

FINAL REPORT

Traumatic Brain Injury Implementation Grant
Grant # H21MC02561

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\$600,000

NARRATIVE

1. PURPOSE OF PROJECT

The purpose of the Implementation grant, funded under the Health Resources and Services Administration (HRSA)'s Maternal and Child Health Bureau, was to develop a collaborative, statewide project to develop the infrastructure for comprehensive system of culturally competent, person/family centered TBI supports and services. Despite some delays and changes in staff, grant goals have been accomplished and structures are in place to support continued growth.

These structures are built upon a firm foundation that was built when Vermont was awarded a TBI Planning Grant by HRSA's Maternal and Child Health Bureau in 2001. Under the HRSA Planning Grant, the TBI Program, with hands-on involvement from the TBI Advisory Board and Work Groups, completed a Needs Assessment and Action Plan. The Needs Assessment pointed to the lack of a comprehensive system of services and supports for children and adults with TBI of all levels of severity. Many individuals with TBI and their families faced a bewildering patchwork of services with numerous gaps and varying eligibility requirements. Children and adults with mild to moderate TBI frequently were unidentified and inappropriately served. Systems to track incidence and prevalence, particularly mild to moderate TBI, were inadequate. The Action Plan identified information, referral and assistance; public education; a trained work force; enhanced service capacity; and a TBI data collection system as top priorities for building a comprehensive system of services and supports. Project goals and objectives have flowed from the Action Plan priorities.

This work led to the setting the goals outlined in the Implementation Grant. This grant, awarded by HRSA in 2004, sought to take the next step in forming the infrastructure for a comprehensive system of supports and services. Following the guidance of the State Action Plan, HRSA Implementation funds have done much to develop this infrastructure and Vermont has been able to increase identification, timely referral, and access to TBI services. Resources for children and adults with TBI of all levels of severity have increased and individuals with TBI and their families now have access to accurate, consistent TBI information, referral and assistance (I/R/A).

There is still much work to be done, however, the Implementation Grant has set the stage for continued growth and success in meeting the needs of Vermonters with TBI.

2. GOALS AND OBJECTIVES

GOAL 1. Information, Referral, Assistance: Individuals with TBI and their families will have access to accurate, consistent TBI information, referral and assistance (I/R/A) to obtain appropriate services and supports.

Objective 1. Develop a centralized toll-free TBI I/R/A service.

Activities: In February 2005, the Brain Injury Association (BIA) of Vermont was chosen to develop and operate a TBI-specific I/R/A system. The contract ended January, 2007, however the BIA was able to maintain this service through its increased capacity. More recently, Vermont 2-1-1, a statewide information and referral service, has provided consultation to the BIA, reviewing and making recommendations on the current structure of information and referral services available at the BIA. The consultant also reviewed the current database structure and assessed I/R/A's progress in relation to the AIRS standards.

Despite changes in staff, the Information & Referral Specialist at the BIA has initiated contact with other I/R and I/R/A providers. The BIA continues to develop mechanisms for routine contact, providing information on TBI signs/symptoms to other providers, and creating memos of understanding with key providers. In addition, the resource database is currently being transitioned into an improved system with technical assistance provided by the BIA of New Hampshire.

The BIA Information & Referral is now AIRS certified and the I/R/A service has received a 25% increase in calls for the first seven months of 2007. The largest request is for general information about brain injury followed by requests for case management. Other most frequent requests include information on medical issues, disability, legal, psychological services, support group information, and veterans' issues.

***Objective 2.** Improve access to appropriate services and supports, and increase knowledge about TBI among children and adults with TBI, their families, and providers.*

Activities: As noted previously, The BIA's help-line has been responding to requests for services. They are also continuing to develop a resource library; creating TBI information packets for dissemination; creating web-site access to the resource library and appropriate links. They have also conducted outreach through their re-designed newsletter. Staff and board have given presentations to childcare workers, domestic violence workers, and supported employment professionals. They have also presented at Drivers' Education classes, and Special Needs classes for Education majors at Champlain College. In addition, the BIA has run advertisements in Vermont's largest newspaper listing signs & symptoms of brain injury and featuring the help-line number.

GOAL 2. Public Education: Increased identification of TBI, particularly mild to moderate, in children and adults will promote timely referral and supports.

Objective 1. Increase awareness about TBI among emergency medical personnel.

Activities: In collaboration with the BIA, the TBI Program has exhibited at the Emergency Medical Services (EMS) statewide two-day conference for the last several years. Fact sheets from NASHIA specific to EMS in both English and Spanish were created and disseminated. A pocket-sized card was created for EMS workers and distributed as well. The card provides a short list of appropriate questions to ask on arrival to the scene and lists local contacts on one side. The other side lists the Glasgow Coma Scale. The BIA/TBI Program exhibit at these conferences has received high praise and Vermont EMS now take the initiative to include workshops on head injury at all their conferences with approximately 600 EMS workers attend this event each year.

Objective 2. Increase awareness about TBI among individuals with mild to moderate TBI and their families.

Activities: Lack of identification of brain injury, especially mild to moderate, was named in the Needs Assessment as a major barrier to services. This has driven activities to raise awareness for these individuals and their families. The message that a concussion constitutes a brain injury was featured on resource cards, a bus signs, and in radio messages. The Vermont TBI resource card was created and printed in November of 2005. Twenty thousand copies were distributed to EMS agencies, hospital departments, primary care physicians (PCPs), sleep & headache clinics, nursing facilities, school nurses, special education teachers, town recreation departments, area agencies on aging,

domestic violence workers, state offices, counselors, nurses, the veteran's administration, refugee and immigrant service workers, the BIA of Vermont, mental health centers, home health agencies, and others. Five thousand additional copies in English have been printed to have available for conferences and additional requests. In addition, the card has been translated into the four most widely spoken languages (Bosnian, French, Spanish, and Vietnamese), and these have been distributed through the Vermont Refugee Resettlement Program, places of worship, and community health centers.

