sciences Center

Award: \$415,762

Status: 2 year active project

Description: Traumatic brain injury results in two types of neuronal damage: the primary injury, or mechanical damage from impact; and the secondary injury resulting from a complex cascade of physiological reactions leading to inflammation, swelling, lack of oxygen in tissue, and additional neuronal death. Eicosanoids detected in brain tissue after TBI are thought to play a role in the secondary injury processes. The goal of this study is to determine if pharmacological manipulation of eicosanoid production or function can prevent or minimize secondary brain injury after TBI.

Title: Improving Neurobehavioral Outcomes in Adult TBI

Principal Investigator: Theresa Hernandez, Ph.D.

Institution: University of Colorado at Boulder

Award: \$405,244

Status: 2 year active project

Description: There is a great need for effective neurobehavioral intervention following TBI, as current drug therapy treatments are often disappointing. Ideally, such interventions would be low cost, highly accessible, self-administered, without side effects and would effectively improve neurobehavioral function, even when initiated months after injury. Jin Shin, a type of acupressure which fulfills many of these requirements, is shown to be effective in chronic stroke patients. This study aims to determine the potential of Jin Shin to improve neurobehavioral outcome after TBI.

Title: Use of a TBI Screen in a Veteran Mental Health Population: Prevalence, Validation and Psychiatric Outcomes

Principal Investigator: Lisa Brenner, Ph.D.

Institution: Eastern Colorado Health Care System VISN 19 MIRECC

Award: \$322,574.96

Status: 2 year active project

Description: The primary aim of this study is to assess the utility of four TBI screening questions (TBI-4) by establishing the validity of this screening method and comparing psychiatric outcomes (e.g., suicidal behavior) of those identified with a history of TBI to those with no history of TBI. Pilot data indicate that the TBI-4 may serve as a means for increased identification of lifetime exposure to TBI in a veteran mental health setting. Moreover, in conjunction with current Veterans Affairs (VA) and Department of Defense (DoD) efforts regarding assessment of Operation Enduring Freedom (OEF)/ Operation Iraqi Freedom (OIF) deployment-related-TBI, findings from this project may provide the VA with a comprehensive TBI screening system. Ultimately it is hoped that that increased identification of TBI in this high-risk population will facilitate appropriate intervention, decrease long-term negative psychiatric outcomes, and reduce overall cost associated with TBI. Dissemination of findings throughout the VA and other systems will include webinars, presentations, collaborations with other VA and DoD facilities, and publications in peer reviewed journals.

Title: The "TBI Screening Tool Inventory": Expanding Psychometric Properties to Support School Team Use

Principal Investigator: Pat Sample, Ph.D.

Institution: Colorado State University

Award: \$294,000.00

Status: 2 year active project

Description: In 2005/2006, this research team piloted *The TBI Screening Tool Inventory for School-Aged Children (STI)* with a grant from the Colorado TBI Trust Fund. This tool is under serious consideration to become CDE's screening mechanism of choice. While the STI's psychometric properties are still being studied, school professionals already request the tool and report it valuable in facilitating students' access to targeted services, not available if they remain unidentified or misclassified. The proposed study is critical to achieve our long-term goal of ensuring that the STI psychometric properties are acceptable for on-going school use. This project will expand the psychometric properties of the STI, and gather valuable information about the use of the STI in the five participating school districts, in order to: determine the normative performance on the STI of typically developing students by age; determine the test-retest reliability of the STI; determine whether the STI can differentiate students with traumatic brain injury (TBI) from those with IEP-identified learning disabilities (LD); and describe the process parents and students experience, following the parents' completion of the STI with positive results and the subsequent educational identification process.

Updates on research grants are available on the Trust Fund website under Research at www.tbicolorado.org. In addition to these successful grant applications, the Program currently has two grants approved and in a queue waiting for available funds and two pending applications in various stages of the review processes totaling \$3,468,511.

Education

For Fiscal Year 2009, a total of 21 grants for a total of \$113,566 were awarded, with individual awards ranging from \$924 to \$10,000. All education grants are awarded for a one year period. Education grants were awarded for the following projects:

Organization:	Amount:	Geographic Area:	Description:
Aurora Public Schools/Pitkin Tech	\$3,910	Aurora	Fund BrainSTARS manuals, educational DVDs, brochures and 2 conference

			registrations
Beth Kahmann	\$5,000	Statewide	Create user-friendly DVD of Colorado TBI resources for use by survivors and caregivers
Brain Injury Association of Colorado (BIAC)	\$10,000	Statewide	Provide self advocacy workshops to increase independence of those with TBI
BIAC	\$2,000	Statewide	Add materials to resource library for families
Cherry Creek School District	\$3,592	Cherry Creek and Littleton Public School Districts	Training of signs, symptoms and strategies working with students with TBI
The Children's Hospital – Department of Rehabilitation	\$10,000	Statewide	Provide BrainSTARS resource manual to each child admitted with a TBI
Colorado Department of Public Health and Environment	\$4,800	Statewide	Provide national brain injury certification to care coordinators working with children with TBI
Denver, CO Information, Resource Coordination, Linkage and Education (CIRCLE) Group/BIAC	\$5,000	Statewide	Develop and distribute TBI educational card to hospitals, clinics and community organizations
Denver Options – Creative Training Accelerating Talent (CTAT)	\$7,000	Durango/Cortez and Sterling/Fort Morgan	Provide the best of TBI Survivor Series trainings in 2 rural areas
Denver Options - CTAT	\$5,000	Statewide	Use E-connections technology to bring TBI stakeholders together to share resources and stories
Denver Options - CTAT	\$5,000	Denver Metro	Provide Survivor Series Trainings
Denver Veterans Administration	\$5,000	Statewide and national	Host consensus conference of national experts on suicide risk in relation to TBI

Douglas County School District	\$5,000	Douglas County	Presentation: Educational implications of TBI and interventions in schools for parents, educators, coaches
Dr. Negron	\$10,000	Statewide	Translate the BrainSTARS manual to Spanish
Greeley/Evans Weld School District 6	\$7,160	Weld County	Training for school personnel to address students with TBI
Larimer County	\$3,500	Larimer County	Conference attendance for TBI survivors, family members and two care coordinators
Pikes Peak First Choice	\$6,400	El Paso County and beyond	Educational Sessions for military service members and veterans with TBI and their families
Pikes Peak First Choice	\$2,500	El Paso County and beyond	Educate First Responders about TBI in combat service members
Safe Kids Denver Metro Area Coalition	\$9,280	Denver Metro	Develop and present brain injury empathy exercises in elementary and middle schools
Tri-County Health Department	\$924	Adams, Arapahoe and Douglas Counties	Provide BrainSTARS manuals to families of children with TBI
University of Denver	\$2,500	Denver Metro	Provide TBI seminar on TBI treatment and assessment
Total	\$113,566		

For additional information on the Traumatic Brain Injury Program, please visit the program website at www.tbicolorado.org or contact: Judy Dettmer, TBI Program Director at 303-866-4085 or via email at judy.dettmer@state.co.us