A sign with a soccer ball on it and the words "Concussion = brain injury" has been displayed on the rear of a public bus in Burlington, Vermont's largest city, area for several months in FY 2005 and 2006. This message was targeted to youth and their families, coaches and teachers, to raise awareness about mild to moderate brain injury and to advertise the I/R/A number. In addition, paid messages on Vermont Public Radio (VPR) were also aired for several months with alternating messages highlighting the need for wearing helmets while bike riding, noting the information and referral number for the BIA-Vermont, and announcing the statewide TBI Conference.

Brain Injury Awareness Month initiatives

In 2006, another initiative with VPR resulted in a call-in program aired live in the evening, called *Switchboard*. Three guests were interviewed by the host, Fran Stoddard. The guests were PJ Long, an individual with a TBI; Dr. William Frey, a psychologist who works with individuals with brain injury and is also a member of our Advisory Board; and Emmie Burke, a TBI Provider and a member of the TBI Advisory Board. VPR boasts 160,000 listeners each week – Per capita, VPR is one of the most listened-to public radio stations in the country.

A local long-standing educational program called *Across the Fence* taped an interview with Dr. Mary Willmuth, a psychologist who works in the Burlington area. She is very knowledgeable about TBI and has presented numerous times in our annual conference and at special TBI Neuro-behavioral trainings. This 11-minute interview was aired between the noon news and the start of the CBS daytime programs. Scripted by the TBI Program, the discussion focused on such issues as prevalence, signs & symptoms, and safety tips. The *Across the Fence* show has approximately 25,000 viewers, ages 45 and older, across Vermont, Northern New York, western New Hampshire, and southern Quebec.

In 2007, posters created by the BIA of America were distributed throughout the state by staff and advisory board: hospitals, doctor's offices, skate parks, town recreation departments, veterans' service providers, and others were targeted for this distribution of approximately 150 posters. An additional spot on *Across the Fence* was aired and included the TBI Grants Manager and the Shaken Baby Syndrome Prevention Manager, who discussed the fragility of the brain, the importance of wearing helmets while bike riding, rollerblading, etc., how to properly wear a bike helmet, the dangers of shaking a baby, and strategies to calm down when frustrated by a crying baby.

Objective 3. *Increase awareness about TBI among health care providers.*

Activities: Activities have included expanding the dissemination of the resource card to include all licensed nurses (both RNs, LPNs), chiropractors, nursing home administrators, optometrists, opticians, ER physicians, and local ambulance services. The kiosk, materials, and a staff person have traveled to the state's Nurse Practitioner conference, Vermont State Nurses' Association conference, the Green Mountain Chapter of the Case

Management Society of America's annual conference, Vermont Medical Society's annual meeting, the Minority Health Conference, and a conference for psychiatrists. The BIA of Vermont has conducted outreach to hospitals and focused efforts on discharge planners and social workers.

Objective 4. *Increase awareness about TBI among school personnel.*

Activities: A TBI kiosk was purchased and used at many conferences, including the Vermont School Nurses' Association conference. The exhibit at this conference was done in collaboration with Safe Kids Vermont and included their materials and also the materials from UVM's project PHAT (Protect Your Head at all Times). This prevention project works extensively with ski resorts in Vermont to determine why helmets are not used. They have produced some posters, stickers, and hand-outs to promote helmet use targeted at youth. The resource card has been mailed to physical education teachers and athletic trainers in Vermont schools.

A training for a district of school nurses was well-received and the nurses plan to do presentations within their schools for faculty and staff. This training focused on TBI in the schools and was based on the information presented at the TBI Interagency Conference in FY 2006. Several nurses commented that they were unaware of the extent of the problem and felt frustrated that other school personnel do not always take a concussion seriously. More education on TBI needed in Vermont schools.

In September of 2006, the Management of Concussion in Sports laminated card was sent to all the Athletic Directors in Vermont primary and secondary schools accompanied by a letter highlighting the importance of protecting the head during play and avoiding multiple injuries. The letter also listed local resources and advertised the CDC's "Heads

Up: Concussion in High School Sports” kit. The TBI Program helped facilitate obtaining kits for several Athletic Directors and brought this information to Health Fairs across the state, working collaboratively with The Shaken Baby Syndrome Prevention Manager.

Objective 5. *Increase awareness about TBI among ethnic and racial minorities.*

Activities: The TBI Implementation Grant Manager has met with representatives from the Vermont Refugee Resettlement Project and has gathered information from them about languages most frequently spoken in Vermont and ways to reach both refugee and immigrant populations. As a result, the resource card has been translated into Bosnian, French, Spanish, and Vietnamese. We have also made a connection with Burlington’s Community Health Center, which frequently serves refugees. We offered the health centers’ staff training and they have requested more information. The TBI Program researched census data and found the areas of Vermont that have the highest populations of refugees, immigrants, and those speaking other languages at home. The TBI Program also identified faith based organizations across the state and these organizations in these areas received an introductory letter and a supply of resource cards. In addition, the newly formed Association of Africans Living in Vermont also disseminated information on TBI through their Outreach Workers who do home visits to African refugees. The kiosk and an advisory board member were present at a Vermont “Pow-Wow” of Native Americans and materials adapted from the CDC about injuries and Native Americans were disseminated. The TBI Program has also reached out to the African, Latino, Asian, and Native American (ALANA) Community Center in Brattleboro, Vermont. ALANA’s mission is to build and reinforce relationships with communities of color and communities at large by addressing issues in health care, education, the arts,

environment, religion, business, and economic development in a culturally sensitive manner.

Objective 6. *Increase awareness about TBI among the general public.*

Activities: The TBI Program and the BIA of Vermont have made a joint effort to increase awareness about TBI among the general public. Press releases advertising the I/R/A service, the TBI conference, and announcing the awards given at the TBI conference have all included basic information about TBI, statistics, and local resources. Other publicity has included the bus sign discussed above, a radio public service announcement (PSA) created with and taped by an individual with TBI, PJ Long. PJ Long has written a memoir about her experience rehabilitating after she fell off a horse and received a TBI. She was interviewed on a Vermont cable television show and also had an article printed in the magazine *Living the Vermont Way*. In addition, she was the keynote speaker at our conference in October 2005 and the local cable television company was solicited to tape her address and air it. Copies of the address were made available through the cable company.

Over 6,000 Vermont State employees received TBI information in the form of an articles appearing in the paycheck newsletter on three separate occasions. The first article listed Vermont statistics on TBI and advertised the I/R/A help-line, the second advertised the annual brain injury conference, and the third announced the new Shaken Baby Syndrome prevention project.

TBI has also received attention from the local press. *The Rutland Herald* interviewed Trisha Meili, who was the keynote speaker at our annual conference in October of 2006. The article appeared in the paper during Brain Injury Awareness Month. On the day of

Trisha's keynote address, a local television station interviewed her, as well as a physician and a psychologist in attendance at the conference. The spot aired that night on the new program's special "Health Watch" segment.

Vermont Public Radio did a story on TBI and returning soldiers which aired in June of 2007. A large Vermont newspaper, *The Burlington Free Press*, ran an article on a local high school student who was injured while playing hockey. This story was powerful as it discussed the downward spiral that the student experienced, resulting in drug use and being expelled from school. It took time for his parents to realize that he was suffering from the consequences of multiple brain injuries and obtain the appropriate treatment. The paper received many letters and phone calls and has been more helpful in publicizing fundraising events for the BIA of Vermont and is more open to future stories about TBI. The kiosk was also exhibited at the town of Northfield's Safety Day held in July of 2007. Northfield is home to Vermont's only military college, Norwich University and information on veterans and TBI were distributed in addition to other TBI materials. TBI staff obtained vouchers for free ice cream from local vendors and gave them to kids seen wearing helmets while bicycling.

Objective 7. *Collaborate with Shaken Baby Syndrome (SBS) Committee to implement a proposal that targets education to those at highest risk to shake a baby.*

Activities:

Prevent Child Abuse Vermont recruited and trained a trainer with support and input from the SBS committee. In the first year of this initiative, the new trainer, Kay Shangraw, R.N., conducted 73 trainings reaching 922 individuals. Those trained included EMS workers, teenaged/young parents, students, teachers, school nurses, licensed childcare

providers, registered childcare providers, healthcare professionals, inmates, nannies, and Family Center staff.

Ms. Shangraw has made strong connections with Vermont's Maternal Child Health network and has met with all 12 District Coordinators at Public Health Nurses Coordinators meeting. During her tenure she has trained many nurses and met with all 12 Vermont hospital maternity units. New parents now receive materials on Shaken Baby Syndrome and watch an 8-minute prevention video called "Portrait of a Promise." In addition to her work with nurses, Vermont prisoners and many on probation received training on the dangers of shaking a baby and how to manage the stress of parenthood while safely caring for and comforting a baby.

Objective 8. *The public's awareness of Shaken Baby Syndrome will increase.*

Activities: Twelve radio PSAs about Shaken Baby Syndrome were produced and aired on 70 radio stations starting in January 2007. In addition, Booth Brothers dairy provided three months of messaging on milk cartons.

30,000 brochures and pamphlets were distributed in the first year of the project, as well as 10,000 "Never Shake A Baby!" magnets. All materials included the parent stress line phone number which is toll-free and staffed during business hours. In addition, 500 "Rock, Don't Shake" posters were distributed to maternity units, family centers, pediatricians' offices, and state offices that serve families. The poster features a young man holding a baby in the foreground with a drum set and electric guitar in the background. This poster targets young men – the population at the highest risk to shake a baby.

Shaken Baby Syndrome was highlighted at the Vermont Statehouse in 2007 for the Governor's Proclamation ceremony and press conference announcing that April is Child Abuse Prevention Month. A member of the SBS advisory committee brought her adopted daughter, Madison, to the event. Madison was shaken as an infant by her biological father and is now six years old. She uses a wheelchair, has limited speech and language skills, and has special educational and personal care needs. Her adoptive mother is working to raise awareness about this form of abuse.

In addition to supporting outreach and education through print materials, training, and special events, the TBI Grant Manager, in collaboration with the Brain Injury Association of New Hampshire, presented at the National Association for head Injury Administrators (NASHIA) Conference in 2007 to provide an overview of the their joint prevention efforts to raise awareness of Shaken Baby Syndrome.

In addition to providing training across the state, the Prevent Child Abuse Vermont trainer, Ms. Shangraw, has appeared on two television programs: one on local cable access and one on a CBS network affiliate. This initiative continues as the Department of Disabilities, Aging, and Independent Living made a commitment to give another \$24,000 for the second year through another funding source and the two other departments, Department of Health and Department of Children and Families, will also continue to give funds to support the project.

Goal 3. Trained Work Force: Improved knowledge and skills of providers will increase identification and enhance quality of services for children and adults with TBI of all levels of severity.

Objective 1. Increase TBI expertise of health care providers.

Activities: A Presentation on strategies to working with individuals with TBI was given at the Occupational Therapy conference. Evaluations were positive and materials were disseminated to all conference attendees where the kiosk was displayed.

The TBI Program Supervisor and the TBI Grant Manager met with the rehabilitation team at Rutland Regional Medical Center to discuss strategies for serving individuals with TBI and available resources for supports. This meeting was attended by 20 physical therapists, occupational therapists, and nurses. A dialogue about best practices, the TBI Waiver program, and possible collaborations with other groups proved beneficial on both sides.

The TBI Grant Manager gave a presentation and distributed materials to over 25 Nurse Practitioners and Physician's Assistants who work in Internal Medicine at a large Health Center in Burlington, Vermont's largest city. The group was particularly interested in screening tools, of which they were given several samples to try. They were also interested in how TBI symptoms mimic other diseases and methods of diagnosing TBI. For the last three years, the annual TBI conference added an extra half-day of focused workshops to boost professional participation in the conference and these have been well attended, training over 70 professionals each year. Professional tracks have included a focus for Speech Language Pathologists and Occupational Therapists titled "Alternative augmentative communication for TBI: Intervention Decision-Making Throughout Recovery" and one for mental health professionals titled "Neuropsychiatric Aspects of TBI." Other topics have included "Alternative Approaches to Behavioral Challenges in Brain Injury" and "Neuro-Optometric Rehabilitation." In 2007, a third workshop was added and the topics were: "Brain Injury and the Military", "Holistic Approaches to TBI

Treatment” and “Tools, Programs, Challenges, and Resources for Clients with Traumatic Brain Injury.” Qualified presenters conducted all trainings and Continuing Education Units (CEUs) were offered. Grant funds helped advertise these trainings and other break out sessions at the TBI Conference that also included survivors, family members, and caregivers.

In addition to training efforts, the TBI Program assisted with the preparation of articles for nursing publications and mailed the TBI “Quick Reference Card”, a TBI screening tool, to Primary Care Physicians across the state.

Objective 2. Increase TBI expertise of school personnel.

Activities: The TBI Program presented on TBI in the schools at a regional school nurses’ meeting in March and distributed materials.

A Special Education teacher who specialized in brain injury presented at a regional special education meeting in February of 2007. She also conducted a three-hour workshop at the Vermont National Educational Association (NEA) conference, discussing strategies for teaching and ways of identifying and documenting a child history of brain injury. The program description was included in the Vermont NEA’s convention guide, which is mailed to 11,500 members. The kiosk was exhibited during the convention as part of their Education Materials Exhibit, which was attended by approximately 700 teachers from around Vermont.

In addition to these efforts, the TBI Concussion Card was mailed to high school and college coaches and Physical Education teachers across the state. In addition the CDC Tool Kit for High School Sports was mailed to several Athletic Directors.

Objective 3. Increase TBI expertise of vocational counselors.

Activities: Vocational Rehabilitation (VR) counselors, including a Vocational Counselor from the Division for the Blind and Visually Impaired, attended a TBI certification program at Assumption College in Worcester, Massachusetts. This program was funded through a continuing education grant for rehabilitation professionals and offered to the New England states. It included twelve days of training specifically on TBI issues. While the funding for this training was only available on a one time basis, The TBI Program continues to work closely with the Division of Vocational Rehabilitation (DVR) to provide training on TBI issues and works collaboratively with DVR to develop training for the Annual TBI Conference. The TBI program also worked with DVR to develop a panel of individuals with TBI who have returned to that spoke at the annual Supported Employment Conference.

Objective 4. Increase TBI expertise of emergency medical personnel.

Activities: As noted previously, outreach to EMS workers through exhibiting at conferences and creating materials specific to their needs. The TBI Program had a kiosk and distributed information at the EMS Conference each year and was involved in supporting the development of workshops specifically focused on TBI.

A train the trainer workshop on “Prehospital Management & Traumatic Brain Injury” was utilized as a way to better reach EMS workers across the state and these trainers continue to provide training on an as needed basis.

In addition, articles were prepared for EMS Publications and an adhoc committee was formed with the TBI Advisory Board, to make further recommendations.

Objective 5. Increase TBI expertise of direct care workforce.

Activities: The TBI Core Training Manual was created and included input from TBI case managers and providers about best training practices, effective formats, and on-the-job training strategies. A free, full-day training for Life Skills Aides covered empowerment, professional boundaries, documentation, substance abuse, and self-care for those who do the one-on-one rehabilitation work in 2005, 2006, and 2007.

The Core Training Manual has since been revised with consultation from the Division of Disabilities, Aging, and Independent Living Training Coordinator and relevant training activities are now communicated through the Training list-serve.

Objective 6. *Case managers who work with the elderly will have awareness and skills to identify TBI and refer clients appropriately.*

Activities:

Collaboration with the BIA of Vermont has resulted in presentations for case managers at Area Agencies on Aging and in presentations for senior citizens who work as companions to isolated elders. The trainings covered prevention strategies, signs and symptoms of TBI, eligibility for TBI Waiver services, and information on other services available.

The TBI Grant Manager attended regional meetings for case managers who work with the elderly, including employees with area agencies on aging and with home health agencies and presented to these group on the challenges of identifying TBI, the resources available for those with TBI in Vermont, and discussed accommodations that can be made for individuals with TBI/cognitive challenges. Training was also be provided to area agencies on aging, development services providers, and the Vermont

Center for Independent Living staff through a cross-training initiated by Vermont's Aging & Disabilities Resource Center grant.

The Department of Health's Injury Prevention Planning Group also hosted a symposium on preventing falls among the elderly. The TBI Program took an active role in planning this day-long event that brought in stakeholders from insurance companies, rehabilitation facilities, and healthcare workers specializing in geriatrics, nursing homes, and case managers from area agencies on aging. The symposium was well-attended and a list of next steps was developed. The TBI Program continues to collaborate with the Department of Health's Injury Prevention Program as it revises the statewide plan for injury prevention per the CDC grant.

***Objective 7.** Domestic violence and sexual assault workers will have awareness and skills to identify TBI and refer clients appropriately.*

Activities:

BIA of Vermont staff presented to domestic violence service providers and the Vermont Network Against Domestic and Sexual Violence sent a representative to consult on our TBI Advisory Board. The representative is working through a grant with the 16 programs around the state to make all their services accessible to people with disabilities. They are still in the planning stages of the grant and will be calling upon the TBI Program and the BIA of Vermont to provide further training on TBI to program staff. TBI Program published and disseminated information on screening domestic violence victims for TBI. The document included the help-line number and suggestions for follow-up assessments if a client screens positive. It also included a list of accommodations for individuals with TBI. These items were distributed to the Vermont

Victims' Assistance Academy and through the Vermont Network Against Domestic and Sexual Violence's list-serve to the 16 programs in the state providing services. In addition, a TBI presentation was included at the Victims' Assistance Academy with pre- and post-tests showing increased awareness of participants. The Vermont Center for Crime Victims' Services hosted a tri-state conference, "Voices for Justice: Increasing Cultural Competence to Meet the Needs of all Victims", and asked the TBI Program to present again on domestic violence and TBI. The Grant Manager and a TBI advisory board member, Dr. William Frey, a psychologist, presented on identifying TBI, referring appropriately, and strategies for working with individuals.

Goal 4. Data Collection: Planning for TBI services and supports will be based on TBI incidence and prevalence data for all ages and levels of severity in Vermont.

Objective 1. Establish systems to track incidence and prevalence of all levels of TBI.

Activities: Conversations with the Vermont Department of Health's surveillance staff has launched the exploration of establishing a TBI registry in Vermont. Current CDC Surveillance Grant Program statistics have provided TBI-related deaths, TBI-related hospitalizations from hospital discharge data, and TBI-related ER visits, but this data is at least two years old and there is a need for "real-time" data to make immediate follow-up with individuals possible. Models from other states continue to be explored. The possibility of including the cost of development and maintenance of tracking systems in a potential trust fund is also being considered.

Goal 5. Enhanced Services: Vermont's capacity to provide accessible, appropriate, acceptable, affordable services and supports to children and adults with TBI of all levels of severity will be enhanced.

Objective 1. Develop detailed Action Plans for priorities related to Enhanced Services.

Activities: A work group on sustainability convened in August 2006 as a sub-committee of the Advisory Board. The group has focused on seeking the establishment of a trust fund supported by an additional tax of \$1 on vehicle registrations. This would constitute approximately 700,000 registrations in Vermont, with a potential of \$700,000 per year to provide TBI prevention, education, training, tracking and direct services. The direct services offered through this fund would be based on gaps in current services and needs identified through the Needs Assessment and the data gathered from those served through the I/R/A service. A Bill was prepared and introduced during the 2007 legislative session. Late in the 2007 session, a mandated study on TBI was added on to the Senate Appropriations Bill. The study, which was completed in December 2007, supported the needs that were outlined in establishing the state Action Plan in 2003.

Expanding on these needs to meet the needs of specific populations, the TBI Program began to address the issues faced by returning veterans with TBI. The TBI Program was also able to raise public awareness and train the workforce by collaborating with other stakeholders to support specific populations including the Shaken Baby Syndrome prevention initiative, collaboration with the Department of Health's Injury Prevention Program, collaboration with Vermont Safe Kids, and collaboration with the Vermont Center For Crime Victims' Services. The TBI Program also identified the need to train domestic violence workers and case managers for the elderly. The TBI Advisory Board has obtained representation from many of these groups and has become educated about issues related to working with the veteran's administration. The TBI Program has

actively served on the Aging and Disabilities Resource grant advisory group and in particular the streamlining access to services sub-committee.

Objective 2. Implement selected priorities related to Enhanced Services.

Activities: Under the new Global Commitment, TBI personnel have augmented collaborative efforts with other waivers to find creative ways to provide services for clients, especially those with dual diagnoses. There continues to be a need for more case management/resource facilitation services. Other identified needs include support for long-term employment and Public Guardianship (in Vermont it is by statute only available for individuals with developmental disabilities and seniors with cognitive deficits.) The BIA of Vermont will continue to facilitate support groups around Vermont and seeks to add groups as needed, i.e., in new regions, for veterans, for family members. Several TBI Providers also facilitate support groups for individuals and serve as resources to their local community members who need information and referrals to services.

Objective 3. Establish pilot to offer targeted resource facilitation to the TBI population not receiving waiver services.

Activities:

The TBI Program with the BIA of Vermont is beginning to develop plans for a neuro-resource facilitation program. An initial \$10,000 received from a private source, allowed the BIA to coordinate support services and provide case management to 30 individuals in 2007. These services were purchased from our state trained and certified TBI Provider network. Identified needs include: more trained resource facilitators, more funds to support the service, computer data tracking methods, and more public awareness of what

resource facilitation is and is not. The TBI Program has applied for and been awarded a Partnership grant to begin a resource facilitation service for returning Veterans. The model that BIA of New Hampshire has perfected will be adopted along with the wisdom gained from the pilot program implemented at the BIA of Vermont to create an efficient system.

Goal 6: Services for Veterans: Veterans returning from the Middle East and their families will have access to TBI services when appropriate.

Objective 1. TBI Program and the Veteran's Administration (VA) in White River Jct. will develop and follow a plan to help returning veterans access services.

Activities: Fourteen VA staff members participated in an early February 2006 meeting to discuss needs around TBI training. A wide range of expertise was represented at this initial meeting including those of social work, discharge planning, psychology, occupational therapy, physical therapy, speech language pathology, and spiritual ministry. Many staff members expressed their fears about the numbers of veterans returning with unidentified TBI. As a result, training was planned for staff to focus on known statistics regarding veterans sustaining TBI, TBI services available through the States of Vermont and New Hampshire, and through the BIA. A 2-hour training was held during March of that same year and was attended by 21 people including chaplains, National Guard staff, and others. The former BIA Executive Director gave a presentation on the significance of exposure to blasts and an experienced service provider talked about the challenges of serving individuals who sustained TBI. At that time the State TBI Program was informed that there will be 600-700 Vermont National Guardsmen with an average of 15-20 blast exposures returning from the Middle East in June, 2006.

That State agency and BIA are now members of the Military and Community Family Network organized for National Guard and other military branches. In 2007, the State Agency and the BIA were involved in two Friday evening trainings for family members sponsored by this network and made information about signs and symptoms of TBI available at a kiosk. On June 8 and on October 24, the Network sponsored a conference to educate Health Care Providers and Community Service Members on what to expect when veterans return from the Middle East. The TBI Program sponsored presentations at both conferences regarding TBI and returning soldiers. The October conference demonstrated a marked increase in awareness on the part of VA personnel and other presenters who mentioned TBI and spoke to Lead Agency representatives about their concern.

In addition, the VA held "Education Day's in June and September for their staff, including medical personnel. The Lead Agency attended these events with the kiosk and materials in both 2006 and 2007. Numerous staff members visited the kiosk, asked questions, and took away printed information. TBI presentations were also included in two regional trainings called "From the War Zone to the Home Front" to help family members and local service providers understand and prepare for the return of soldiers who have seen combat. TBI also was among other exhibitors at these two full-day events along with exhibitors on Vet to Vet support, Post Traumatic Stress Disorder (PTSD), National Guard Family Readiness Programs, and sleep disturbance treatments.

Staff members from the Vermont Office of Veteran's Affairs have consulted with TBI staff and attended TBI Advisory Board meetings. The Office of Veteran's Affairs has also been supportive of the Lead Agency's application for a Partnership Grant by offering

office space for the proposed Neuro-Resource Facilitator. The grant will work with the BIA of New Hampshire to adopt their model of Neuro-Resource Facilitation. Returning veterans will be the priority served through this new system in Vermont for the duration of this 3-year project.

A member of our TBI Advisory Board, Dr. Roger Knakal, Psychiatrist, presented at a VA Community-Based Out-Patient Clinic (CBOC) known as Fort Ethan Allen in Colchester. Medical staff at the CBOC was interested in how to best identify individuals with TBI and how to approach treatment. Dr. Knakal has worked extensively with TBI patients and presented his team-centered approach to TBI rehabilitation. The CBOC staff has requested that Dr. Knakal return at a later date to further their knowledge of TBI treatments.

The VA in White River Junction, Vermont is now approved as a Poly-trauma Unit, Level III, and includes a TBI Clinic. This has increased access for appropriate assessments on soldiers returning from Iraq who screen positive for TBI on the VA's mandatory screening. The clinic includes a full-time Neuro-psychologist. The clinic was launched in July of 2007. TBI staff and board members have met with the psychiatrist, Dr. Lanier Summerall, who will be conducting the assessments. She stated her concerns about differentiating between PTSD and TBI and also stated that veterans may prefer a TBI diagnosis because it has less stigma than PTSD in the military culture.

The TBI Advisory Board has a Veteran with TBI on the Board and Steering Committee. This individual has been distributing Veteran TBI Survival Guides to Vet to Vet Centers, VA staff, the American Legion, Vietnam Veterans of America, and other veteran's organizations. The outreach binders consist of information from the DVBIC, the Brain

Injury Association of America, the Department of Veterans Affairs, the CDC, and other local support groups targeted at assisting returning veterans with TBI.

The National Guard Family Funding Demonstration Project has hired six full-time Global War on Terror (GWOT) specialists to work in the field for one year. They are doing home visits with the goal of bringing returning soldiers to the VA for help once they have identified their needs. The visits include a TBI screen. The Team Leader of the GWOT Specialists attended the TBI Advisory Board meeting in August 2007 and demonstrated his collaborative intent by agreeing to disseminate materials and sharing anecdotal information on what the Specialists are encountering in the field as they conduct home visits to returned veterans, many of whom are in crisis due to PTSD, TBI or both. With the newly awarded Partnership grant, the new Neuro-Resource Facilitator will work closely in collaboration with the military staff participating in these exciting new initiatives.

Objective 2. *TBI Program will assist the VA to develop a method for identifying soldiers who were exposed to blasts.*

Activities:

The VA made TBI screening mandatory in April of 2007, but soldiers are free to refuse the screening, which may create a barrier to accessing services. In addition, there is concern that VA personnel may not know how to use the screening properly. The TBI Program recognizes these difficulties and seeks to remove barriers through raising the awareness of returning soldiers through mailings and media coverage. Simultaneously, the TBI Program will continue to provide training to VA personnel and other providers who serve veterans. The first year of the Partnership grant will be spent building

infrastructure to make identification of individuals with TBI and TBI treatment streamlined and easily accessed.

3. METHODOLOGY

Program activities were geared towards Vermont's strength as a small state with many opportunities for effective collaborations. These collaborations allowed the TBI Program to build upon the existing knowledge, best practices, & products of our partners to help them focus on TBI issues. Public education & training activities were used to reach targeted audiences such as EMS workers or school nurses, who could readily apply their new knowledge of TBI information into their daily work experience. The TBI Program utilized these existing networks to accomplish its goals and is continuing to take this approach in building services for veterans. The VA already has convened a Military and Community Family Network that includes an alliance with the National Guard Families Services. Trainings developed specifically for National Guard families have prepared them to identify potential TBI signs and symptoms in their loved ones in the coming months.

All trainings are planned in collaboration with the participant representatives to ensure appropriate content. Pre- and post-tests are administered at trainings and evaluation forms collected. Whenever possible, an individual with brain injury acts as co-trainer because participants find individual stories of living with a brain injury so compelling and educational. In addition, individuals with brain injury and their family members are represented on our Advisory Board as well as providers, professionals, and representatives from various state offices. Their input will continue to guide the work begun under the Implementation Grant.

4. EVALUATION

All goals for Vermont's planning grant were process driven and able to be evaluated by the accomplished goals and products produced. All goals and activities for Vermont's planning grant are complete.

As noted by the overview of program goals and objectives, all grant activities followed the outline of these objectives and goal attainment was tracked by spreadsheet, noting target date and accomplishments. Beyond tracking grant activities, there were several ways that the TBI Program utilizes to evaluate program performance. This includes the number of resource materials provided, the number of trainings, conferences, publications, and other media that has helped to educate and increase awareness of Vermont's communities about TBI. Numbers only tell a part of the story and ongoing evaluation also relies heavily on the feedback from consumers and partners.

In addition to this feedback, the TBI program was also evaluated on an ongoing basis by the TBI Advisory Board, who provides input and direction to be sure that quality services are being offered. It is ultimately the consumer and providers who utilize the support and training that the TBI program has to offer the best indication of how the program is doing. Beyond the feedback that is solicited to evaluate the effectiveness of all training (of which results have been consistently at or above a satisfactory level), it is the willingness of stakeholders to consistently engage in collaboration with the TBI Program that speaks to the quality of its products.

5. RESULTS/OUTCOMES(POSITIVE & NEGATIVE)

As noted in the methodology section, public education & training activities and a wide variety of print materials were used to reach targeted audiences. The program provided

education and training to 400+ individual each year, with over 1200 individuals trained during the course of funding, with most of these being professionals/providers who work directly with people with TBI.

Over twenty-five thousand TBI resource cards were distributed and the resource card has been very popular with other state TBI Programs. It was noted as the most downloaded product on the TBITAC website and in 2007 it was awarded the, “Most Popular State Agency Grant Product.” at the annual Federal TBI Conference.

During the course of the “Never Shake a Baby” campaign, over 30,000 brochures and pamphlets were distributed, as well as 10,000 “Never Shake A Baby!” magnets. 500 “Rock, Don’t Shake” posters were also distributed to maternity units, and family centers. Trainings, public ad campaigns and the distribution of print materials has resulted in an increased awareness of TBI. The number of referrals to the TBI Waiver program has nearly doubled in the last few years and the number of IR&A calls the BIA receives has increased as well.

Despite this increase outreach continues on all fronts. Even though Vermont’s population is over 97% Caucasian, grant efforts have strived to be proactive in reaching different cultures and ethnicities across the state. Towards this goal, the TBI Program had the TBI Resource cards mentioned earlier translated into four languages (Bosnian, French, Spanish, and Vietnamese). In order to better serve minority and immigrant populations, they were distributed through the Vermont Refugee Resettlement Program, places of worship, community health centers, faith based organizations and organizations serving the African American and American Indian population.

As noted earlier, system change primarily resulted from the good collaborations that were established with grant funds. The overview of goals and objectives attests to the broad range of collaborations that have developed to create greater awareness and better serve the needs of individuals with TBI. Because of these collaborations, there is now an increased awareness of TBI among a wide variety of stakeholders, who have now integrated it into their work. Whether it is Shaken Baby, sports concussion, falls, veteran's issues, or reaching out to EMS providers and underserved populations, the TBI Program has been able to promote awareness of these issues through training and print material. It remains to be seen, however, how much more could have been accomplished with a more focused approach on just a couple target areas.

As services have begun to be developed for returning veterans with TBI, there has been an increased awareness that these efforts will ultimately result in system improvements for all Vermonters with TBI. While our future focus will be on developing a neuro-resource facilitation system for returning veterans, we are building a system that will do a great deal to improve access to TBI services in Vermont.

6. PUBLICATIONS/PRODUCTS

* indicates that a copy of this product has already been submitted in past grant reports or to the Traumatic Brain Injury Technical Assistance Center (TBITAC). All products are also included in the Appendix (included with the hard copy) in the following order.

**Advisory Board Operating Guidelines:* Developed to guide the process of conducting business during meetings, choosing new members, and holding members accountable.

Completed in February of 2005.

*Advisory Board Code of Ethics: Developed to hold members to a high quality of ethical standards. Completed in February 2005.

TBI Annual Conference brochure. The annual conference was expanded in 2005 from a day to a day and ½. The ½ day offered two professional-track workshops for Speech-Language Pathologists, Physical Therapists, and mental health workers. The brochure was mailed to over 5,000 addresses. Nearly 400 people attended this conference, including individuals with brain injury, family members, caregivers, and providers.

Resource card. This card was adapted from a Brain Injury Association of America product. A professional designer worked on the text, graphic, and colors. In response to our needs assessment, the card was targeted for those with mild to moderate brain injury by equating concussion with brain injury. It was also meant to introduce the TBI Program to primary care physicians, ER personnel, and school personnel. 20,000 copies were disseminated in November of 2005 to the above professionals plus licensed nurses, psychologists, psychiatrists, hospital discharge planners, nurse home administrators, area agency on aging workers, domestic violence workers, school nurses, special education teachers, physical education teachers, coaches, town recreation department directors, state district offices, and occupational therapists, physical therapists, optometrists, opticians, EMS workers, physiatrists, neurologists, and chiropractors. Vermont residents were targeted and some New Hampshire practitioners on the border of Vermont received the card, including Dartmouth-Hitchcock Hospital workers.

Bus sign. The same designer who created the resource card used a similar image of a ball moving to create this sign targeted at soccer parents and other sports enthusiasts. The toll-free help-line is featured in the message. The sign on the rear of a bus circled the

Burlington area each day for three months during soccer season in the 2005 and was used again in the fall of 2006.

TBI logo. The logo is designed to help make the meaning of TBI more familiar and to make clear that the TBI Program is housed with the state of Vermont. It is meant to say to the general public “this may mean you” by using the agency’s name with the word “human” in it instead of the department’s name, which might communicate that only the disabled or aged can have a TBI.

EMS card/sticker: Small enough for EMS workers to carry with them and offered as a sticker as well. The front has a short list of questions to ask at the scene which may indicate possible brain injury, and lists the I/R/A help-line number. The back has the Glasgow Coma Scale. Cards are available laminated or as stickers to attach to a clipboard.

Press releases/articles/ads:

*I/R/A announcement: This press release was sent to all the daily newspapers in Vermont and was printed in some form by five of them. It announces the I/R/A service, lists signs and symptoms of TBI, and makes clear that the State holds a contract with the BIA to provide this service. Release date: April 5, 2005.

PJ Long article: Appeared in *Living the Vermont Way* magazine, the article featured PJ Long, an individual with TBI, and her healing process. Vermont’s Lt. Governor came to hear PJ’s keynote address at our conference because he saw the article. Appeared on newsstands in mid-October, 2005.

*TBI conference awardees: Announced the 2005 awards given out at the conference in four categories: “Individual with a TBI”, “Caregiver”, “Employer”, and “Professional.”

Each award is given for outstanding service or contributions. Release date: November 14, 2005.

*Paycheck newsletter article: July 7, 2005. Appeared in envelopes with employee's paychecks (or pay stubs if they have direct deposit.) The purpose was to inform state employees that the TBI Program is housed with the state and also to reach a large number of the public. The largest employer in Vermont, there are over 6,000 people working for State Government.

*Annual Brain Injury Conference ad: Appeared twice in one daily newspaper in the Health Section, *The Rutland Herald* and one weekly newspaper, *Seven Days*. The ad promoted the professional track workshops for physicians, mental health counselors, optometrists, occupational therapists, physical therapists, speech language pathologists, case managers, and other health care workers.

*Paycheck newsletter article: Another article appeared on September 28, 2006 announcing the annual brain injury conference coming in October.

*Paycheck newsletter article: February 15, 2007, another article appeared regarding the "Shaken Baby Prevention Project."

*High school sports concussion article: initiated by the student's mother, this article generated many reader responses.

Power Point presentations:

Vermont Injury Prevention Committee introduction to TBI Implementation Grant: This committee is housed with the Vermont Department of Health and is in the process of revising the statewide injury prevention plan. Previously, TBI prevention was not

included so TBI staff has been working to make TBI a part of this overall plan to make communities aware and pro-active in injury prevention.

Education for State Nurse Long Term Care Clinical Coordinators: In October 2005, 12 nurses were hired to work regionally around Vermont to determine clinical eligibility for the Choices for Care Long Term Care Waiver. Our Choices for Care program offers nursing home eligible persons the opportunity to choose between three settings in which to receive their care: nursing home facility, home-based, or enhanced residential care. (For Medicaid recipients where such services are available.) This presentation oriented the Long Term Care Clinical Coordinators to the TBI Waiver and how it relates to their work.

Education for school nurses: based on the presentations on “TBI in the schools” at the TBI the 2nd Federal Interagency Conference on Traumatic Brain Injury. The presentation covered statistics, signs & symptoms, and best practices for schools to serve students with TBI.

Education for Senior Companions: The Senior Companion Program is a federal initiative that provides a stipend to income-eligible senior citizens who are able to visit isolated seniors for whom companionship would improve their health and well-being. This presentation included TBI 101 with statistics, and focused on how to recognize the signs of brain injury, how to refer someone for assistance, and also gave tips for helping to prevent falls. (hard copy unavailable)

Education for VA personnel: Two PowerPoint’s were given on the topic of Veterans and TBI. The first focused on “Blast Injuries and Traumatic Brain Injury” and included research data on how a blast affects the brain, post-concussive symptoms, and

information on the work of the Defense and Veterans Brain Injury Center. The second PowerPoint discussed “Flooding and Brain Injury”, how to recognize flooding, how to avoid or reduce flooding, and the circumstance that can trigger this reaction. Both presentations were created and given by James Vyhna, individual with a TBI and former Executive Director of the Brain Injury Association of Vermont.

TBI and Domestic Violence: Presented at the Victims’ Assistance Academy to two separate groups. It includes statistics on the prevalence of TBI and on the connection between TBI and domestic violence. Also included information on coup contrecoup injury as an example of brain injury, warnings about multiple brain injuries, most common signs & symptoms, steps to take to further assess extent of injury, and a list of resources in Vermont.

TBI and Veterans: Presentation created by Neuro-Psychologist Mary Willmuth and presented at a regional training, “From the War Zone to the Home Front: Continuing to Build a Military, Family, and Community Network.” Includes information on blast injuries, penetration injuries, secondary injuries, Post Traumatic Amnesia, long-term outcomes, risk of substance abuse, and types of intervention.

DISSEMINATION/UTILIZATION OF RESULTS:

Vermont is proud of the activities that it has initiated under the Implementation Grant. The TBI Program Supervisor and TBI grant manager have been active participants in sharing and participating in TBITAC sponsored work groups that aid in the development of resources and sharing their lessons learned. As noted earlier, the TBI Concussion cards have been identified by other states as an important resource and it was recognized as the Federal TBI project’s most popular state agency grant product, because of the number of

times it had been downloaded from the TBITAC website. Beyond its working relationship with other states through TBITAC projects, Vermont has developed a special relationship with the Brain Injury Association of New Hampshire. These two states have always worked closely together, and are now working even more closely to establish a Neuro-Resource facilitation system in Vermont. The state of Vermont recently entered into a contract with the BIA-NH to help build the capacity of the BIA-VT, support the development of a new data-base system, and replicate its current neuro-resource facilitation system which has been recognized as a best practice approach.

Dissemination of project activities, progress and results are always available for download on the Vermont, Division of Disability and Aging Service Website at

<http://ddas.vermont.gov/ddas-programs/programs-tbi-default-page>. The website includes Advisory Board and Steering Committee Meeting Minutes. All documents produced are available in alternate format upon request to the TBI program staff (lead agency).

Documents have been distributed to the BIA-VT and Vermont Protection and Advocacy for distribution as well as Vermont Legislators. Additionally, Documents are distributed through conference venues such as the Association of persons in Supported Employment and TBI State Grantees Conference and at a local level BIA-VT support groups.

6. FUTURE PLANS/FOLLOW UP:

Many of the activities begun by this project will be continued by collaborators. Two examples include EMS staff, who took a leadership role through the train the trainer training, and will continue to provide support and training to other EMS staff across the state; and efforts to provide parents with materials on Shaken Baby Syndrome including an 8-minute prevention video called “Portrait of a Promise.” That is now shown at

maternity units across the state. Efforts to support training that increases awareness of “Shaken Baby Syndrome” will continue through funding from the Department of Health and Department of Children and Families as well as with new funding through the Vermont Department of Disabilities, Aging, and Independent Living.

Past efforts to support the development of IR&A services through the BIA-VT will be continued with support from other funding sources. In 2007, with a private contribution of \$10,000, the BIA-VT was able to provide targeted case management services to over 30 individuals. These services will be continued with funding recently allocated by the Vermont State Legislature.

In addition, the TBI Program was awarded a Partnership Grant to begin a resource facilitation service for returning veterans. The TBI Program and the BIA-VT are working to create a strong collaborative relationship to support increased capacity through the added serve of resource facilitation. Efforts to develop this system will be aided through technical assistance provided by the BIA of New Hampshire, who has been recognized for their best practice approach to resource facilitation.

As noted previously, due to the activities initiated by the Implementation grant, Vermont has taken an important step forward in developing greater awareness of TBI issues across a variety of populations and service structures. This has led to an increase in TBI Program referrals as well as to an increase in IR&A contacts through the BIA-VT. It is anticipated that as activities continue to be supported by past collaborators that the need for services will increase as well. Current plans for developing a neuro-resource facilitation program will seek to meet this need. As we move forward it is expected that the replication of activities initiated by this project will continue to be based strong

collaborations and that a focus on outcomes and sustainability will be integral to this process.

7. TYPE/AMOUNT OF SUPPORT AND RESOURCES NEEDED TO REPLICATE

The amount of resources necessary for replication is difficult to measure because of the uniqueness of Vermont. Vermont's small size and low population mean that relative to larger states, Vermont has an advantage. Vermont's success, however, is due to the strength of the collaborative relationships that have been developed over the course of funding. If implementation activities were to be replicated in another state, it would be equally important for resources to be focused on supporting collaborations and leveraging funds with other stakeholders to establish quality services.

Given this approach, in similar size states, the amount of support and resources may remain relatively the same. In larger states, however, with greater populations, it may take up to three times as many resources to achieve similar results.